US011932424B2

(12) **United States Patent**
Nawojczyk

(10) **Patent No.: US 11,932,424 B2**
(45) **Date of Patent: Mar. 19, 2024**

(54) **UTTER SYSTEM FOR MULTIPLE USE OF THE SPACE-ROCKETS EQUIPPED WITH SPREADABLE-ARMS AND POSSIBLY MORE DEVICES, AND METHOD OF THESE SPACE-ROCKETS VERTICAL LANDING BY HANGING ON LANDING-STATION HAVING MOVABLE GANTRIES AND MORE APPARATUS**

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(72) Inventor: **Roman Nawojczyk**, Älmhult (SE)

(73) Assignee: **Roman Nawojczyk**, Älmhult (SE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 541 days.

(21) Appl. No.: **16/988,615**

(22) Filed: **Aug. 8, 2020**

(65) **Prior Publication Data**

US 2021/0047058 A1 Feb. 18, 2021

Related U.S. Application Data

(60) Provisional application No. 62/885,324, filed on Aug. 12, 2019.

(51) **Int. Cl.**
B64G 1/62 (2006.01)
B64G 1/00 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ***B64G 1/62*** (2013.01); ***B64G 1/002*** (2013.01); ***B64G 1/222*** (2013.01); *B64G 5/00* (2013.01)

(58) **Field of Classification Search**
CPC .. B64F 1/02; B64G 1/002; B64G 1/62; B64G 2005/005
See application file for complete search history.

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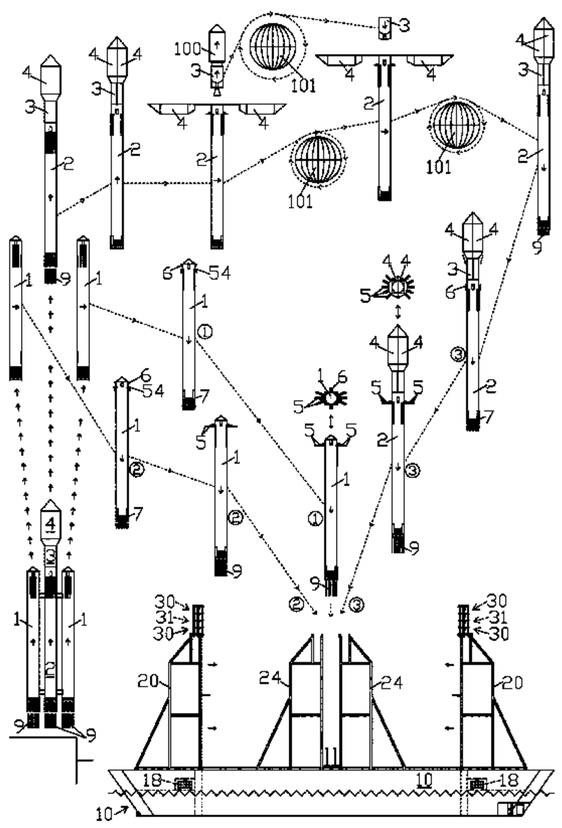
Primary Examiner — Joshua J Michener
Assistant Examiner — Michael B. Kreiner

(57) **ABSTRACT**

System for multiple use of space rockets equipped with spreadable arms and sliding engines covers, and for said space rockets a vertical landing method on two movable gantries situated on a specific sea ship or on a solid ground. Said space rockets comprise steering flaps and a dividable sectional load cover. The specific sea ship comprises specific joined hulls, two horizontally movable decks and tunnels with ballasting wagons. The specific sea ship has installed a landing station for the space rockets. The landing station comprises hangers, grasping wagons and two movable ship gantries. The hangers comprise rotating wedges. The gantries comprise damping wagons. The system comprises also two movable ground gantries and a specific movable ground crane all situated on a solid ground that together create a multi-task station for the space rockets hanging up, reloading, launching, and landing. The system allows that the space rockets can liftoff from two movable gantries while vertically hang on their spreadable arms.

14 Claims, 73 Drawing Sheets



(51) **Int. Cl.**
B64G 1/22 (2006.01)
B64G 5/00 (2006.01)

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FIG.1

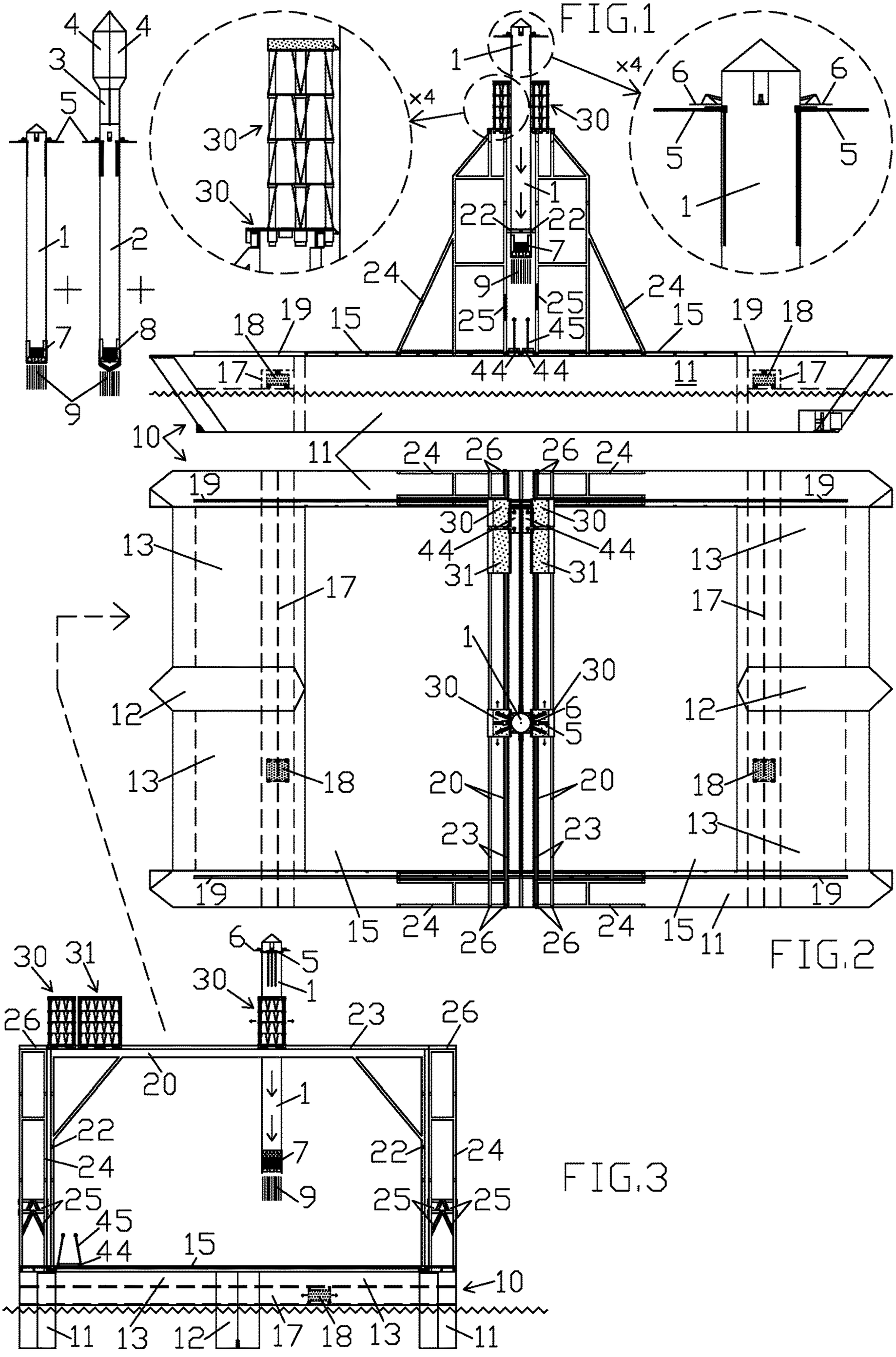
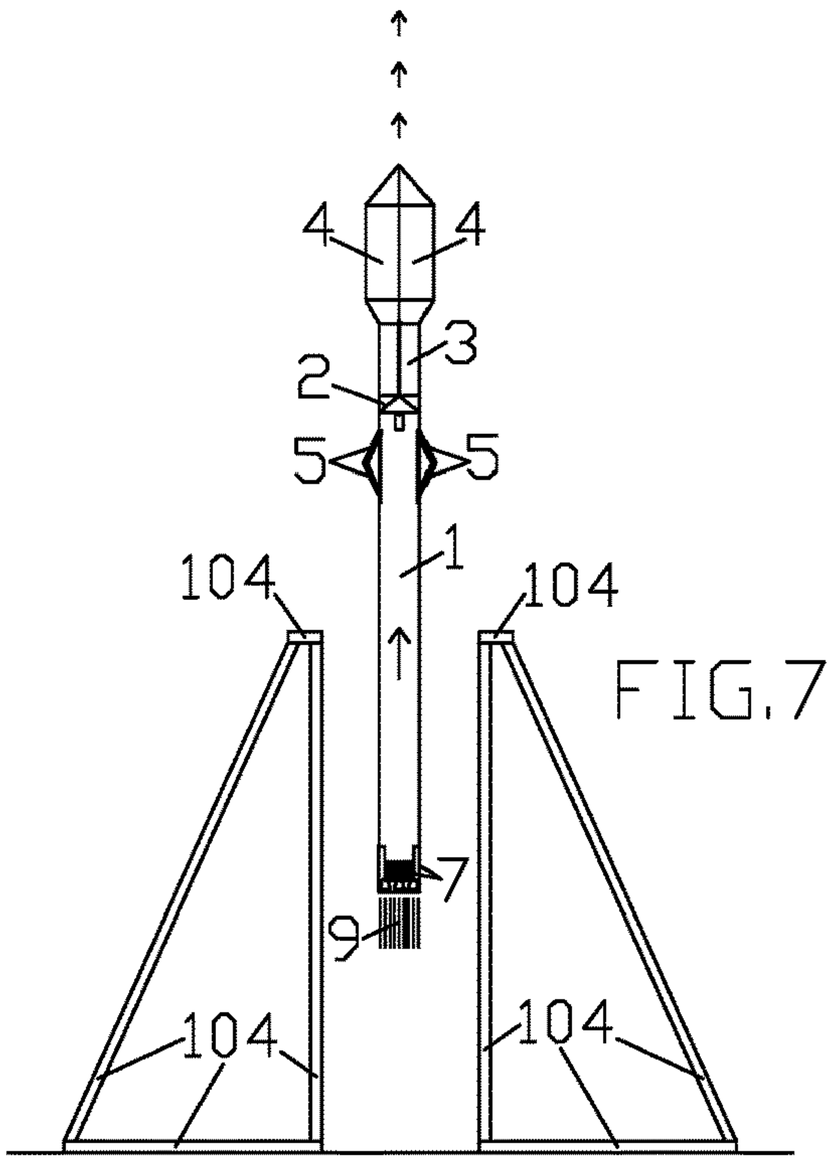


FIG.2

FIG.3



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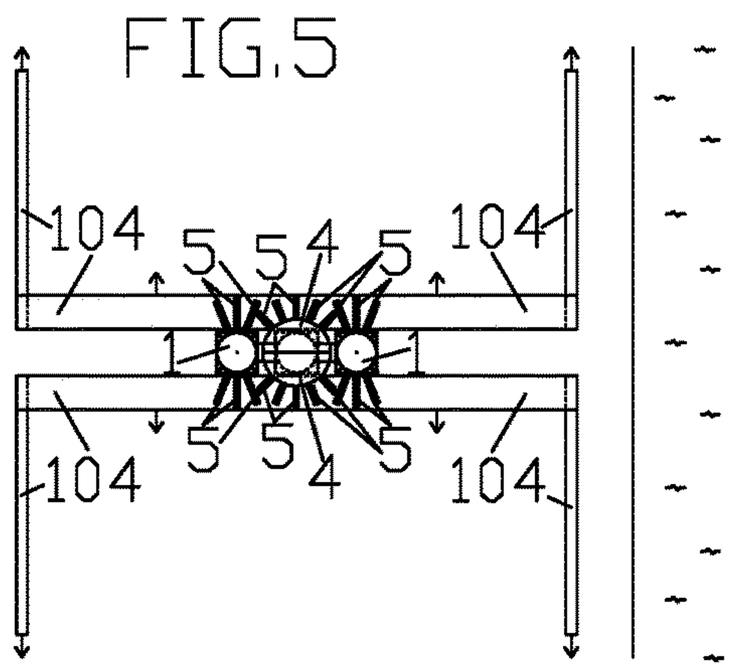

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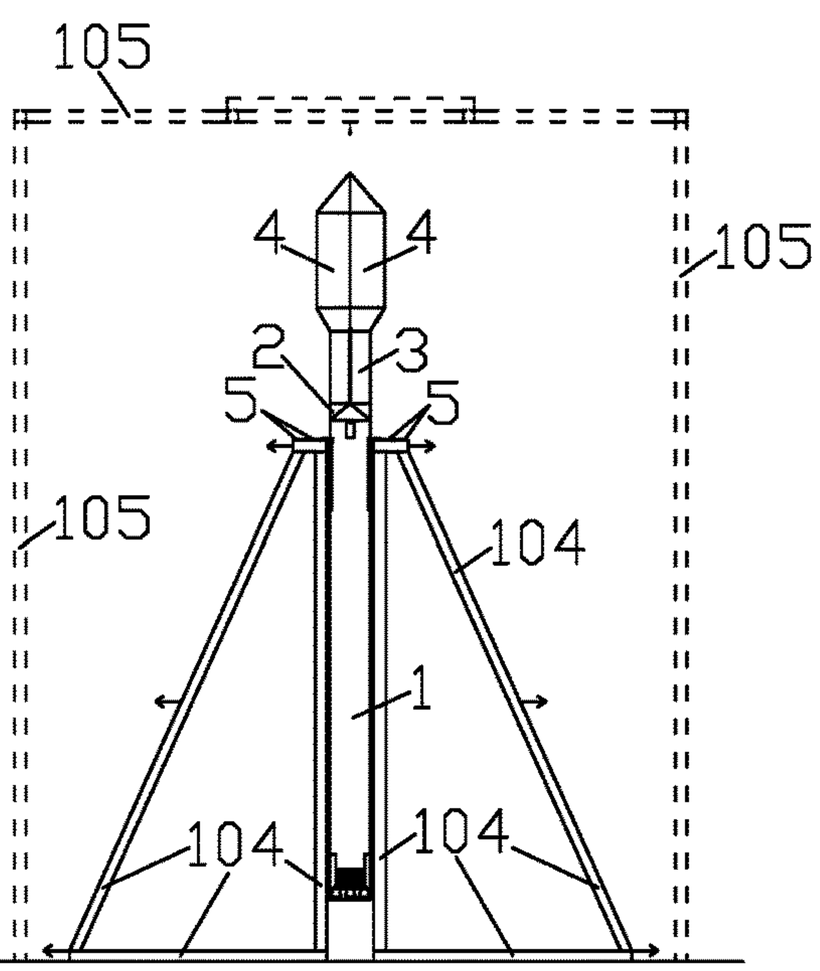

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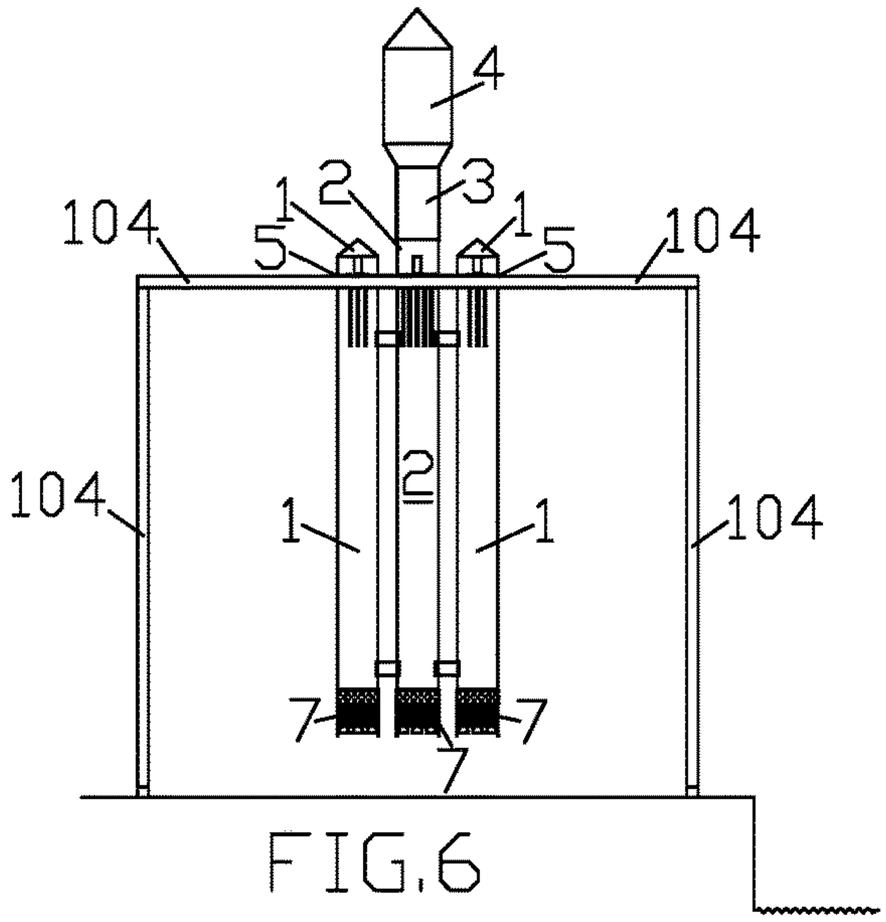

FIG.6

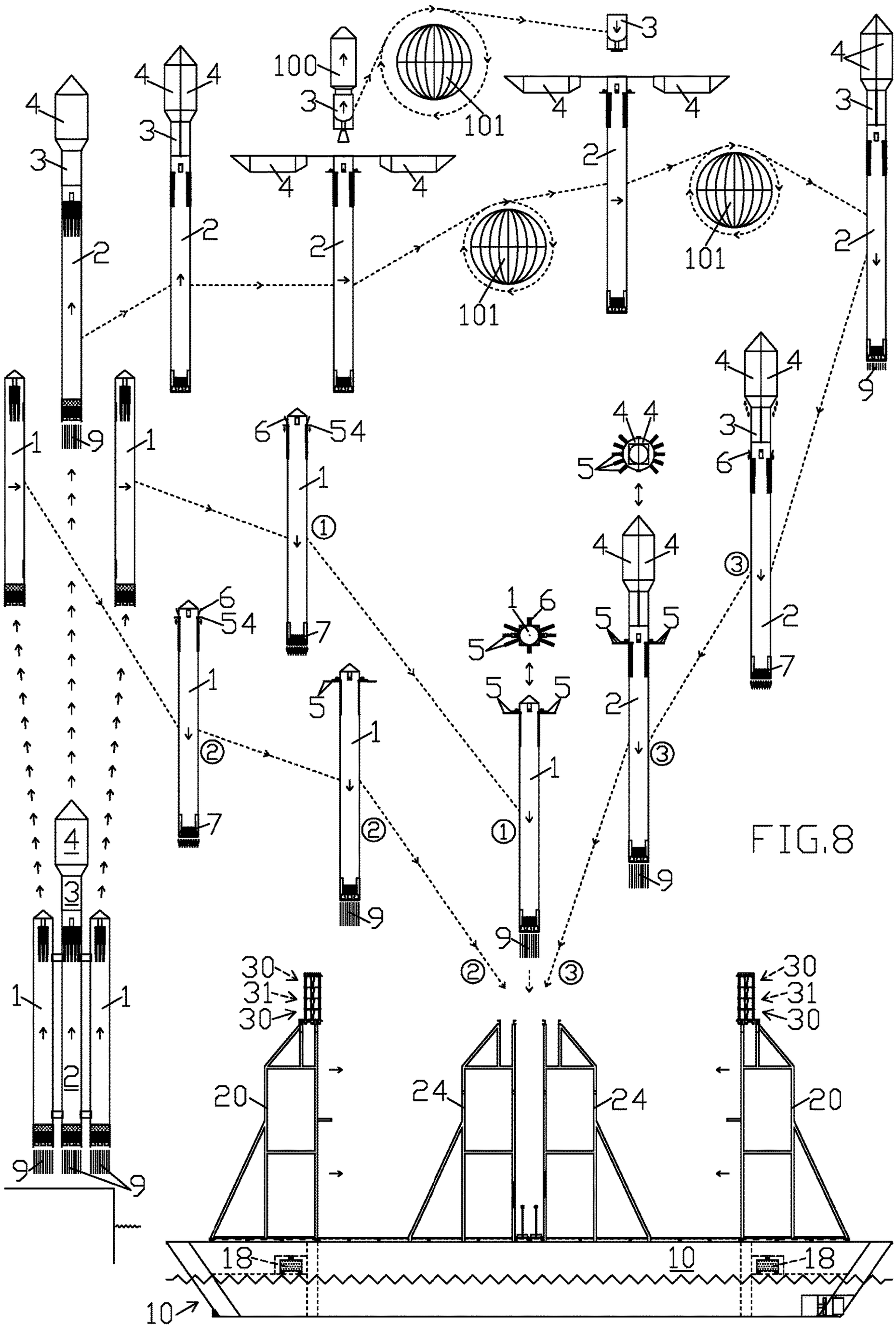

FIG.8

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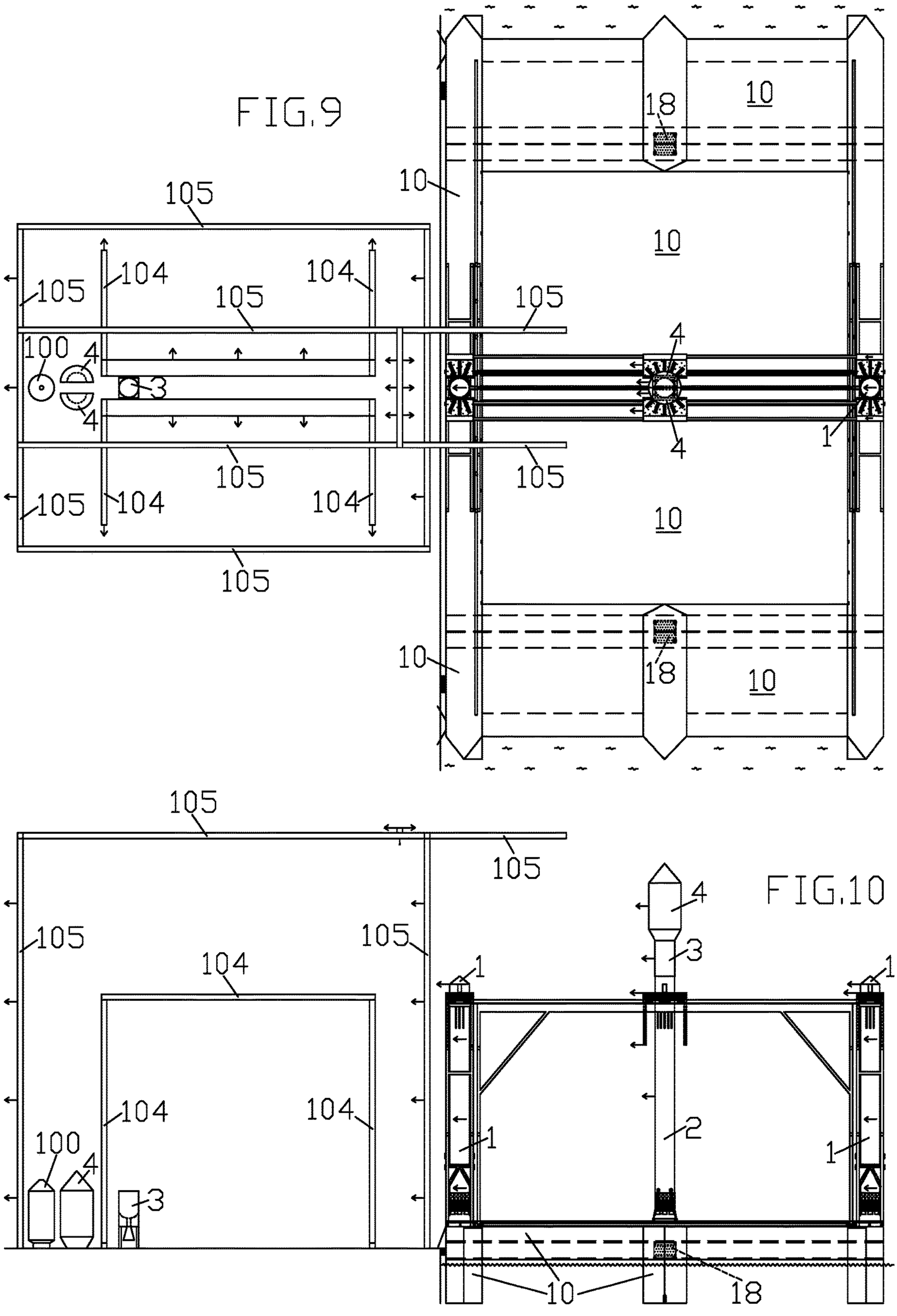
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FIG.10

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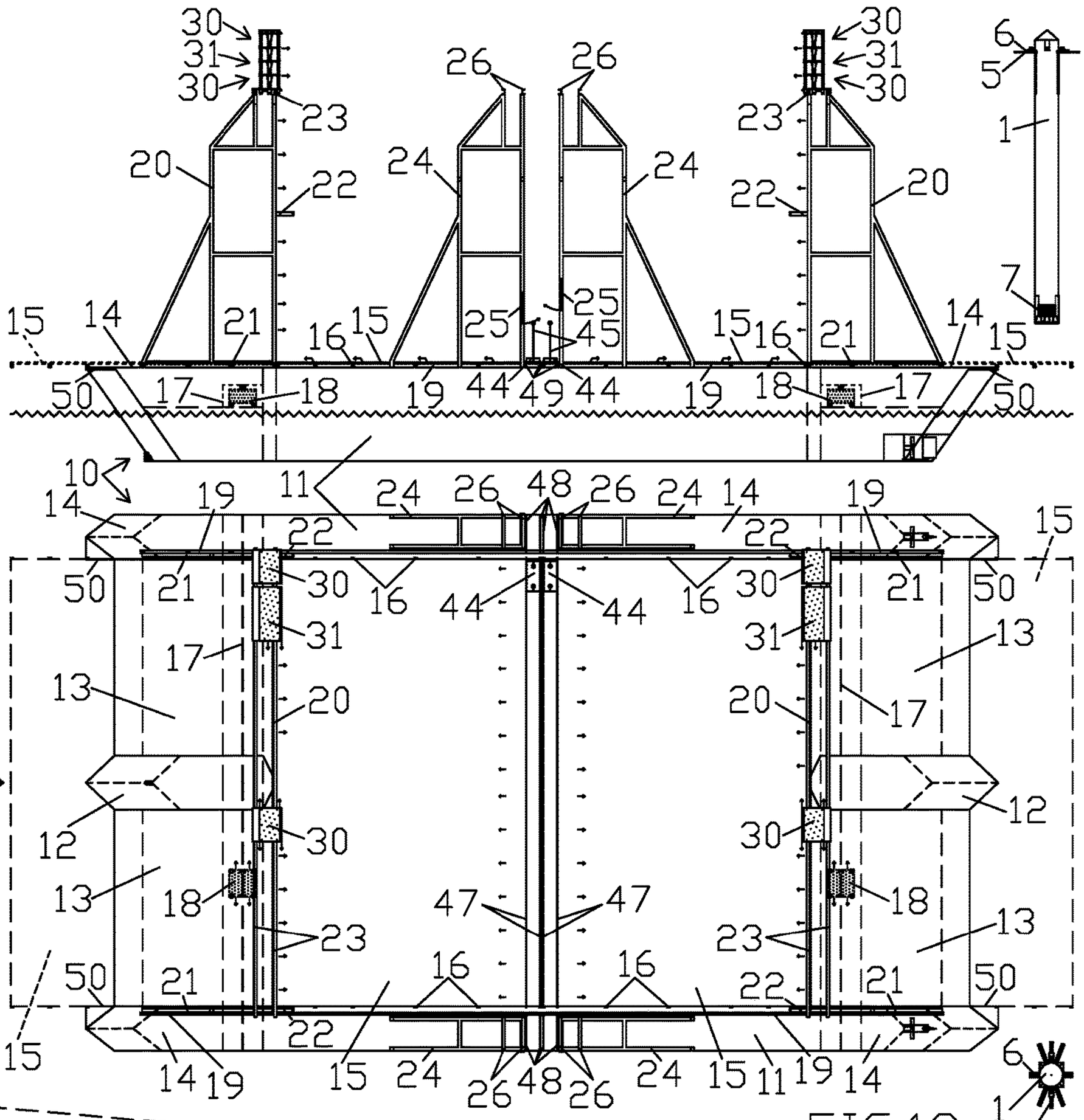
FIG.11



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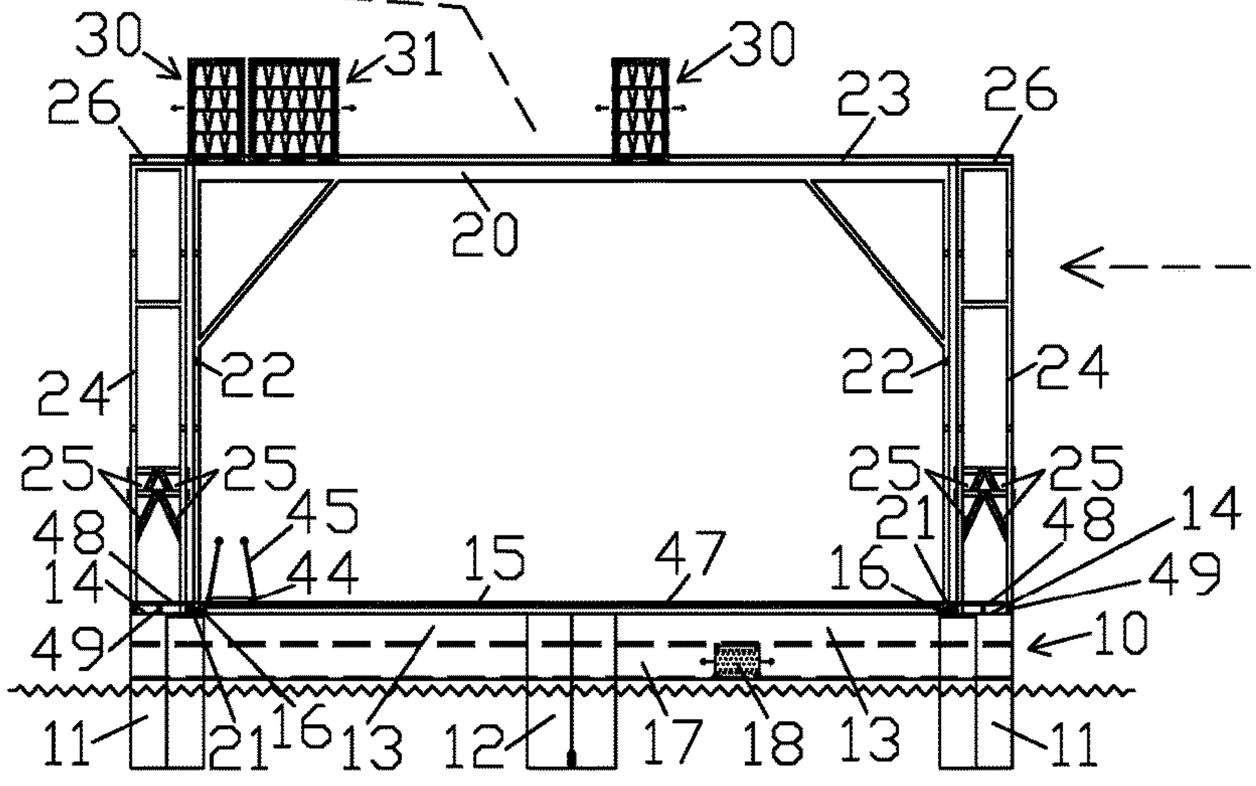

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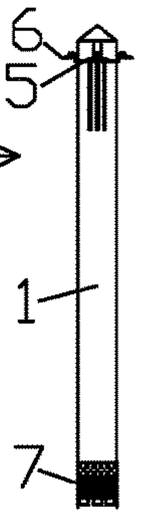

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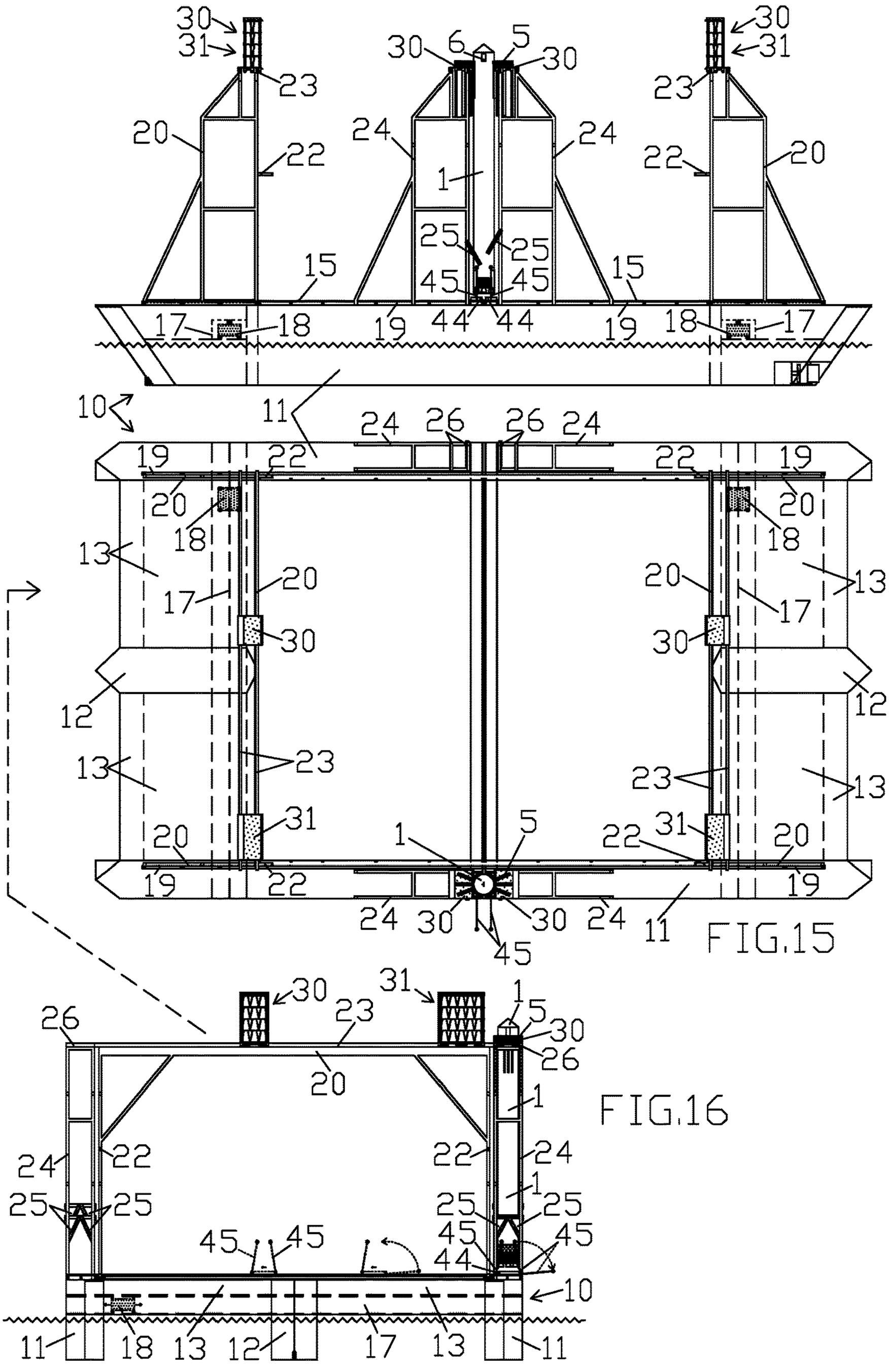
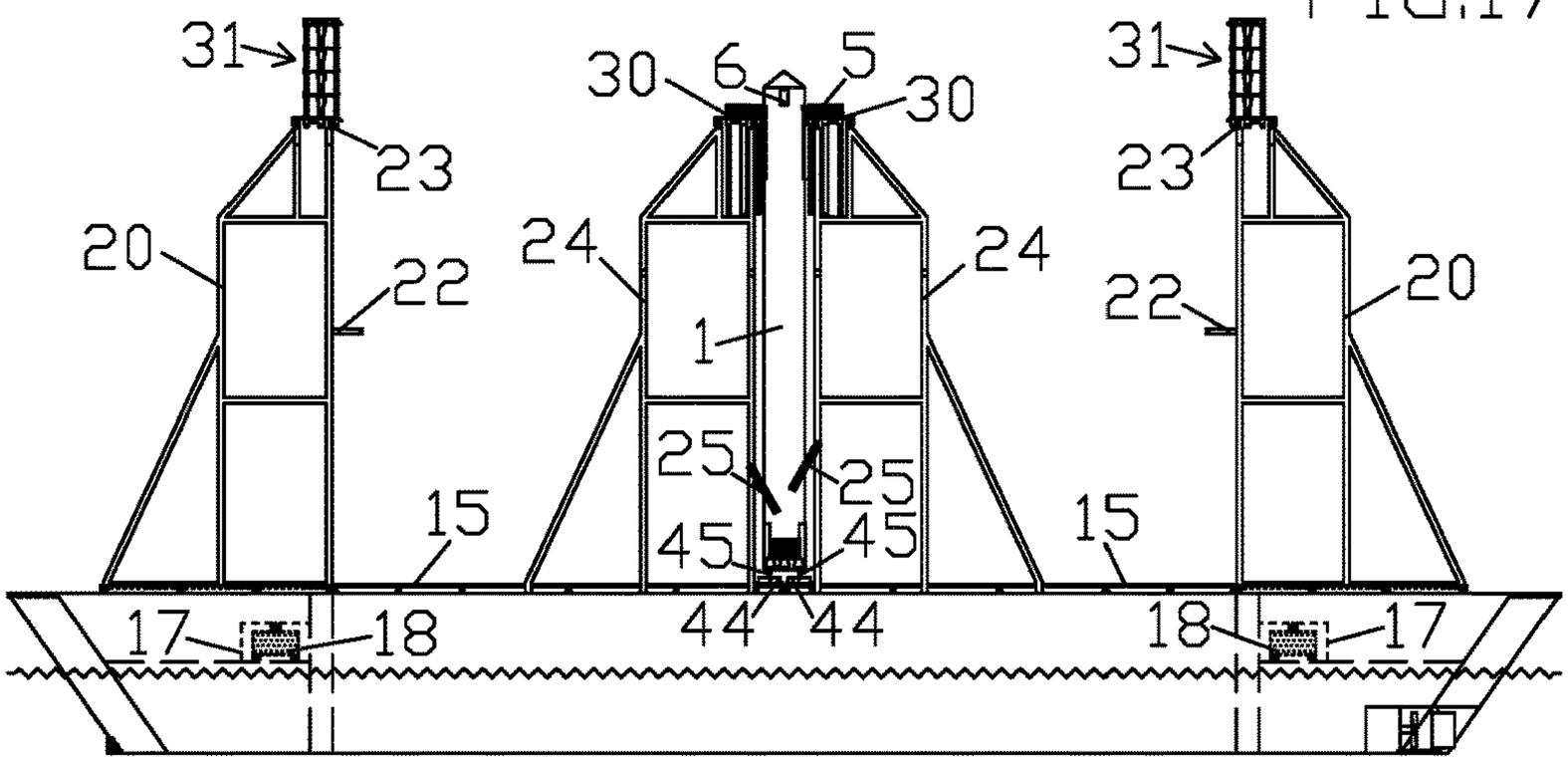
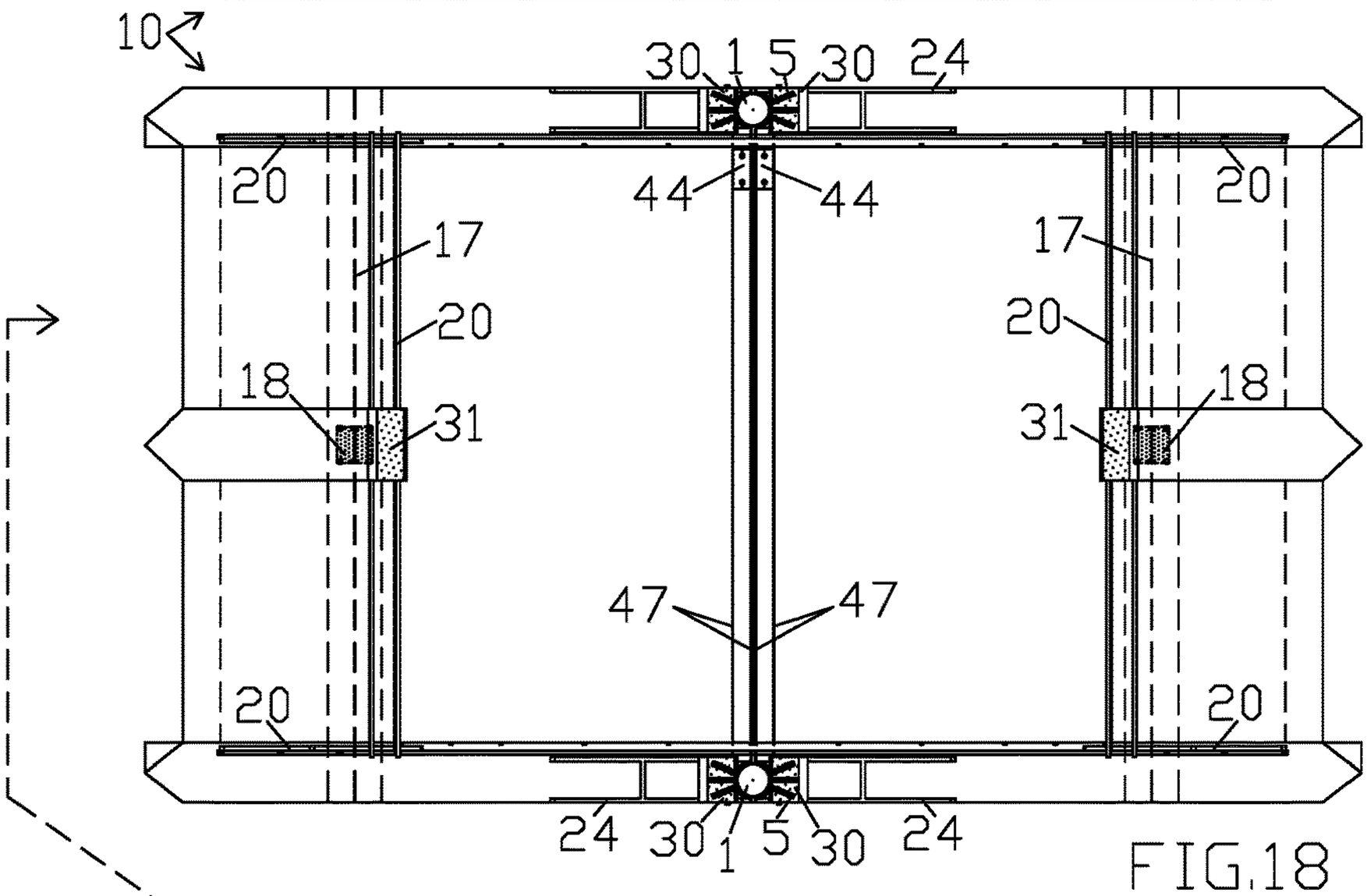


FIG.17





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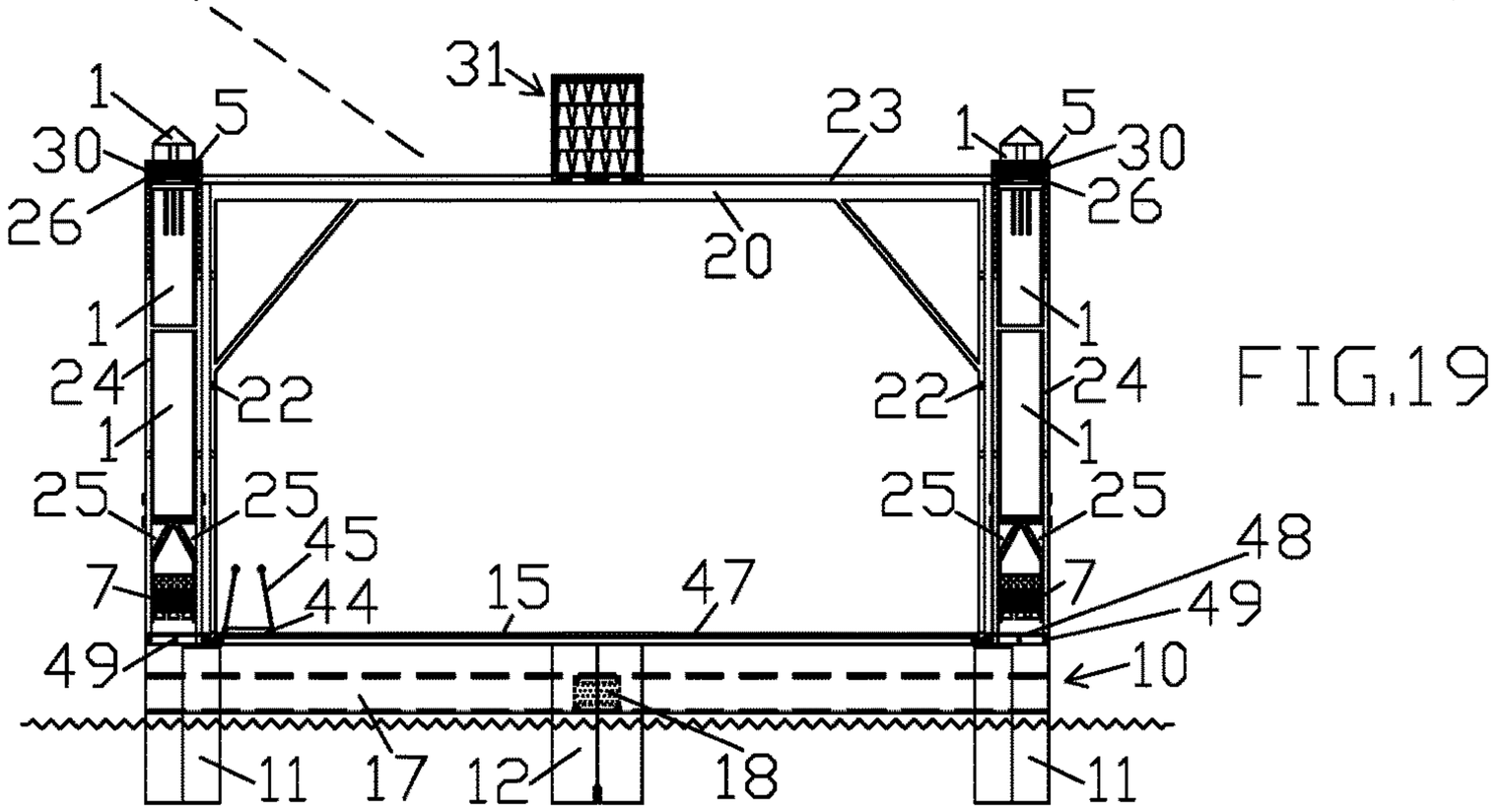


FIG.19

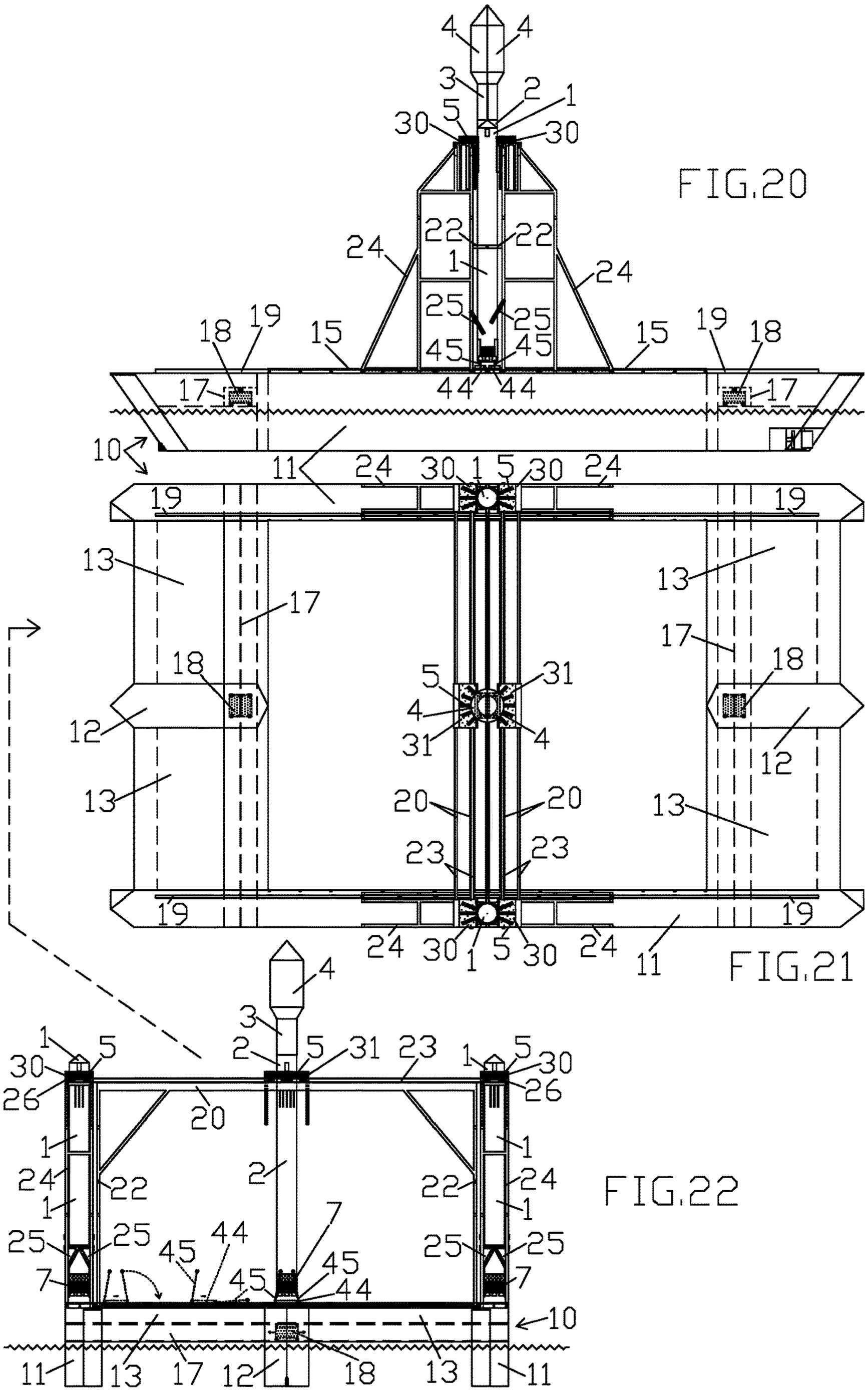


FIG.20

FIG.21

FIG.22

FIG.23

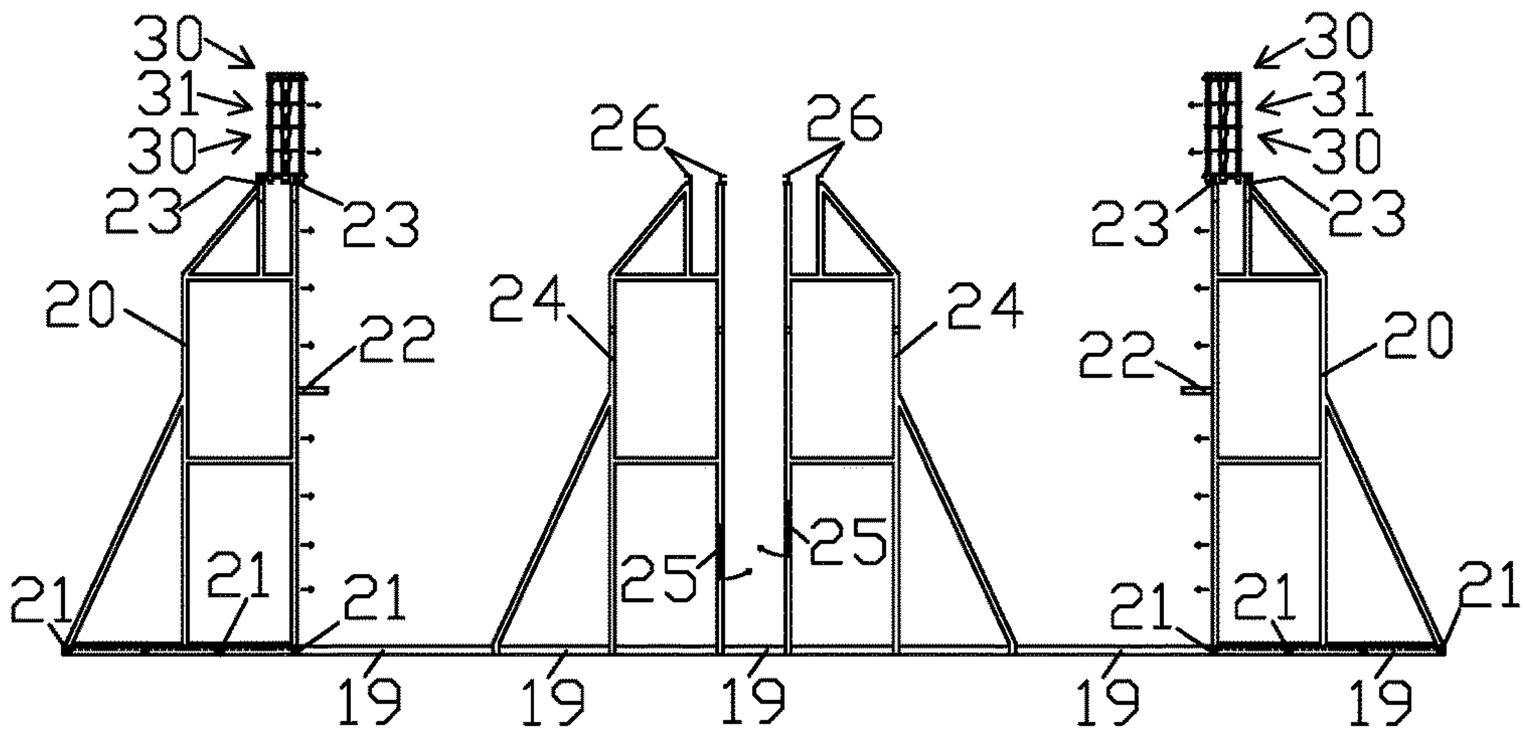
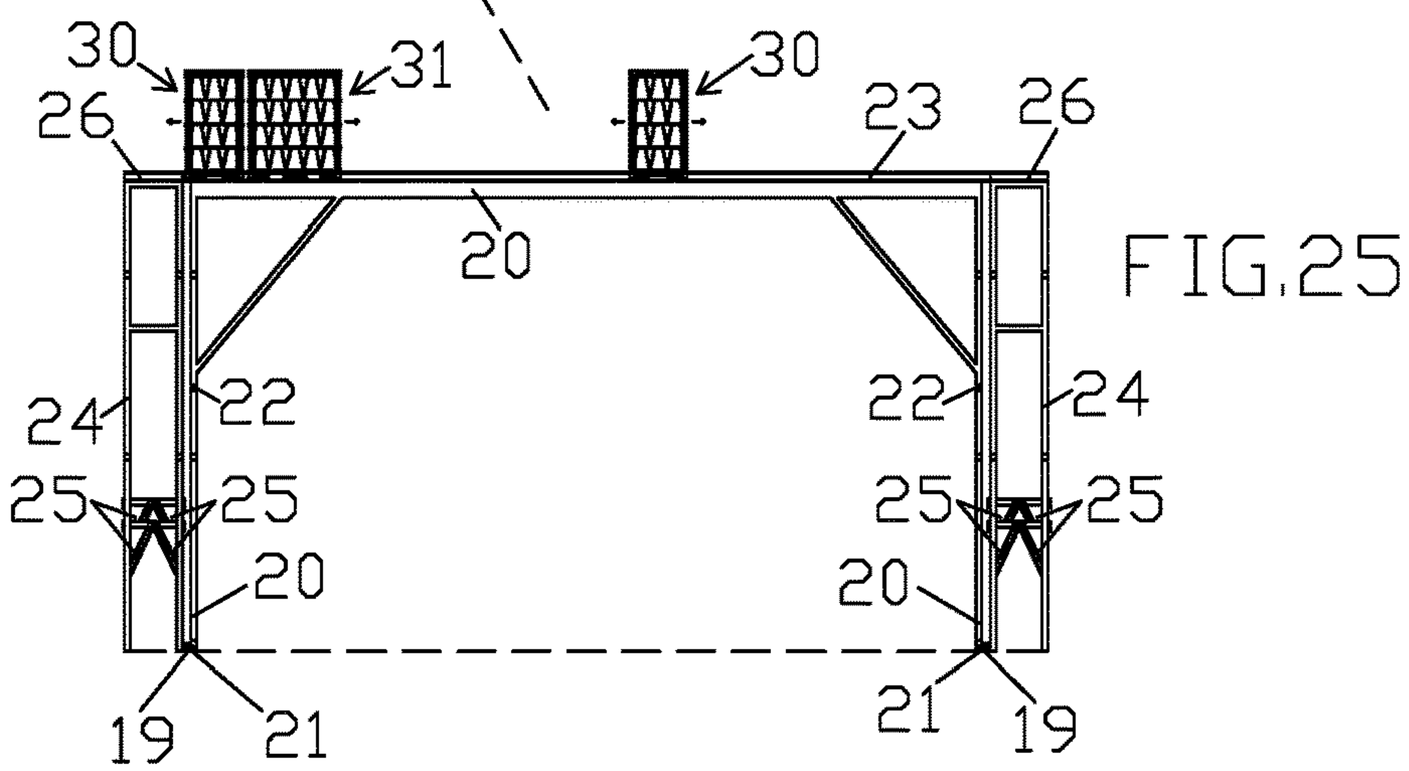


FIG.24



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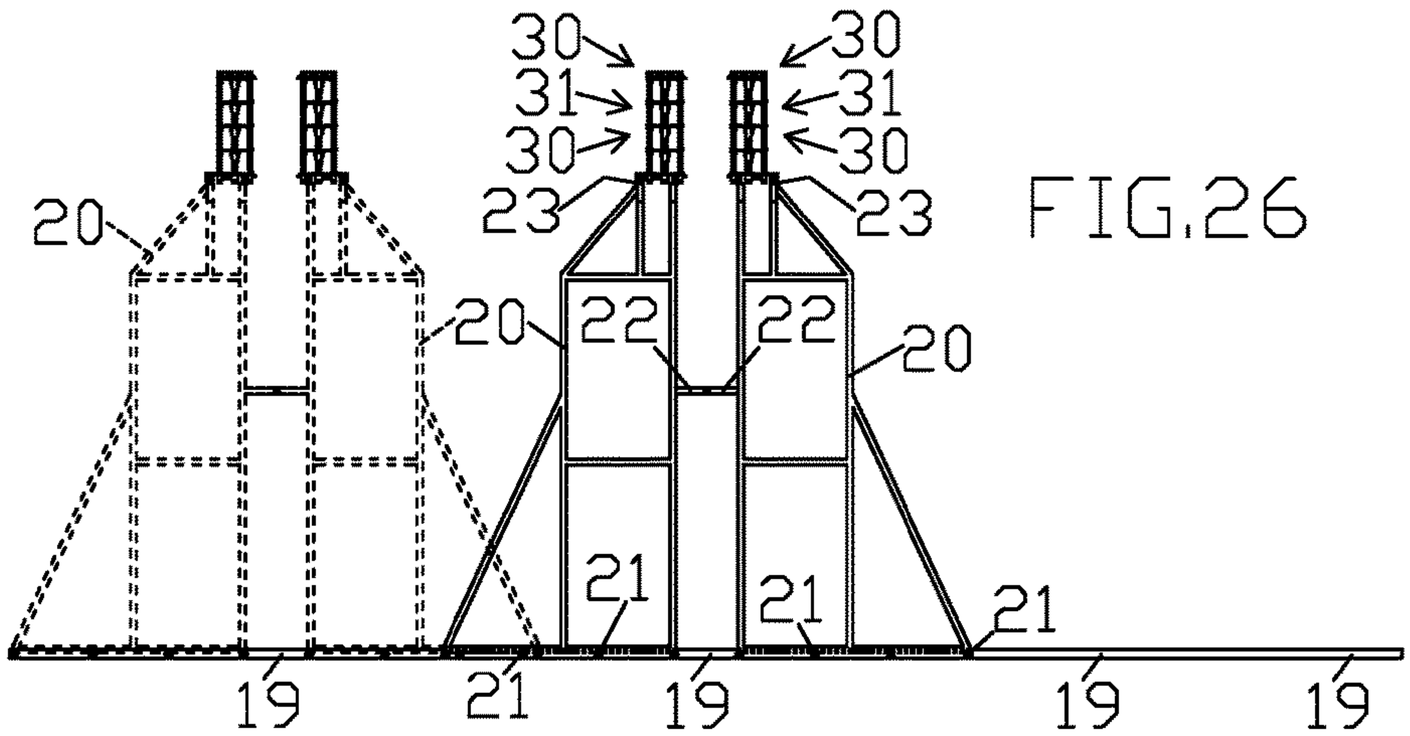

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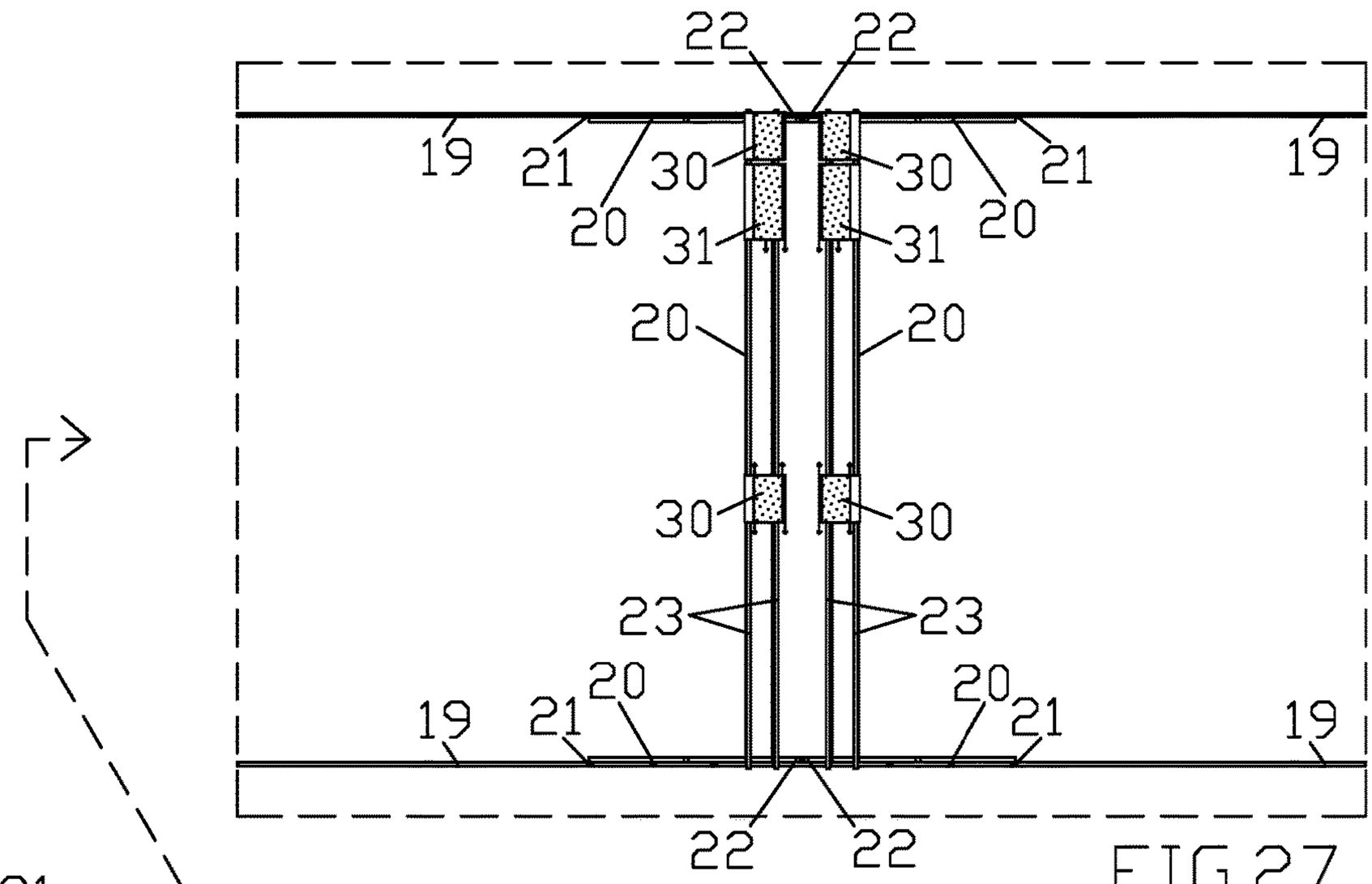

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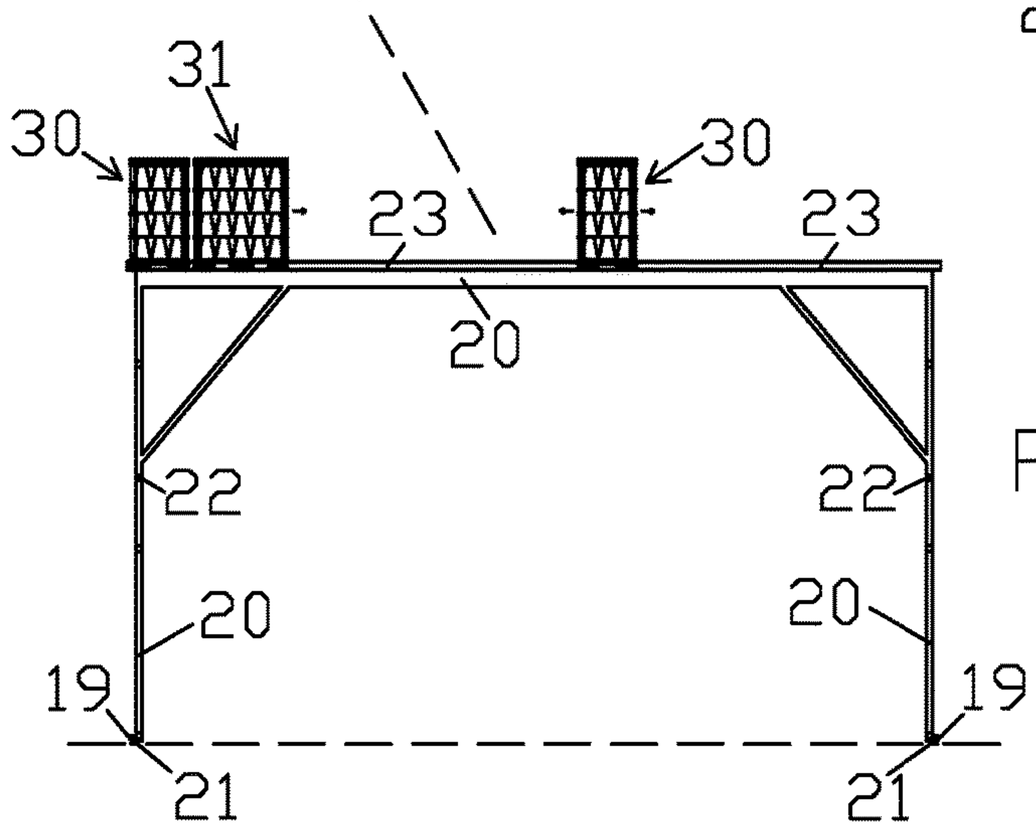

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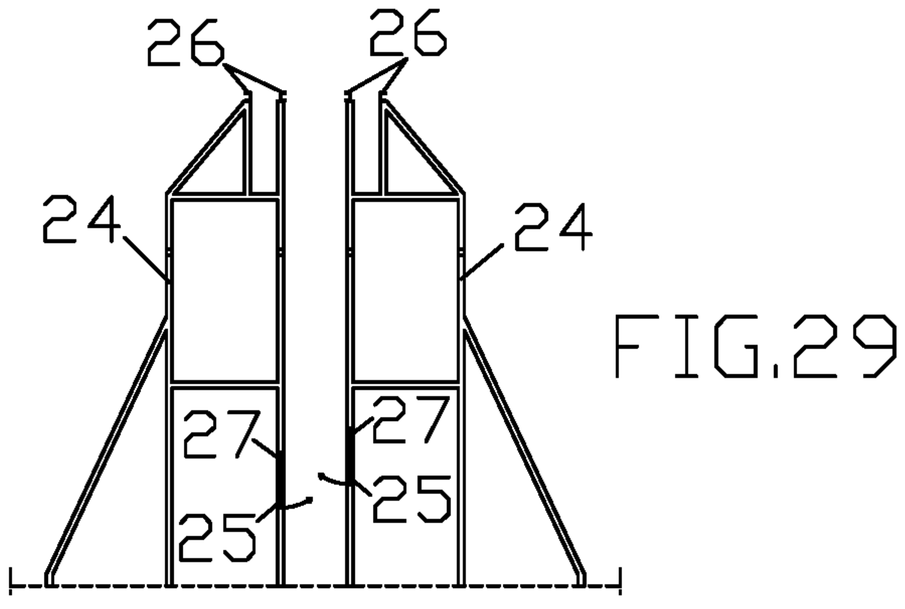

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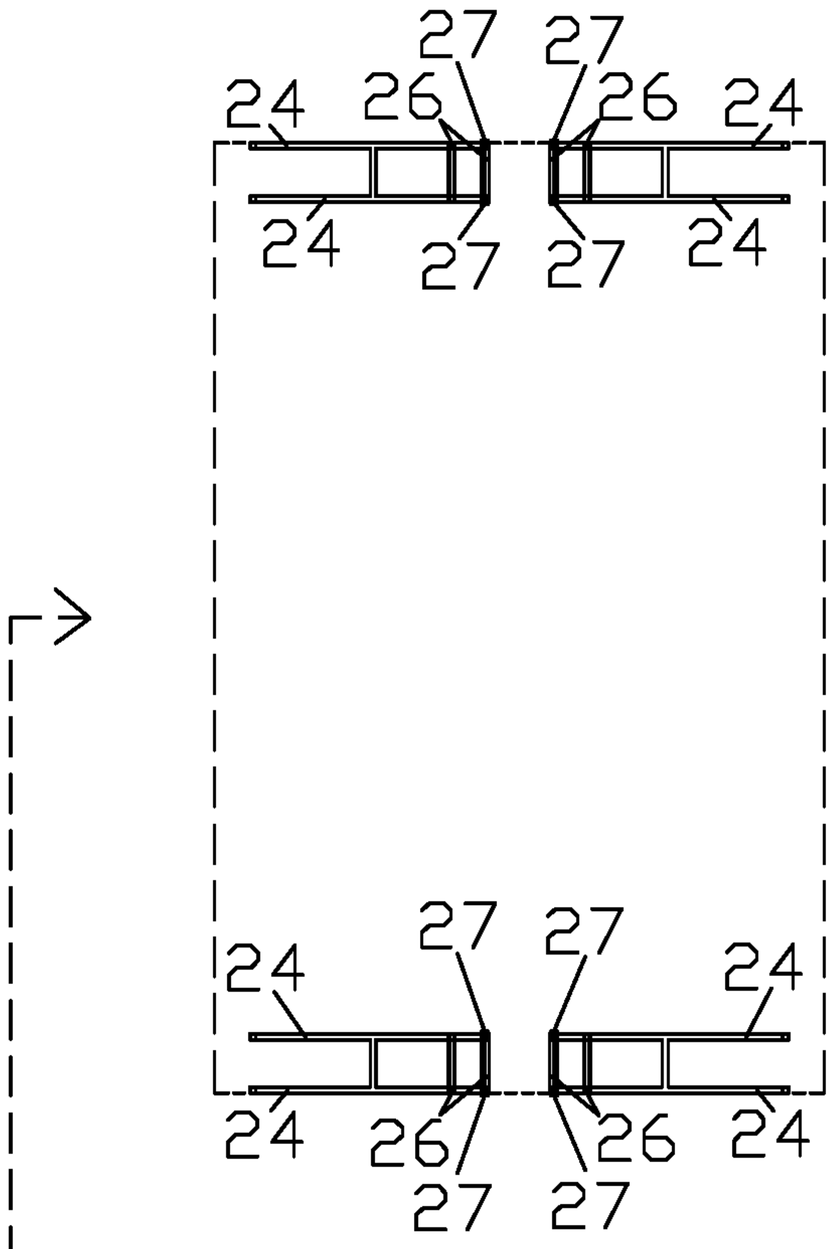


FIG.30

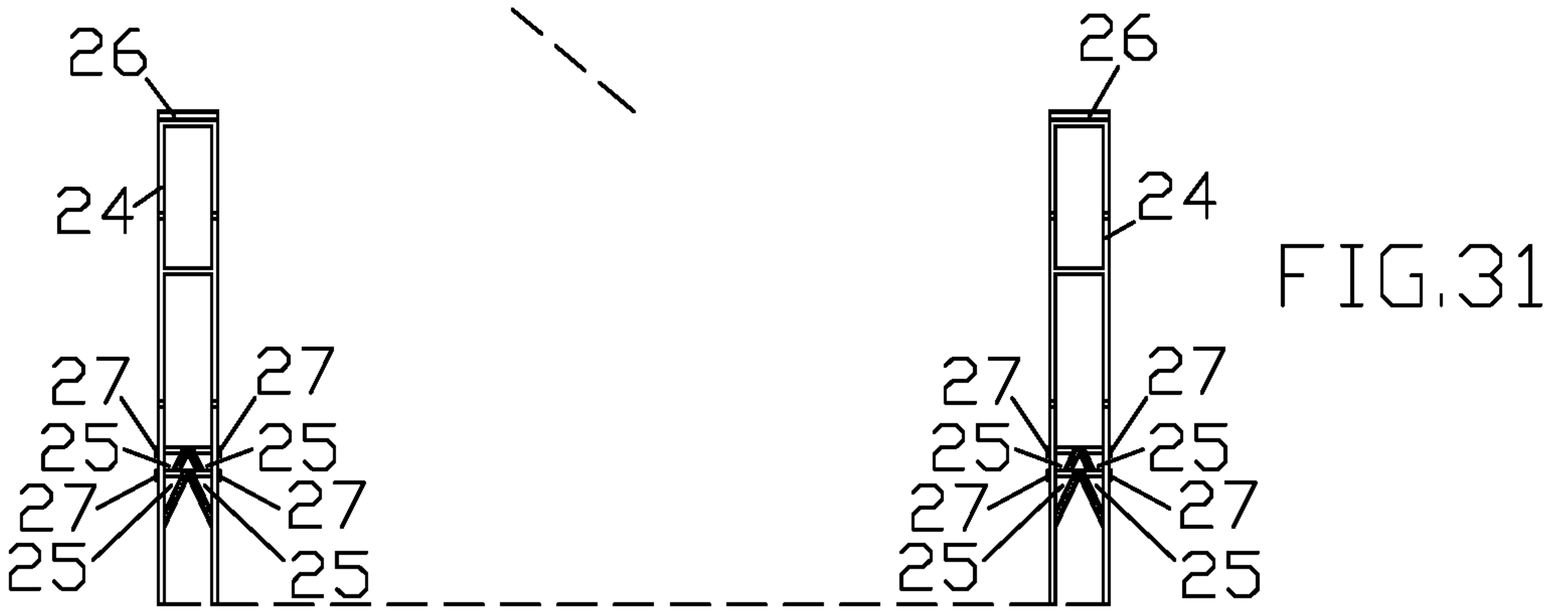
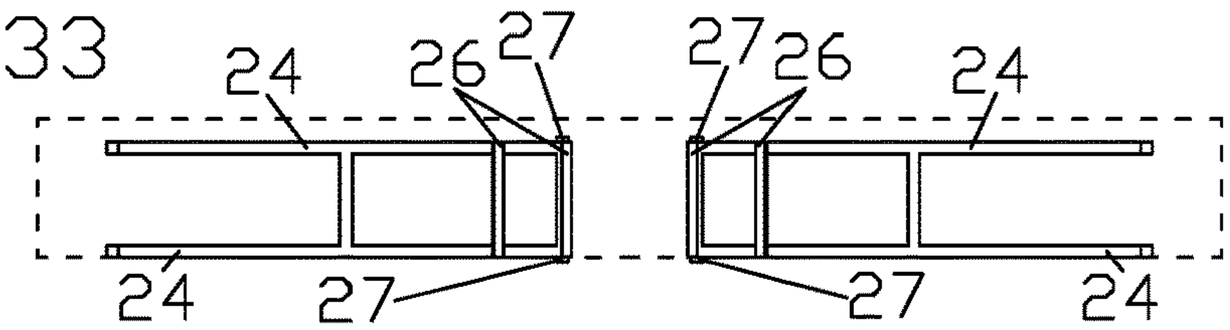


FIG.31

FIG.33



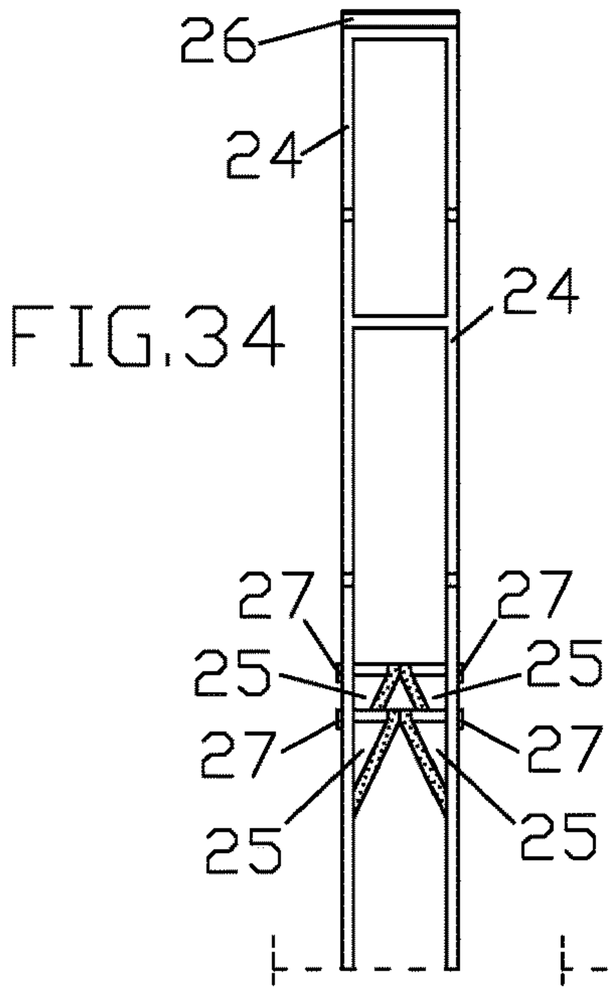
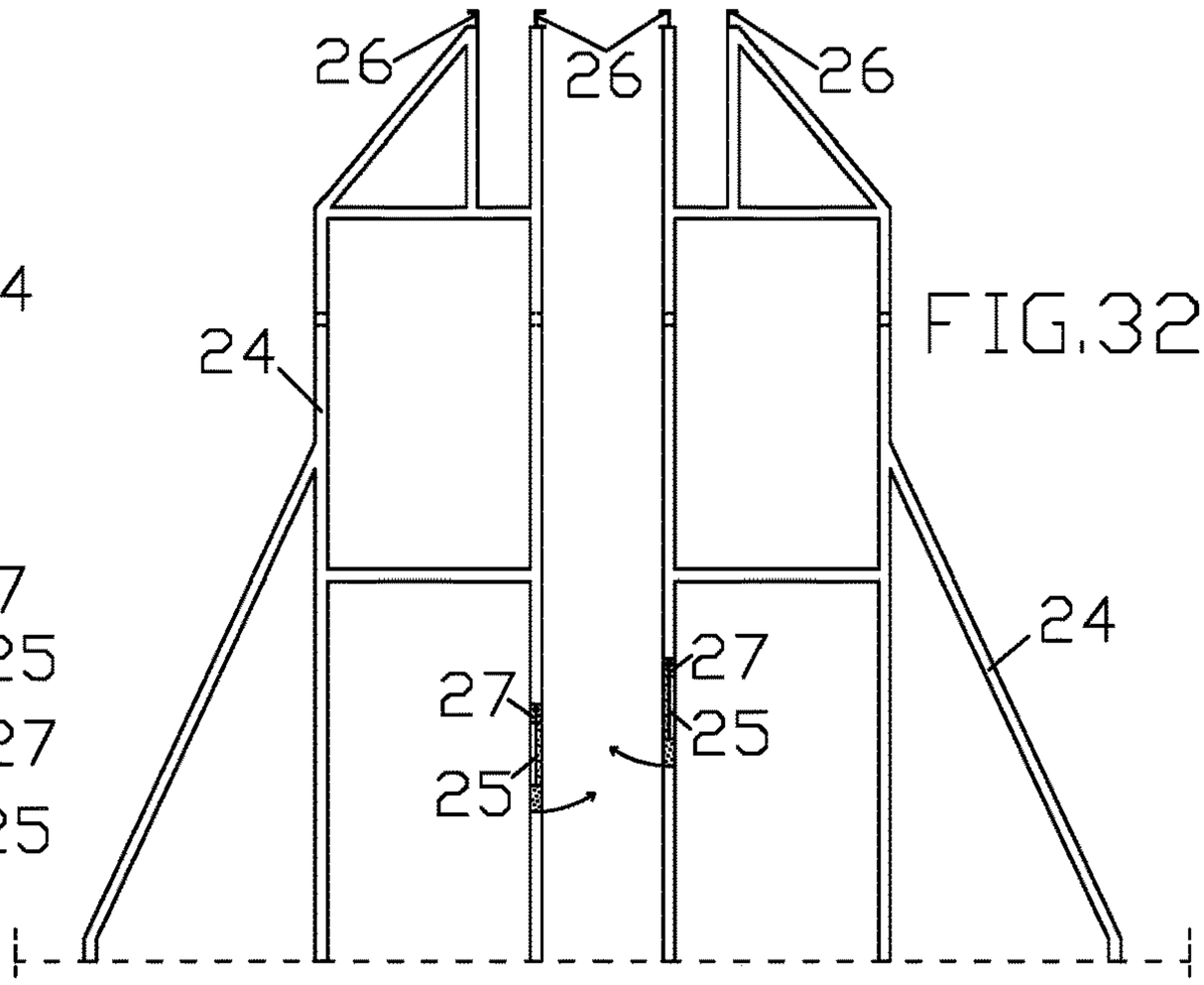


FIG.34



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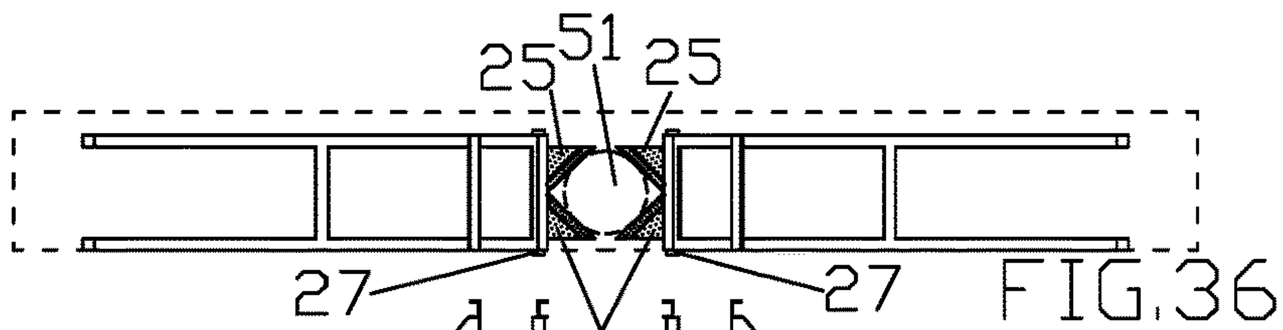
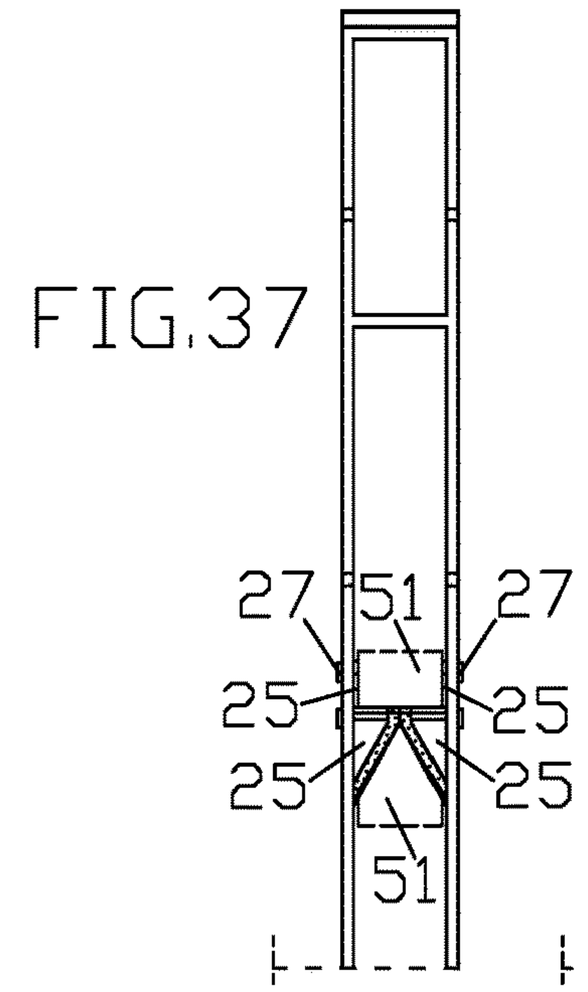


FIG.36



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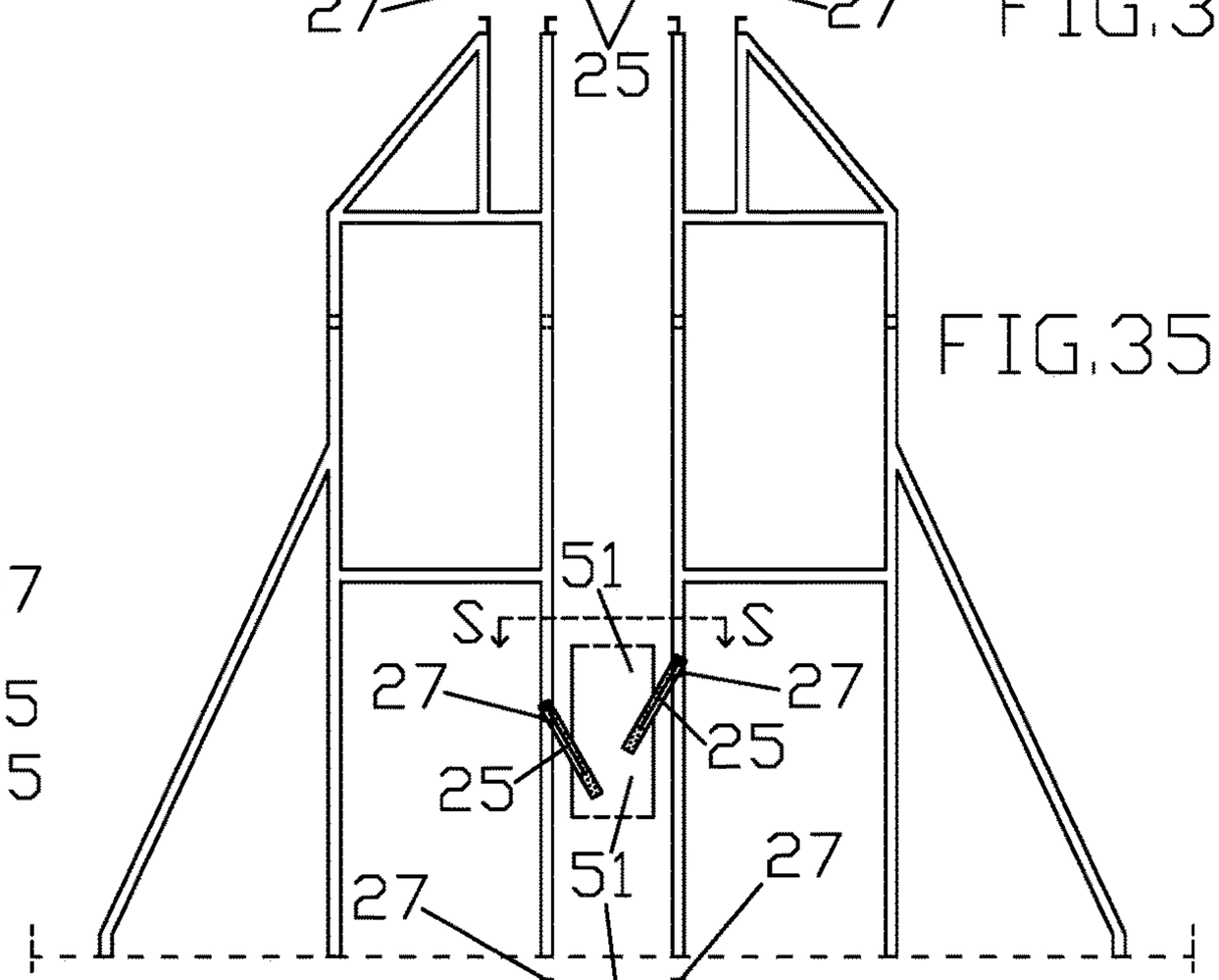

FIG.35

FIG.38
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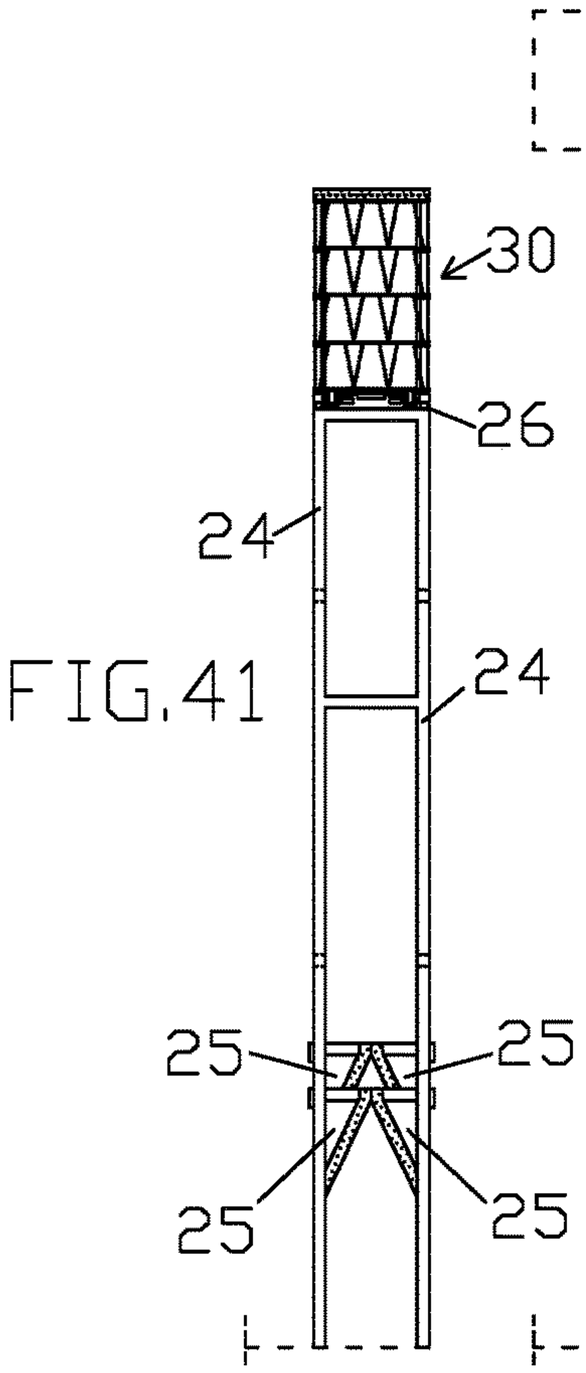

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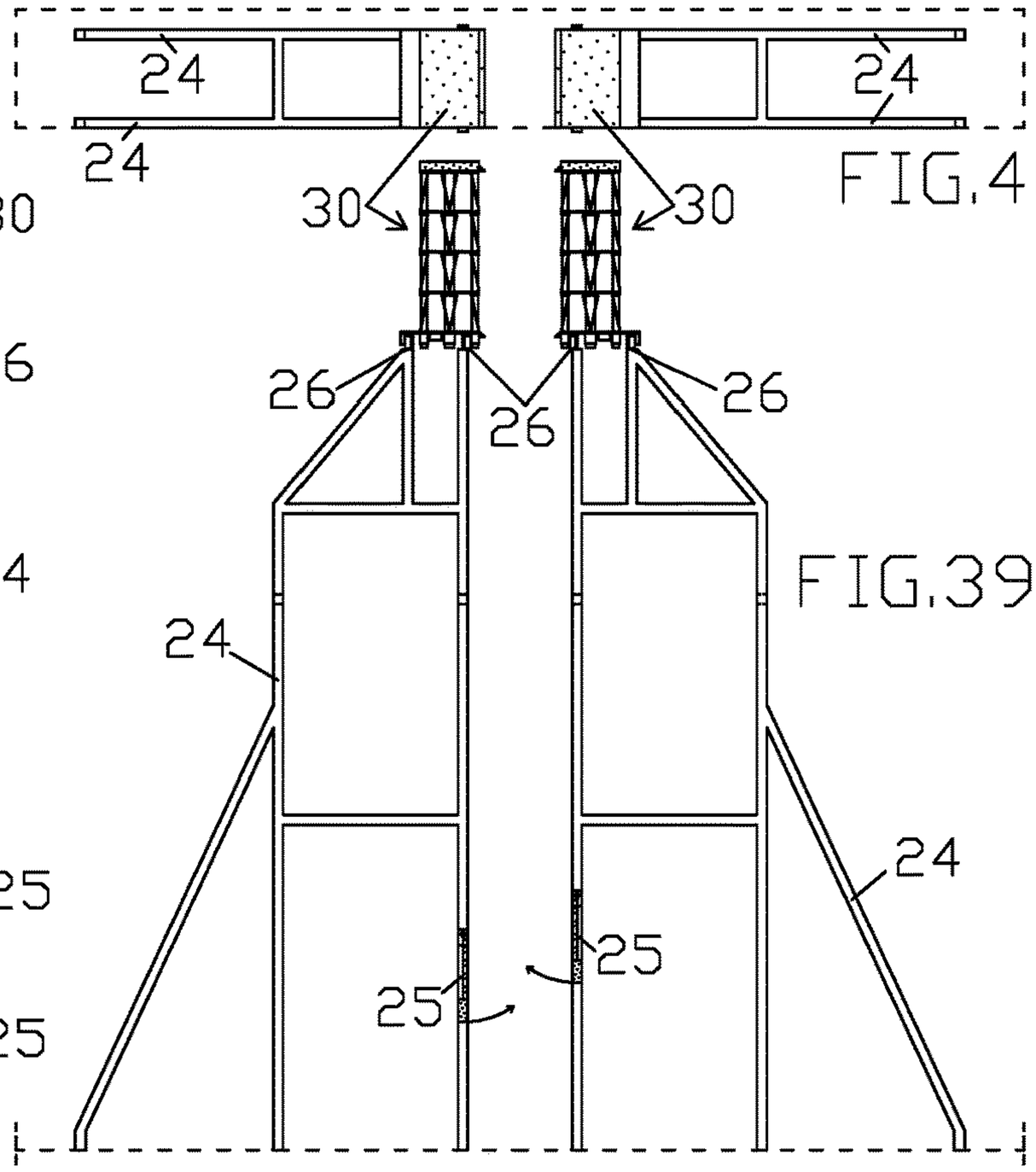

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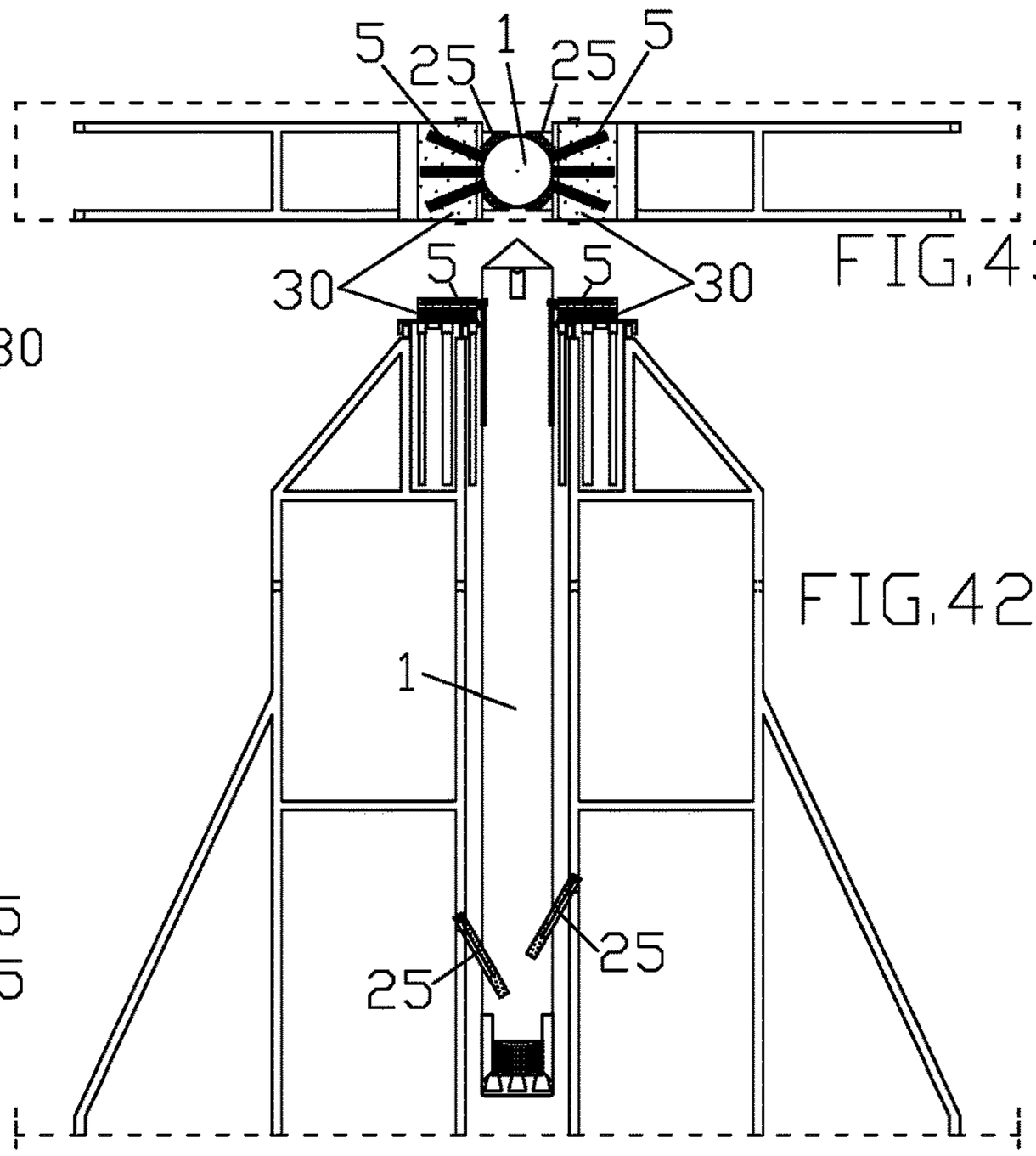


FIG.43

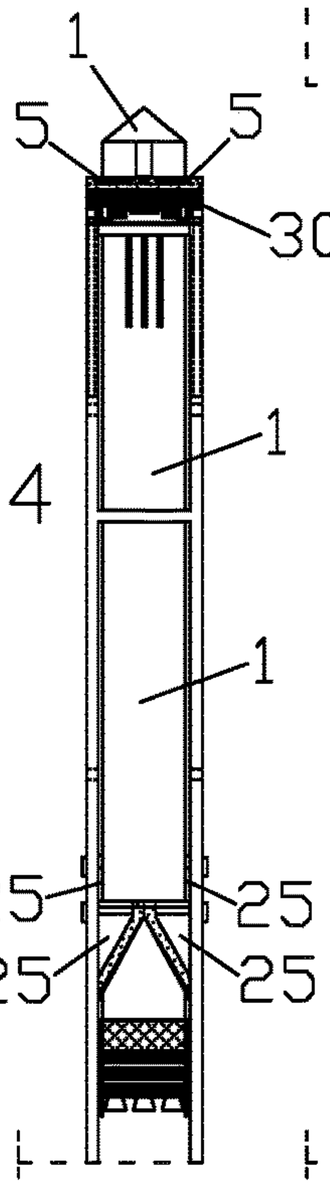
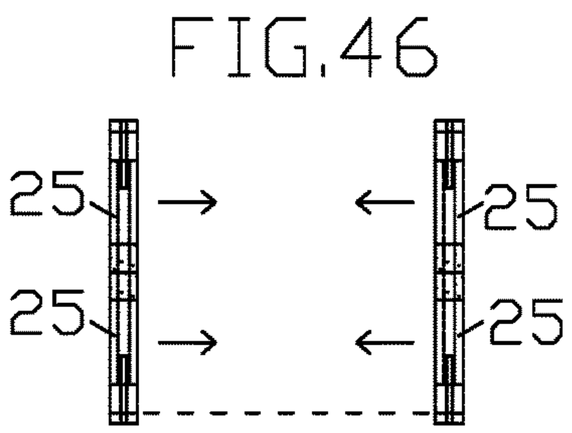


FIG.44

FIG.42



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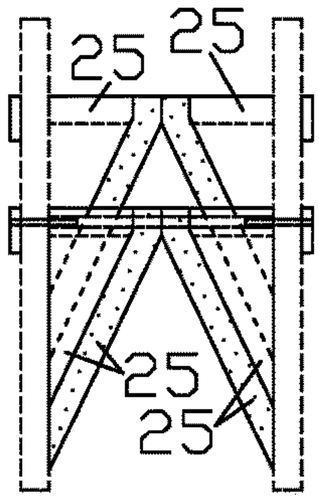

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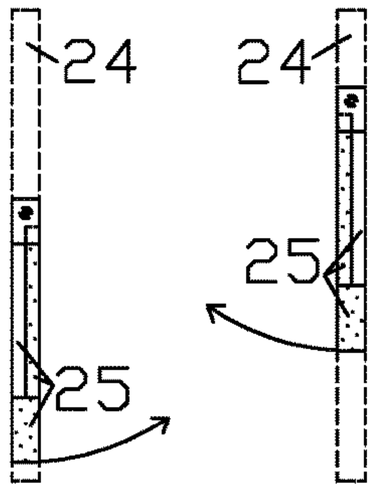


FIG.45

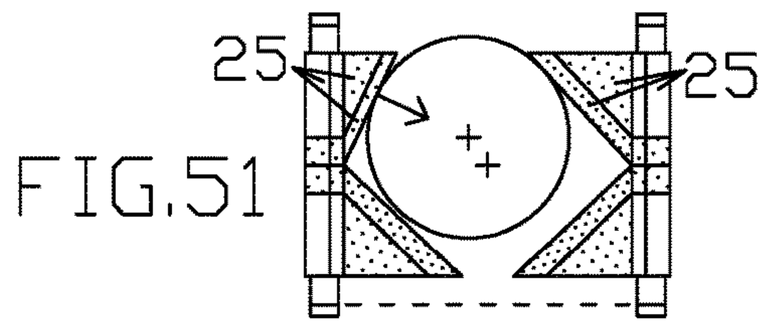
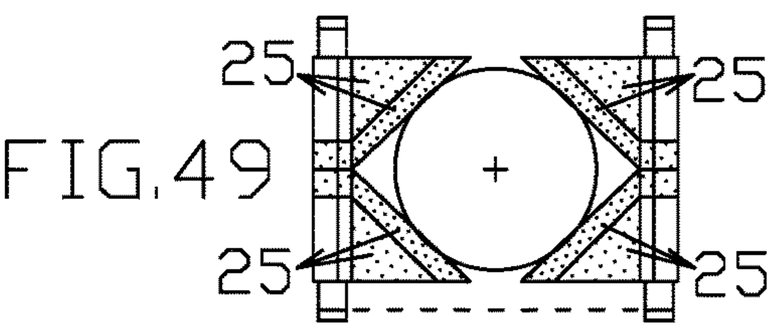


FIG.51



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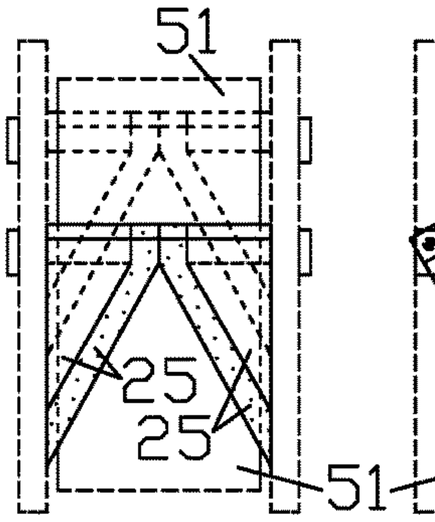


FIG.50

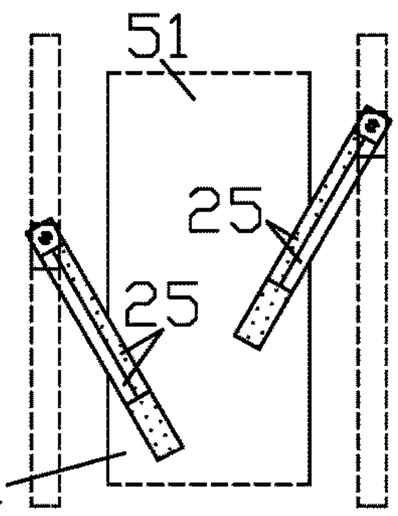


FIG.48

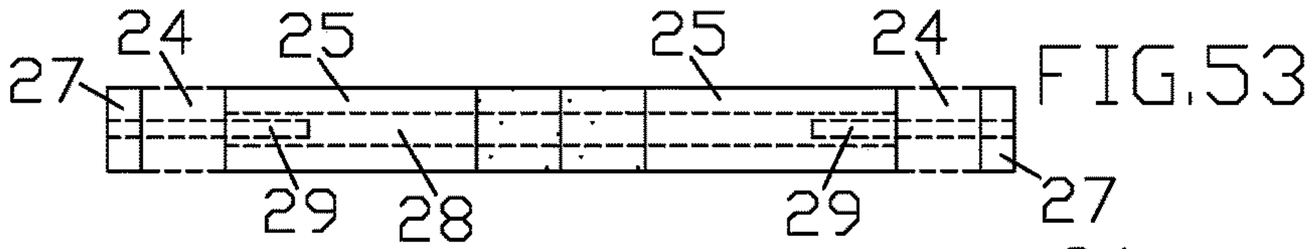


FIG.53

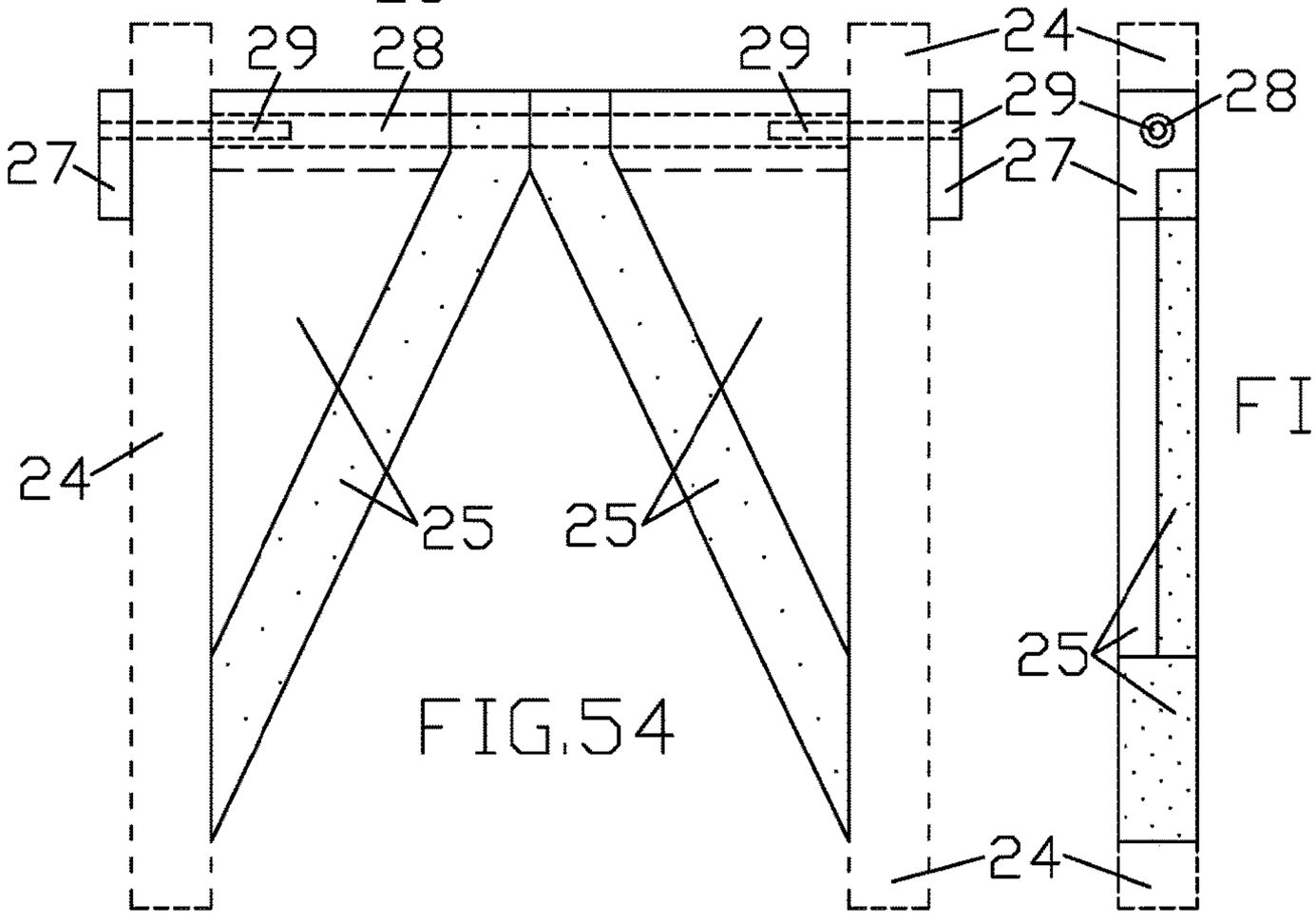


FIG.54

FIG.52

FIG.56

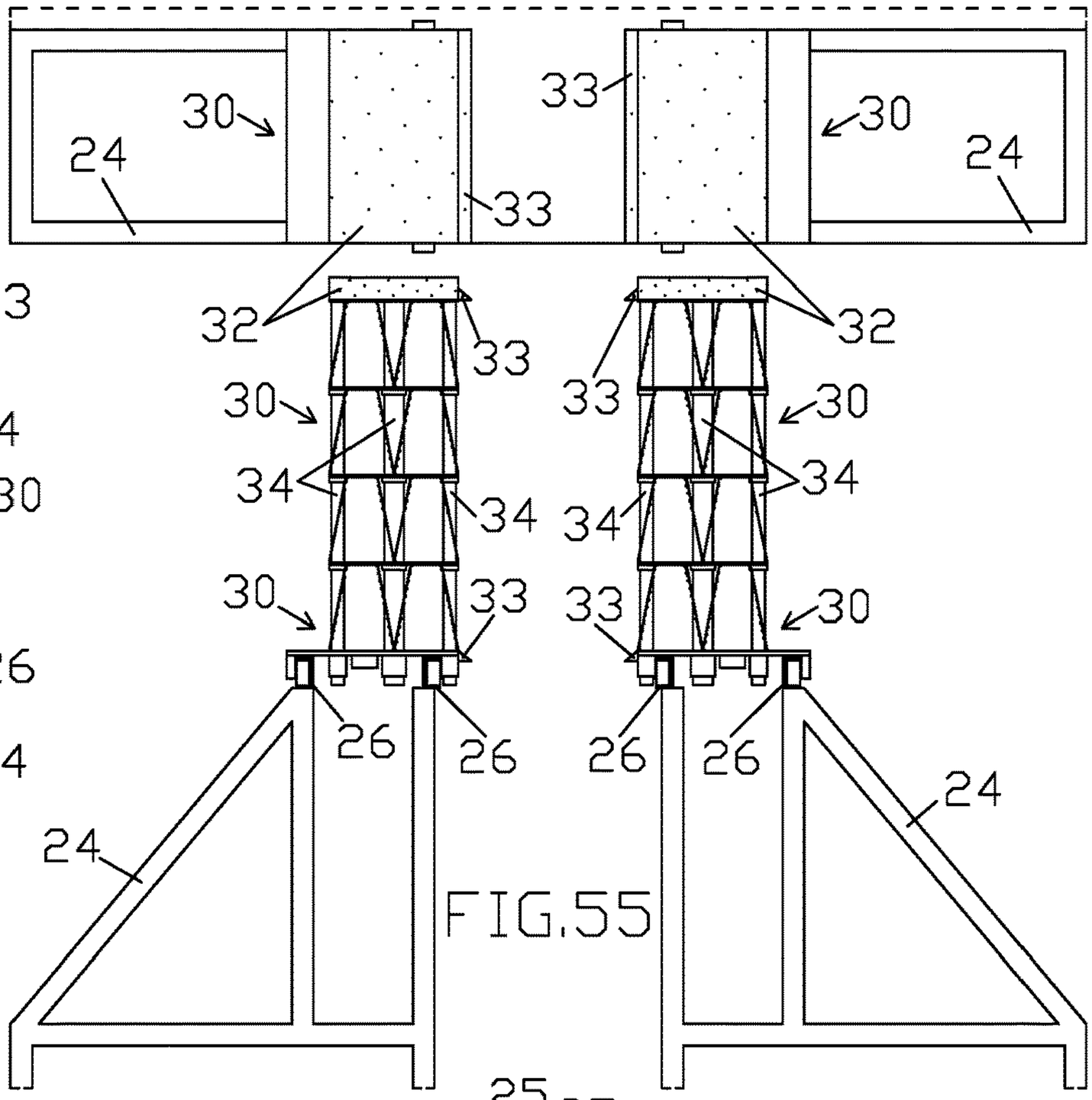


FIG.55

FIG.57

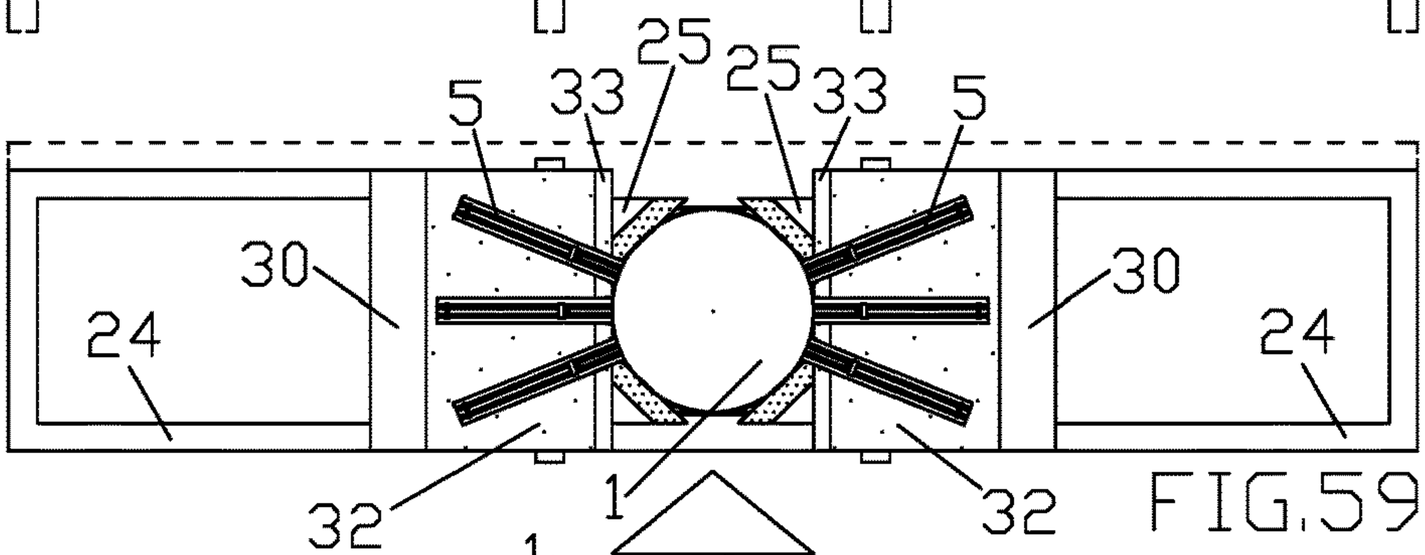
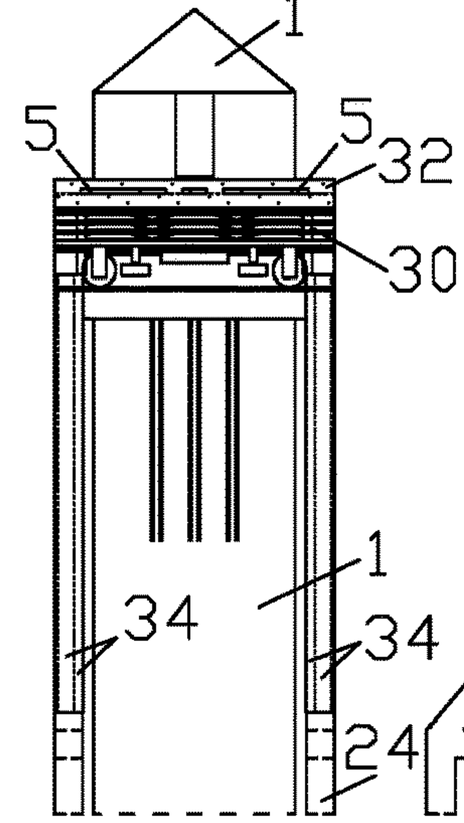


FIG.59

FIG.60



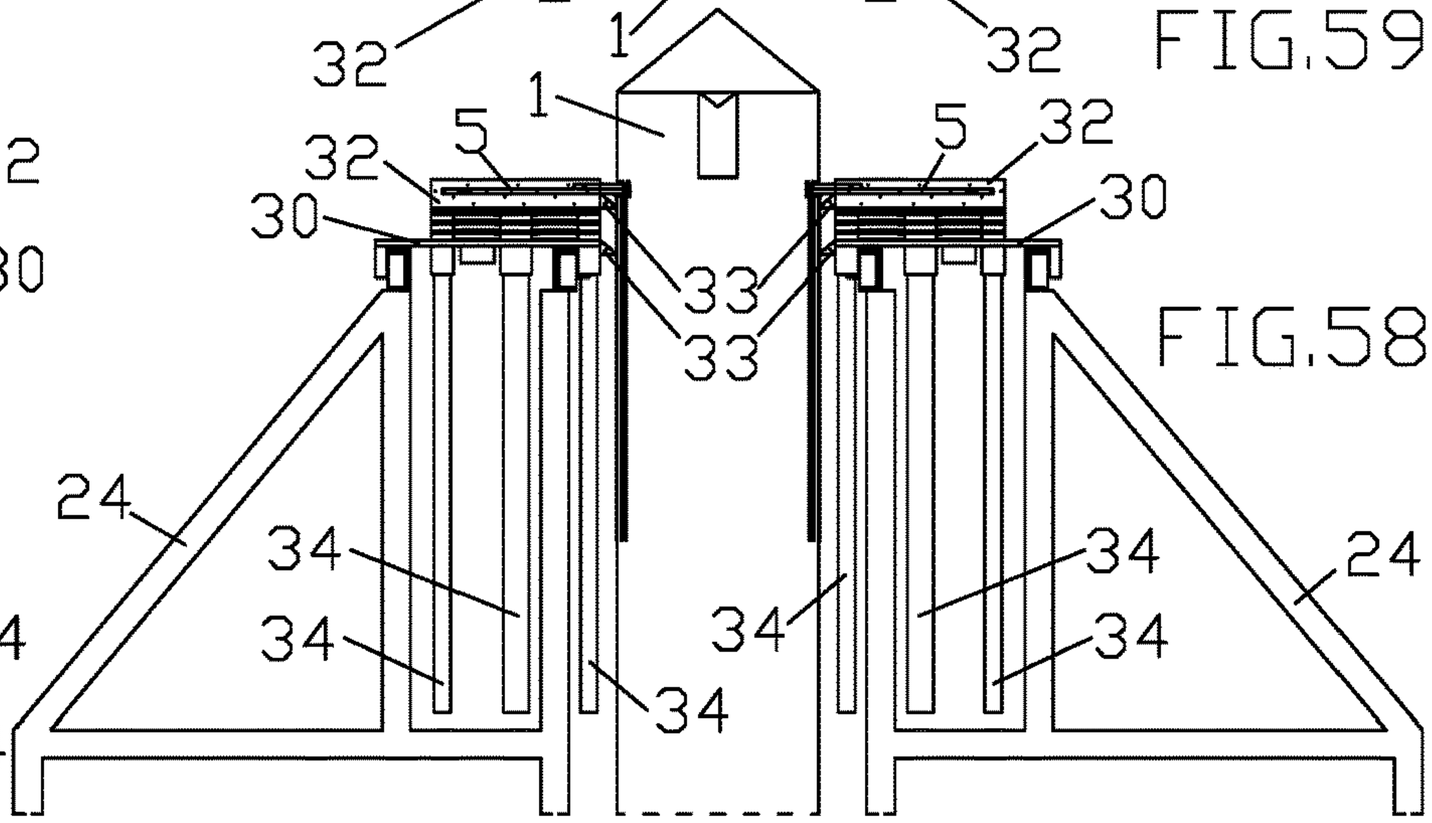


FIG.58

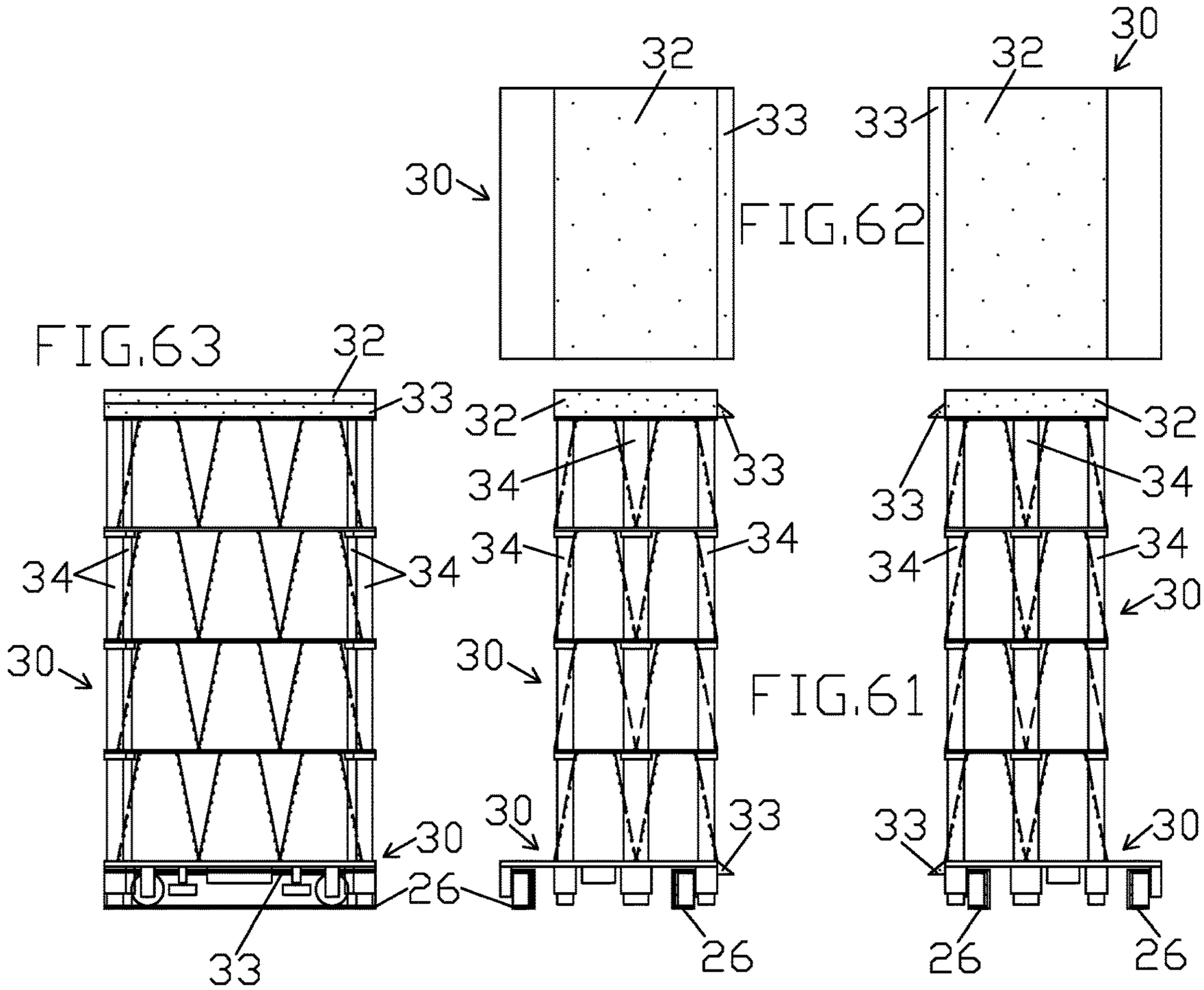


FIG.61

FIG.62

FIG.63

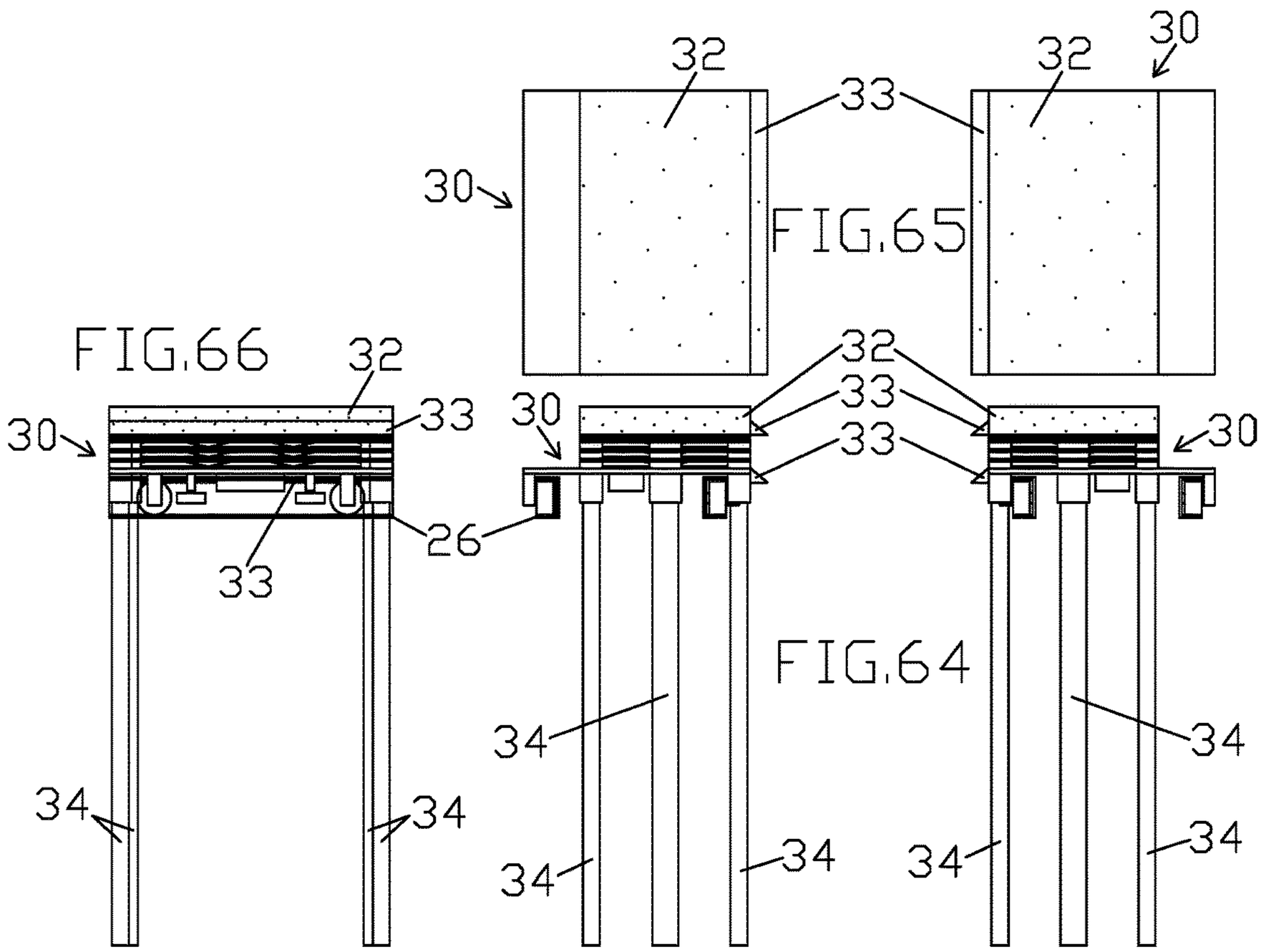


FIG.64

FIG.65

FIG.66

FIG.68

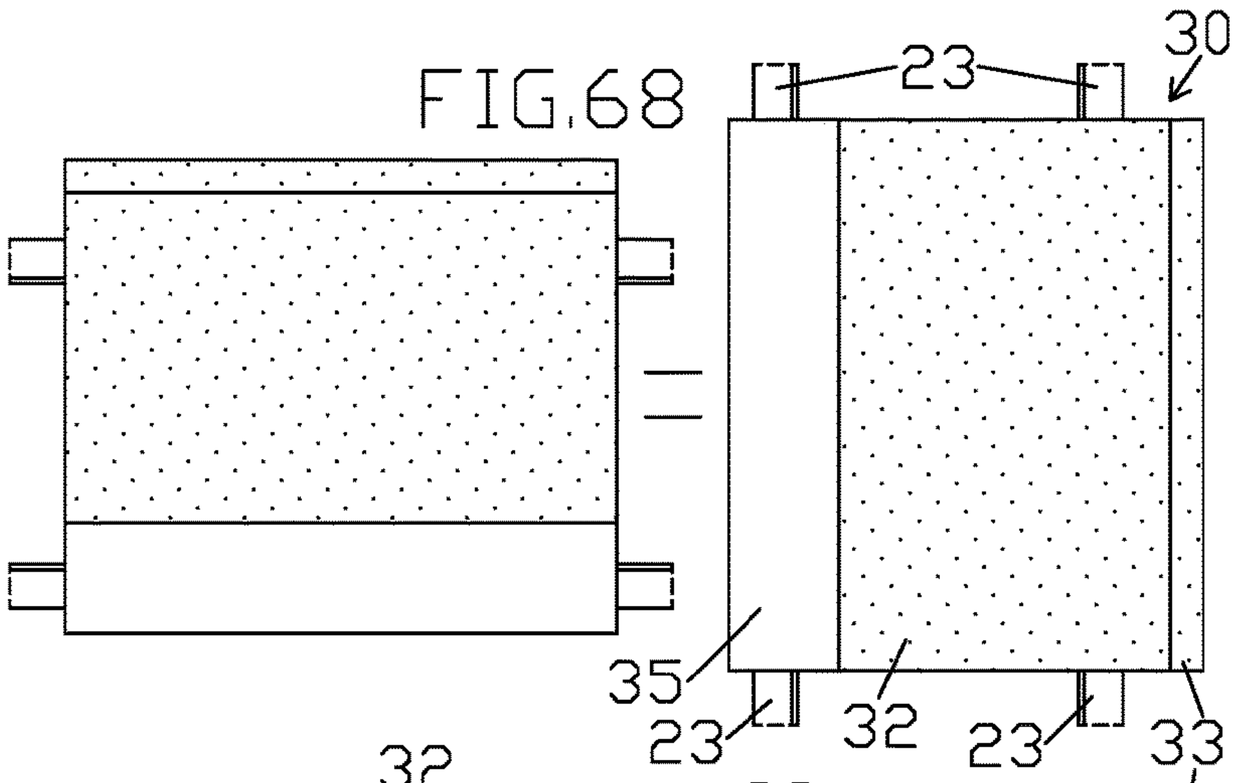


FIG.69

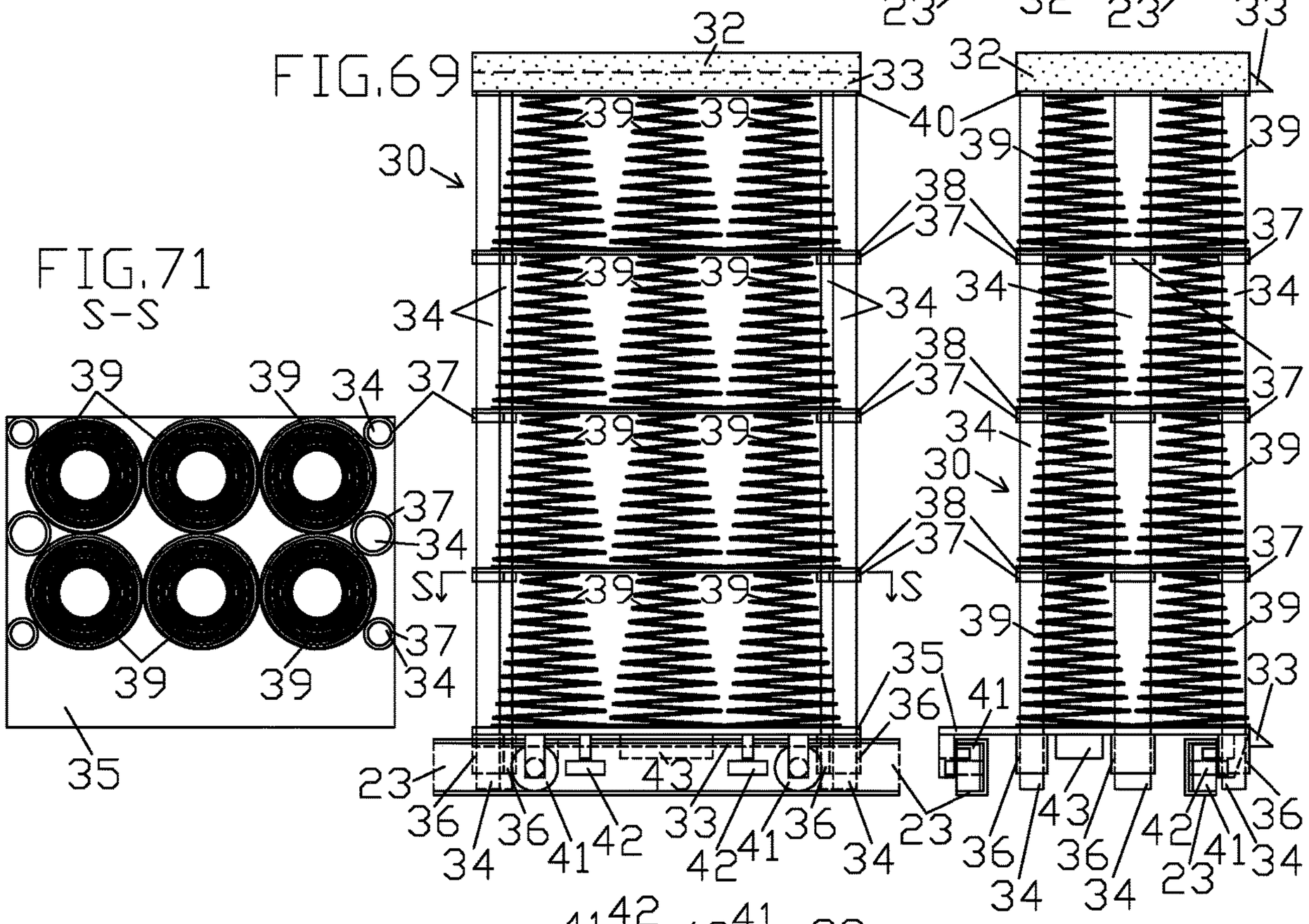


FIG.71
S-S

FIG.67

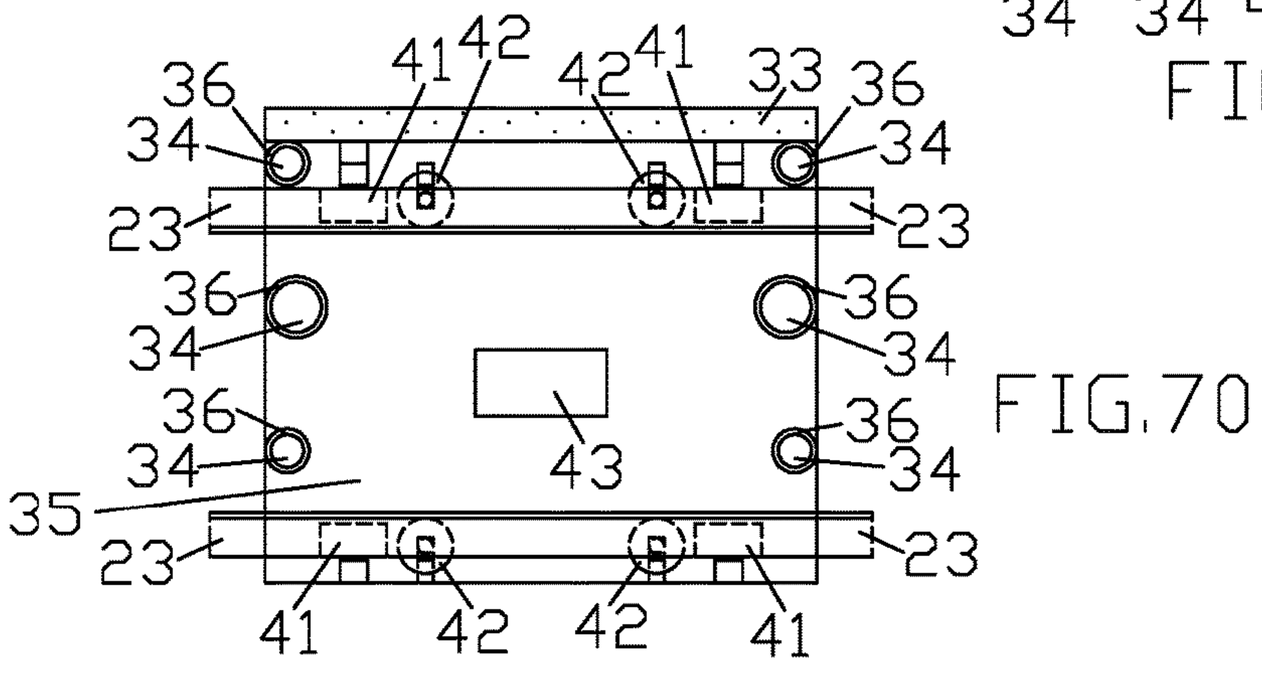


FIG.70

FIG.73

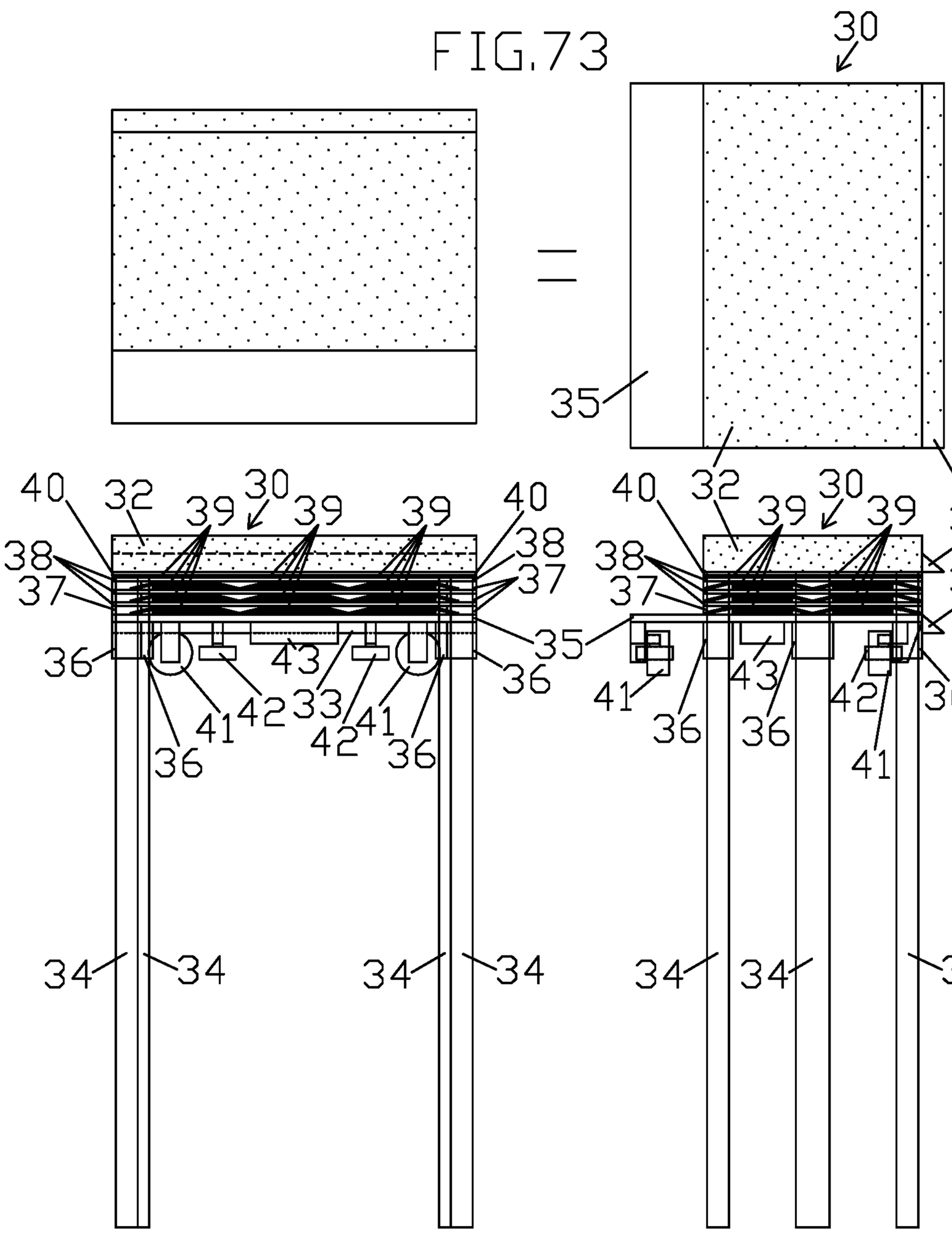


FIG.74

FIG.72

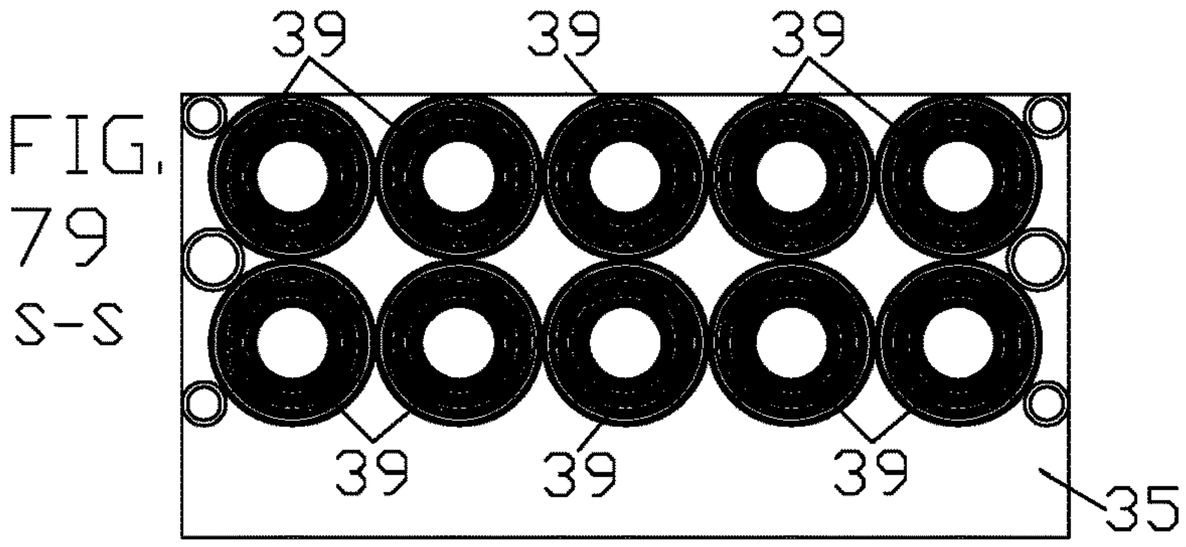


FIG. 79 S-S

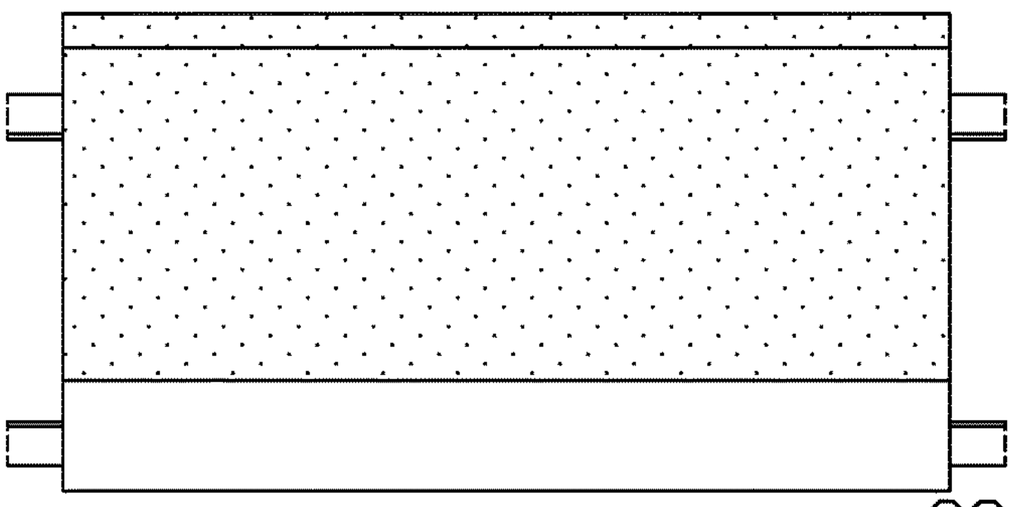
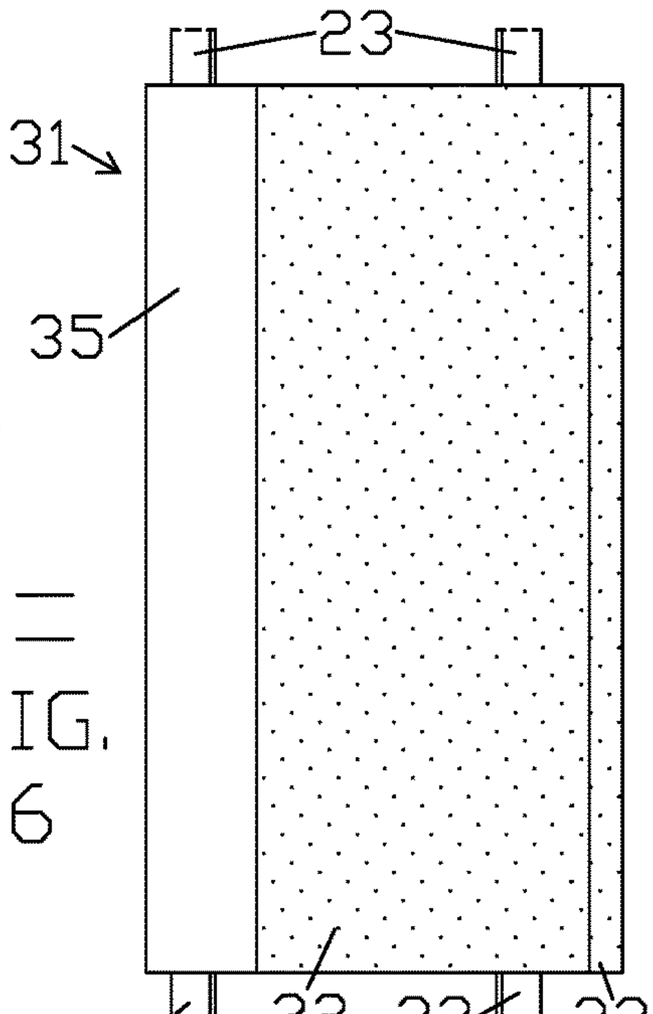


FIG. 76



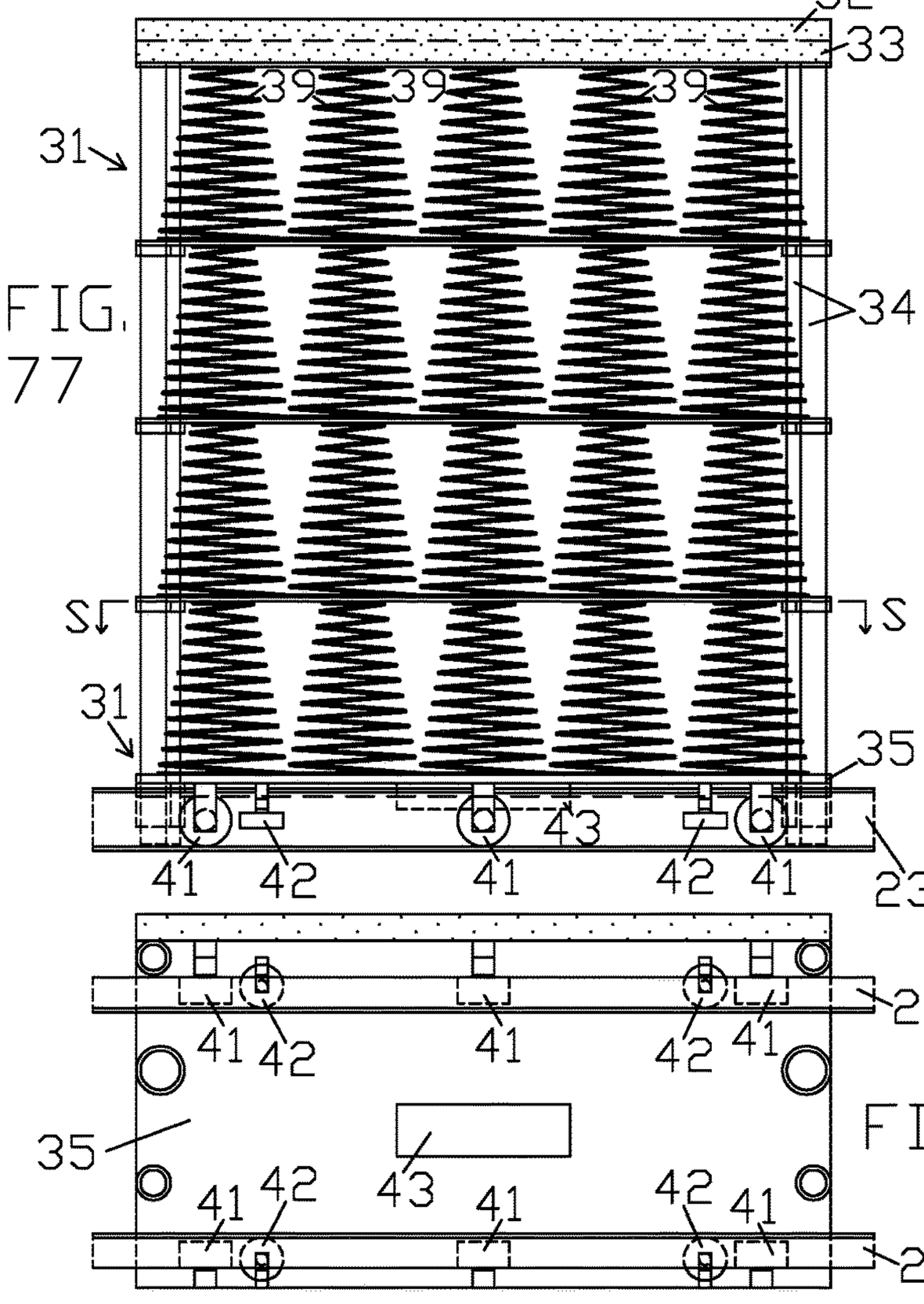


FIG. 77

FIG. 78

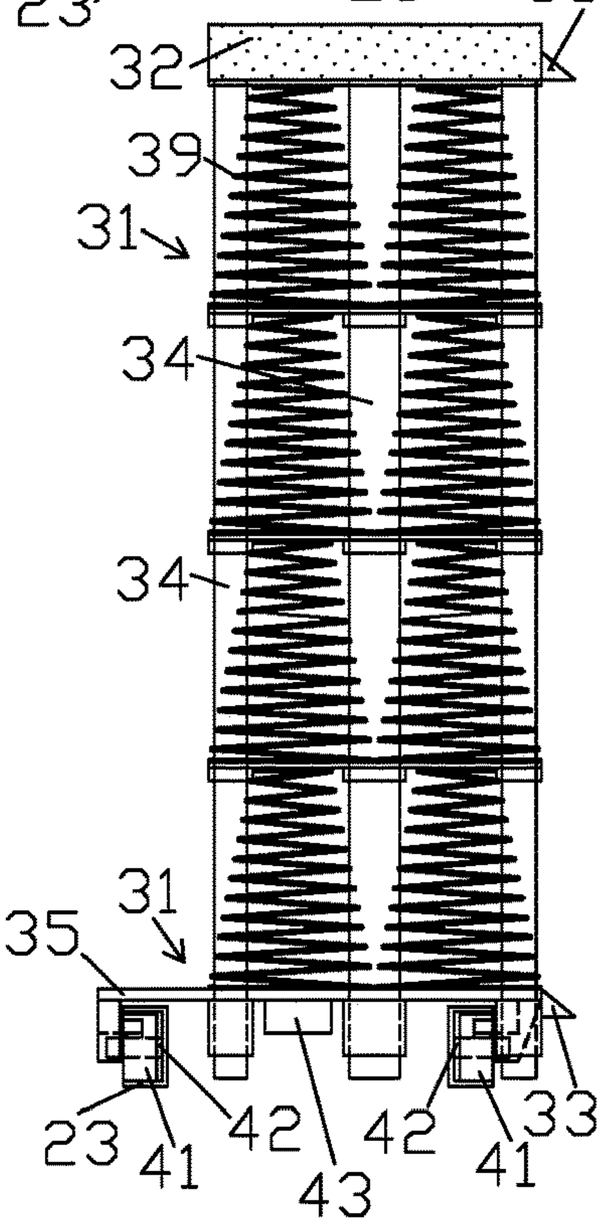


FIG. 75

FIG.80

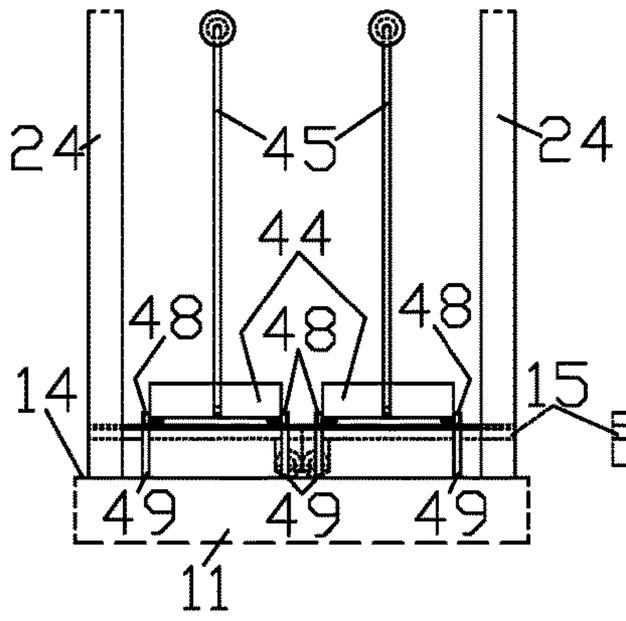


FIG.82

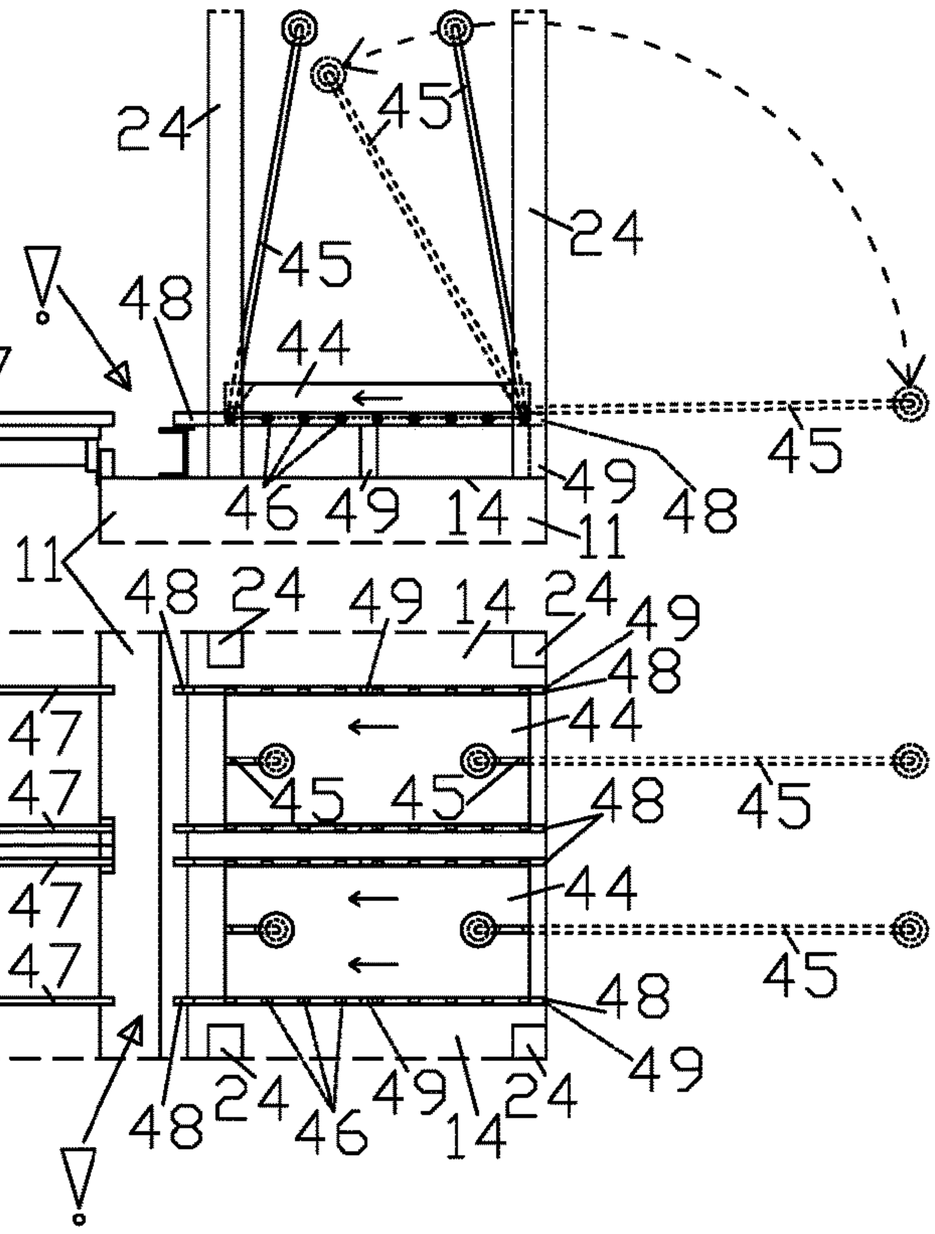


FIG.81

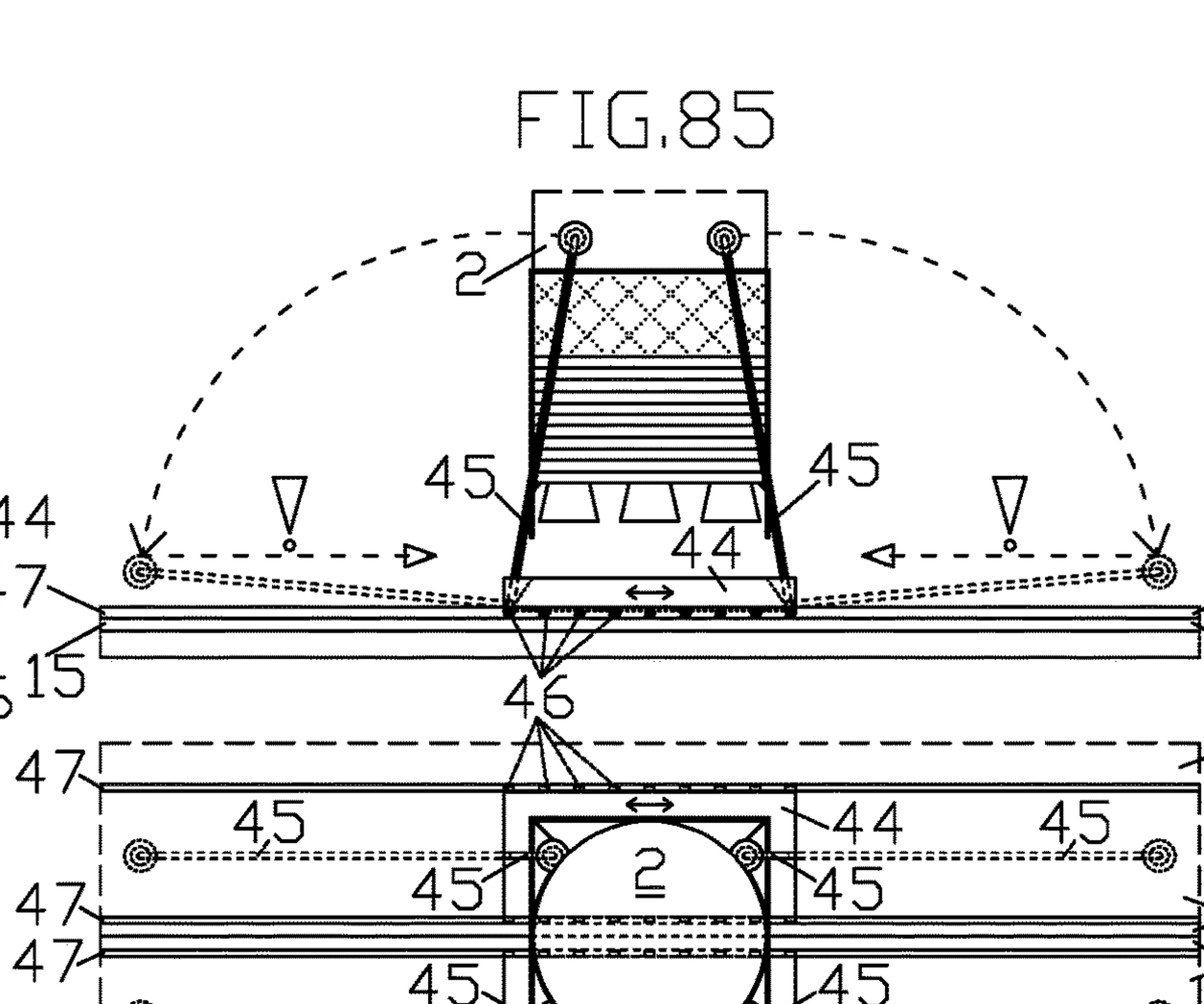


FIG.83

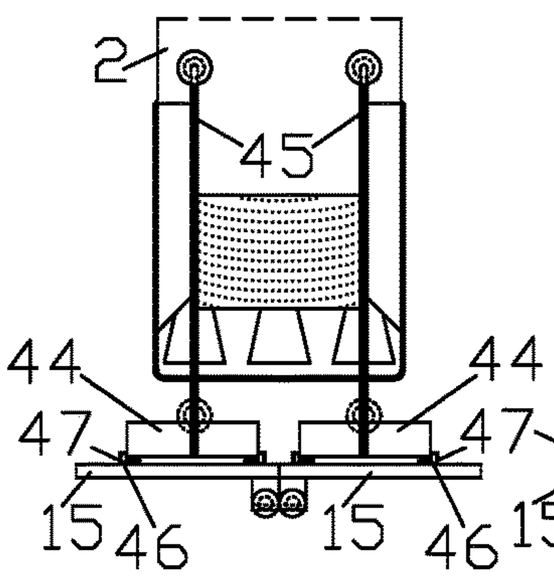


FIG.85

FIG.84

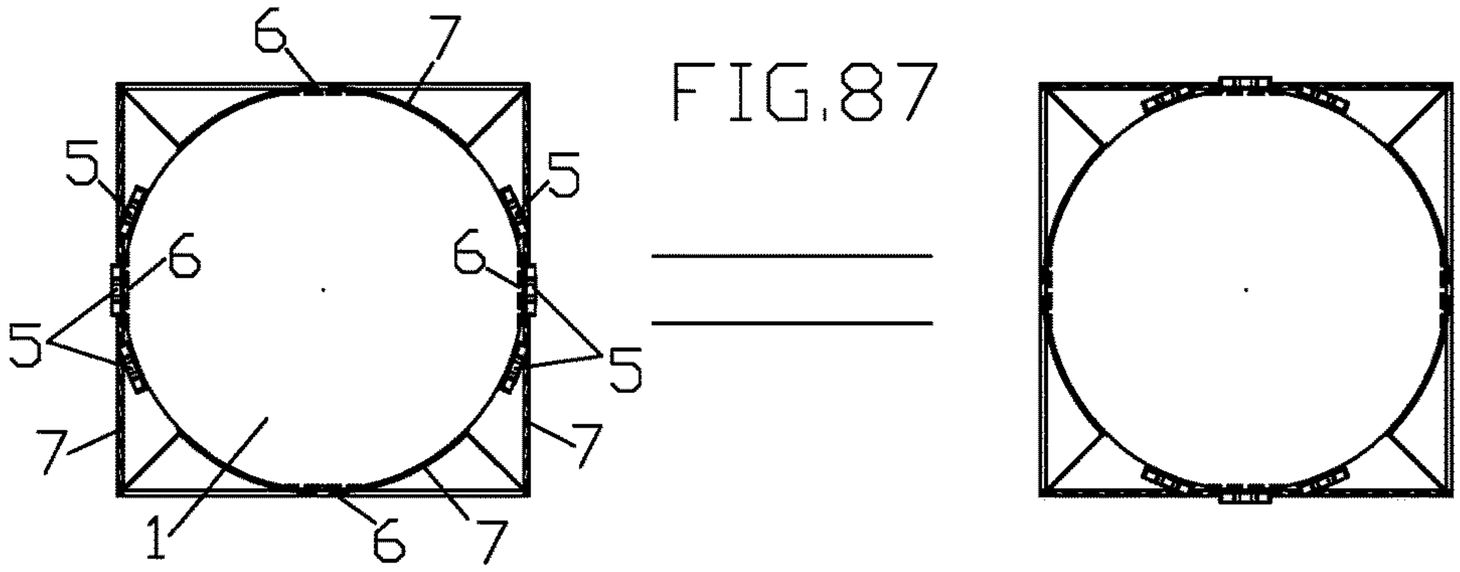


FIG.87

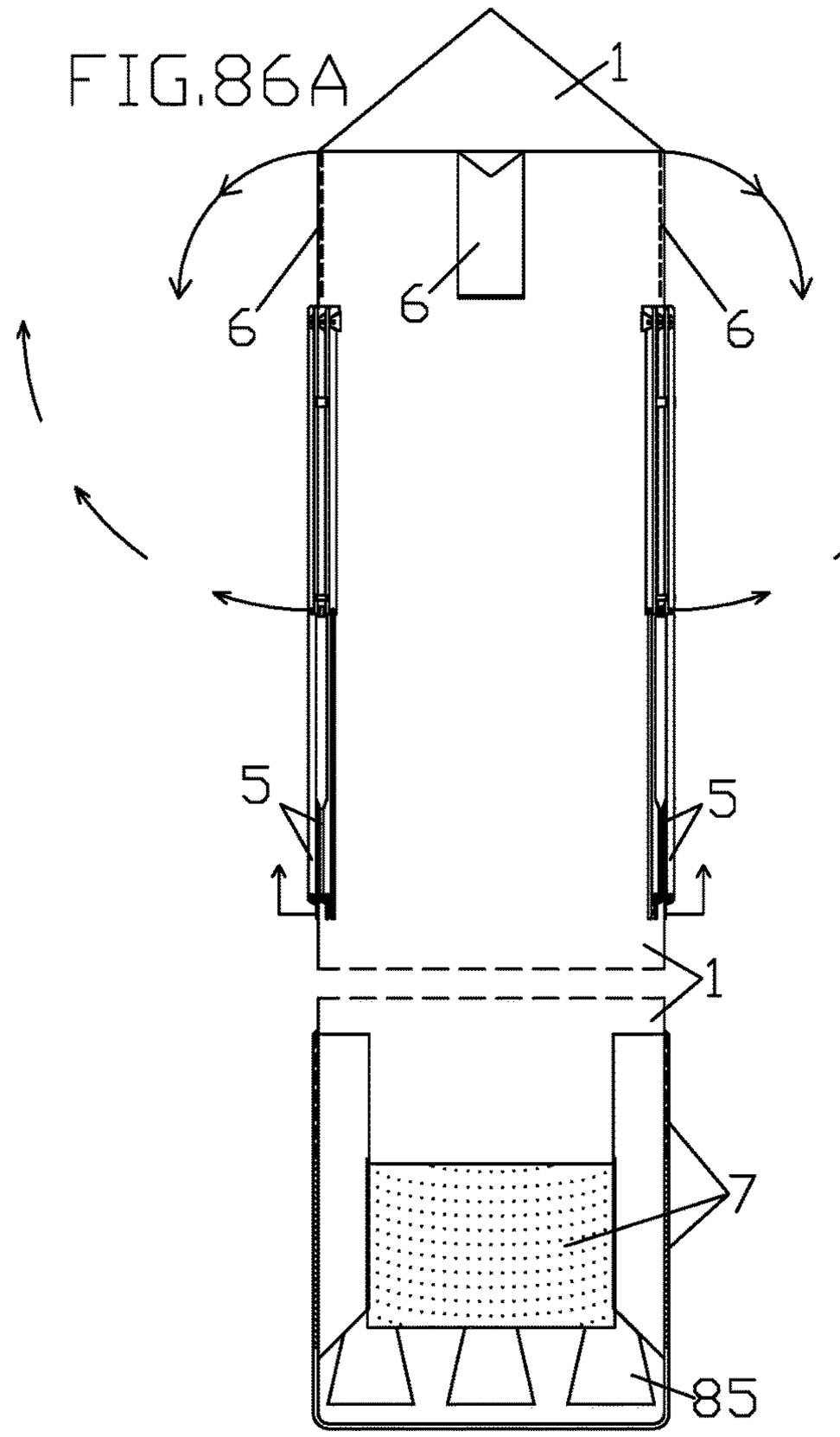


FIG.86A

FIG.86B

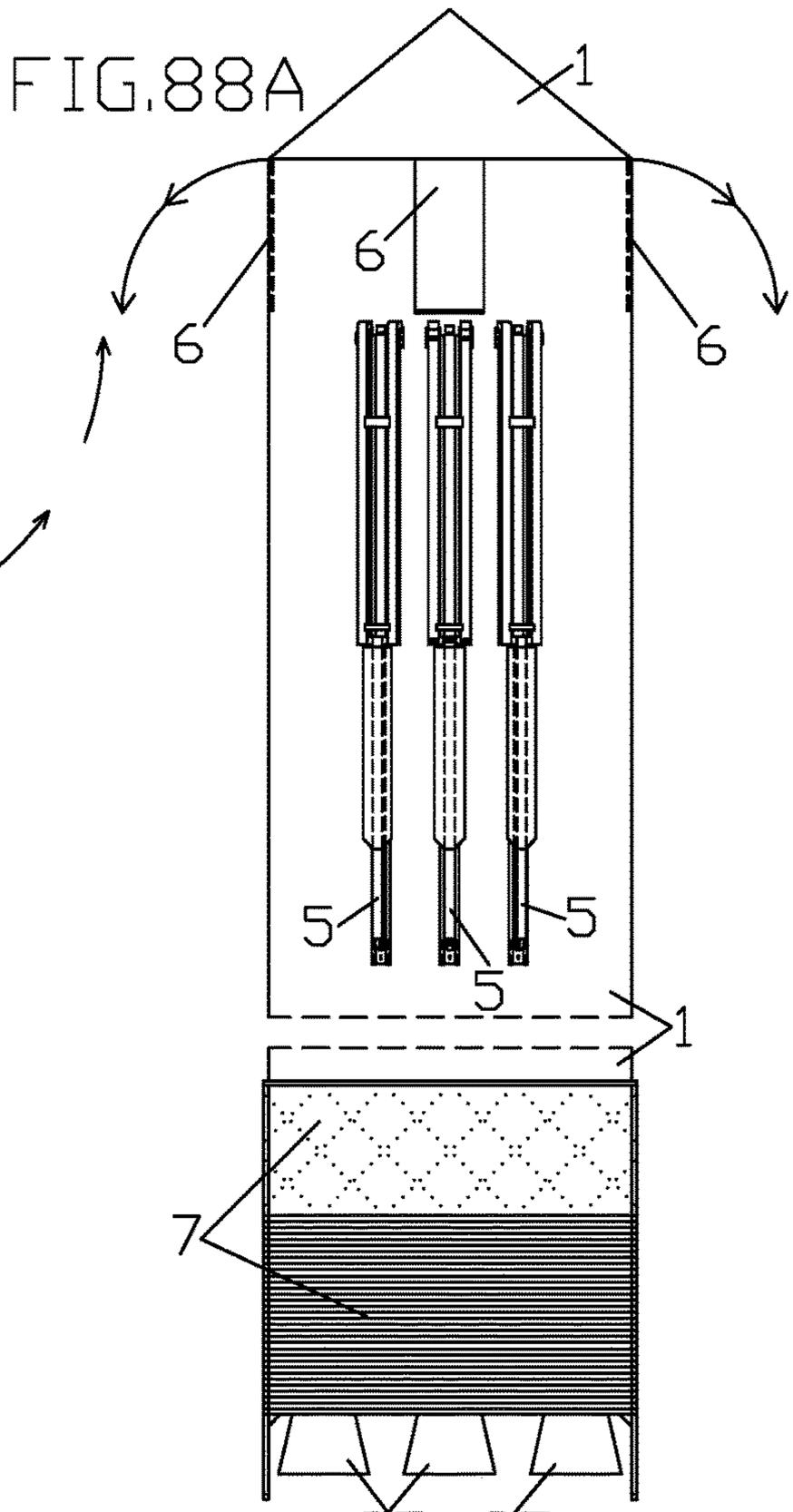


FIG.88A

FIG.88B

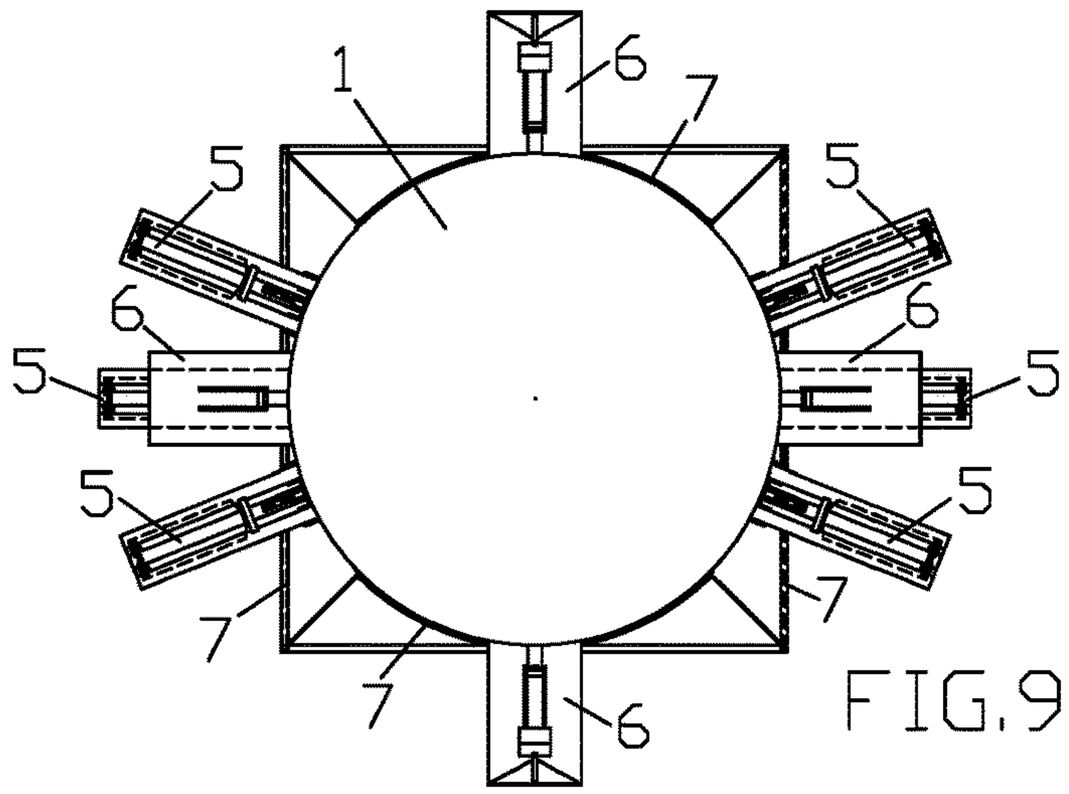


FIG.90

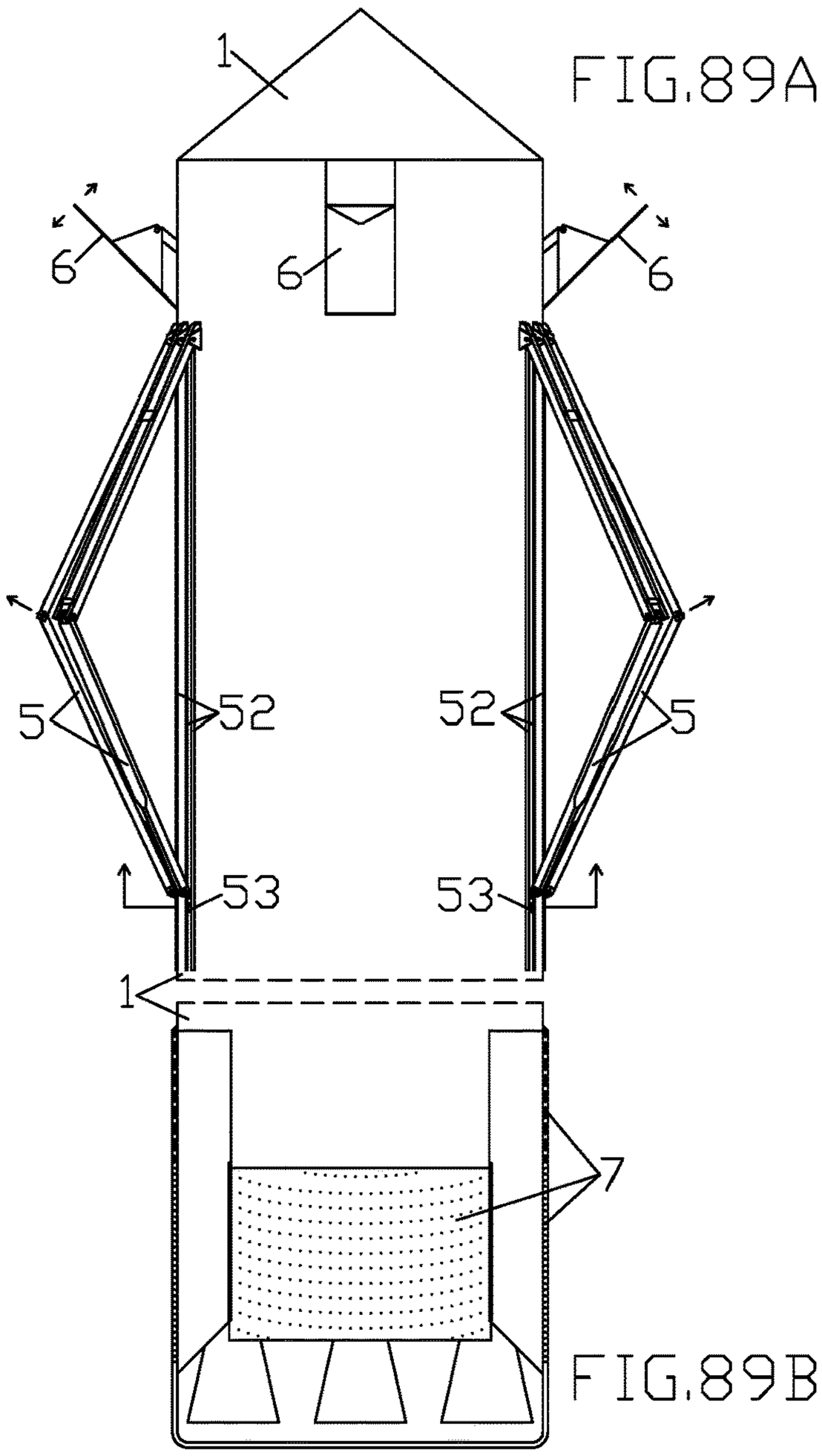


FIG.89A

FIG.89B

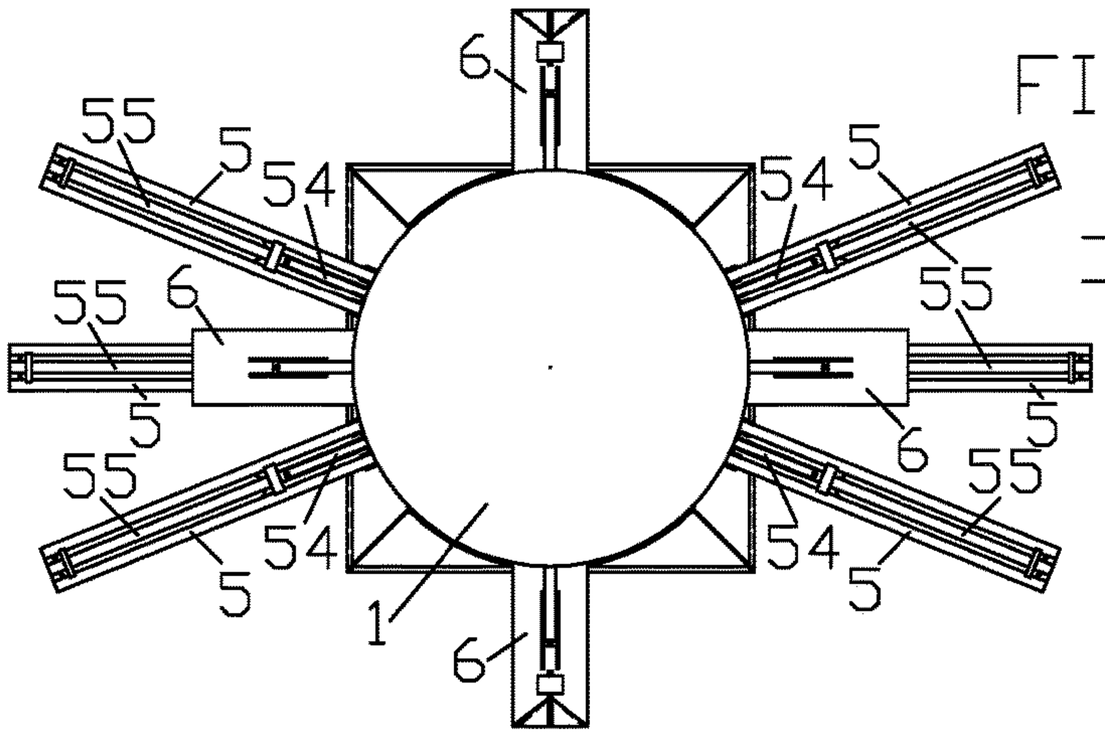


FIG.92

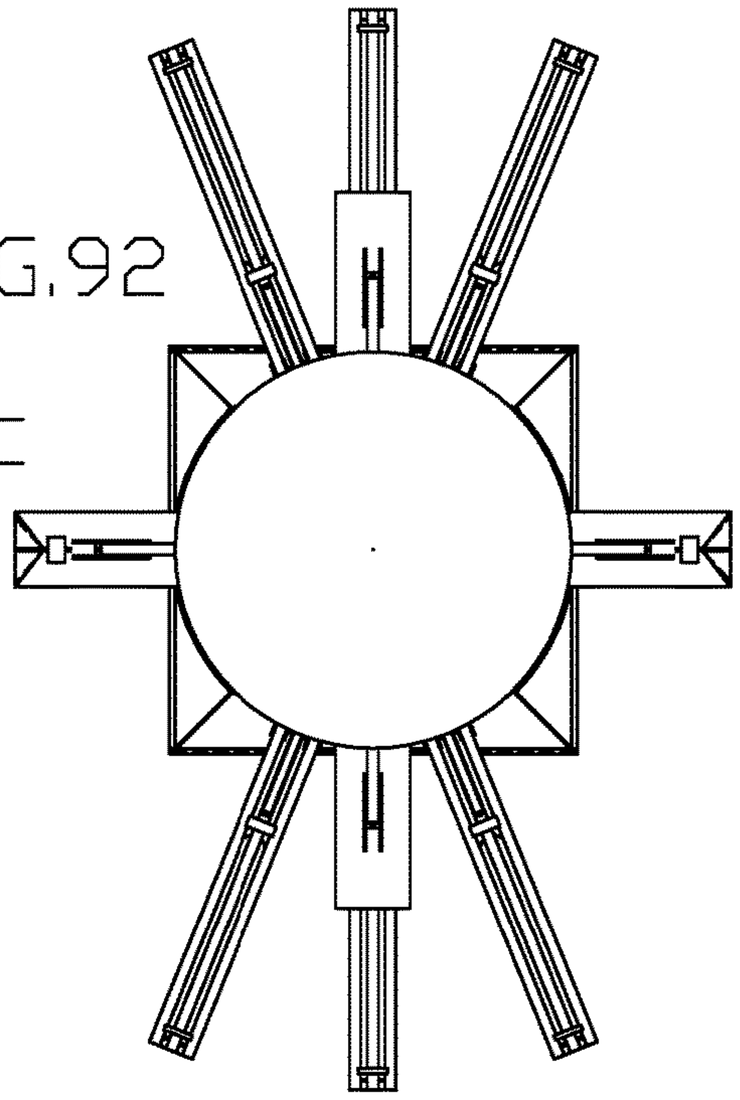


FIG.91A

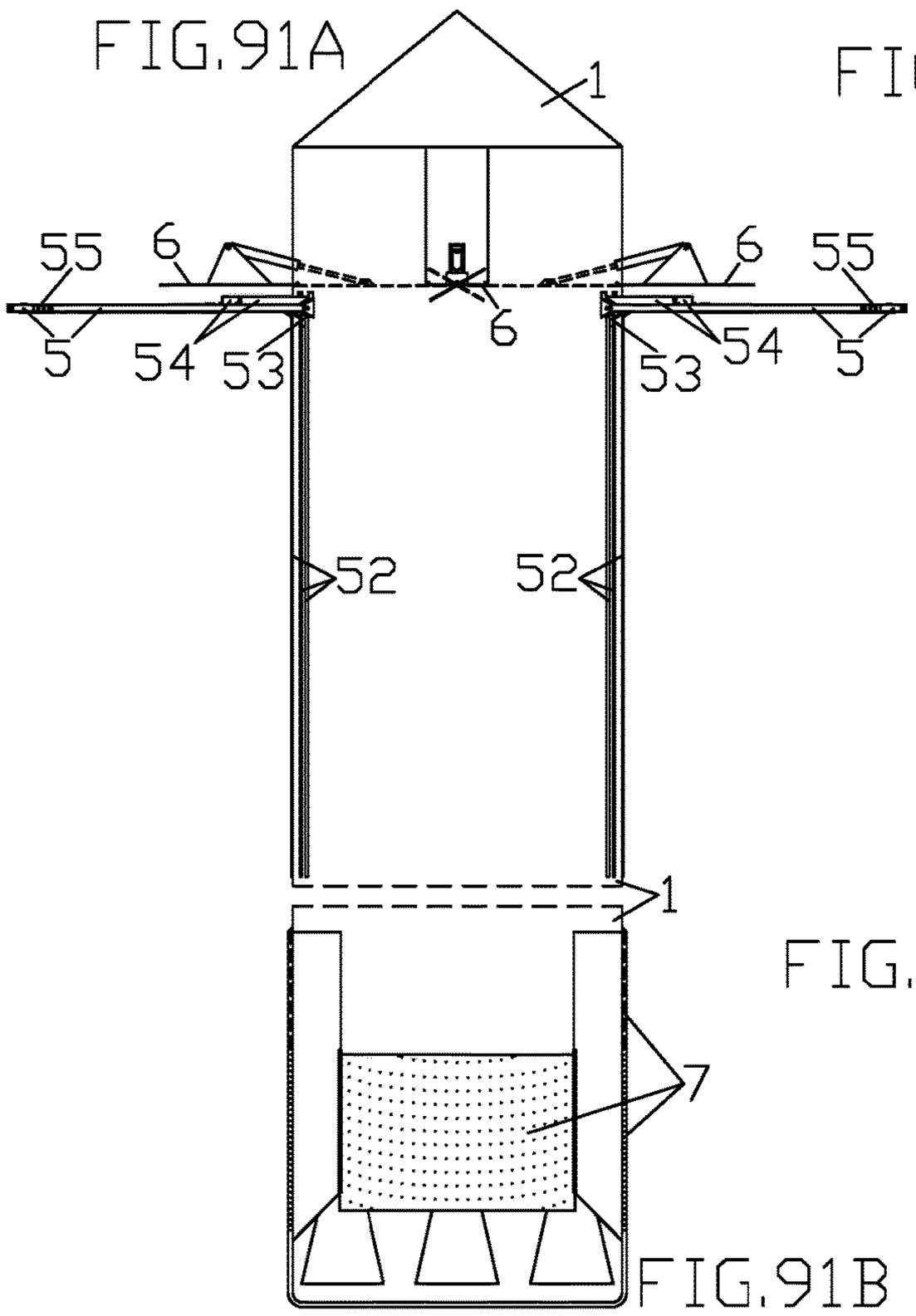


FIG.91B

FIG.93A

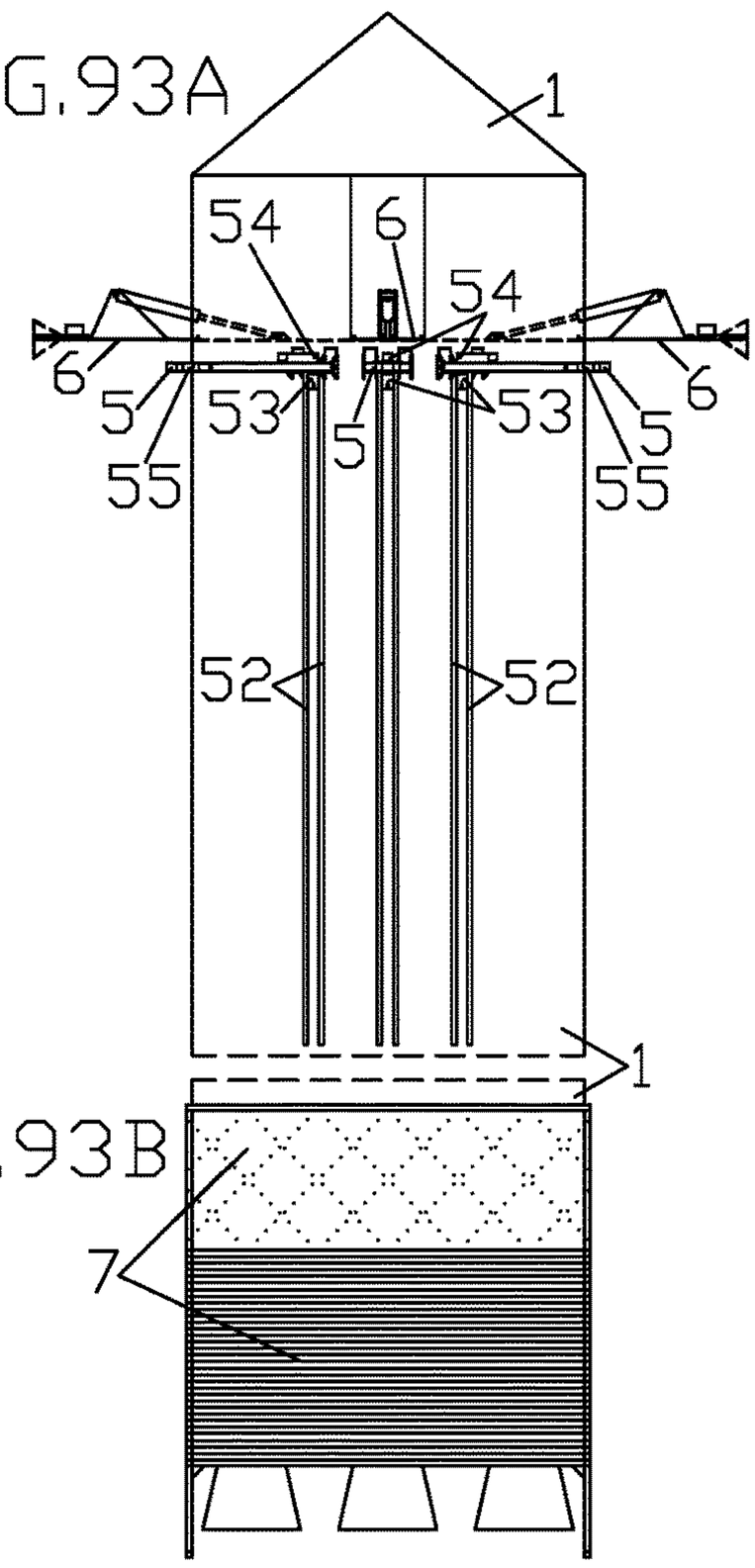


FIG.93B

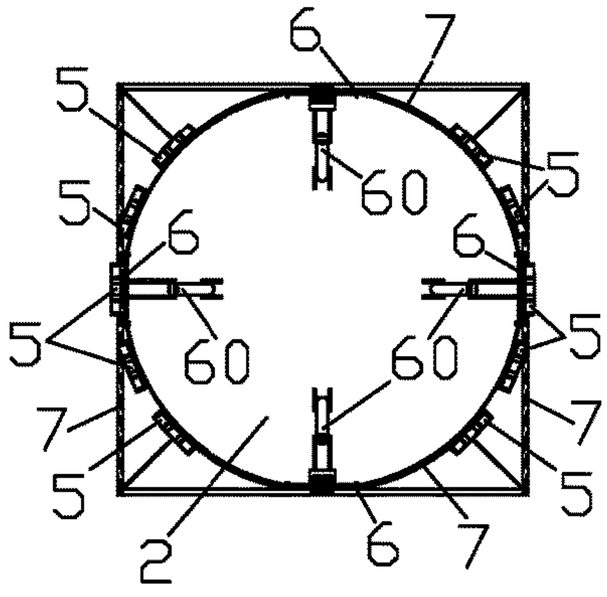


FIG.95

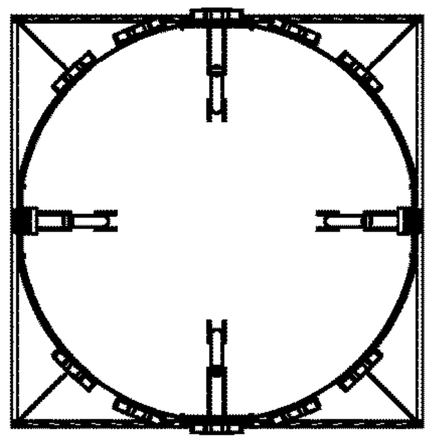


FIG.94A

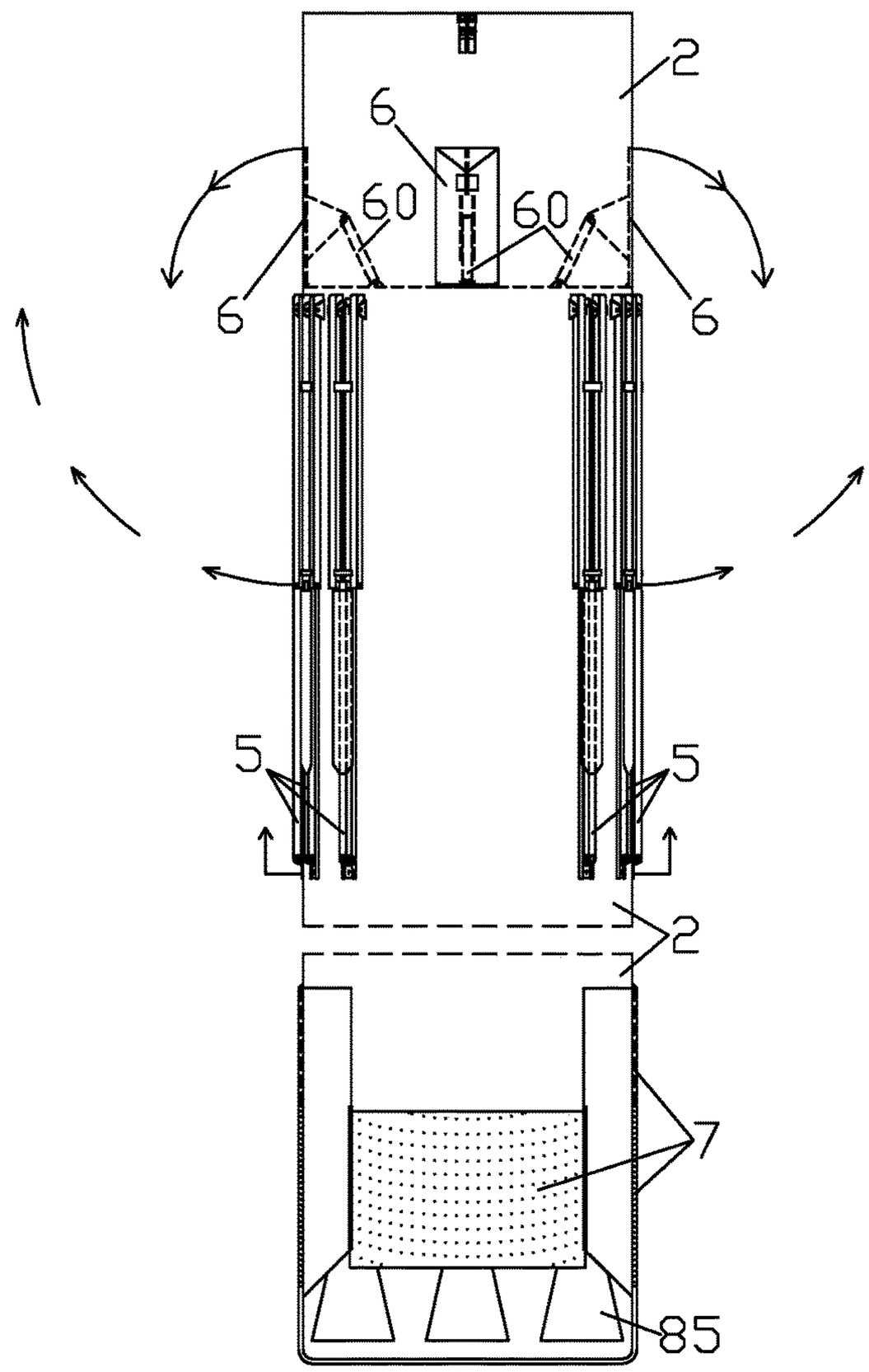


FIG.94B

FIG.96A

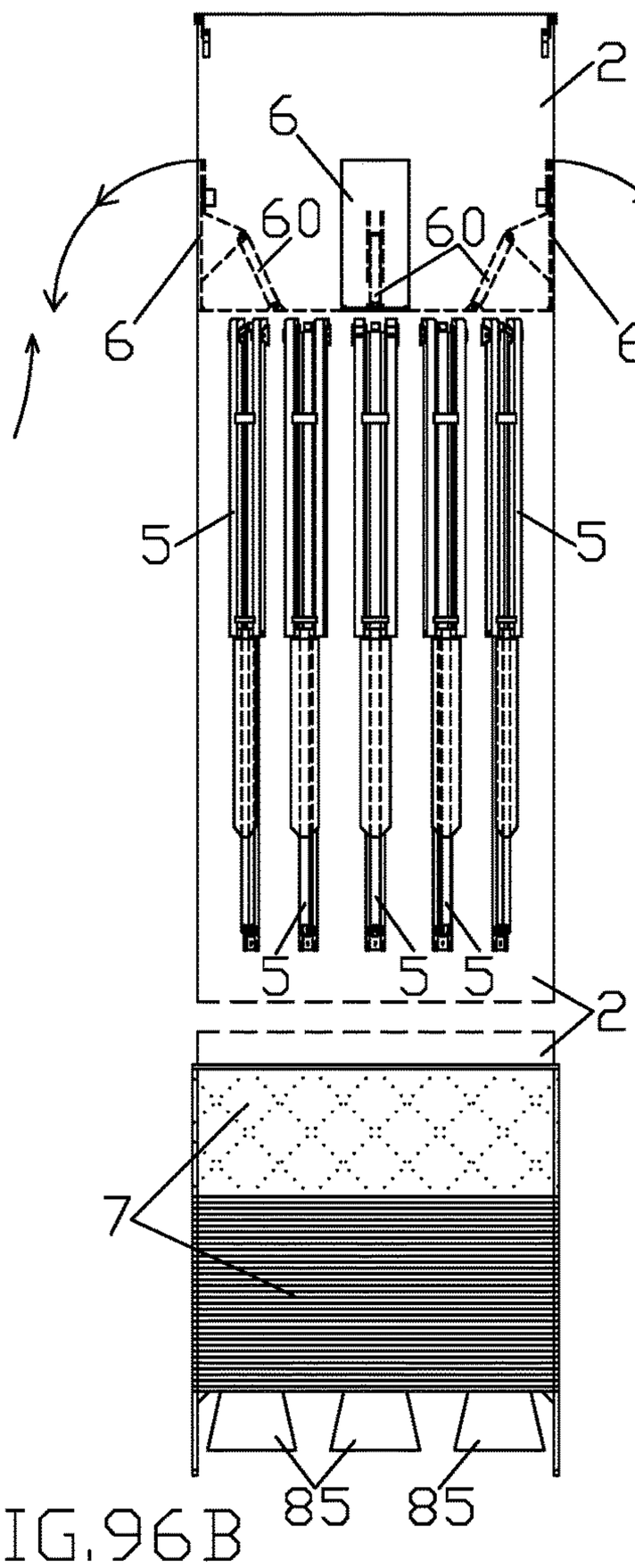
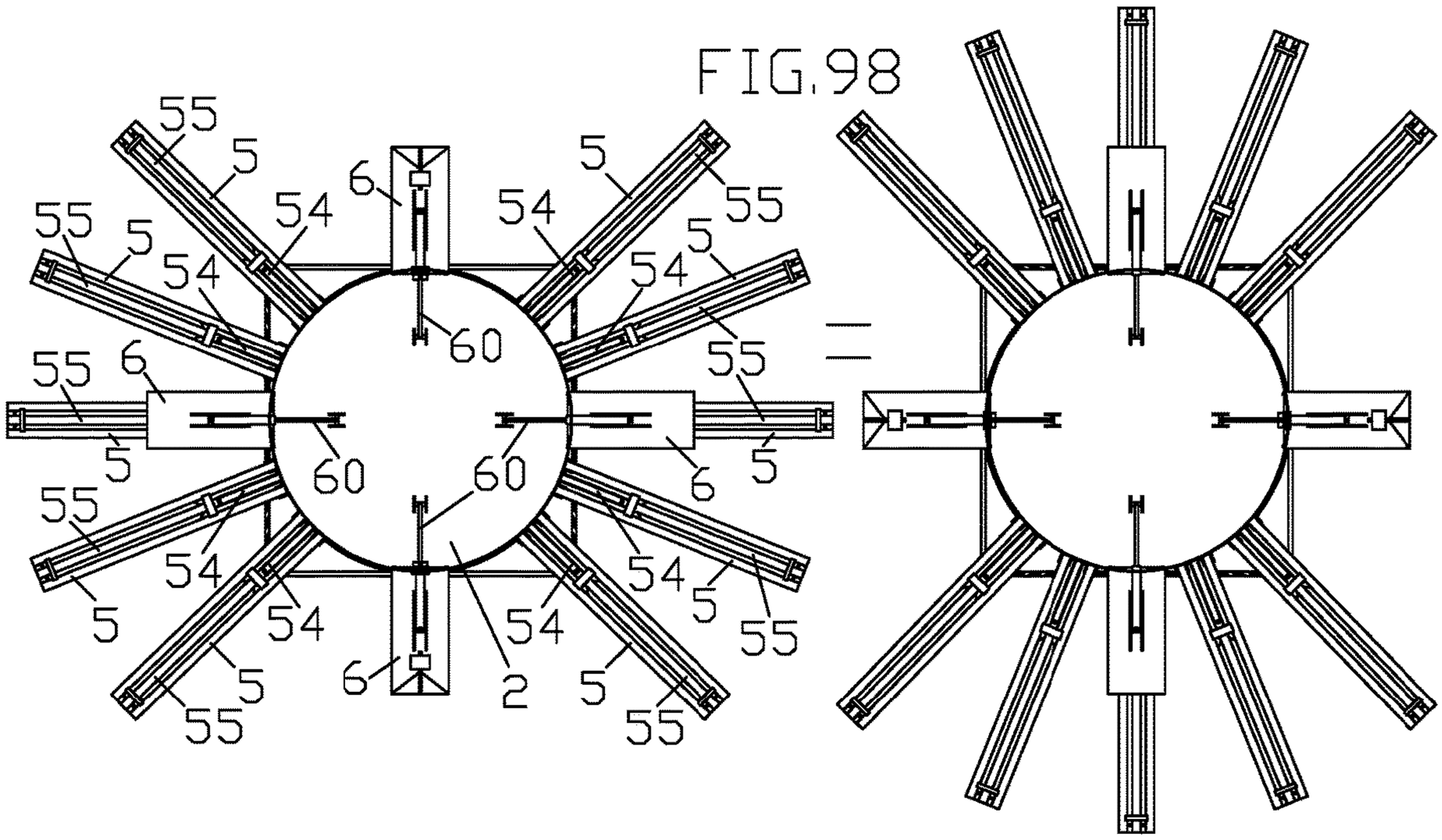


FIG.96B

FIG.98



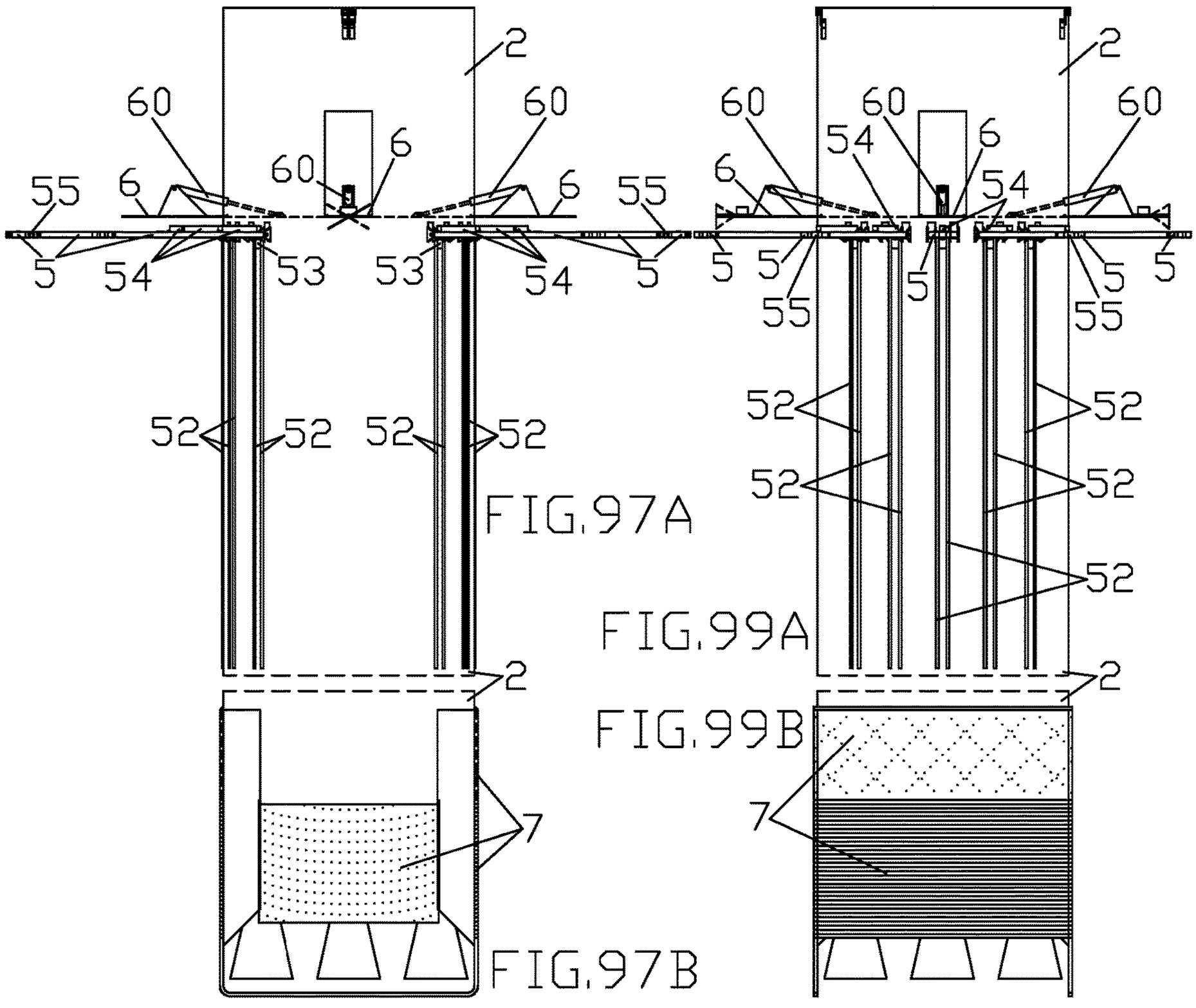


FIG.97A

FIG.97B

FIG.99A

FIG.99B

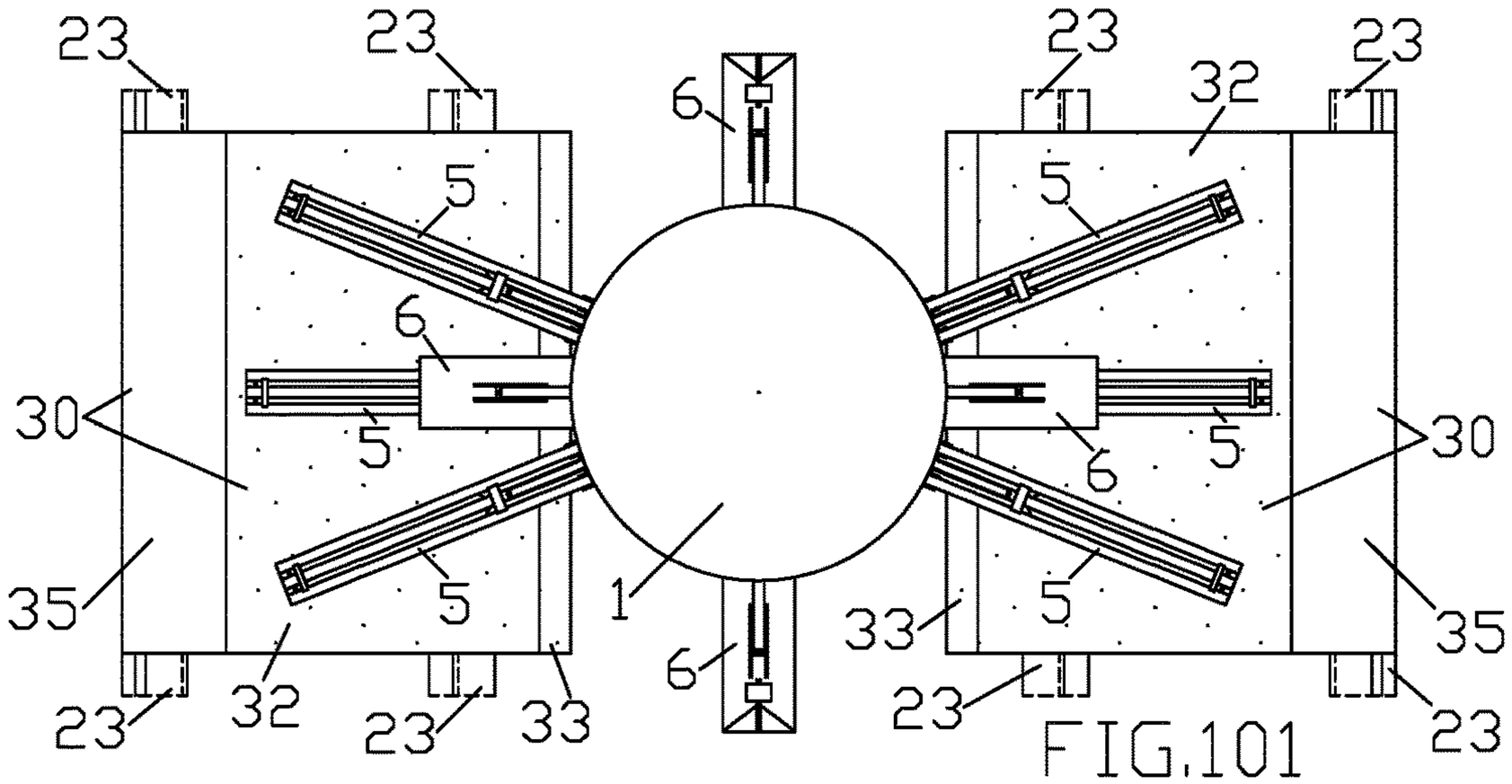


FIG.101

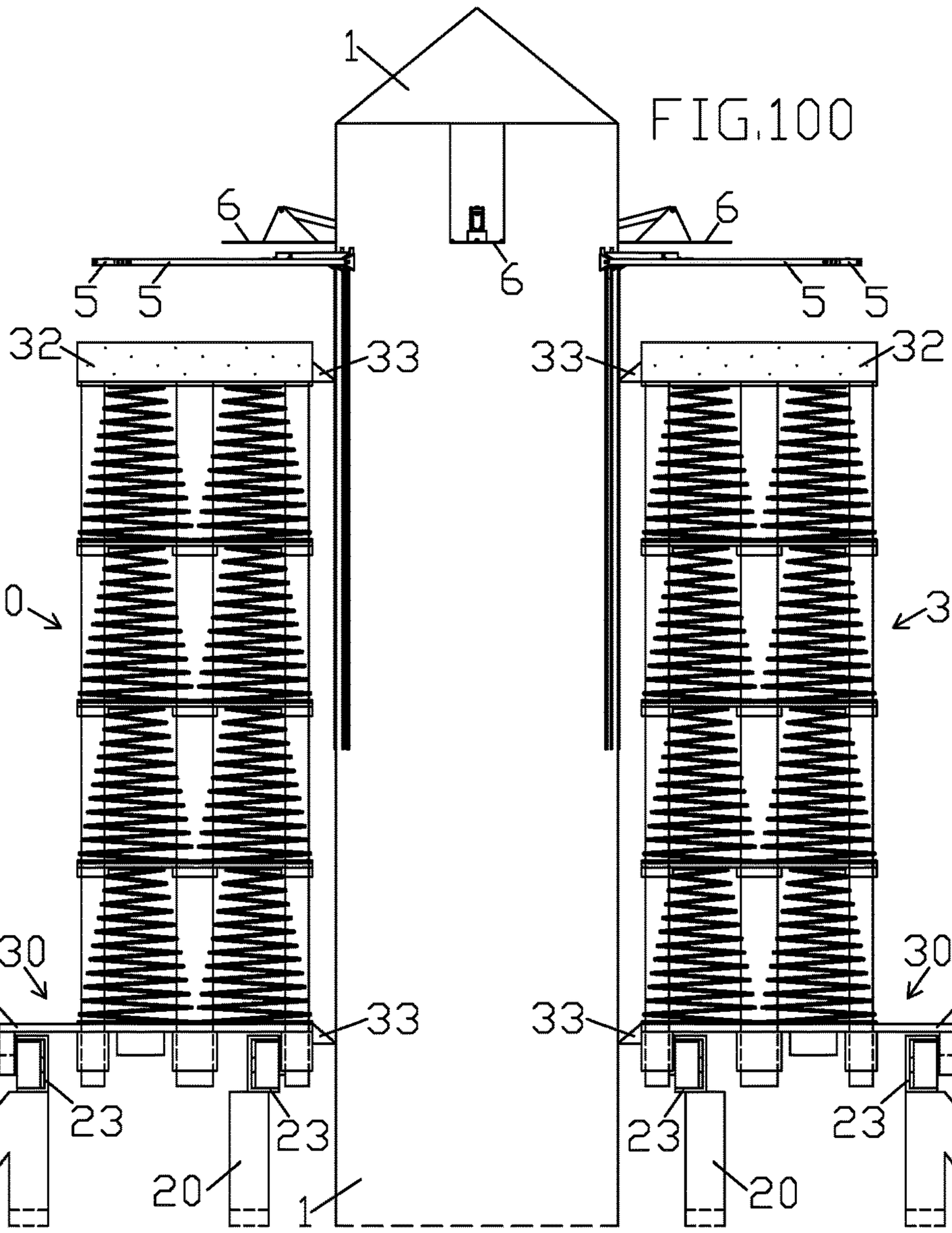


FIG.100

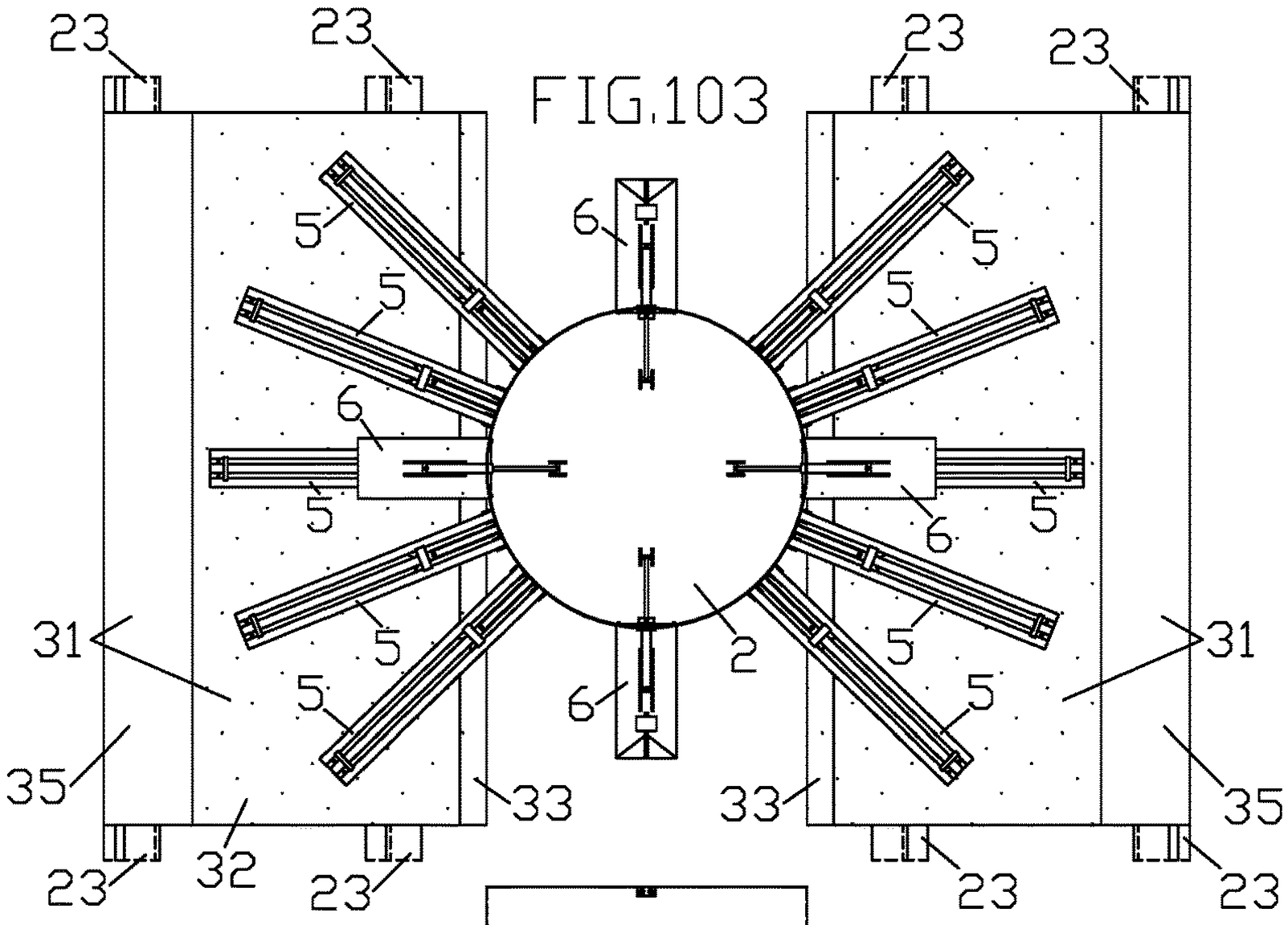


FIG.103

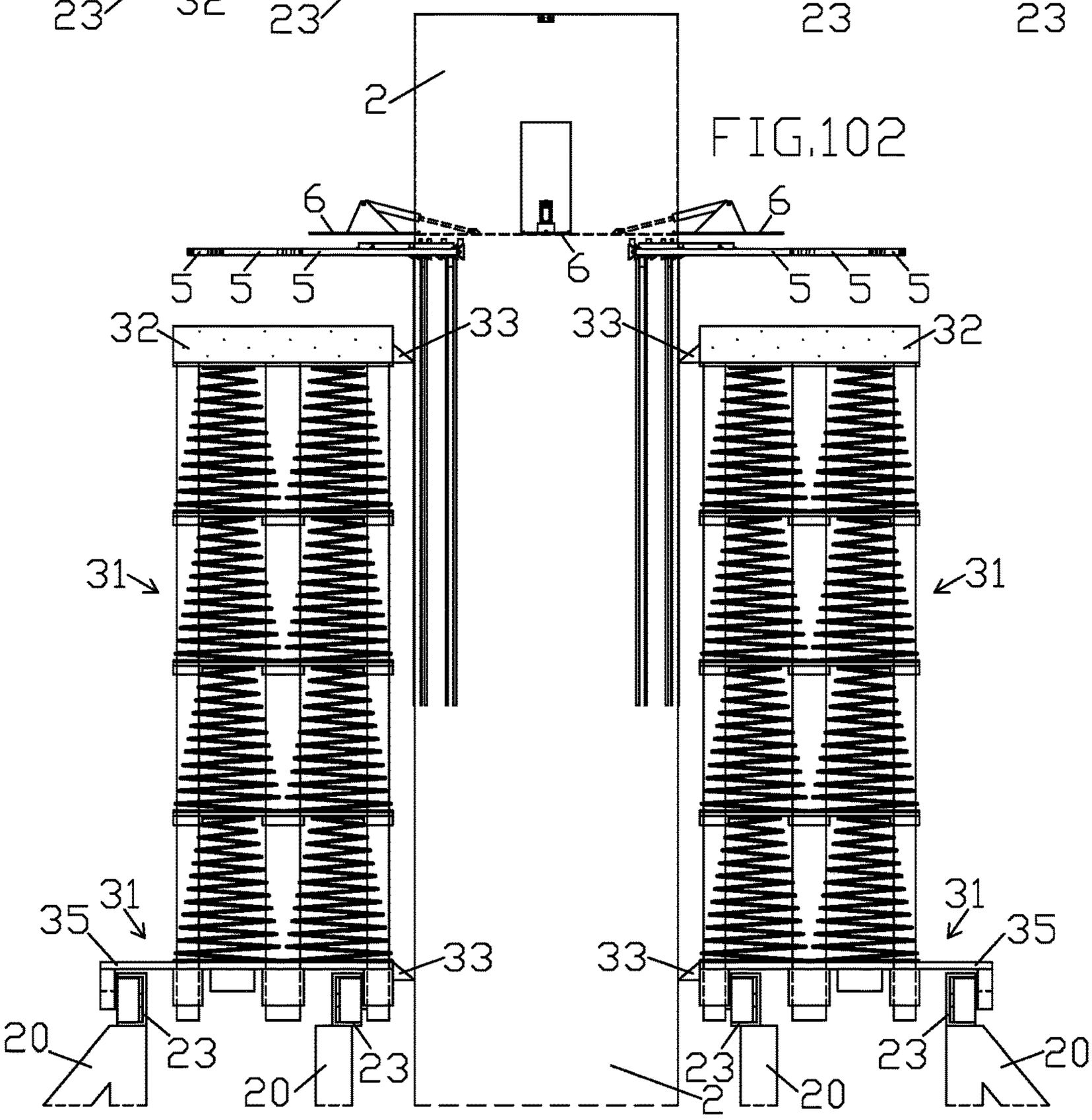


FIG.102

FIG.104

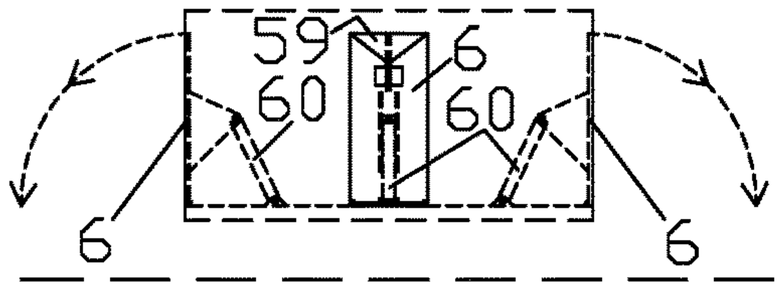


FIG.105

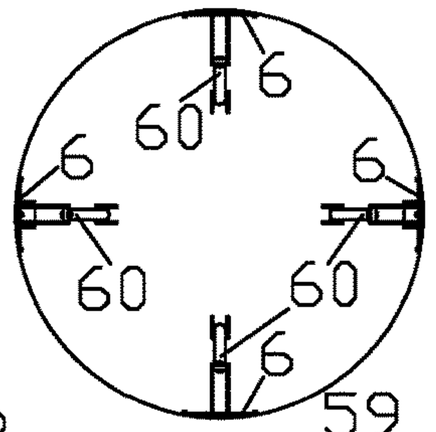


FIG.106

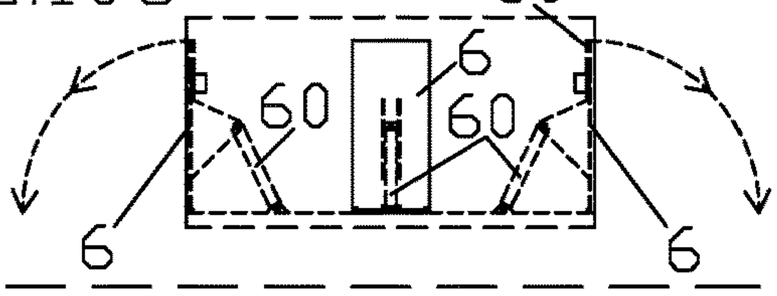


FIG.107

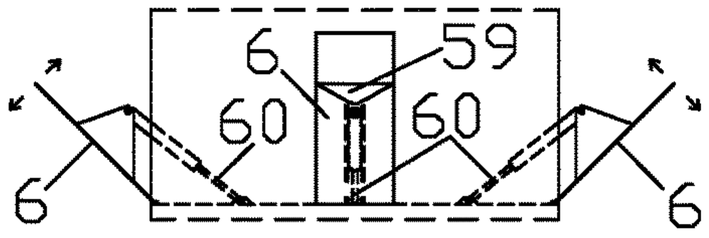


FIG.108

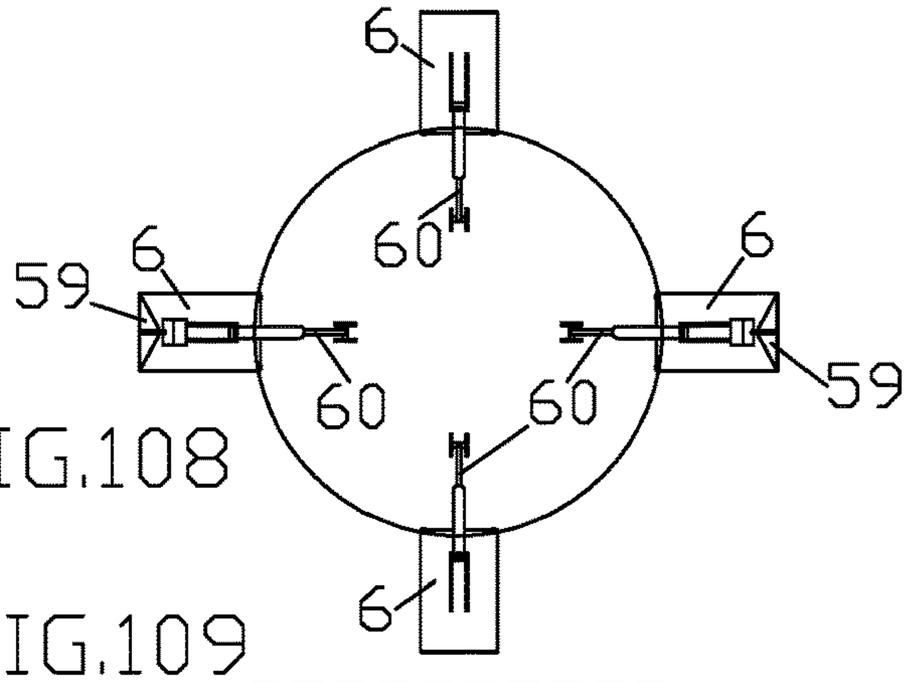


FIG.109

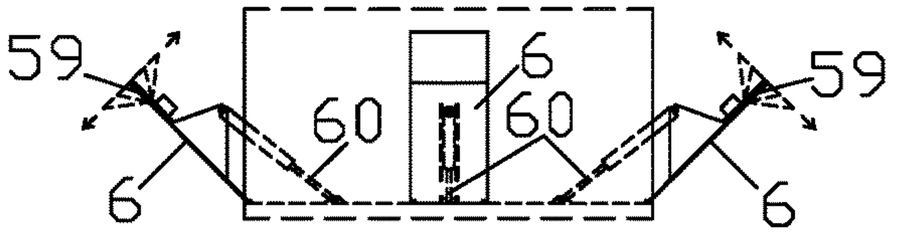


FIG.110

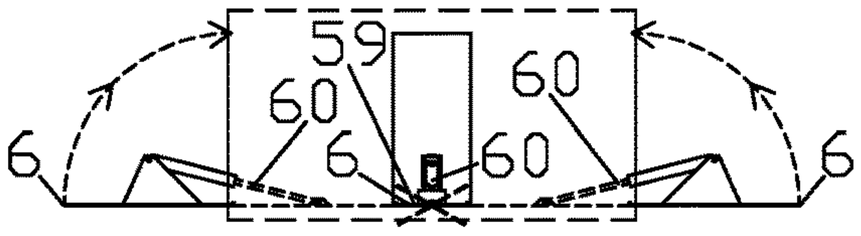


FIG.111

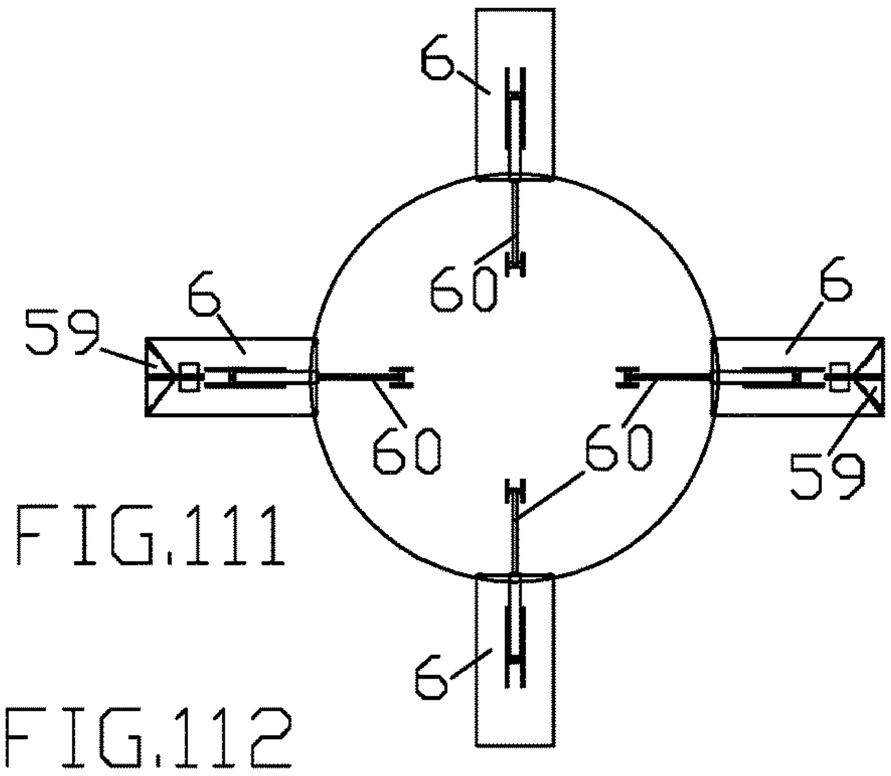


FIG.112

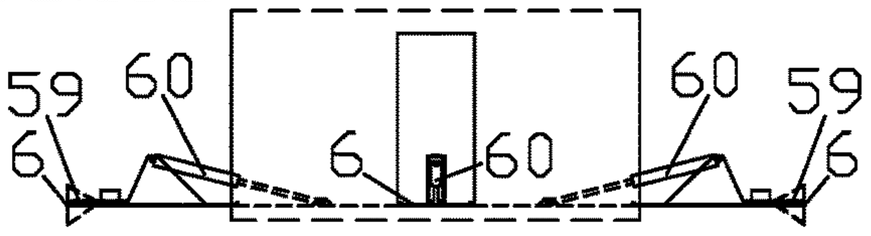


FIG.114

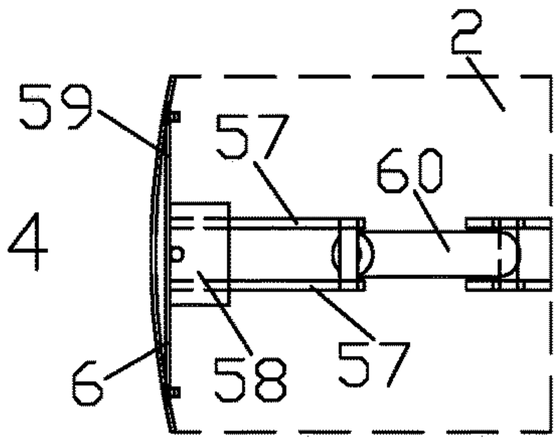


FIG.115

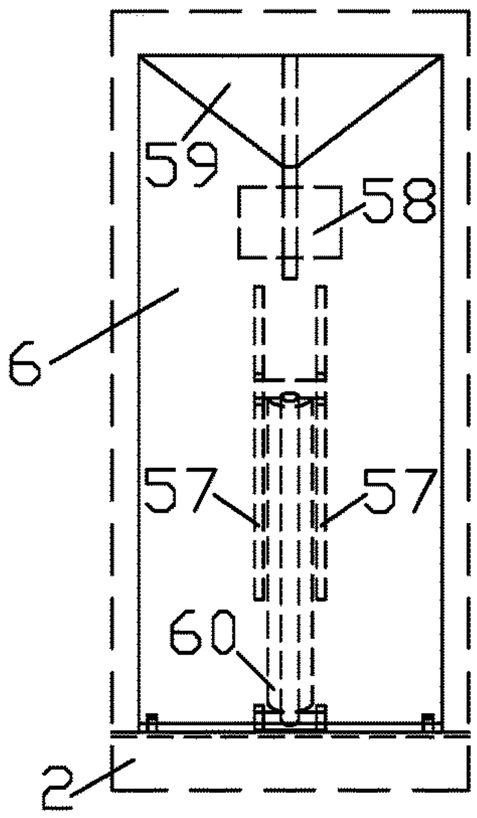


FIG.113

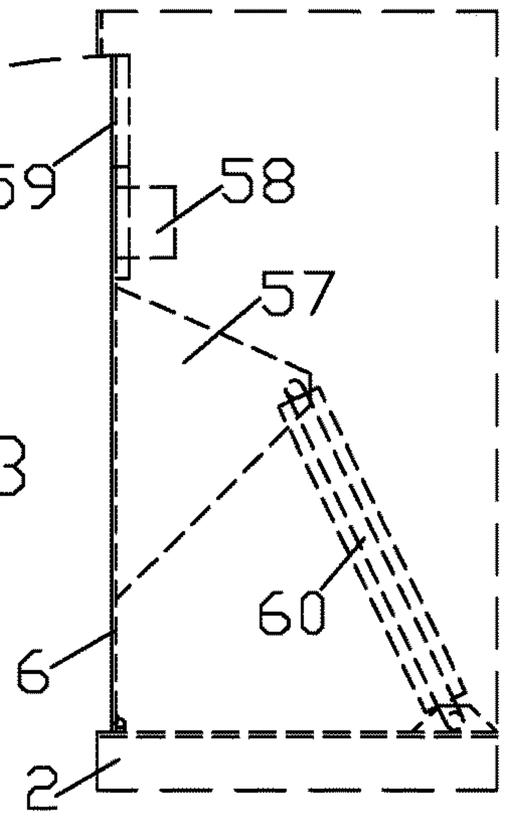


FIG.117

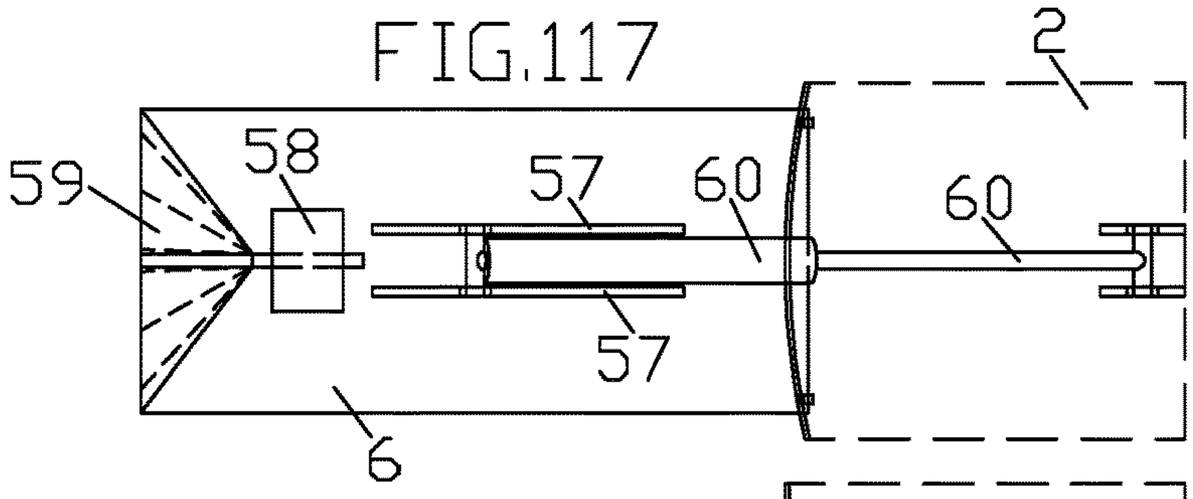


FIG.118

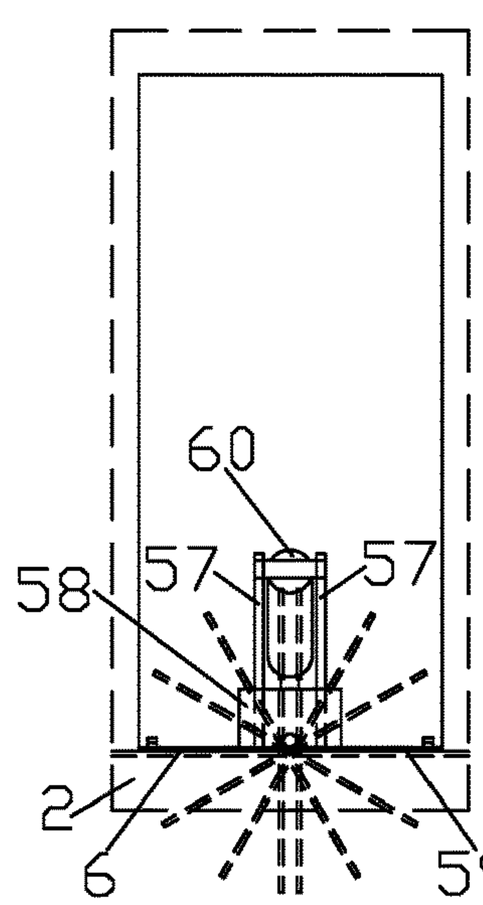


FIG.116

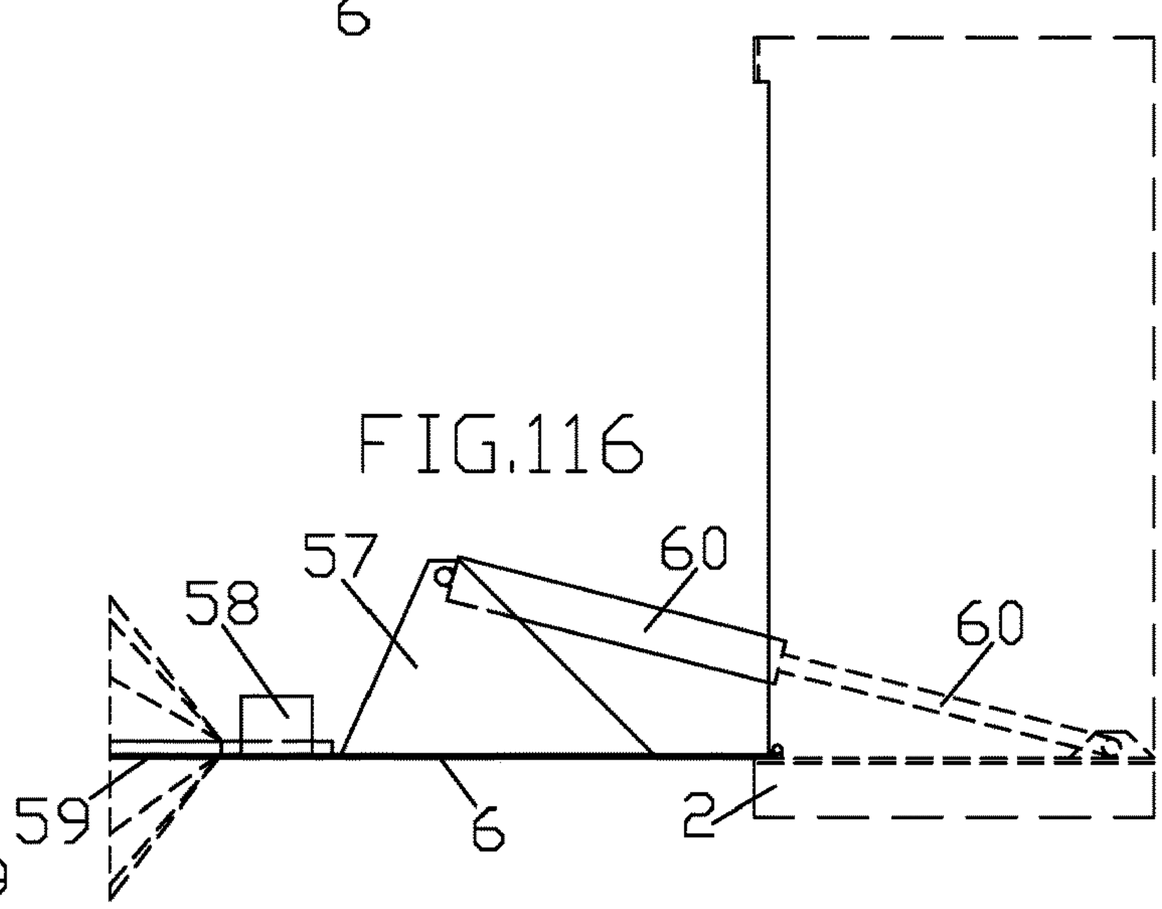


FIG.120

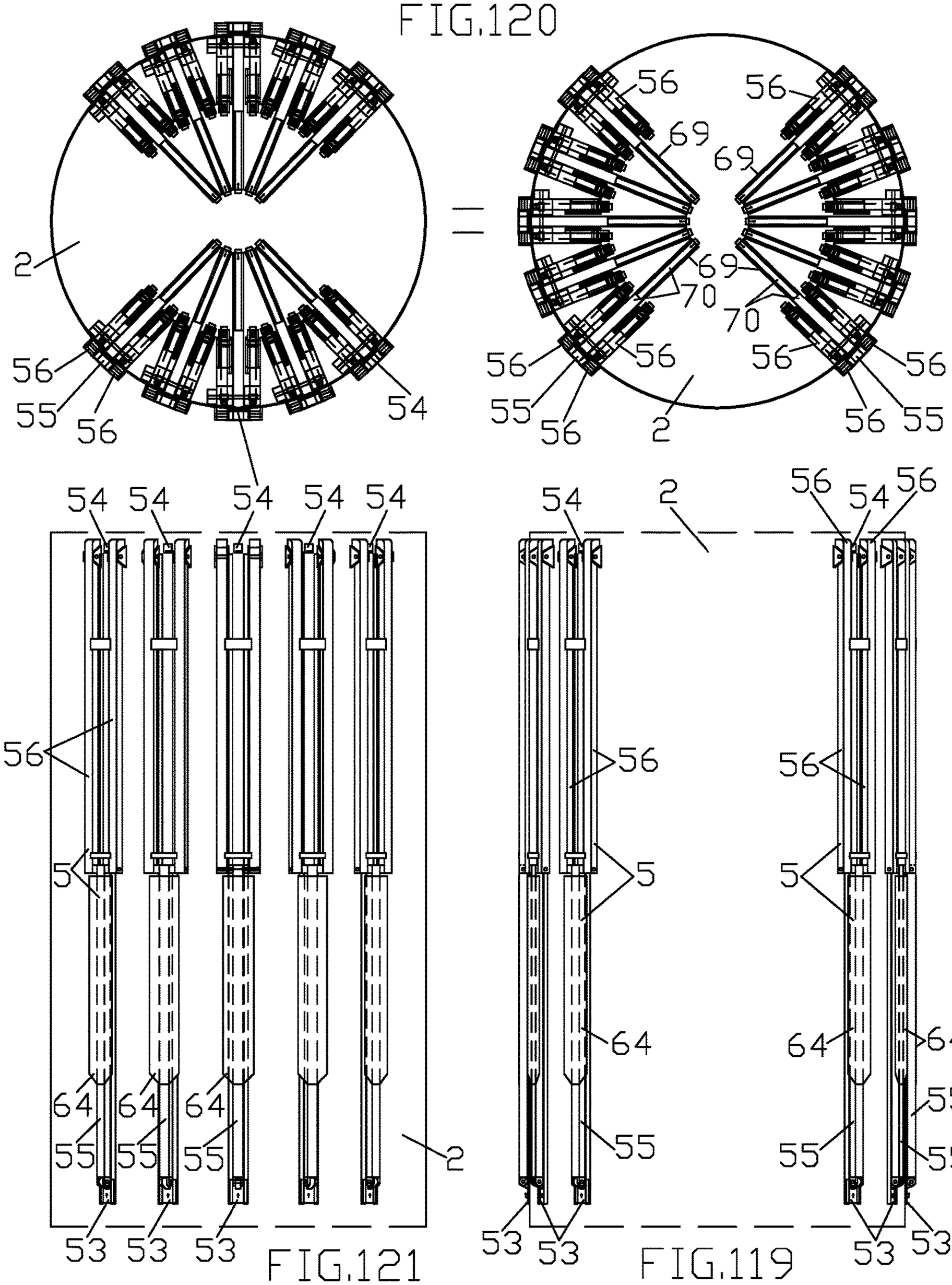

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FIG.121
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FIG.119

FIG.123

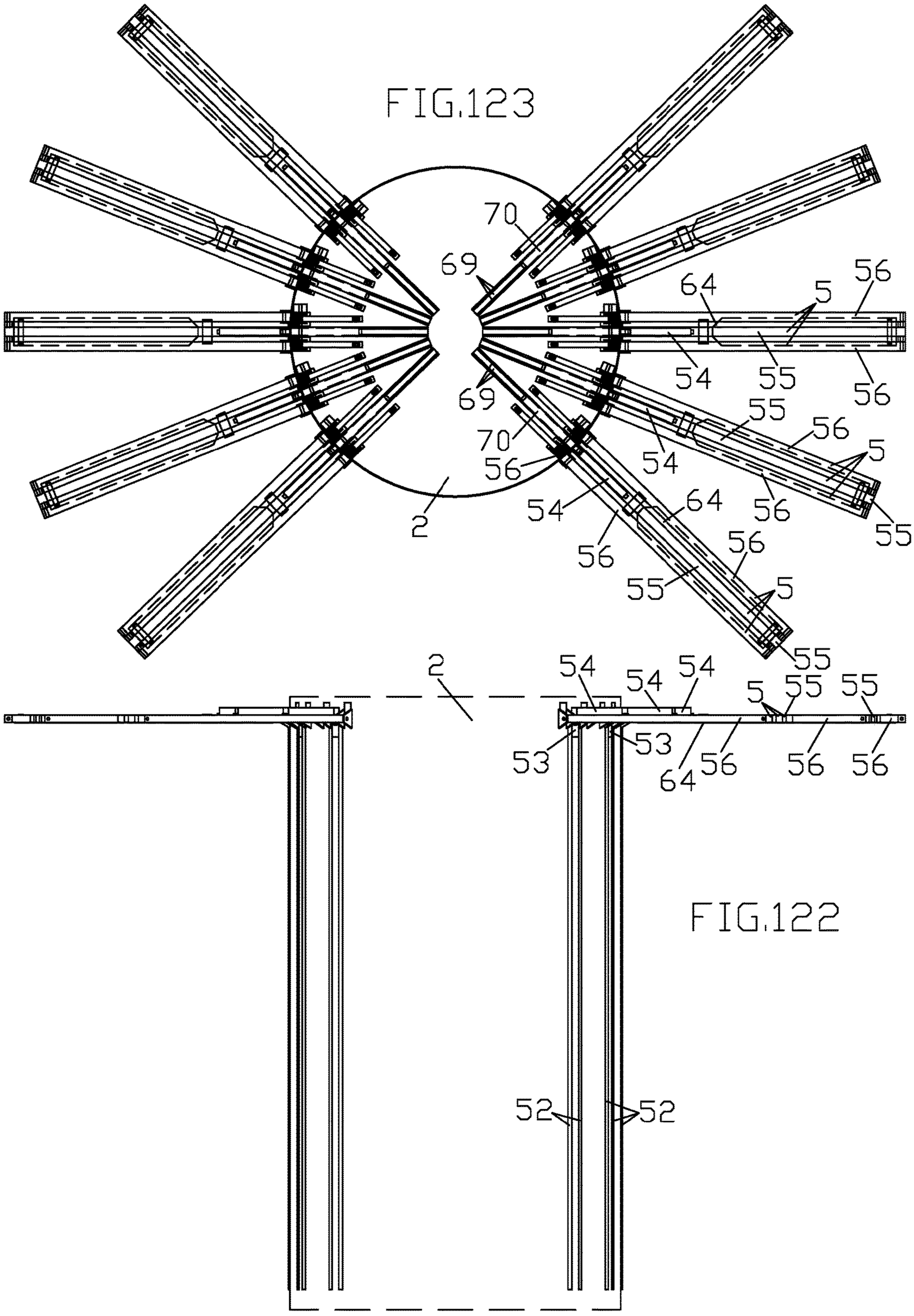


FIG.122

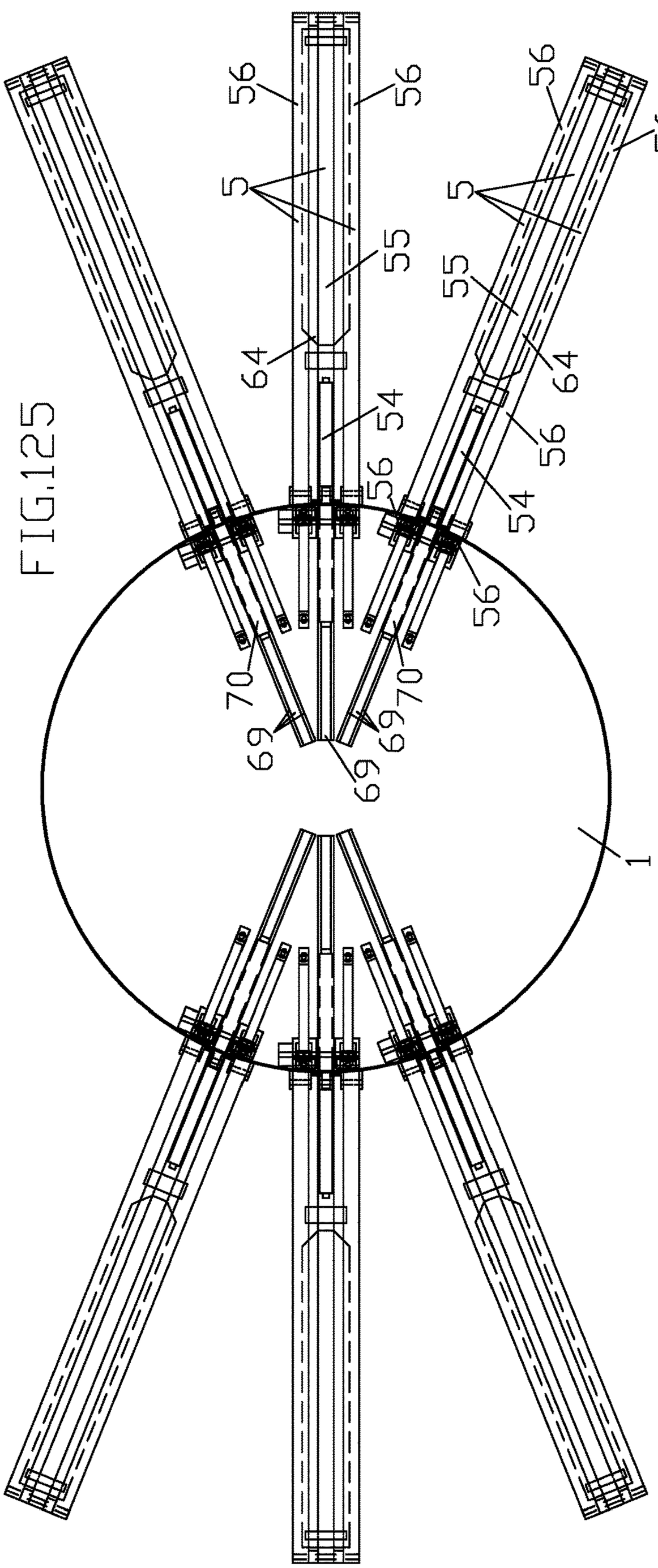


FIG.125

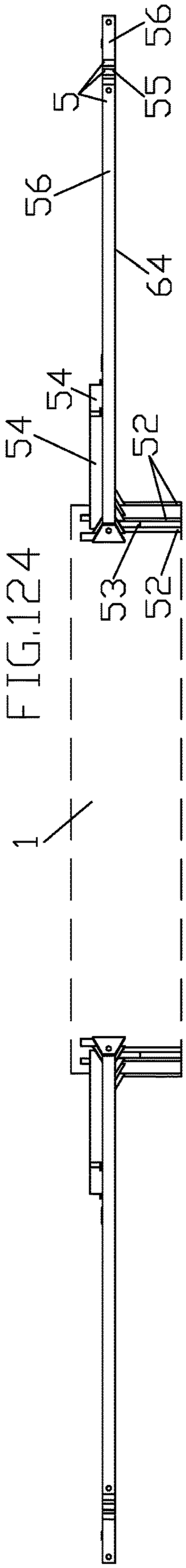


FIG.124

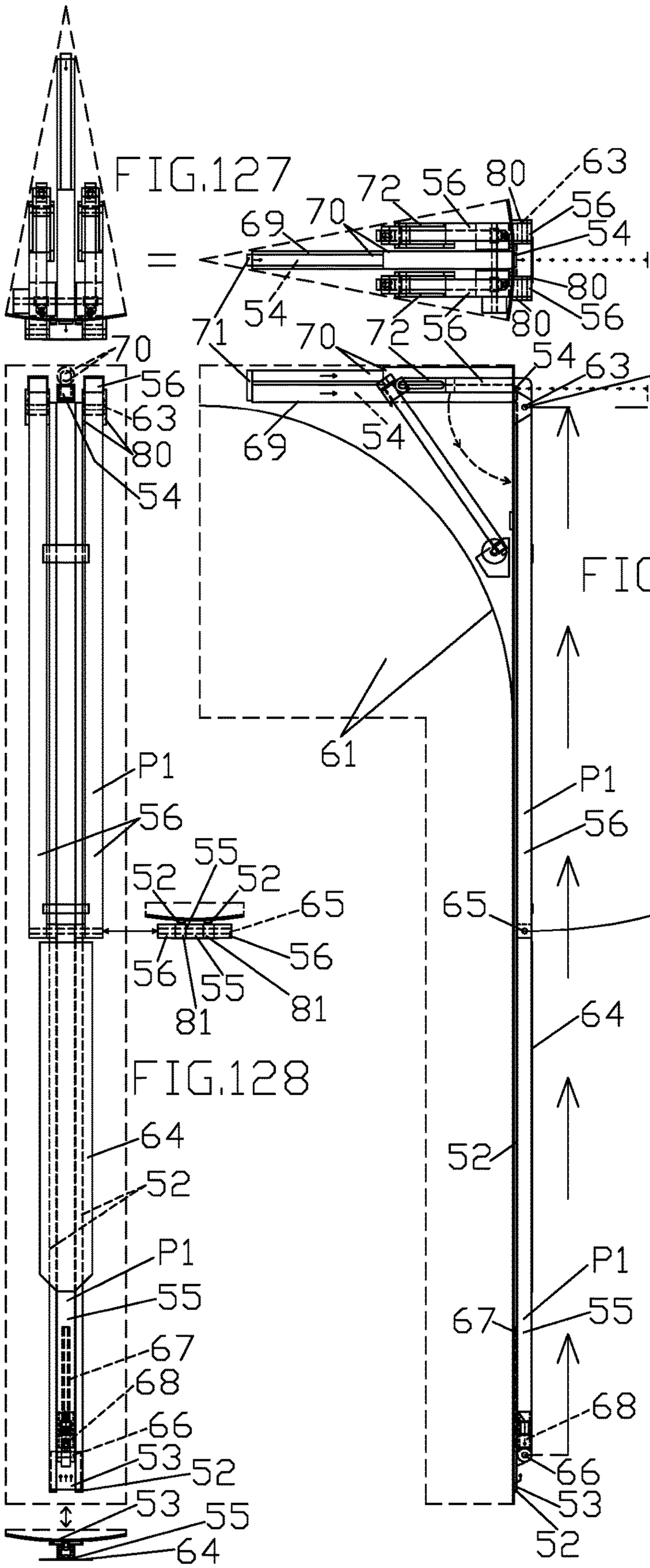


FIG.127

FIG.126

FIG.128

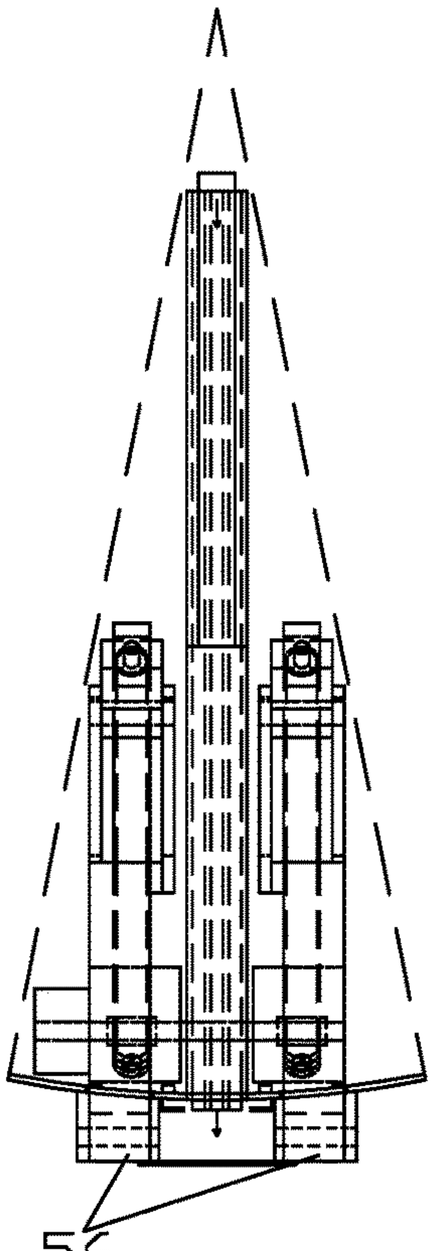
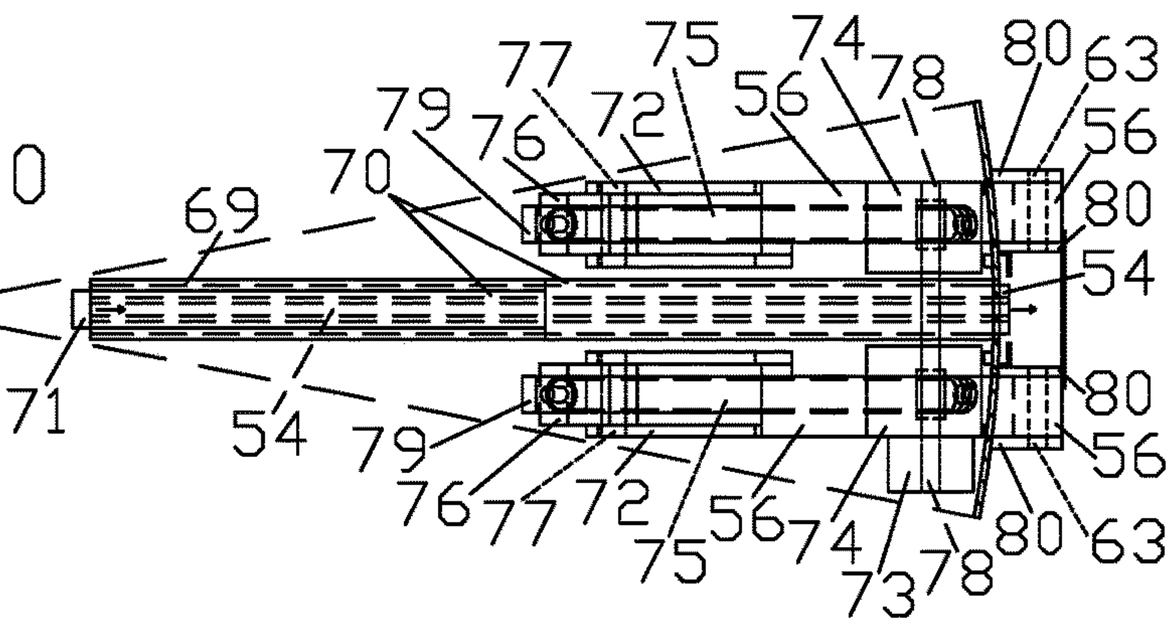


FIG.130



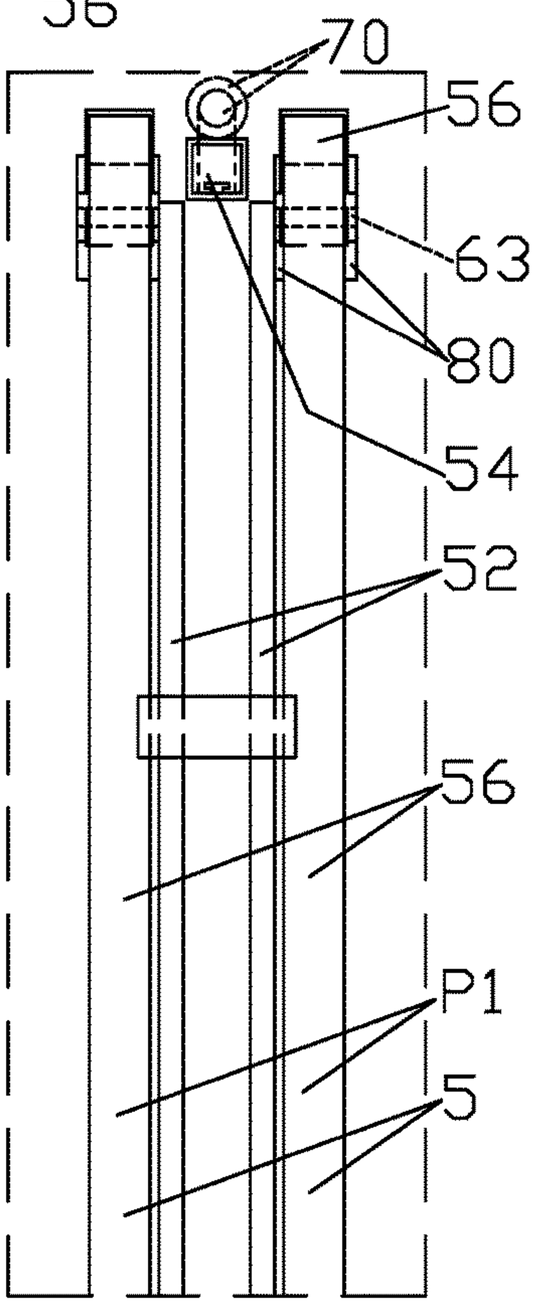


FIG.131

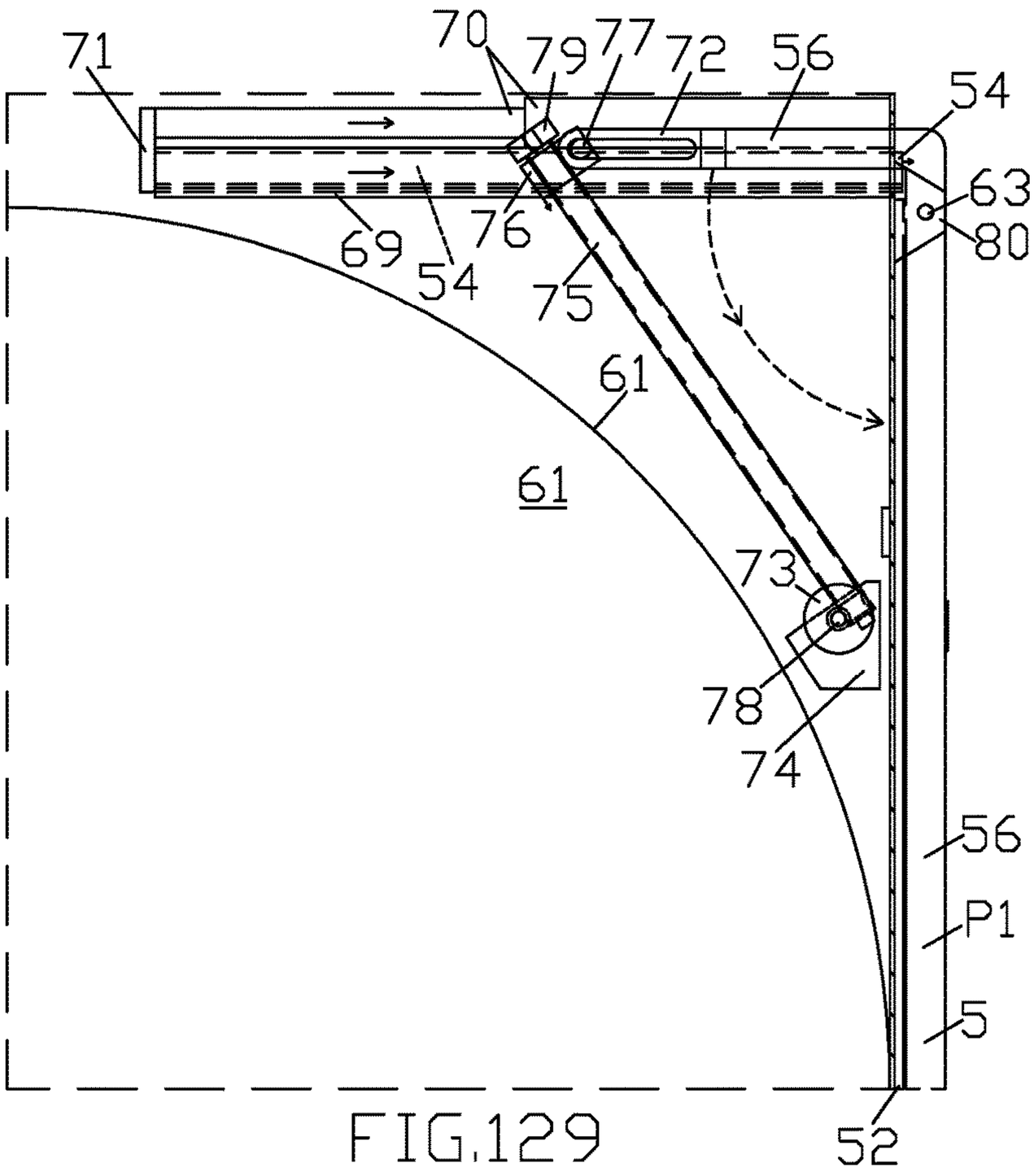
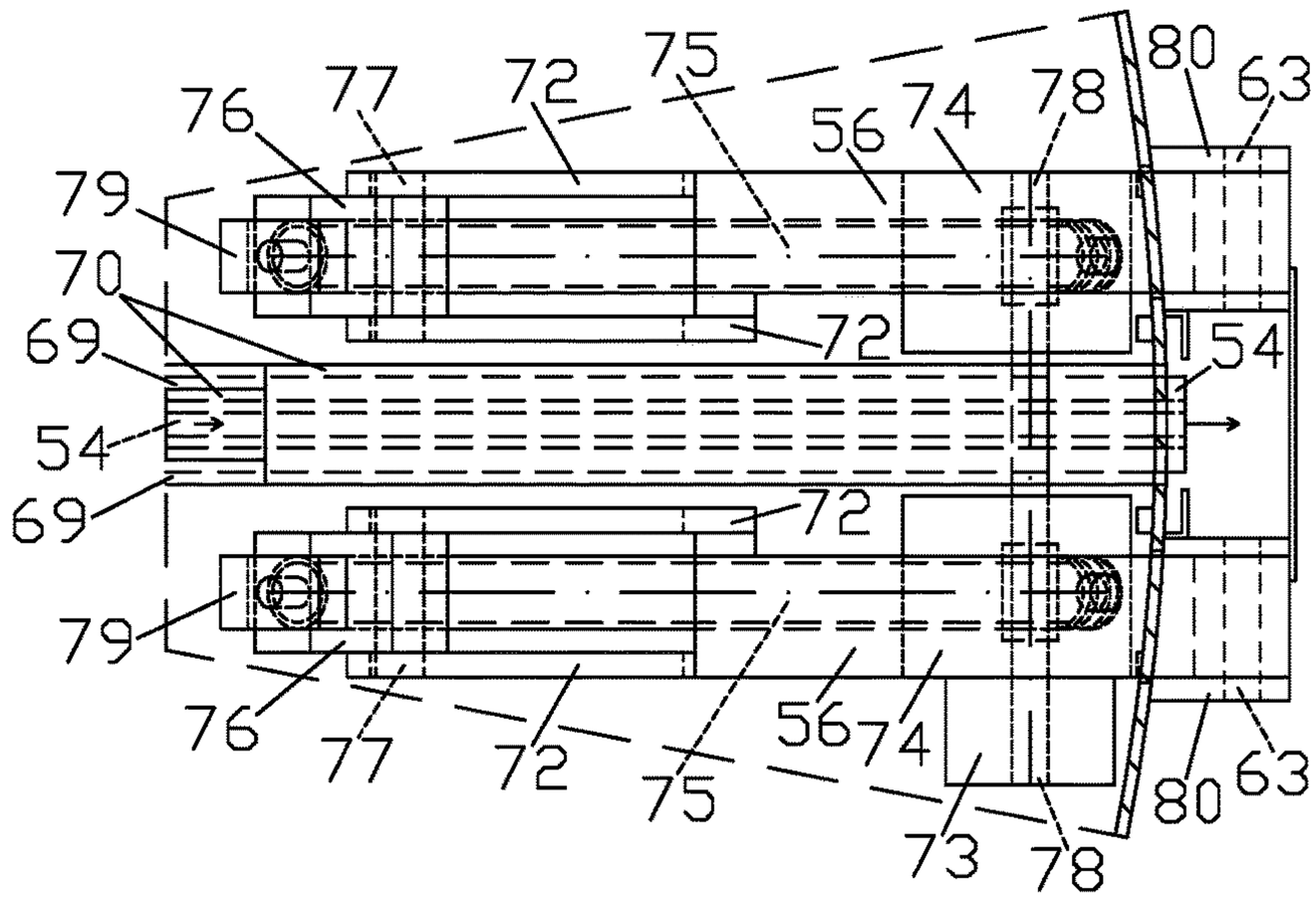


FIG.129

FIG.133



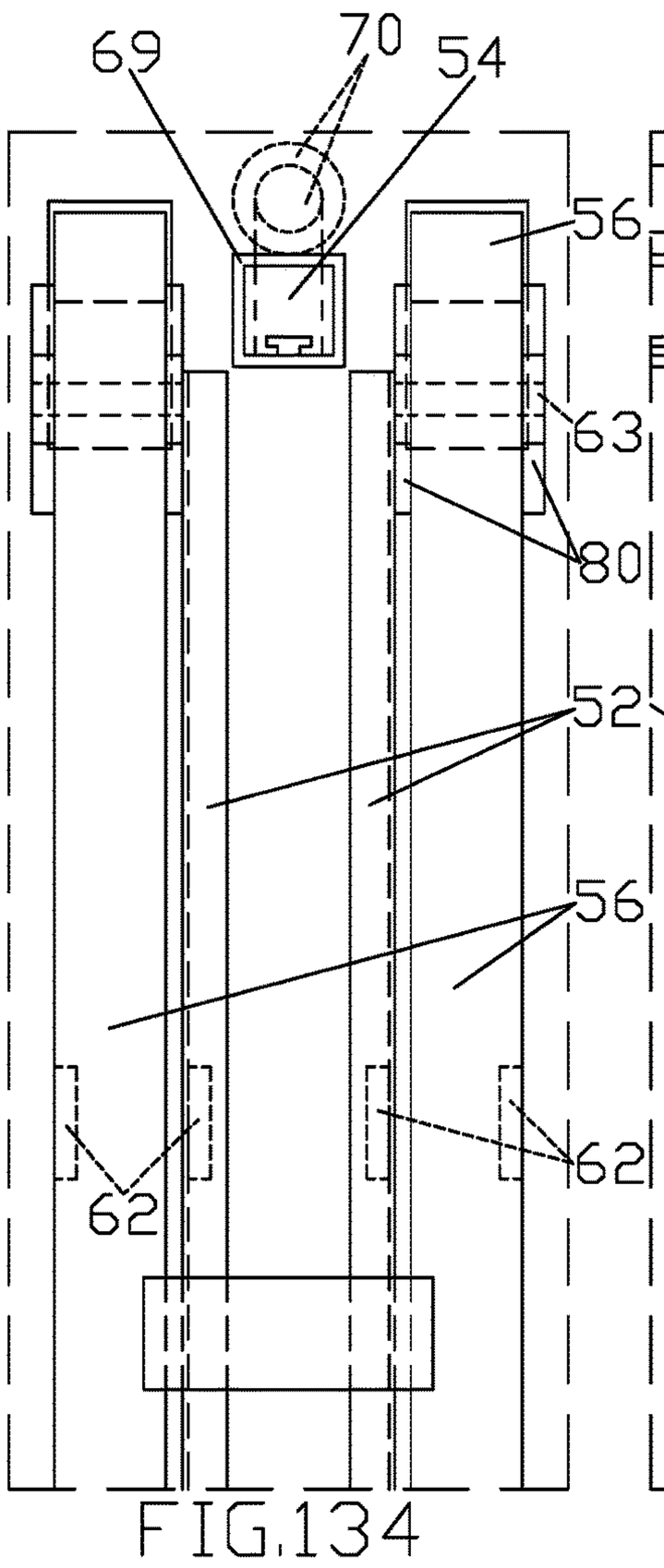


FIG.134

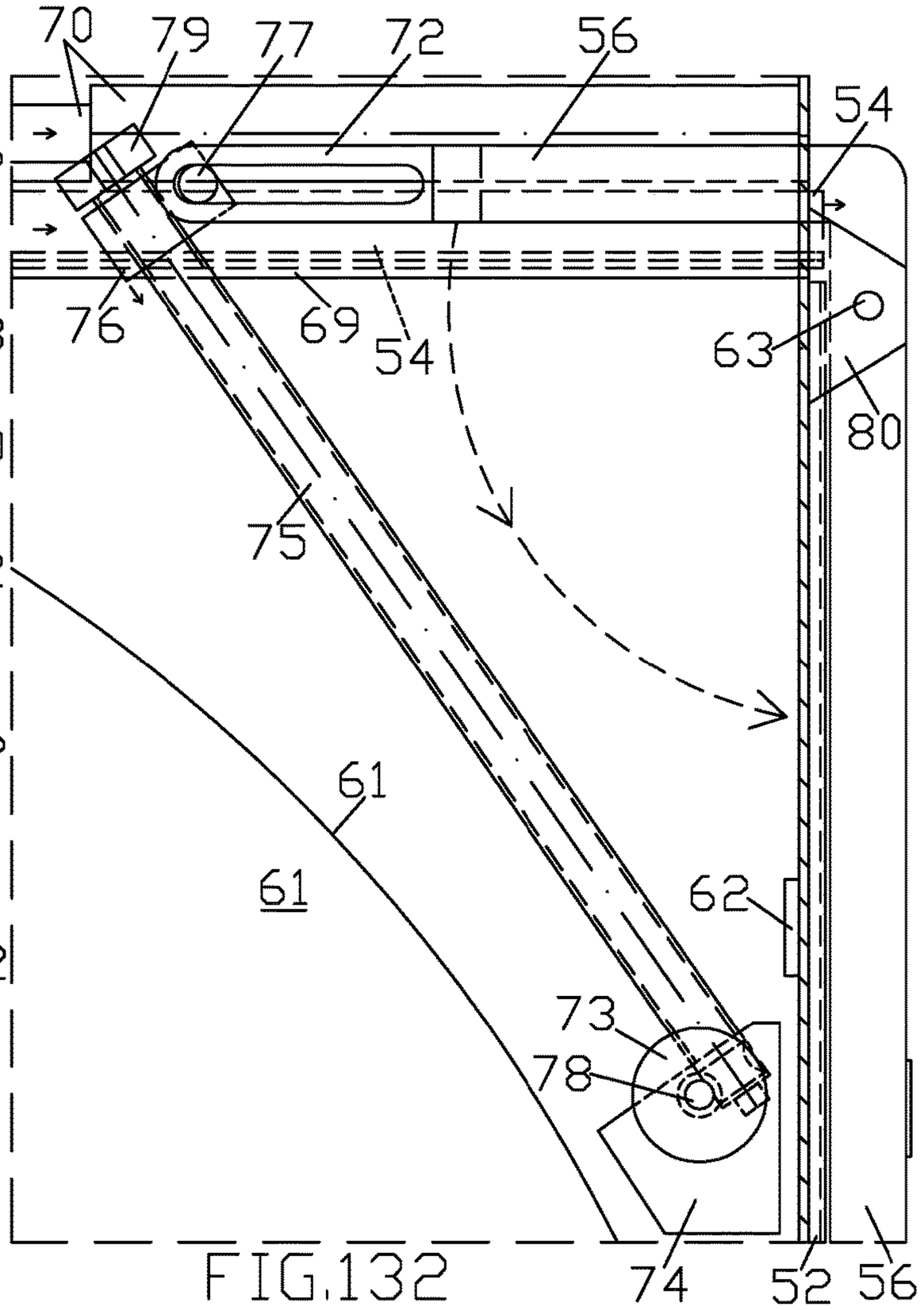


FIG.132

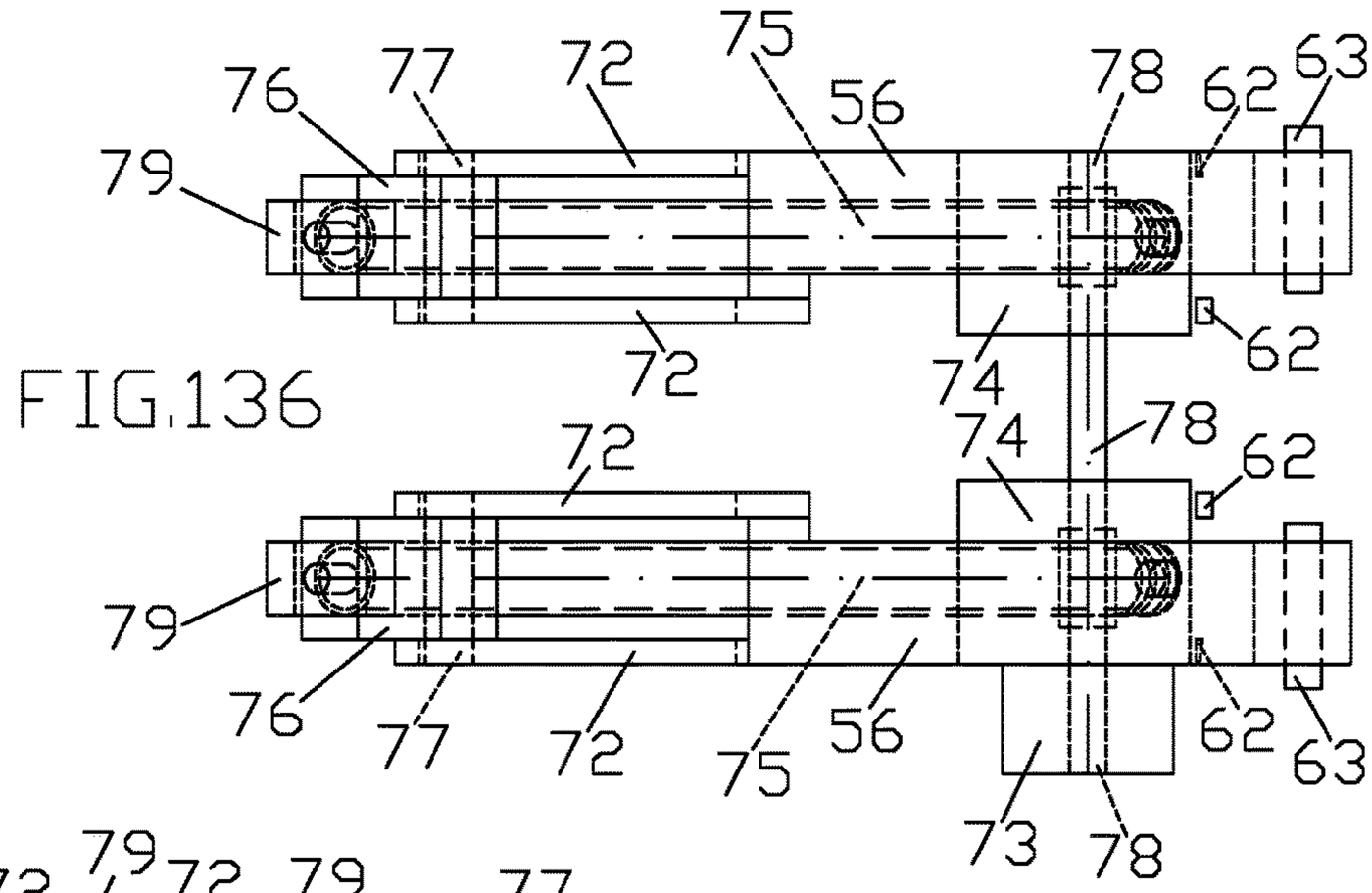


FIG.136

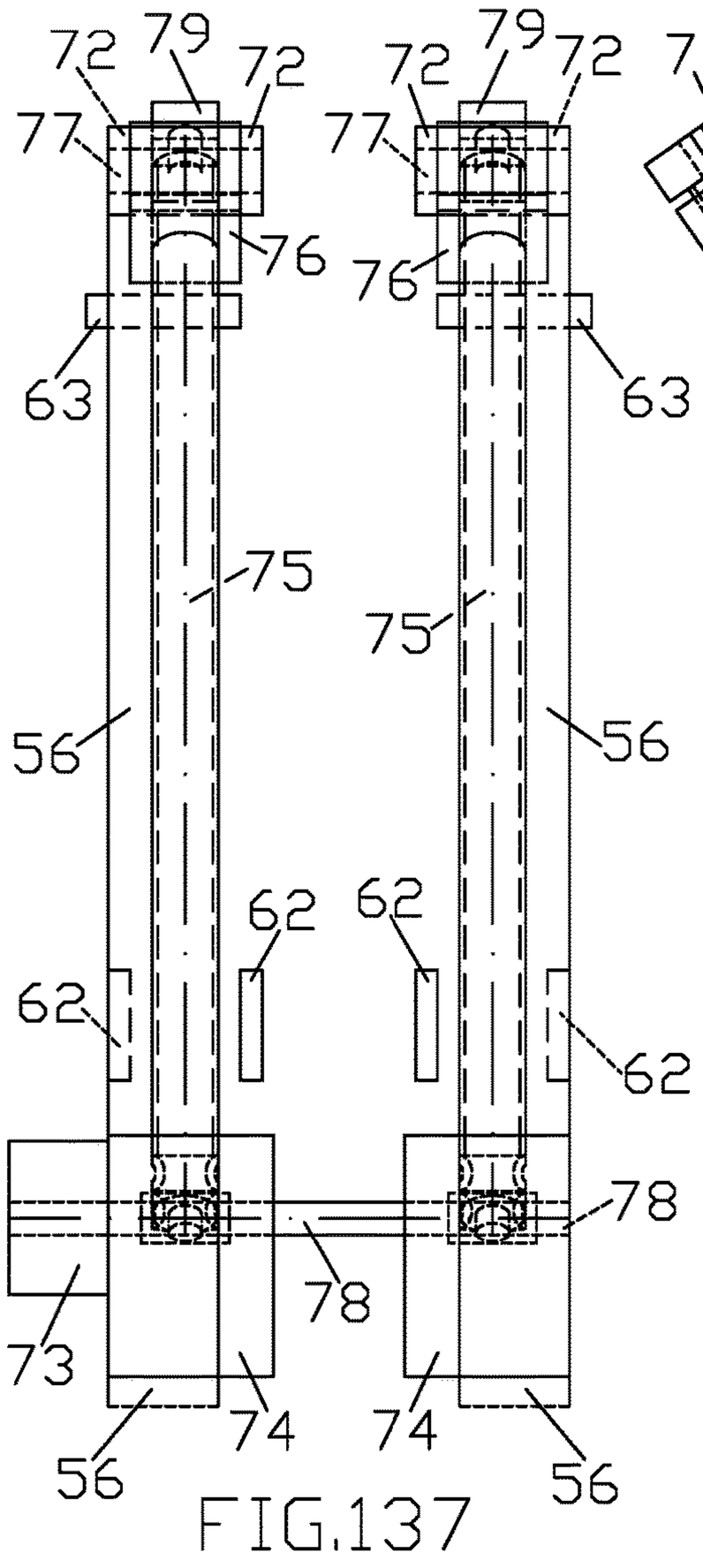


FIG.137

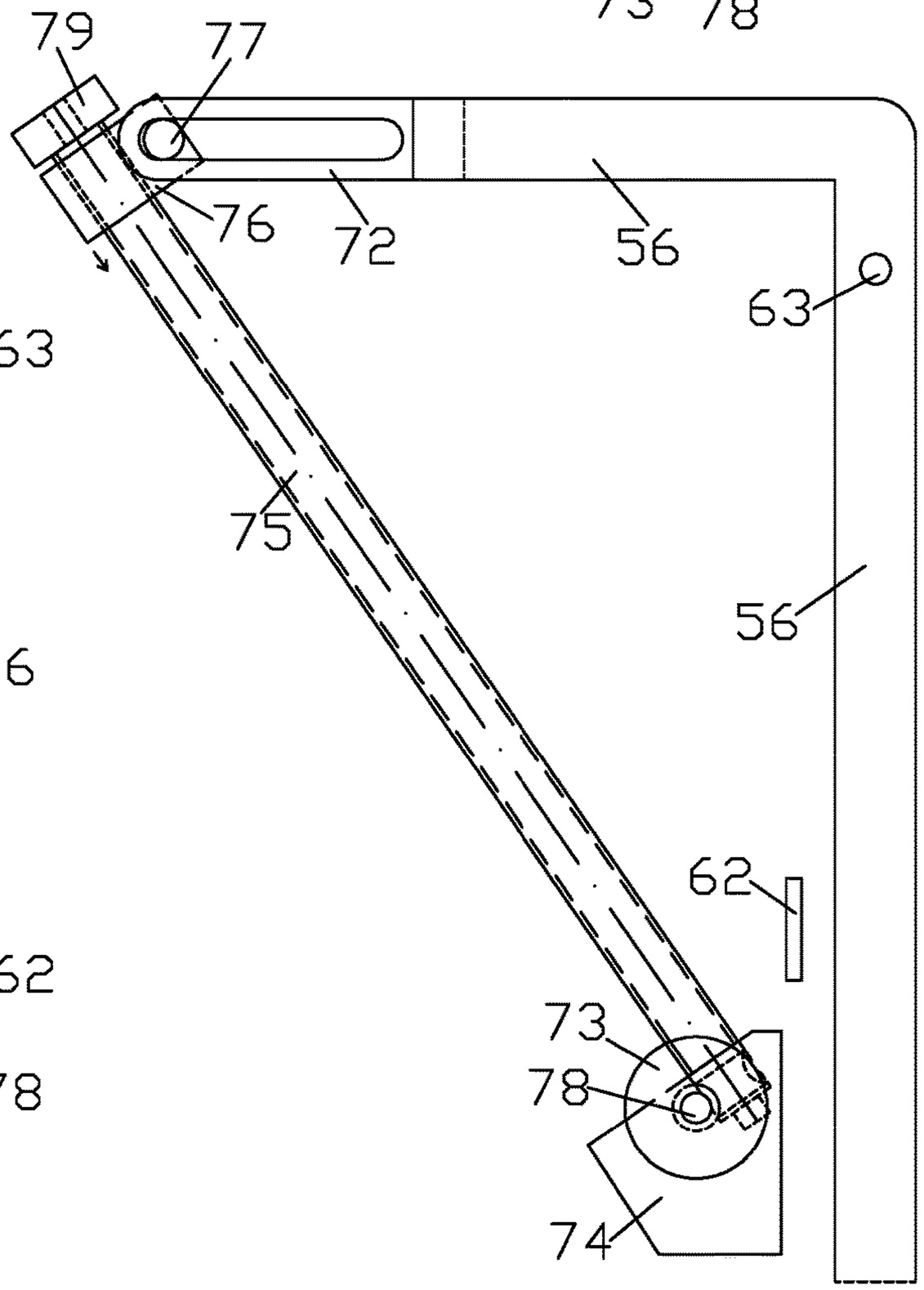


FIG.135

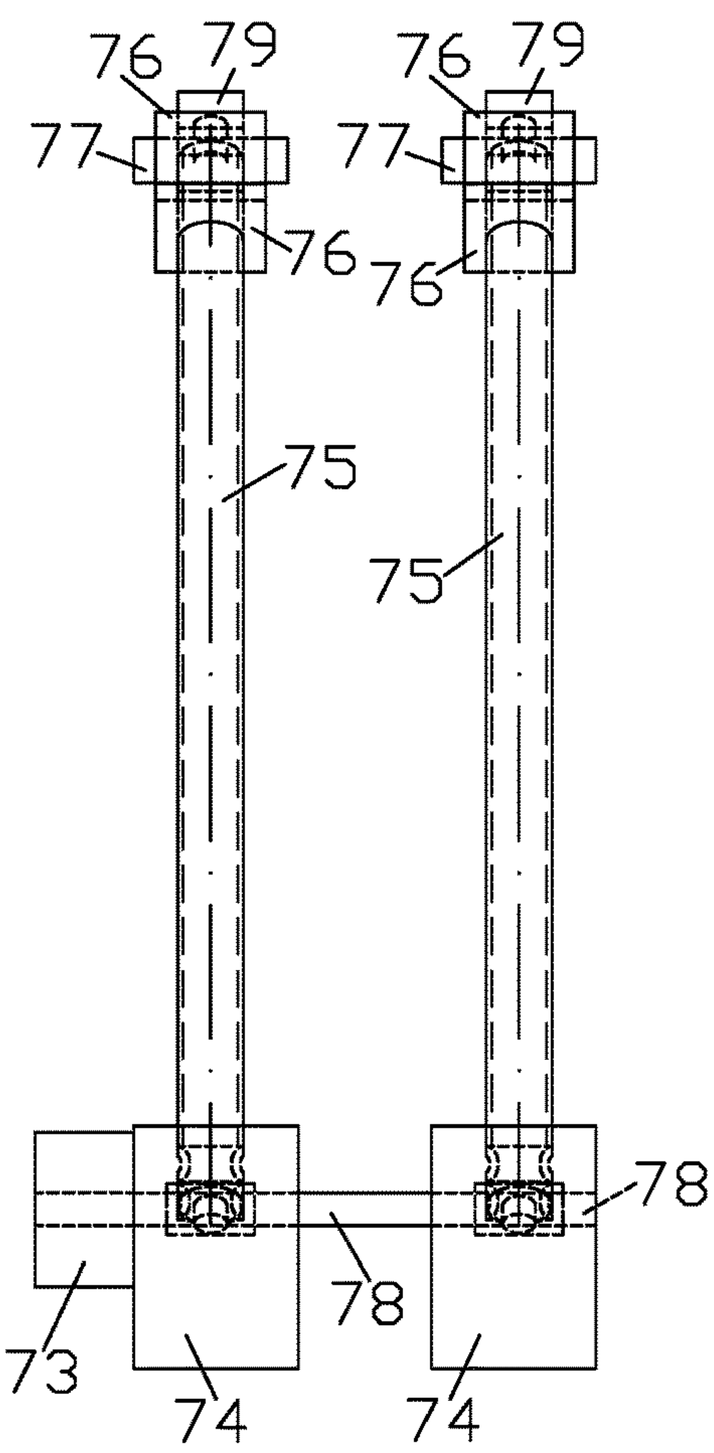


FIG.140

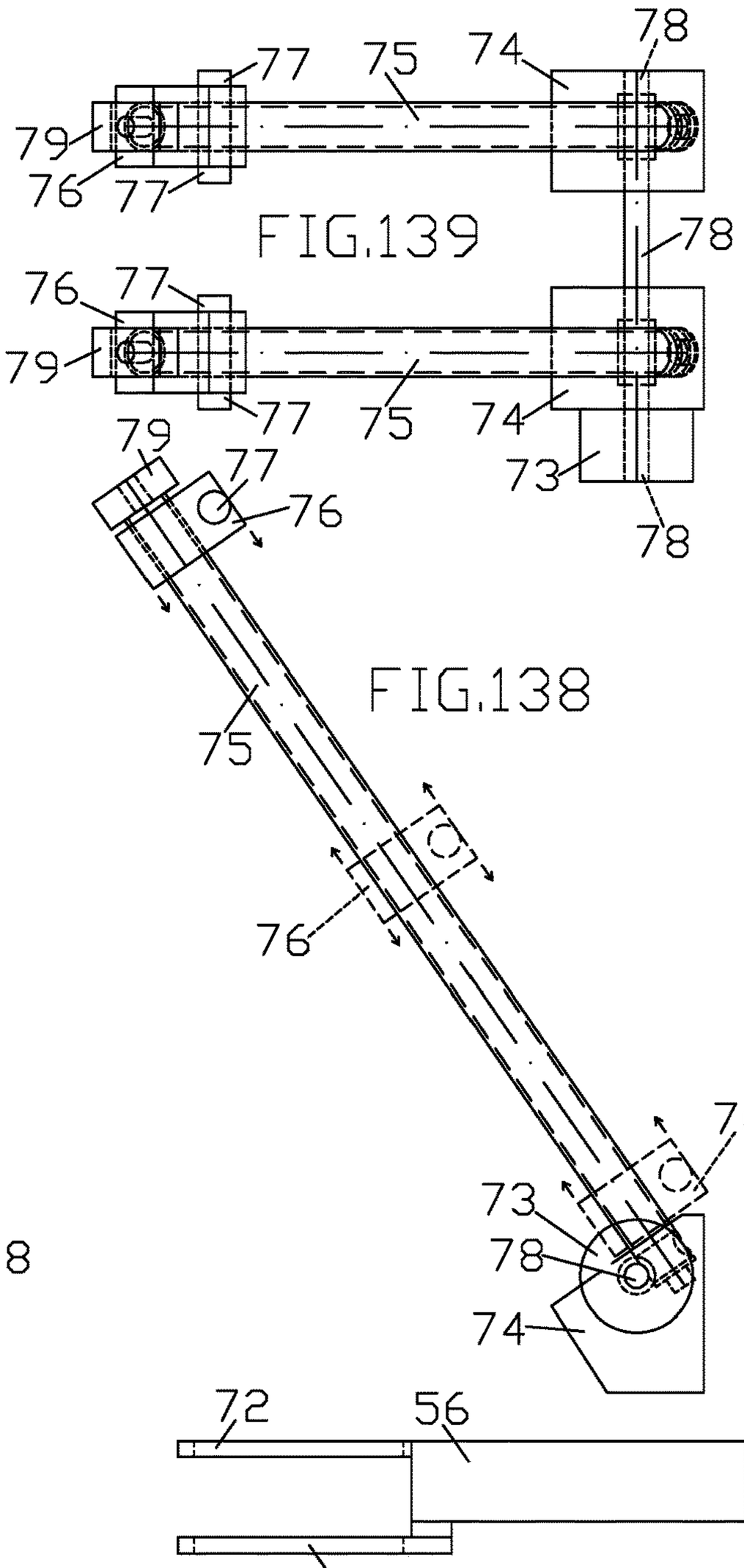


FIG.139

FIG.138

FIG.142

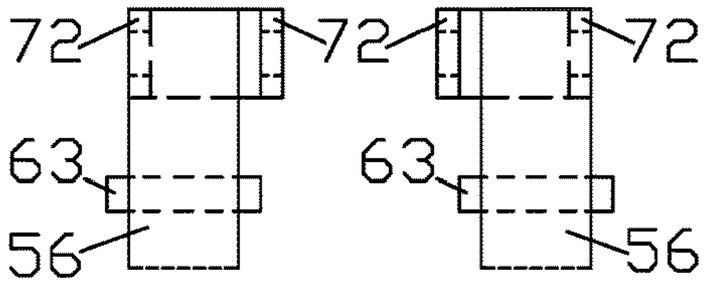


FIG.143

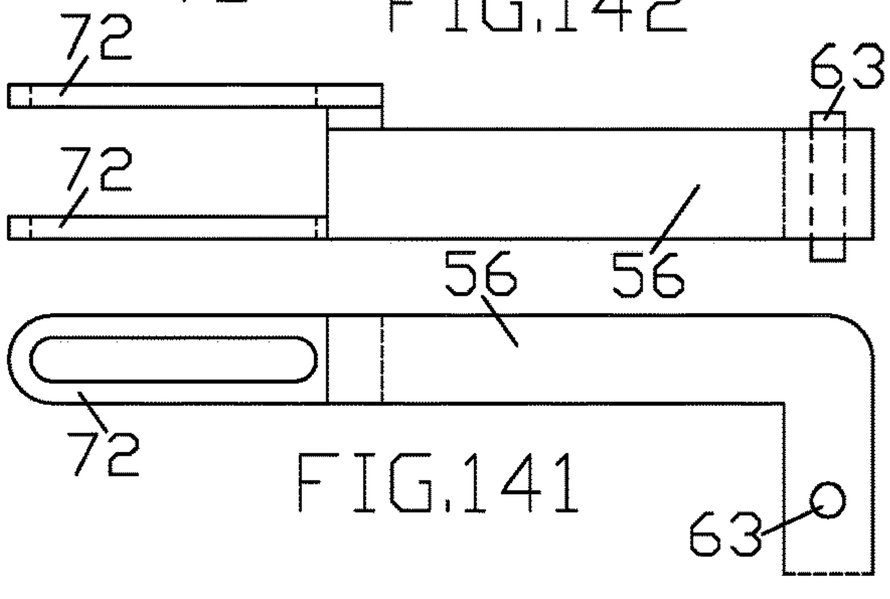


FIG.141

FIG.145

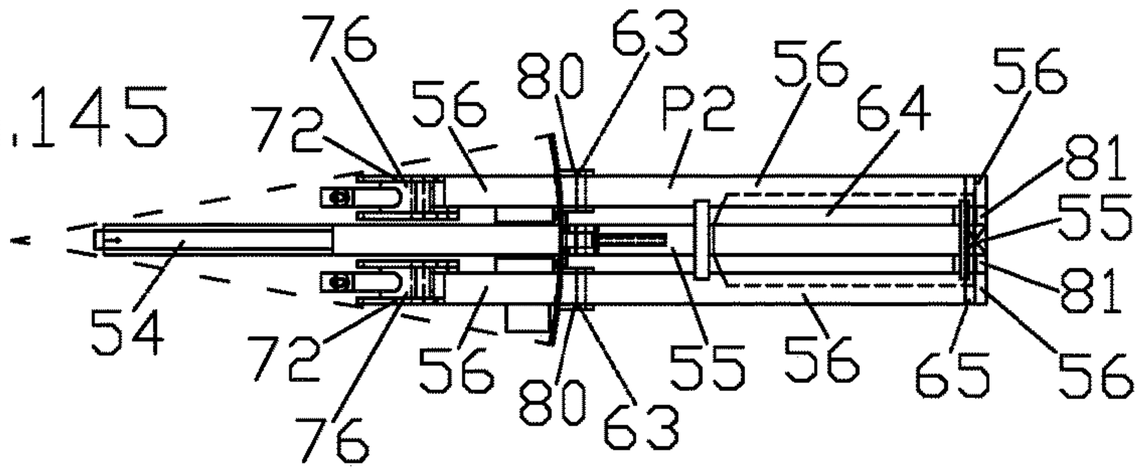
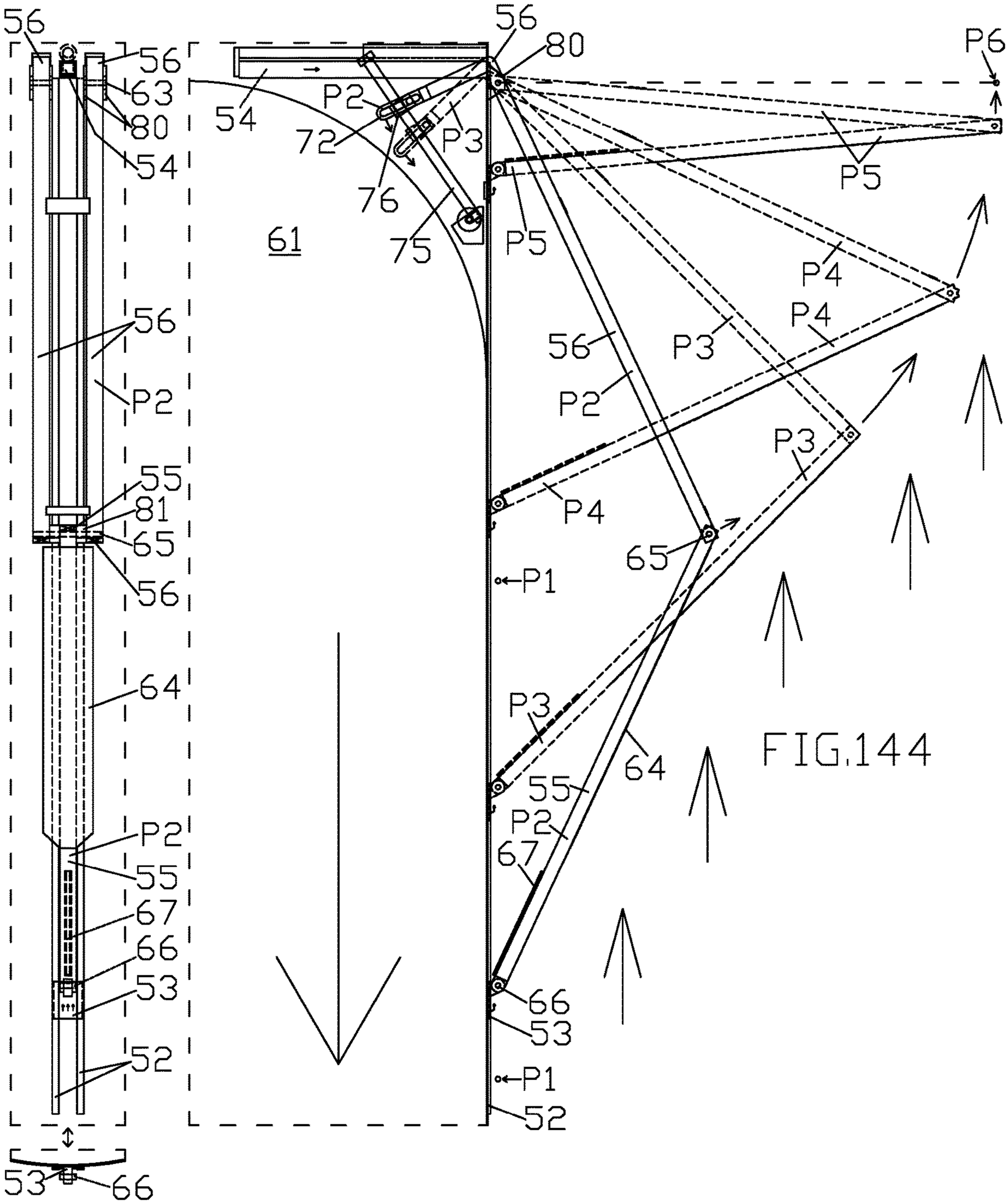


FIG.146



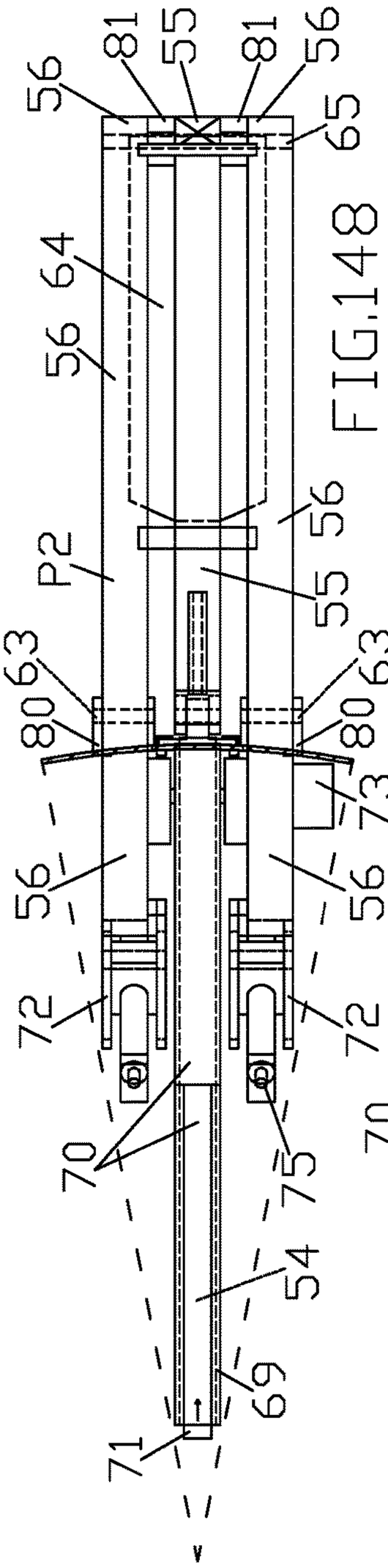


FIG.148

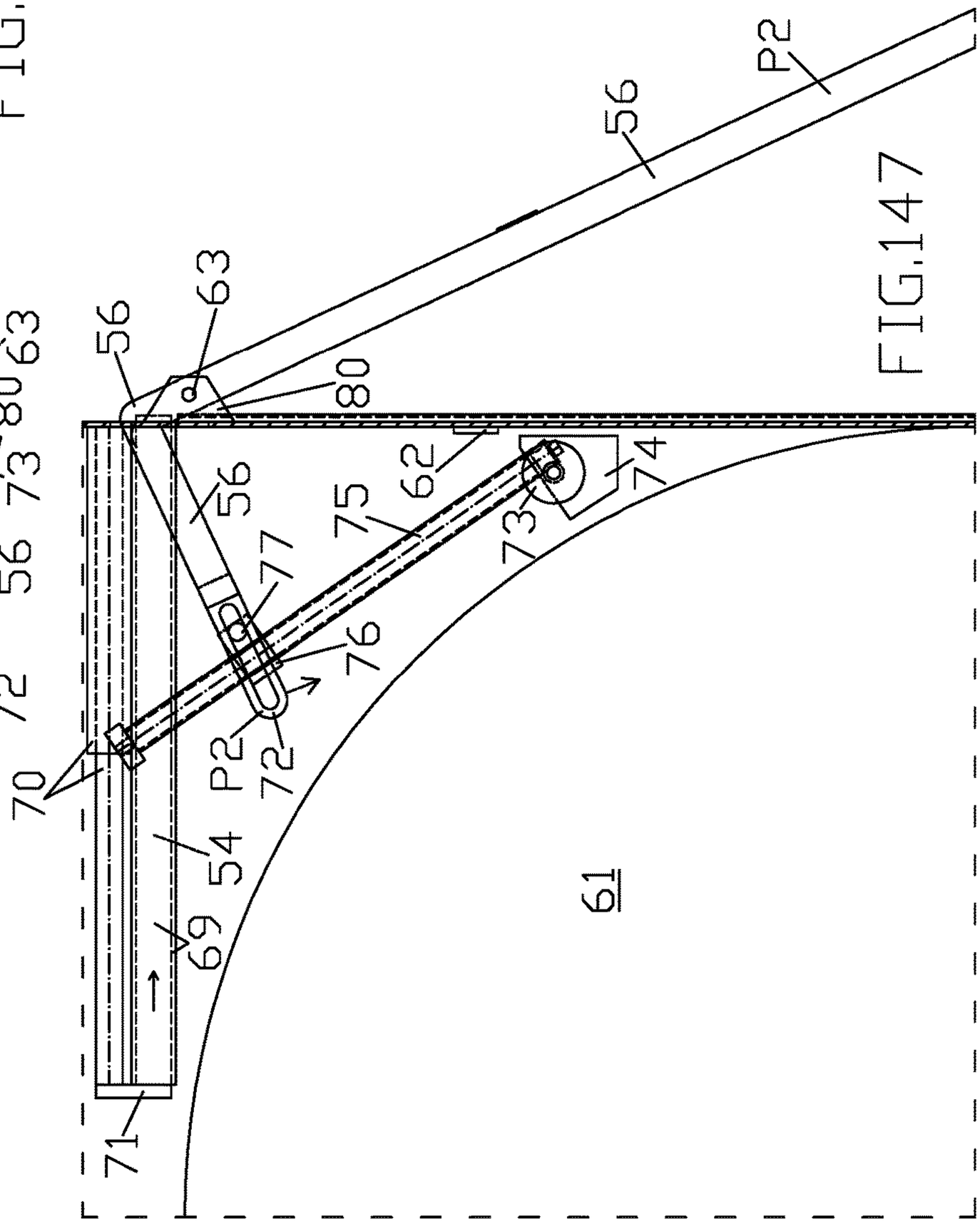


FIG.147

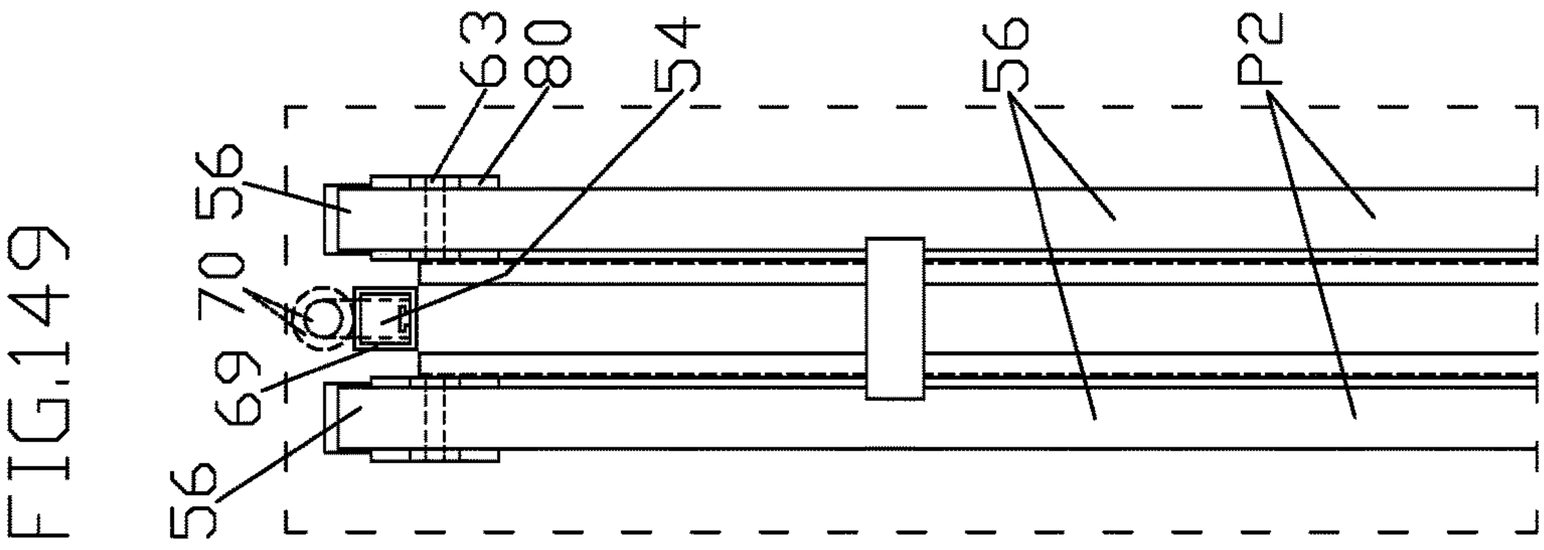


FIG.149

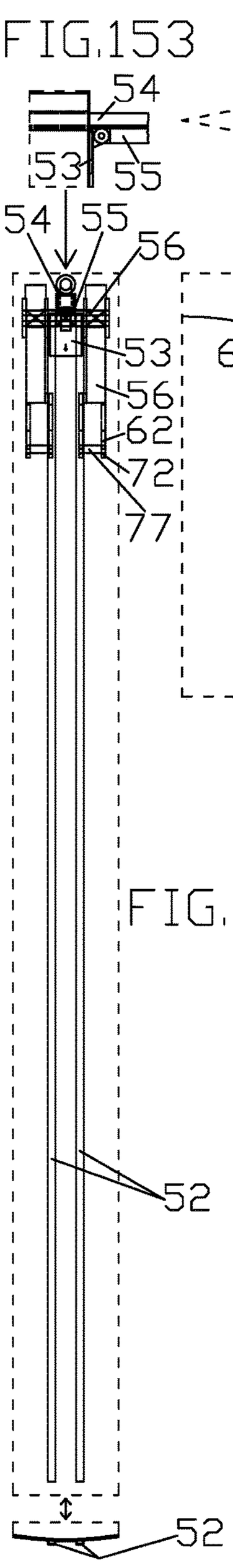


FIG.153

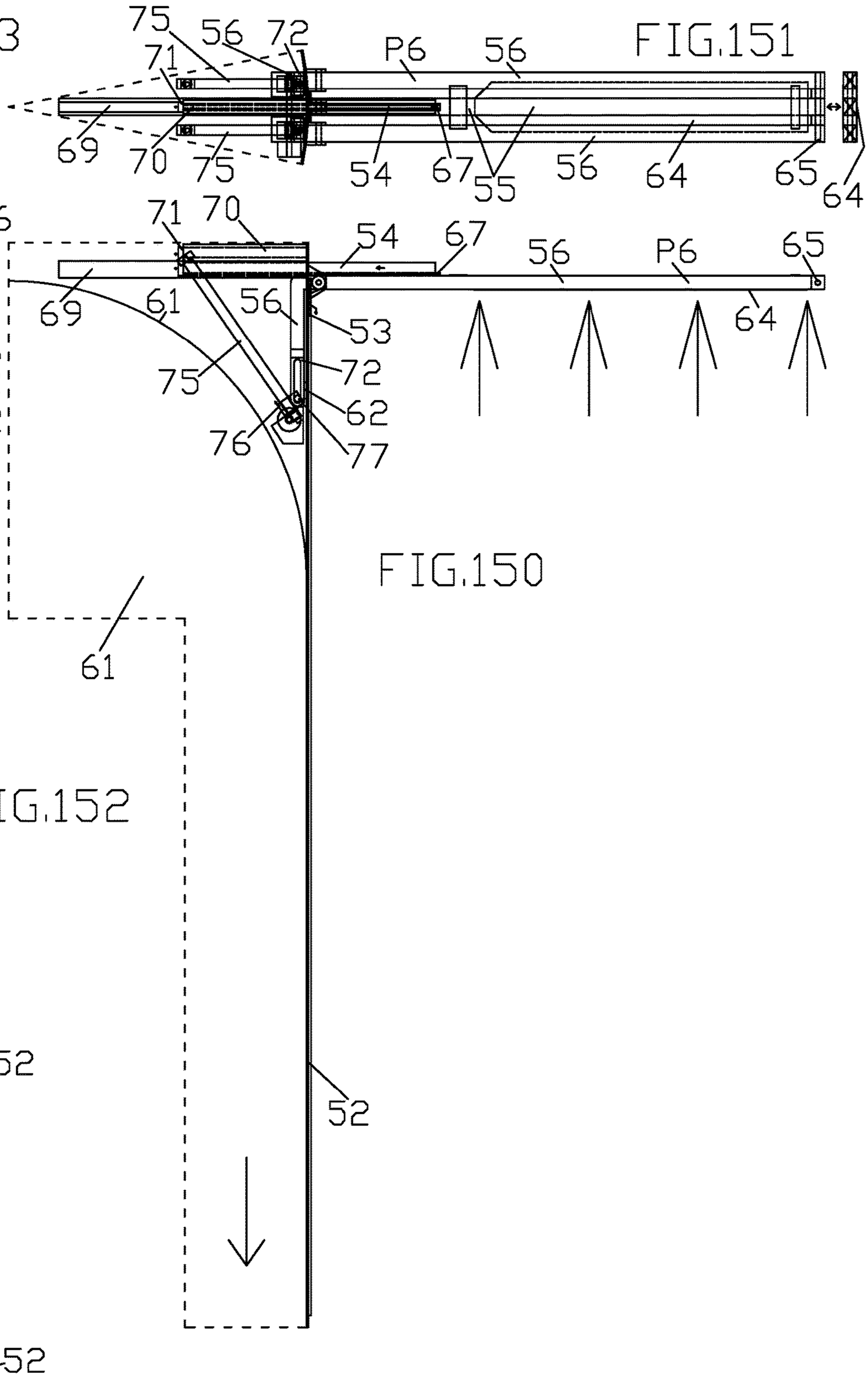


FIG.152

FIG.151

FIG.150

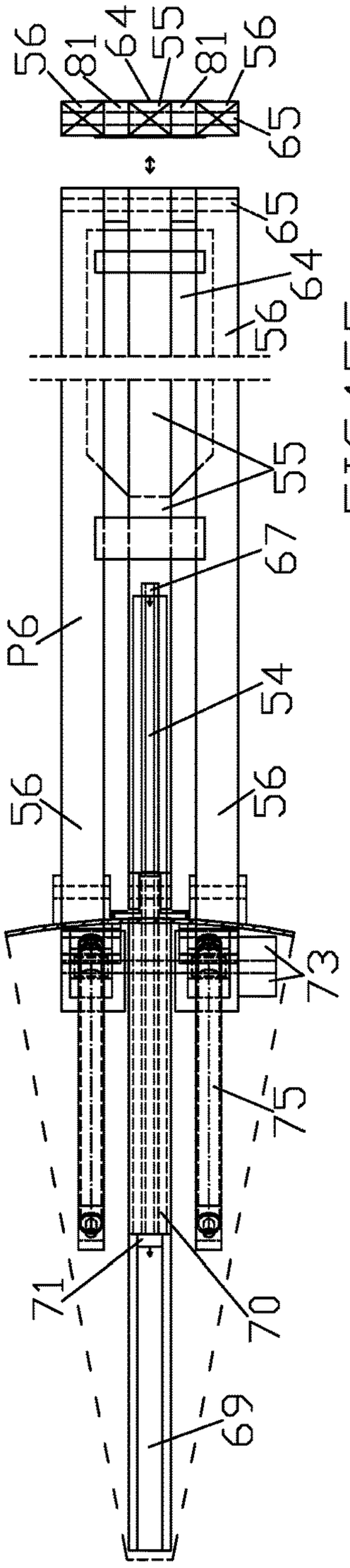


FIG.155

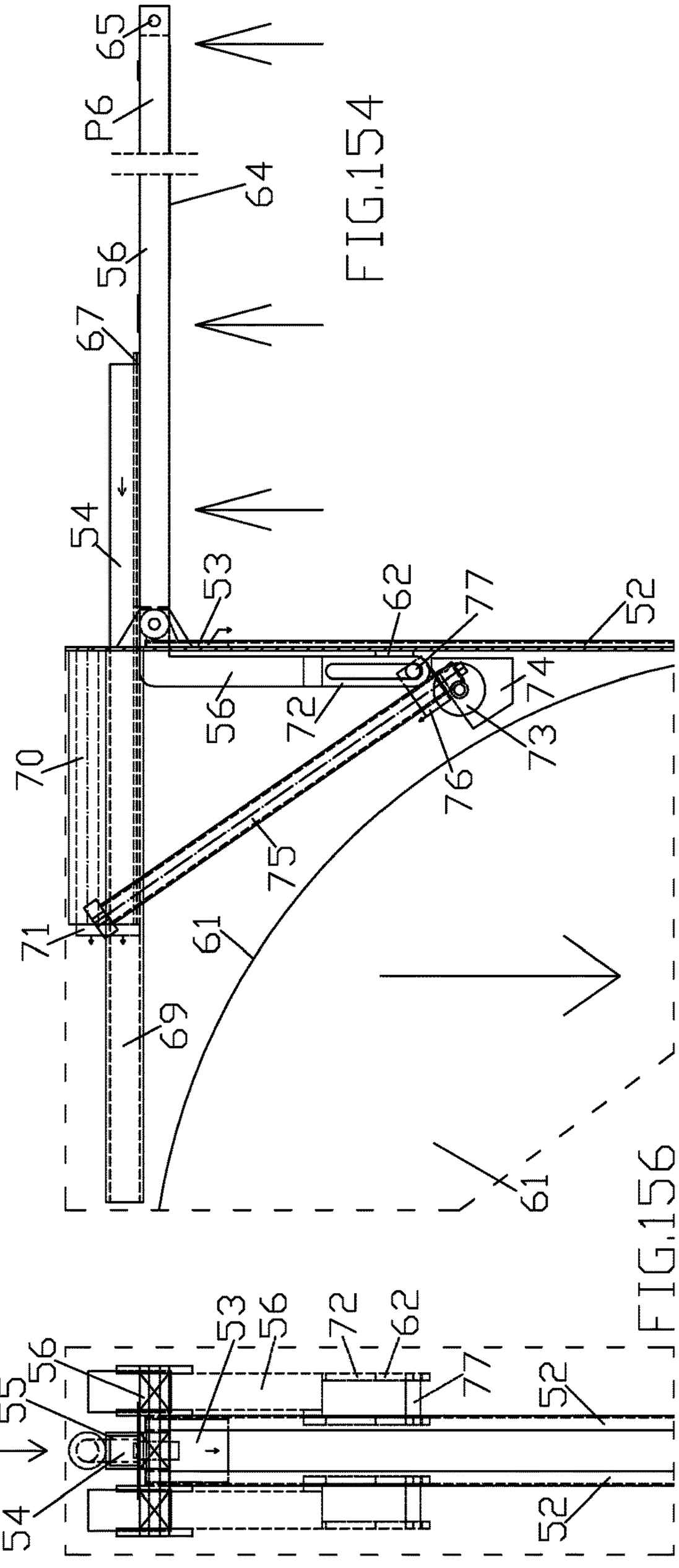


FIG.154

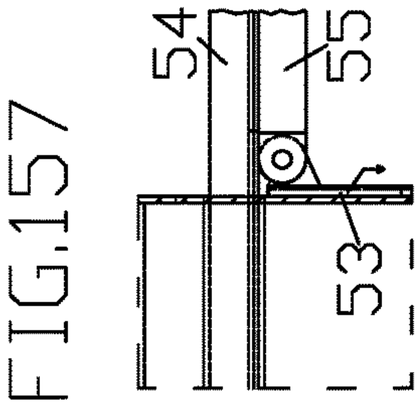


FIG.157

FIG.156

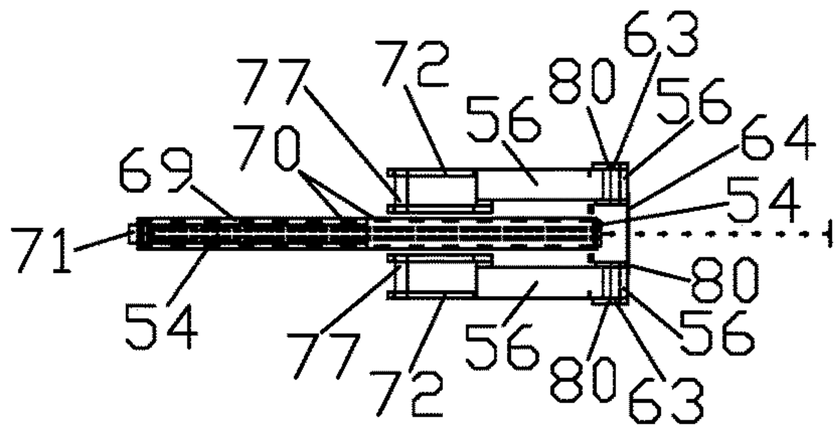


FIG.159

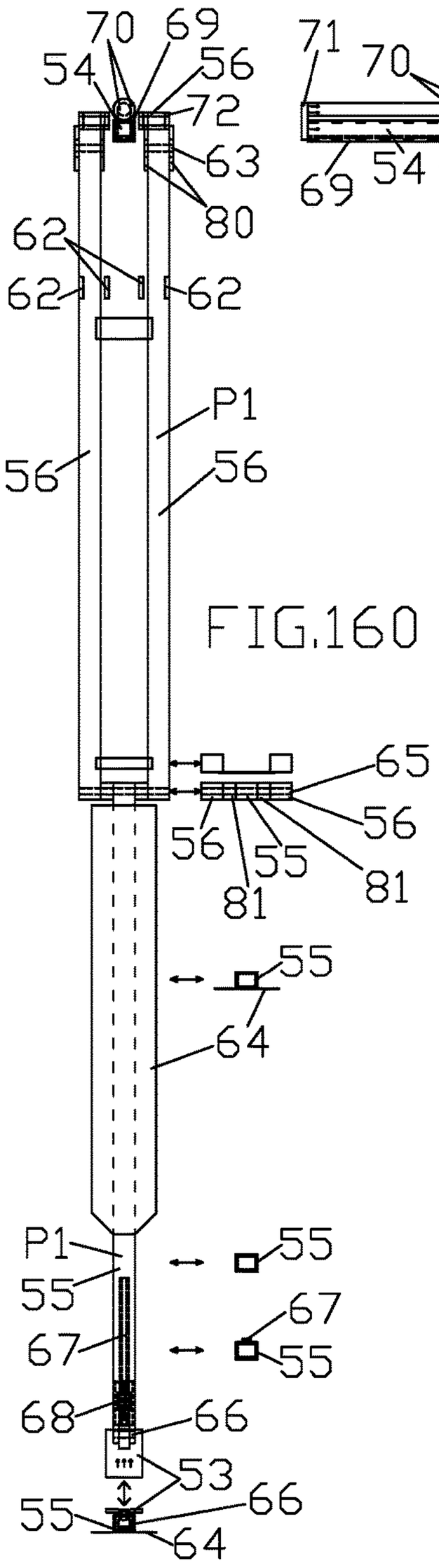


FIG.160

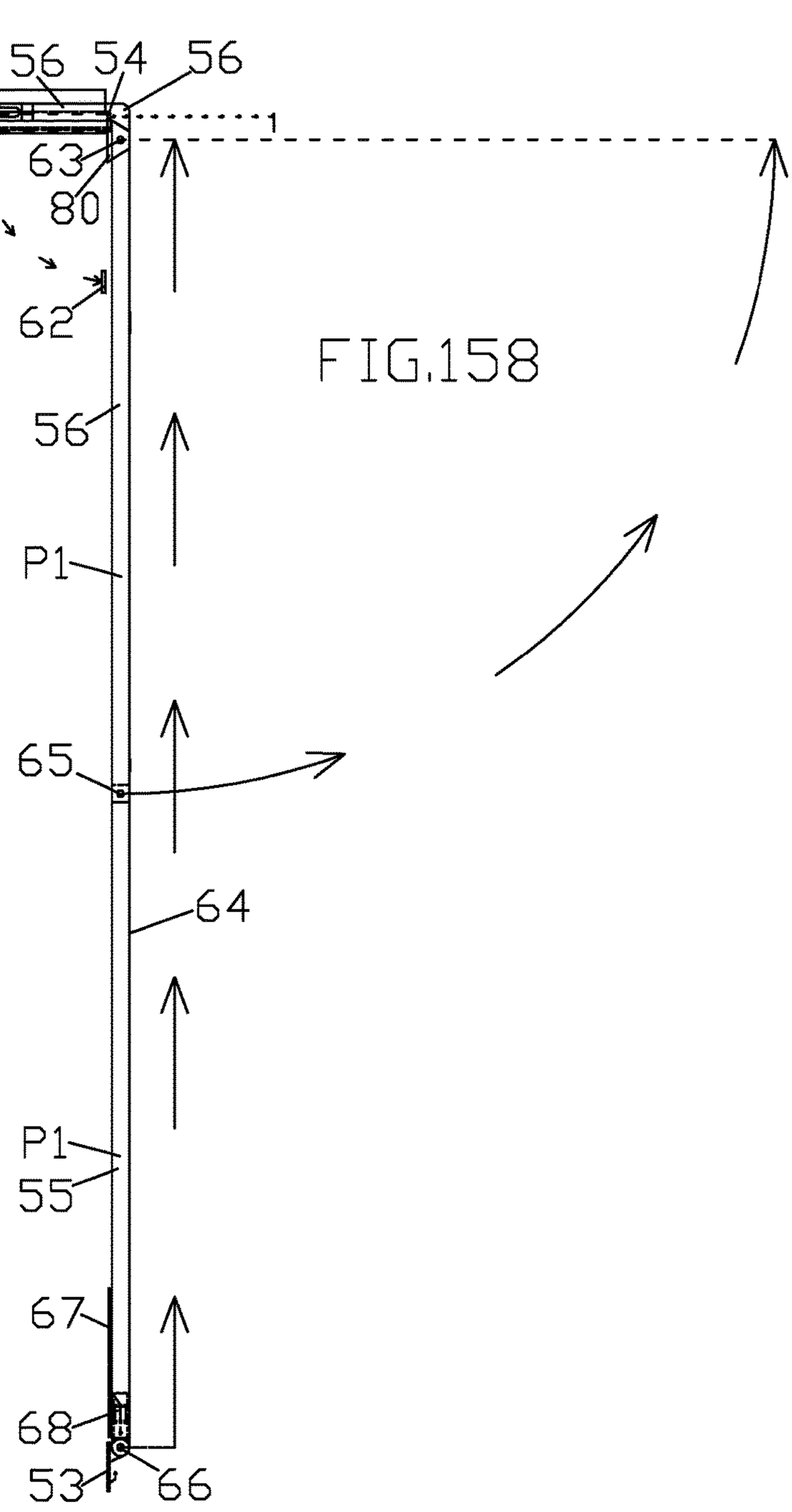


FIG.158

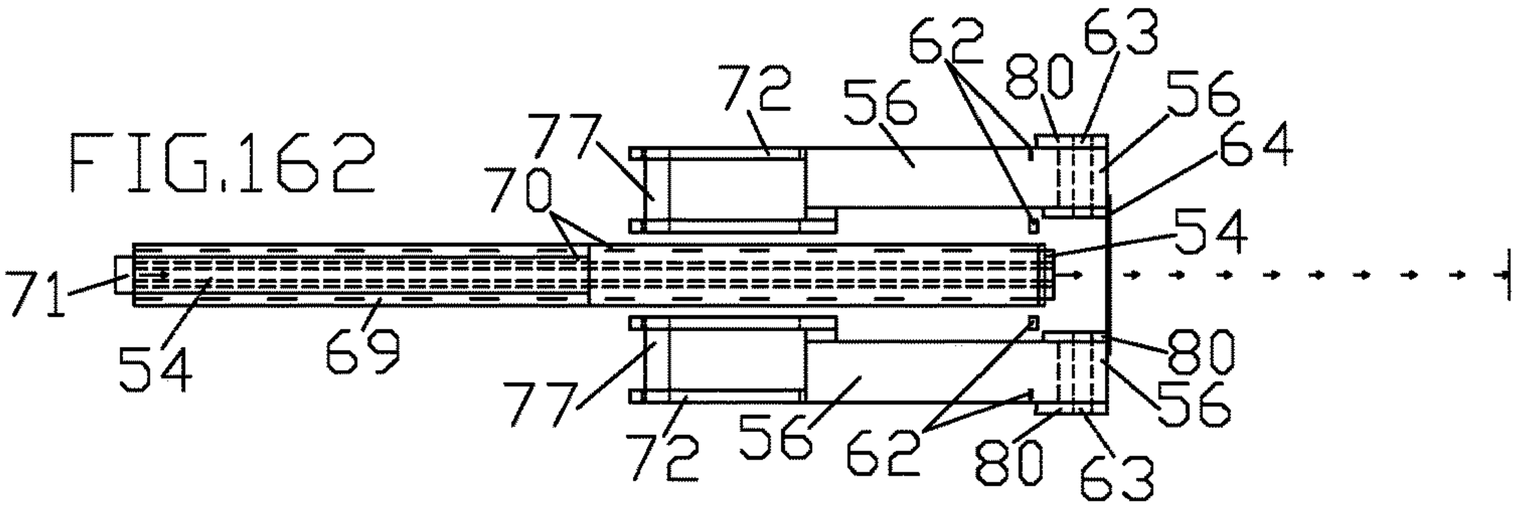


FIG.162

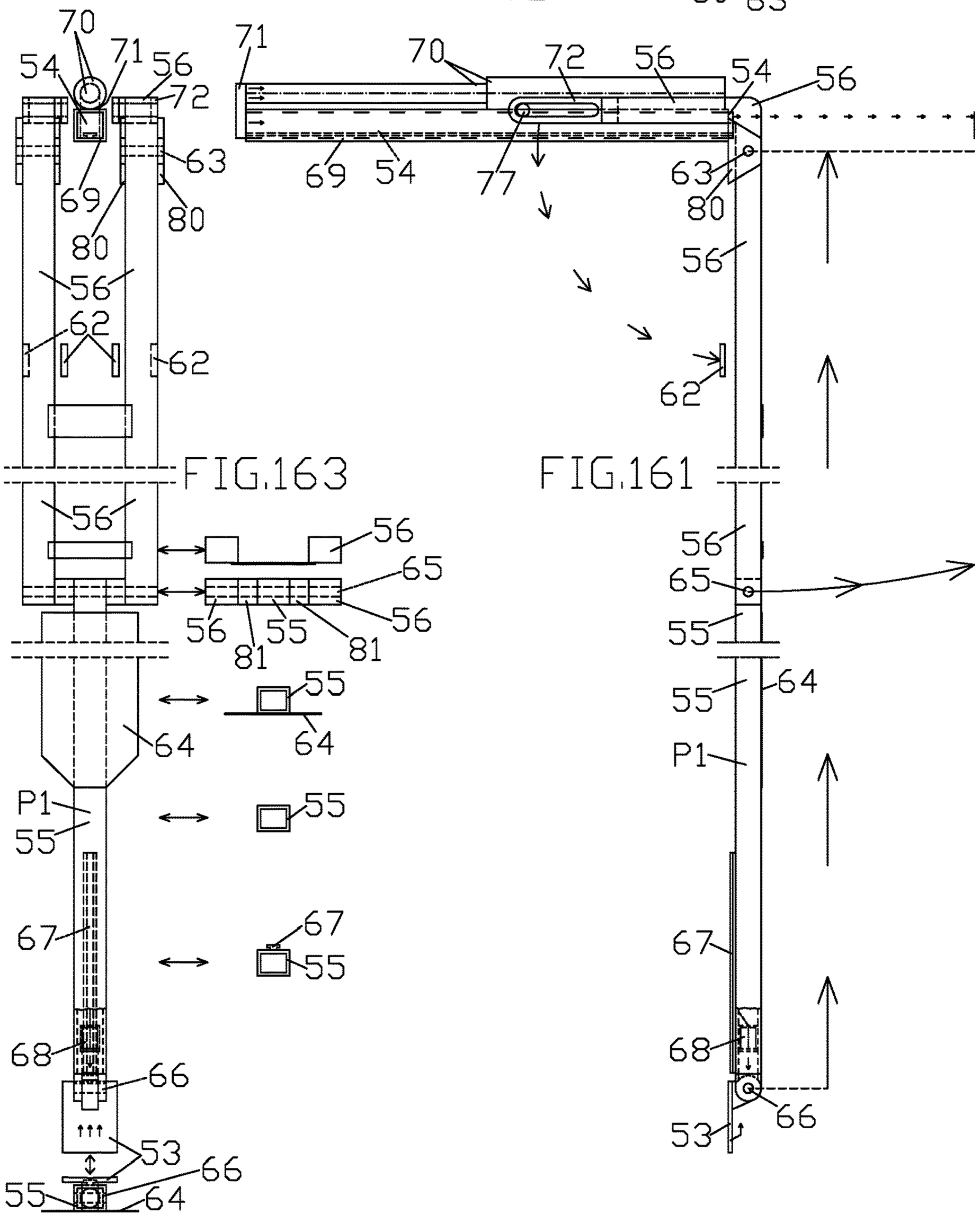


FIG.163

FIG.161

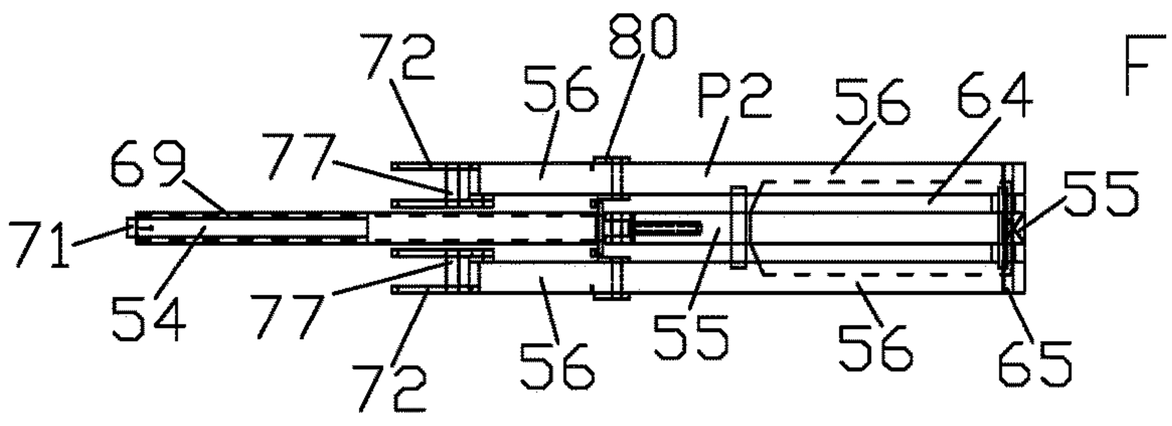


FIG.165

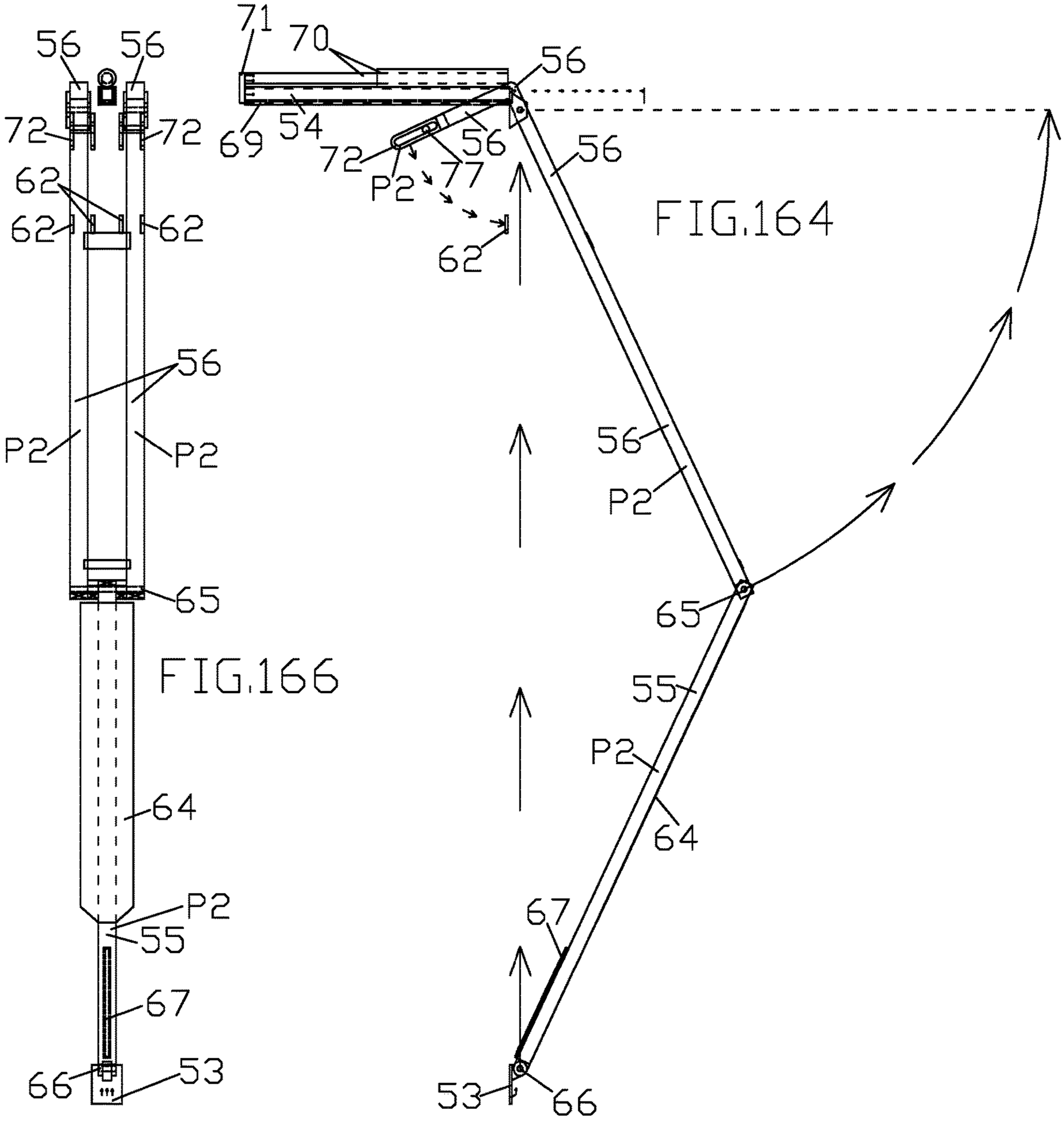
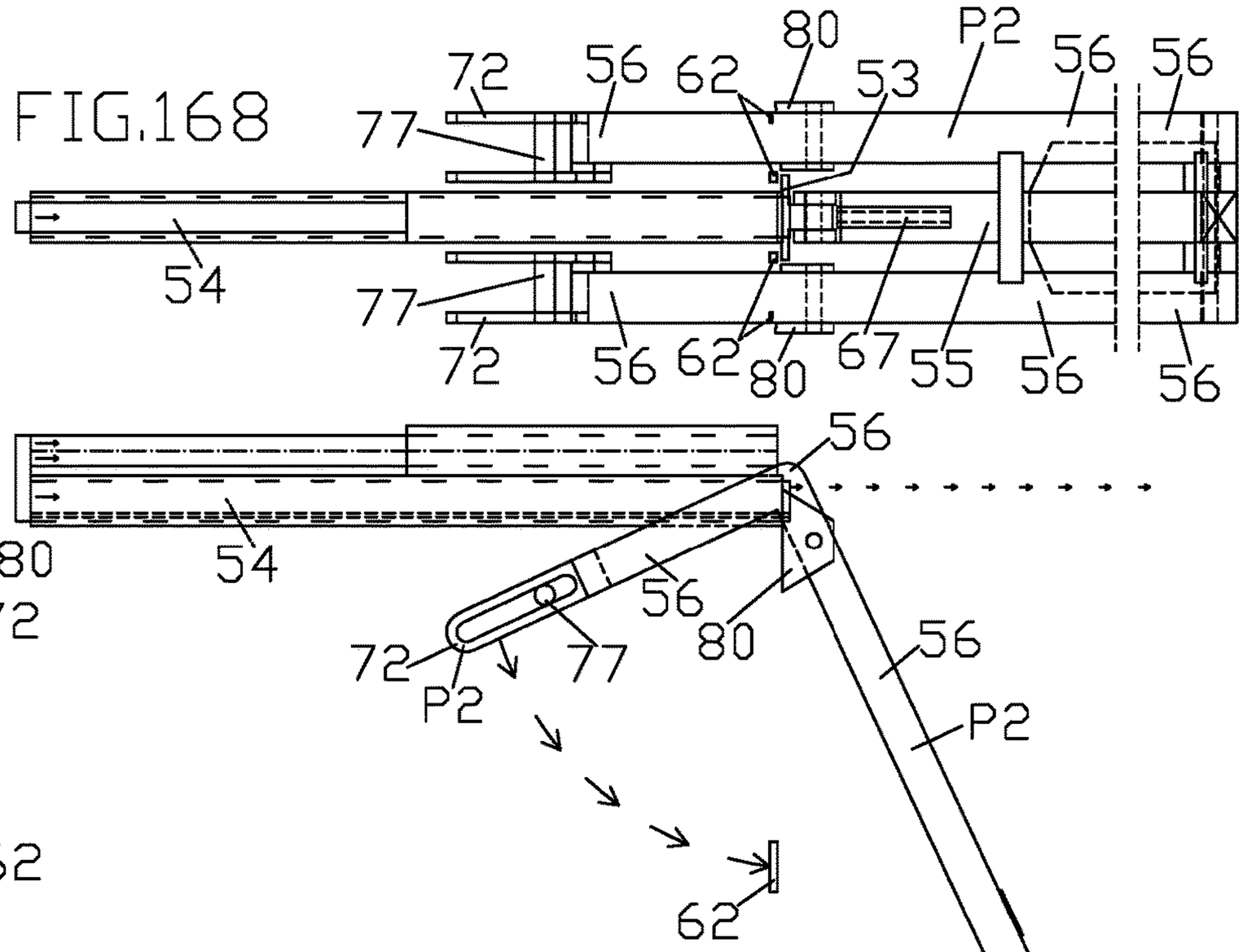


FIG.166

FIG.164

FIG.168



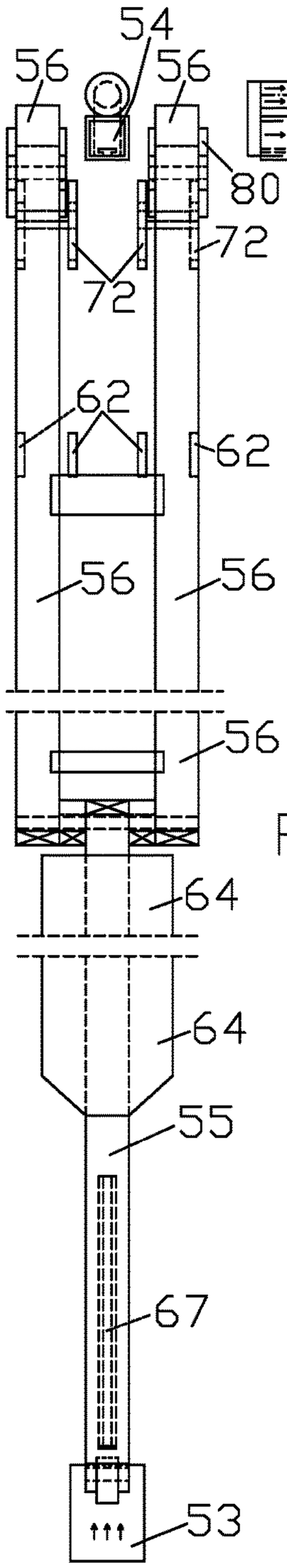


FIG.169

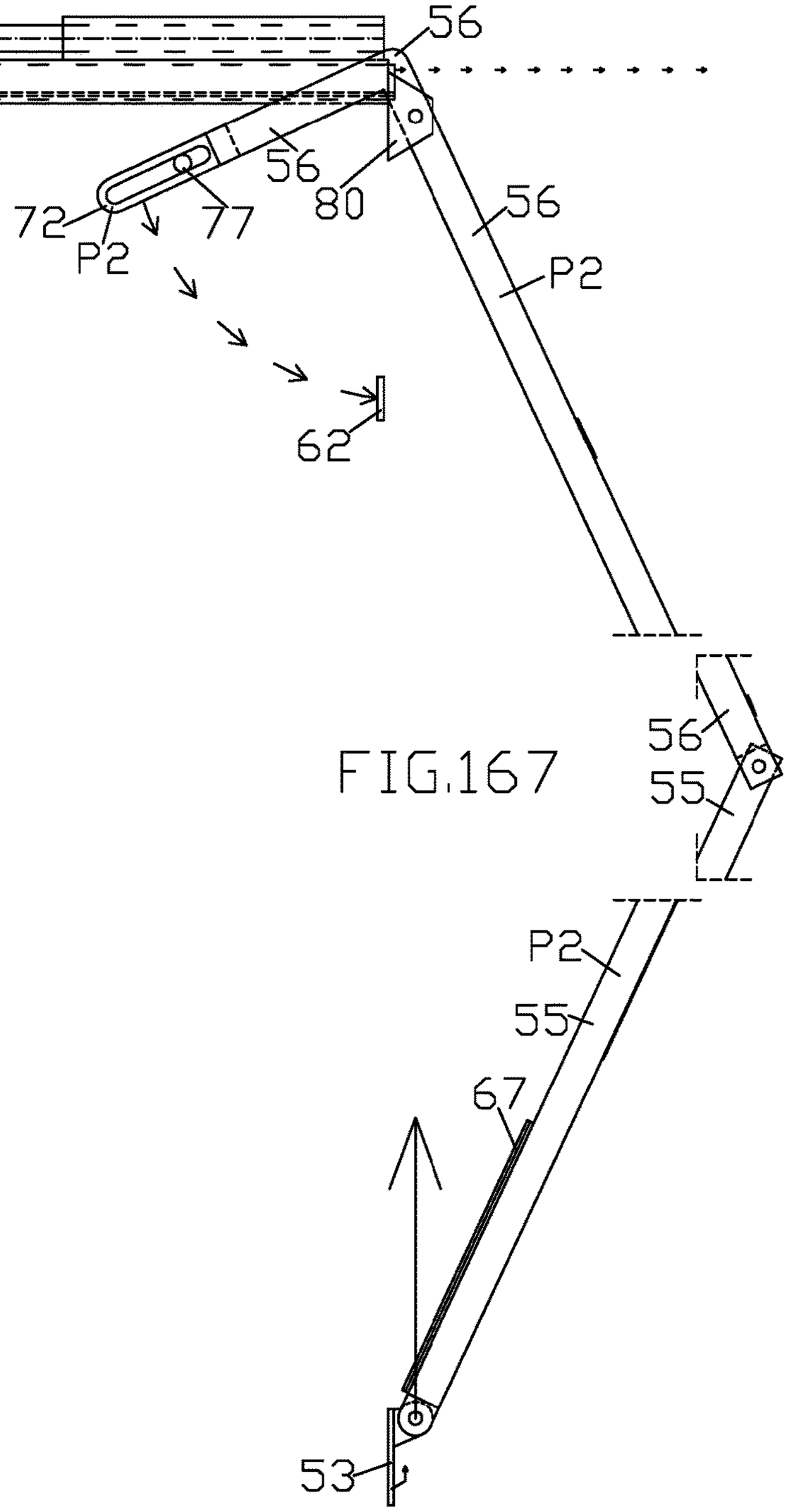


FIG.167

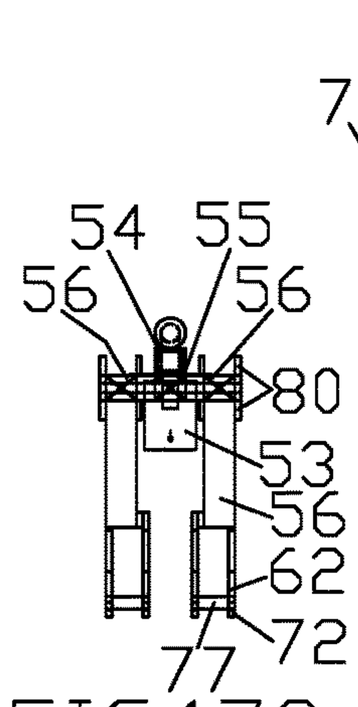


FIG.172

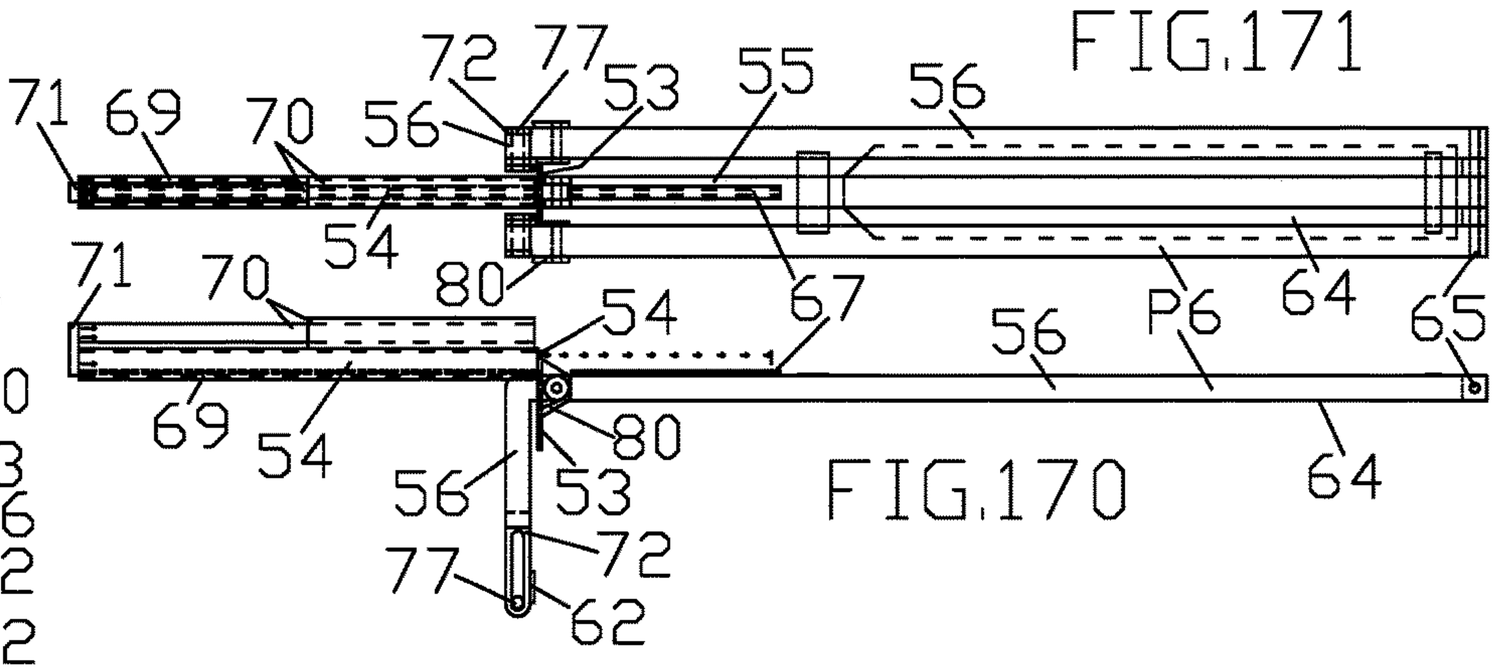


FIG.171

FIG.170

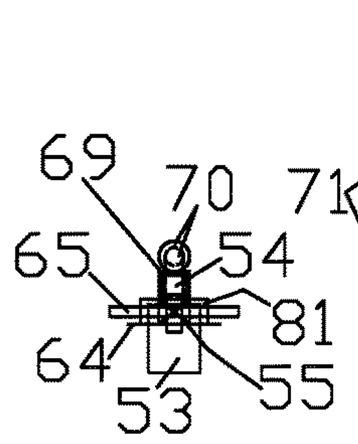


FIG.175

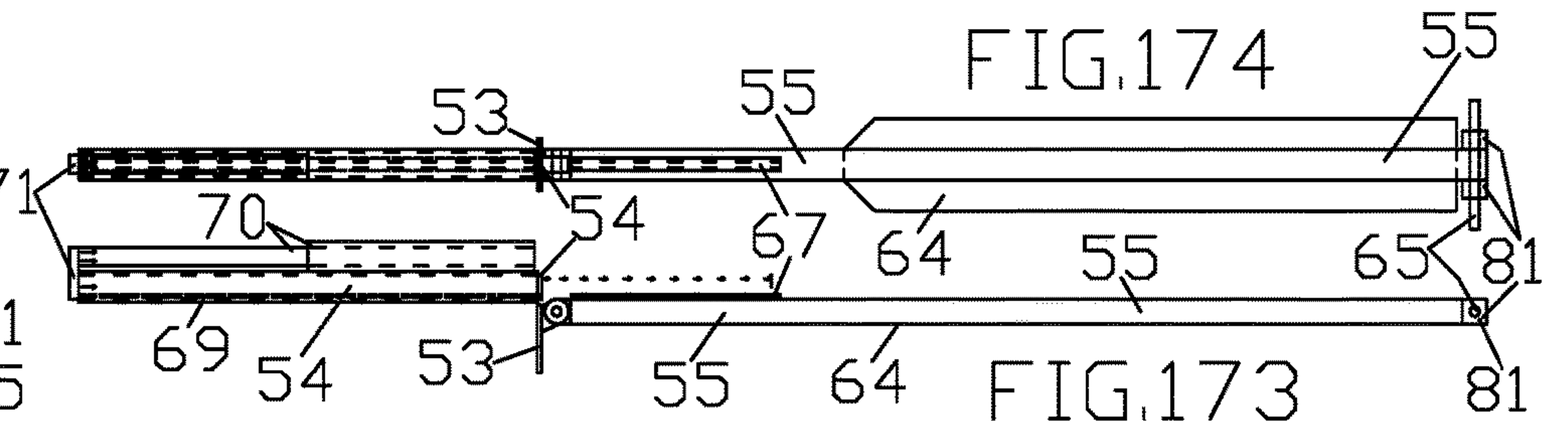


FIG.174

FIG.173

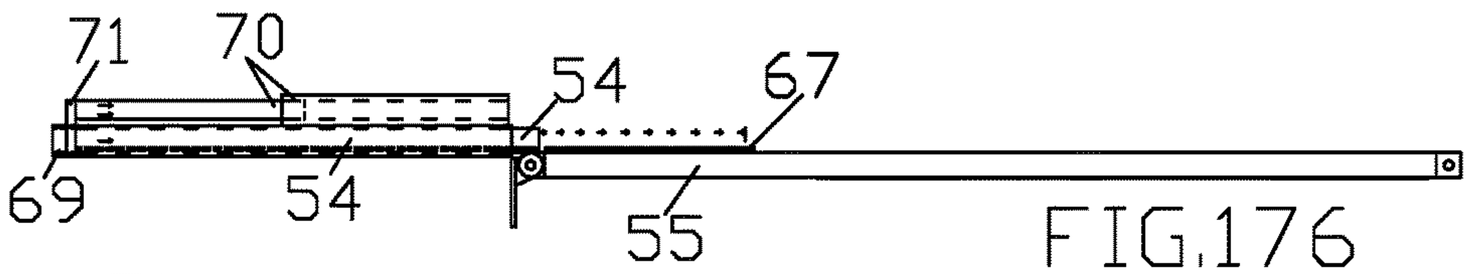


FIG.176

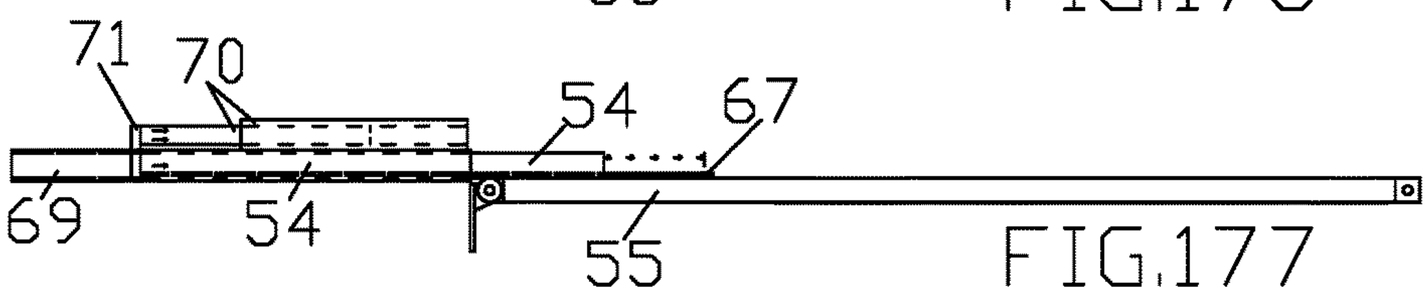


FIG.177

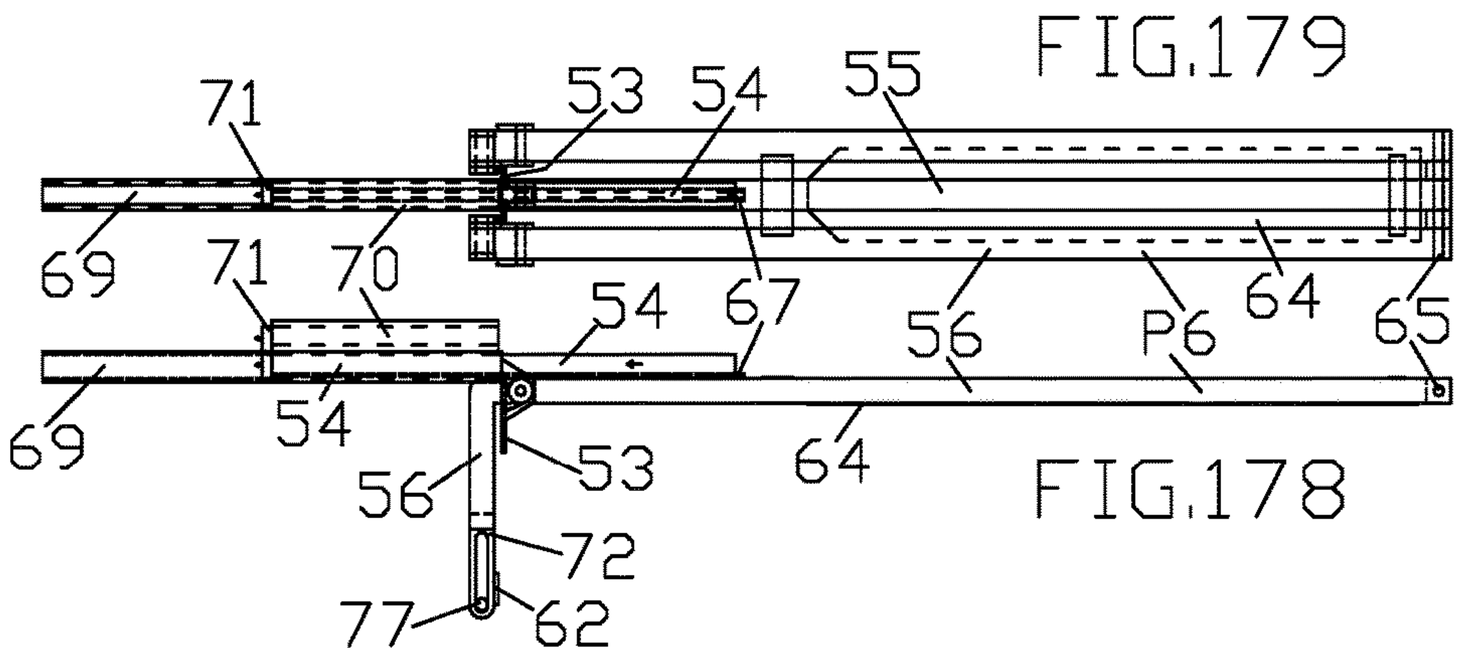


FIG.179

FIG.178

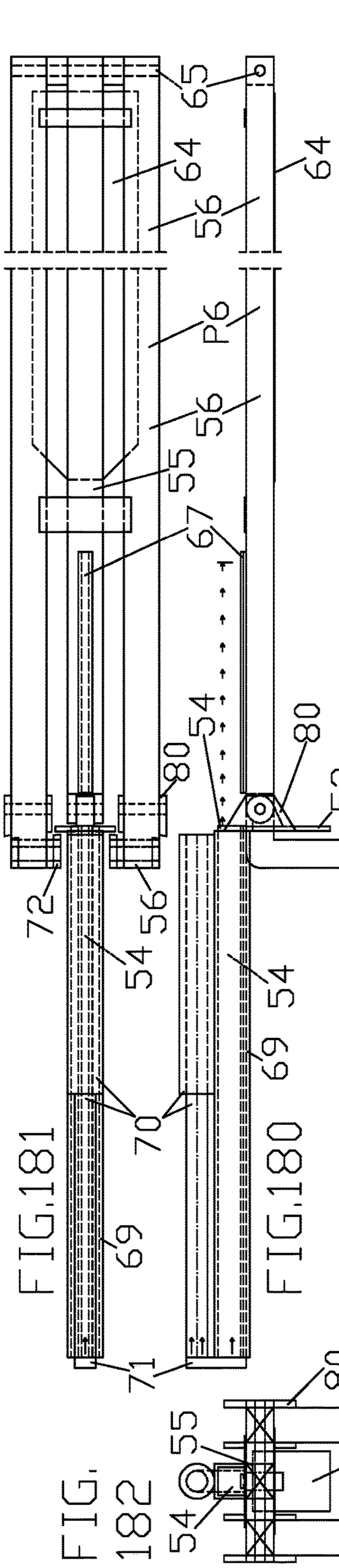


FIG.181

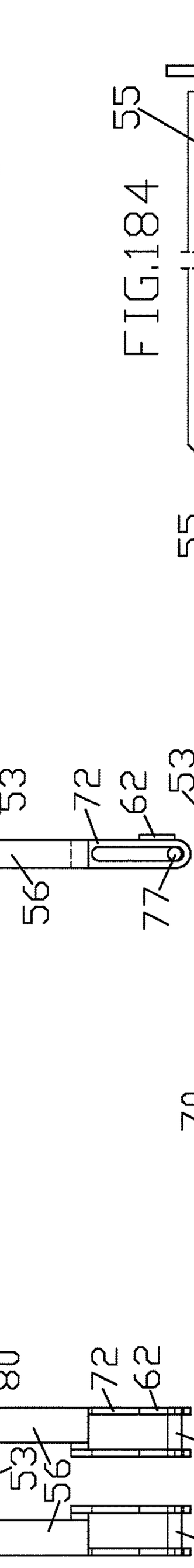


FIG.180

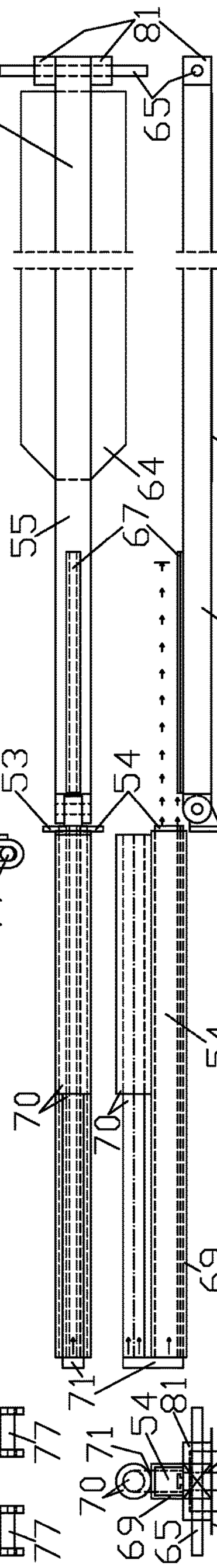


FIG.184

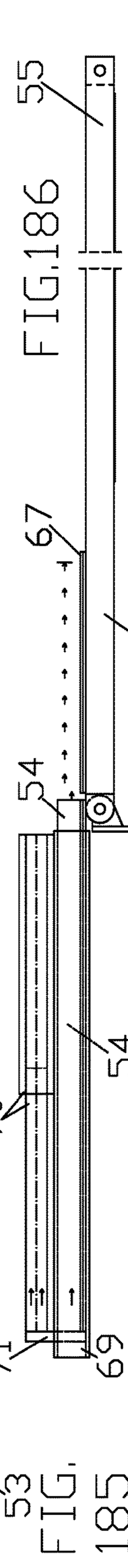


FIG.183

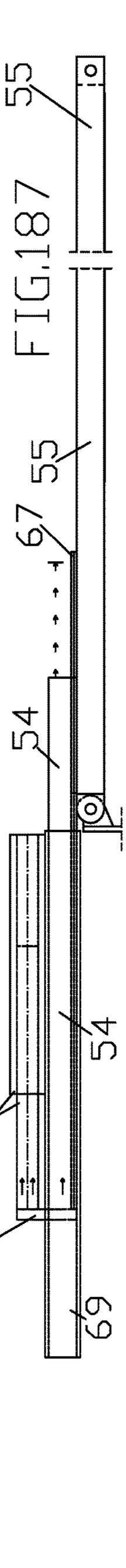


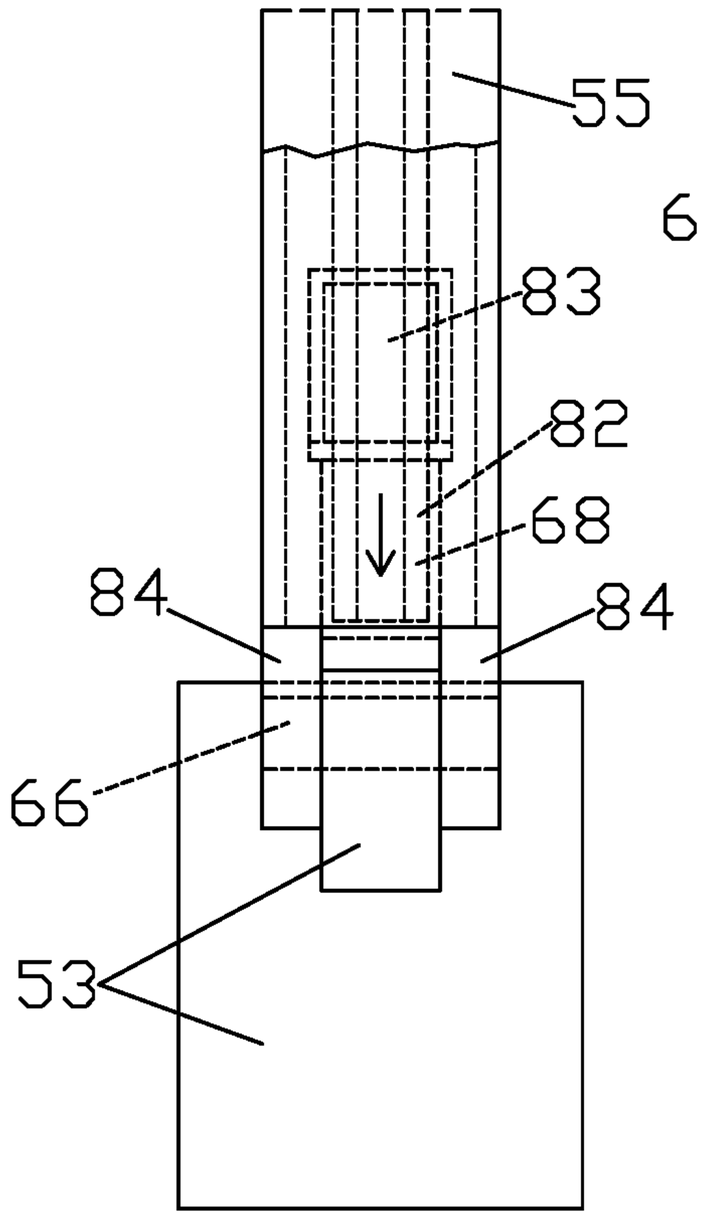
FIG.186

FIG.187

FIG. 182

FIG. 185

FIG.190



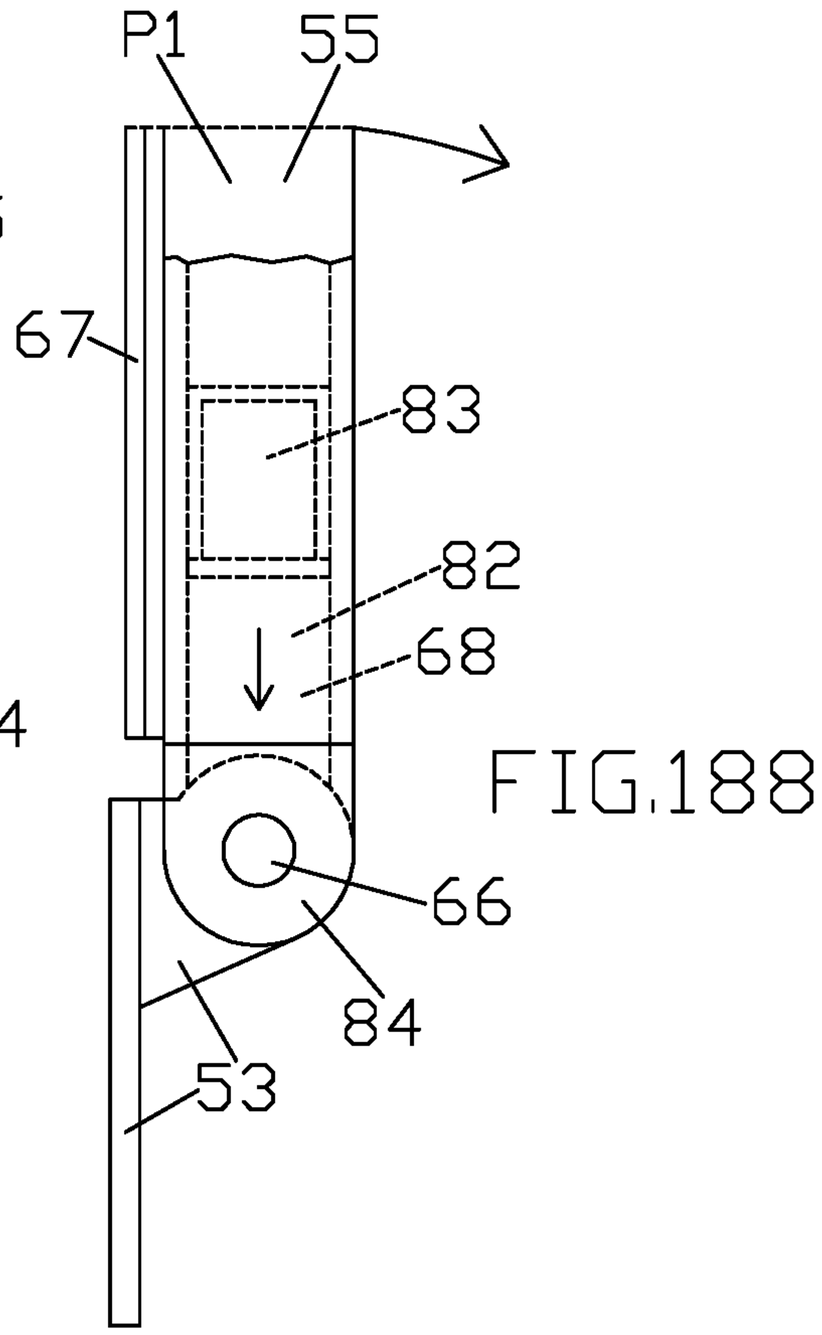


FIG.188

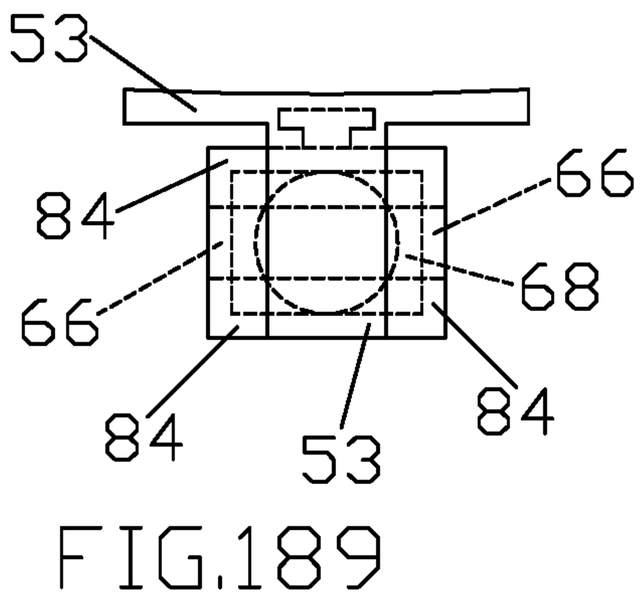


FIG.189

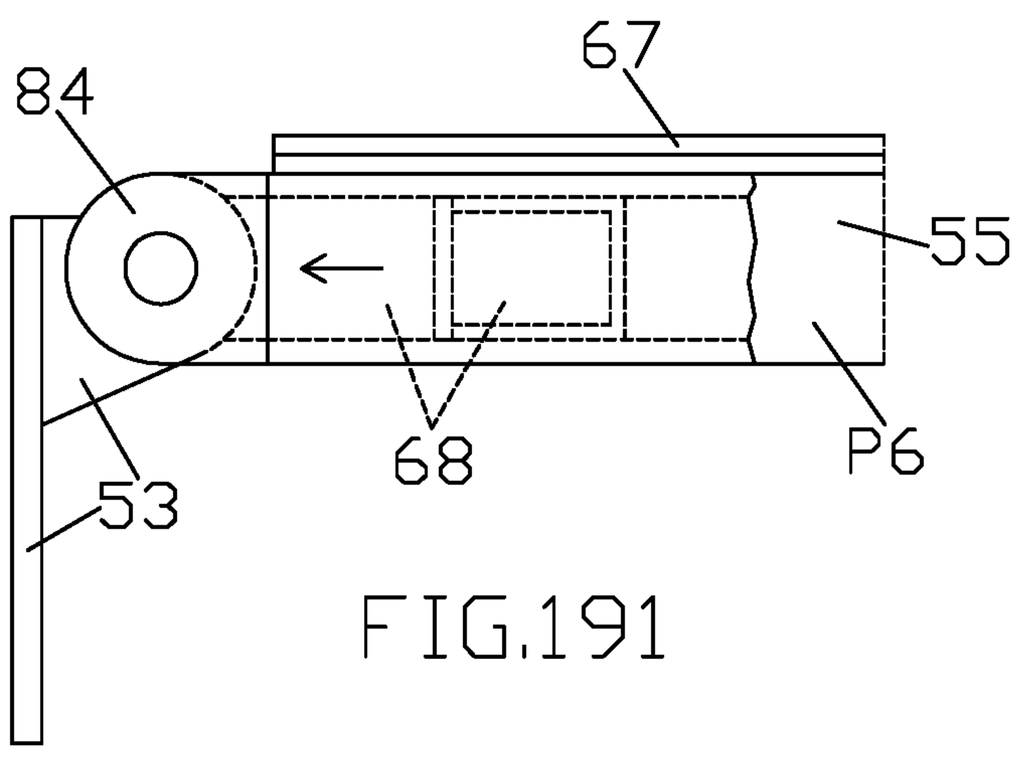


FIG.191

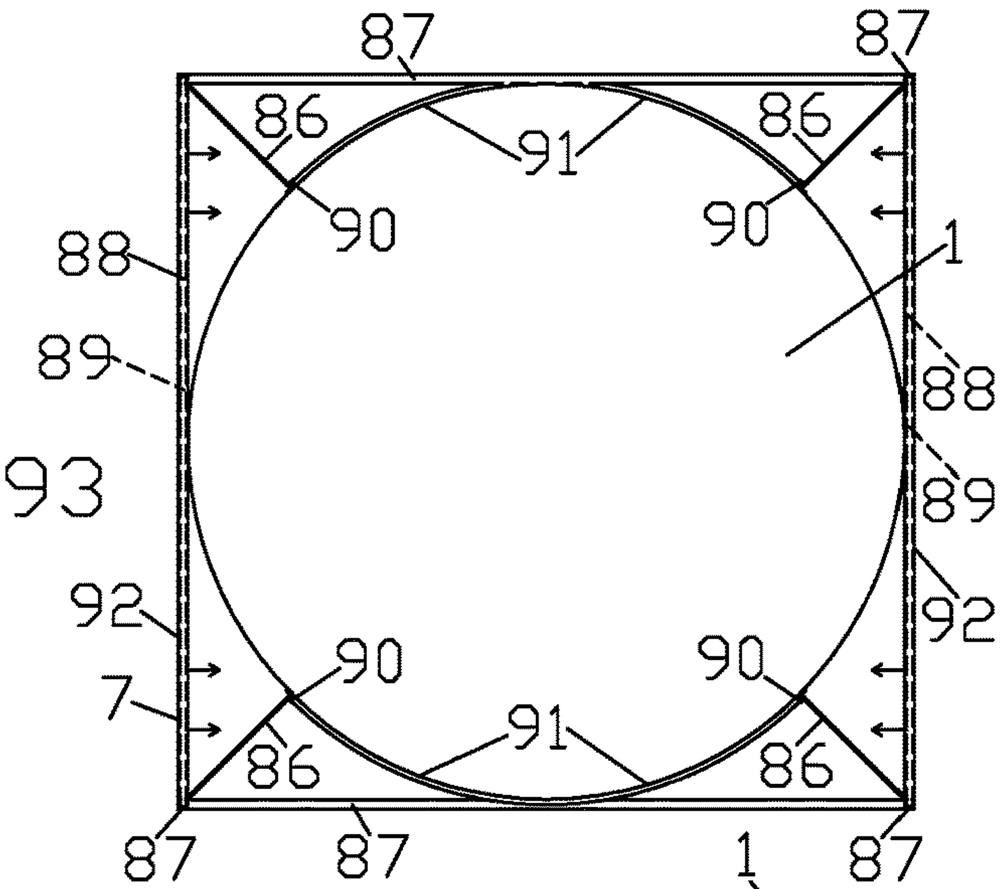


FIG.193

FIG.194

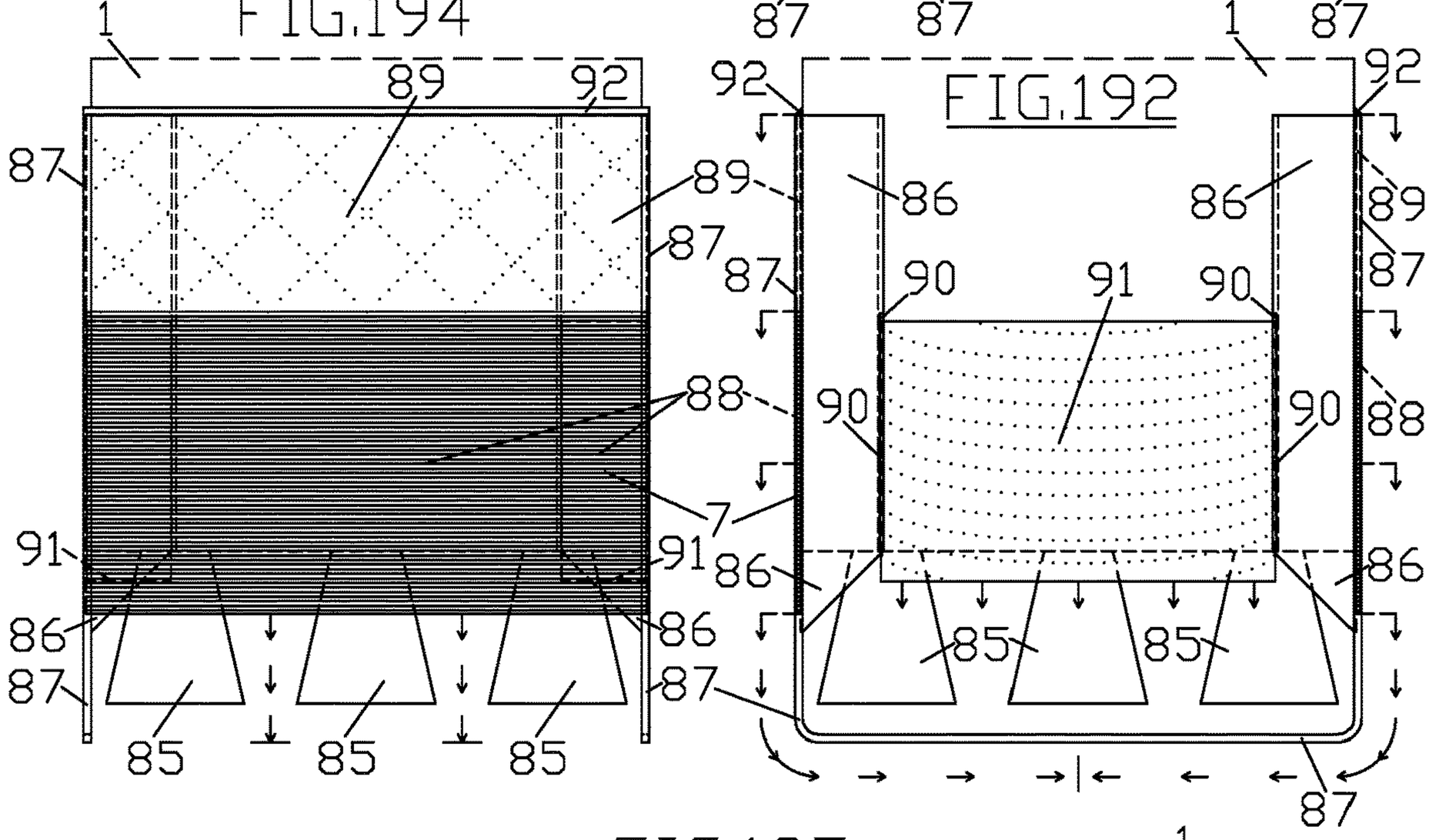
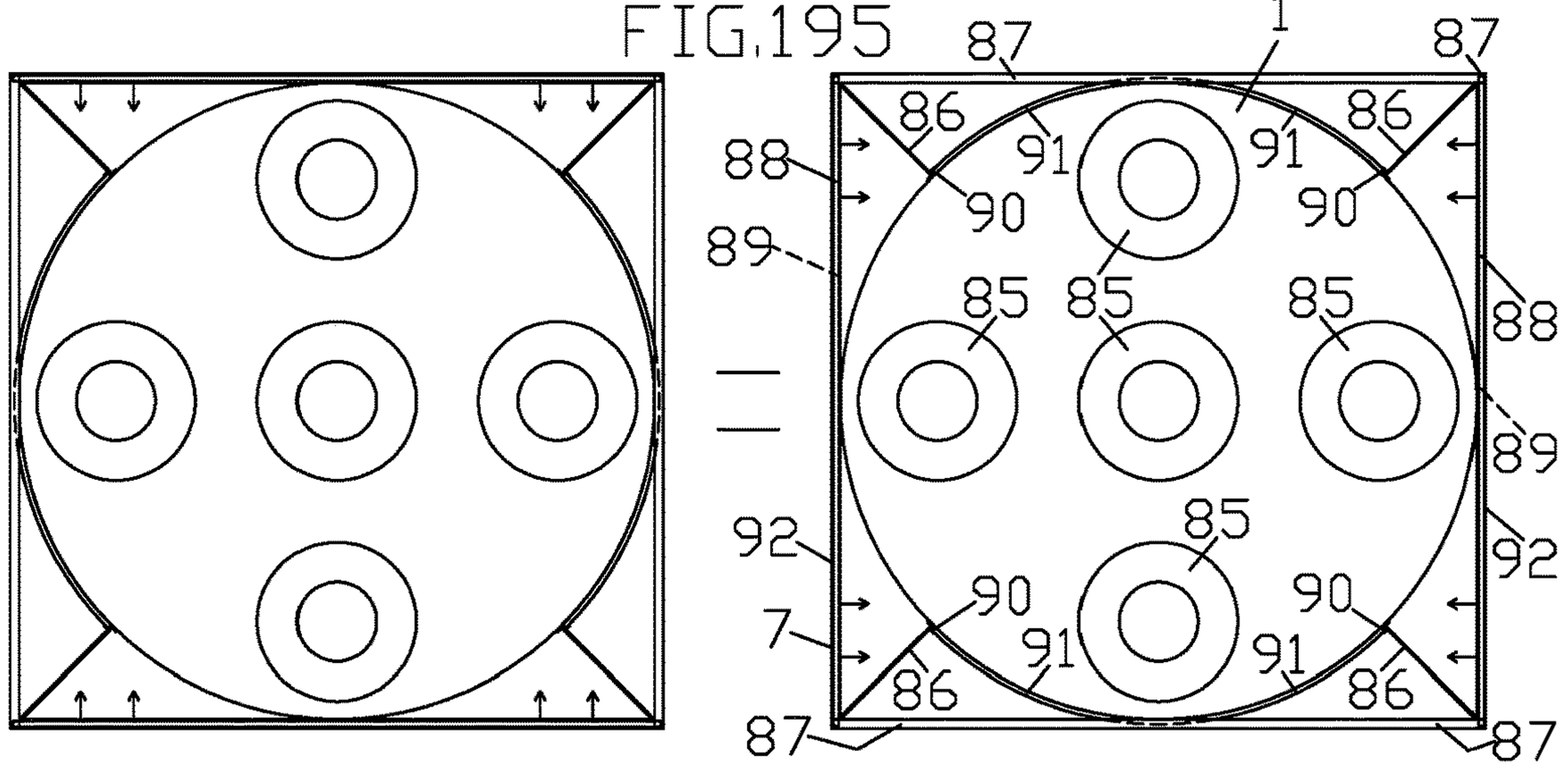


FIG.192

FIG.195



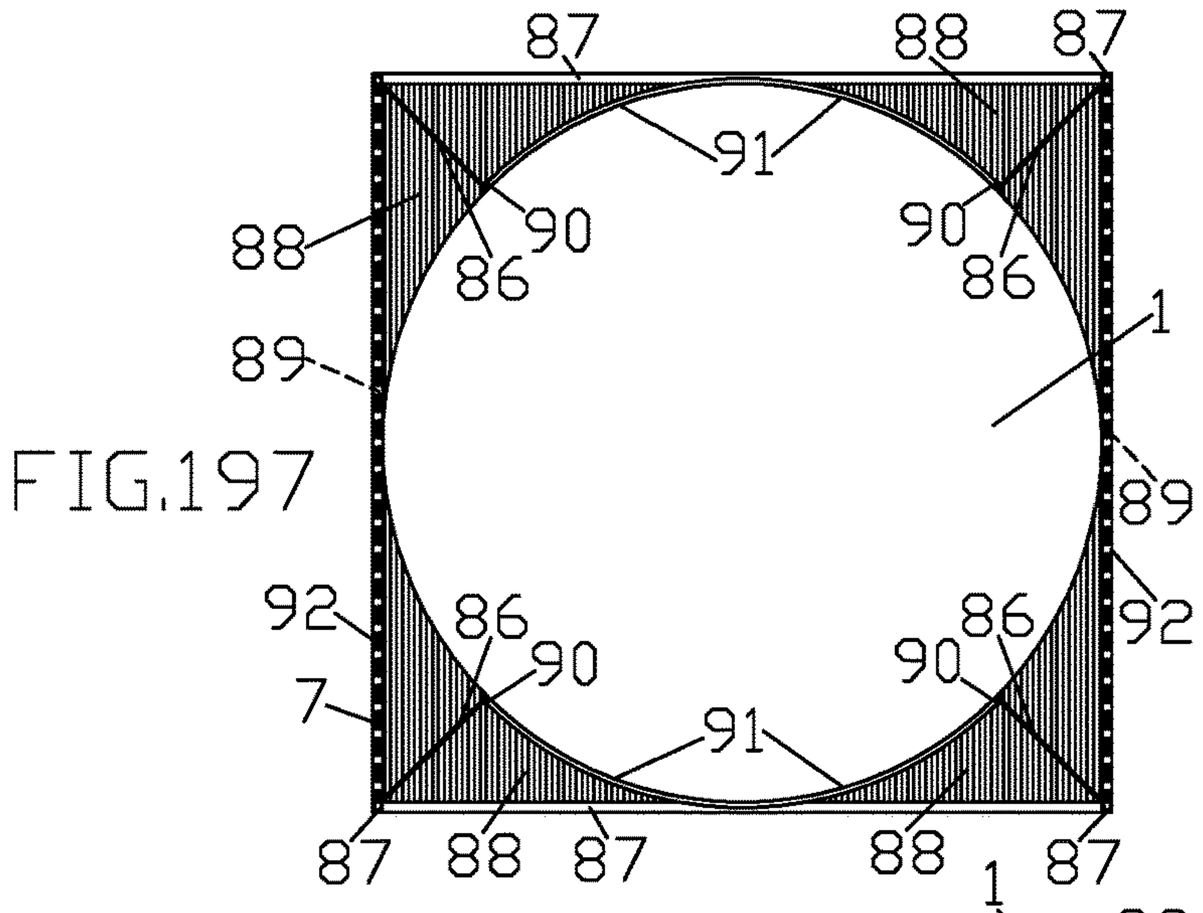


FIG.197

FIG.198

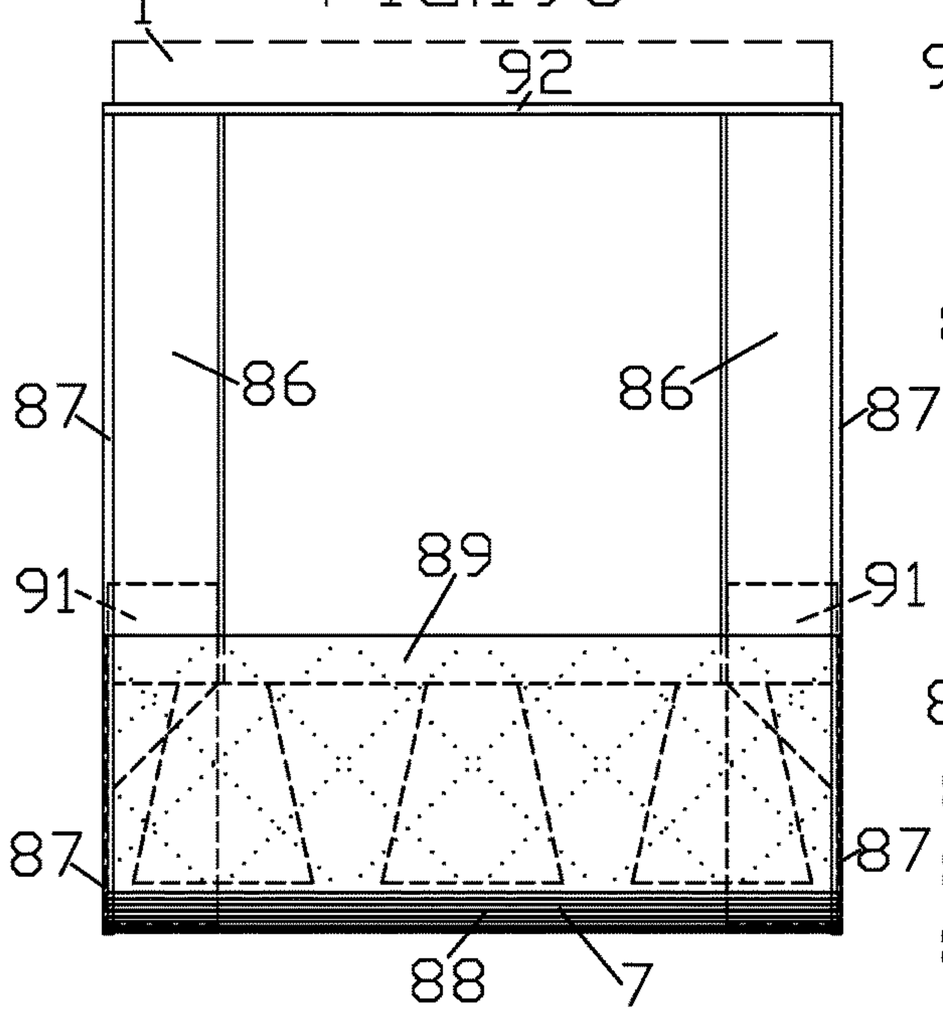


FIG.196

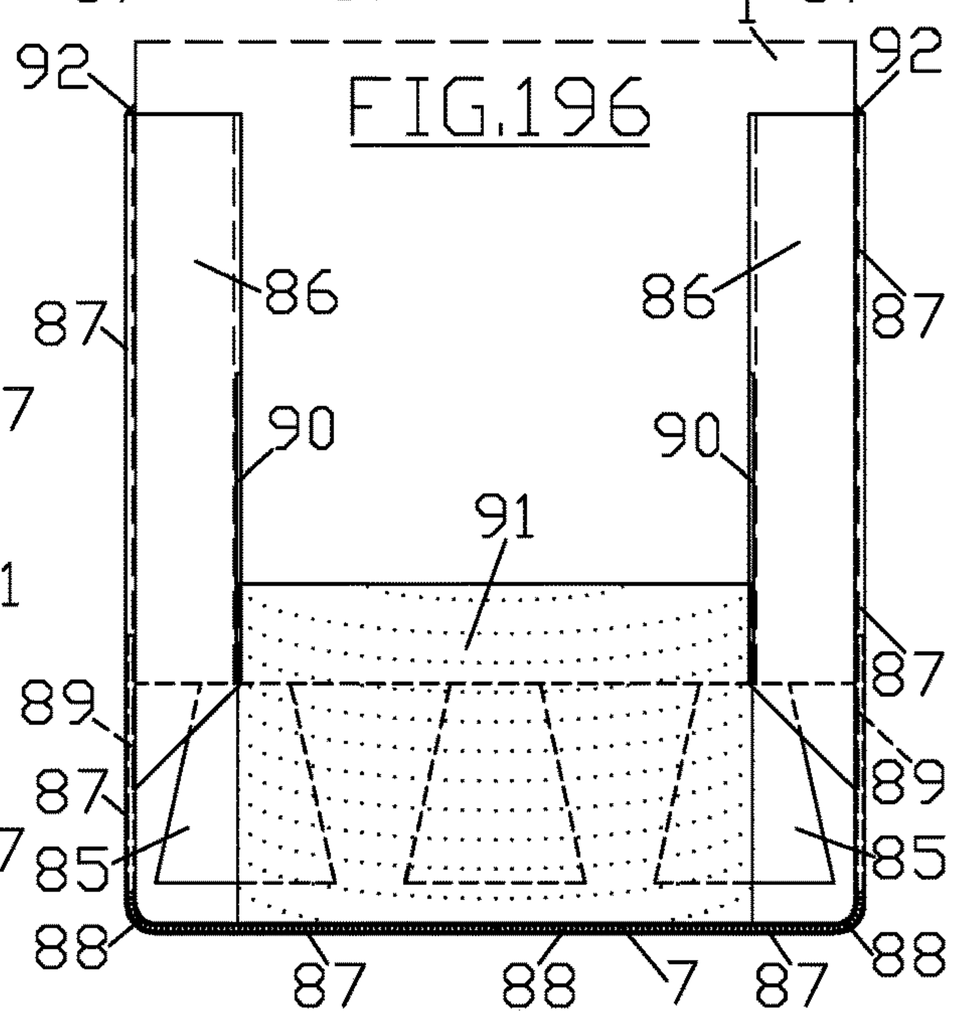


FIG.199

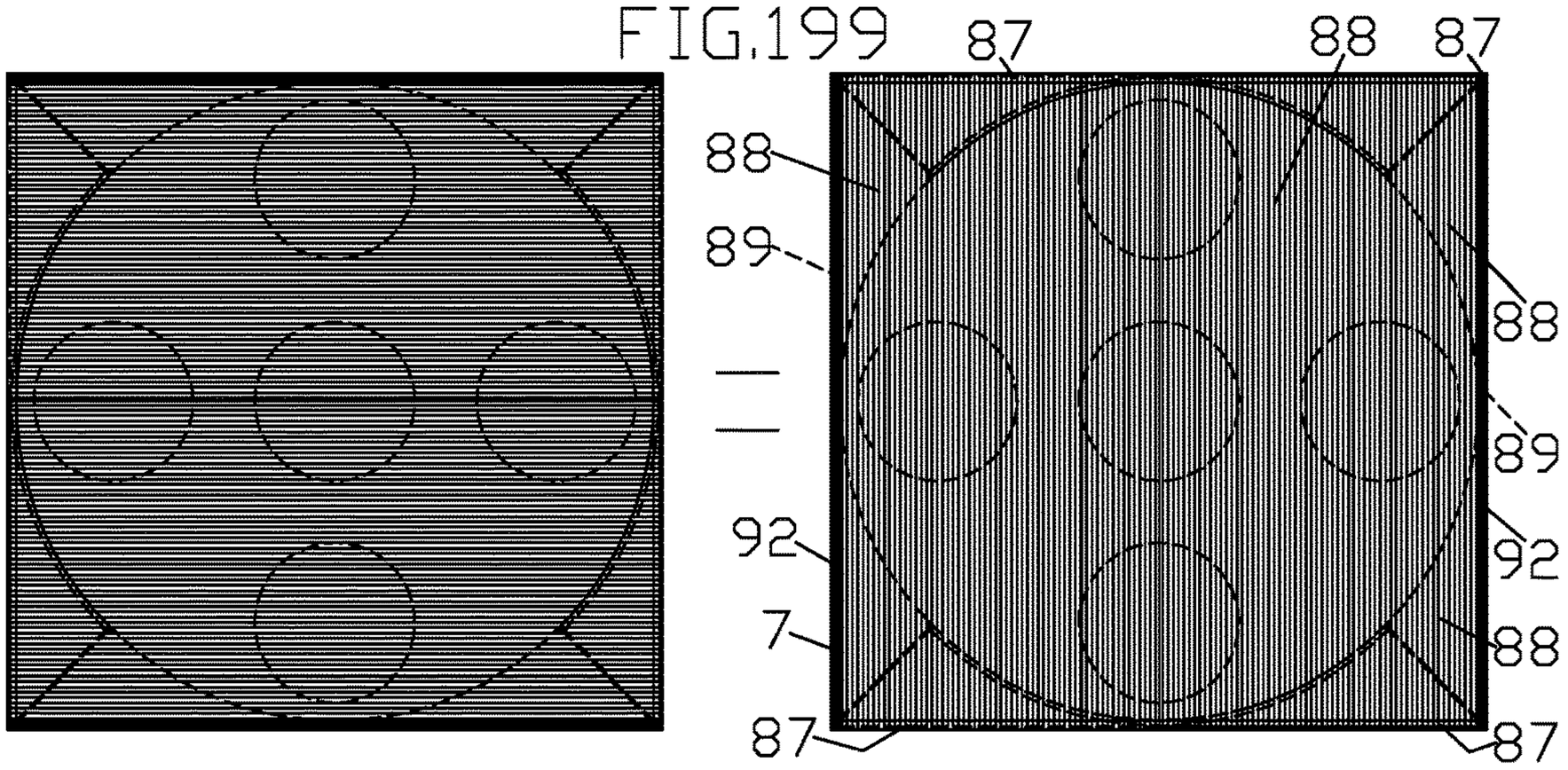


FIG.201

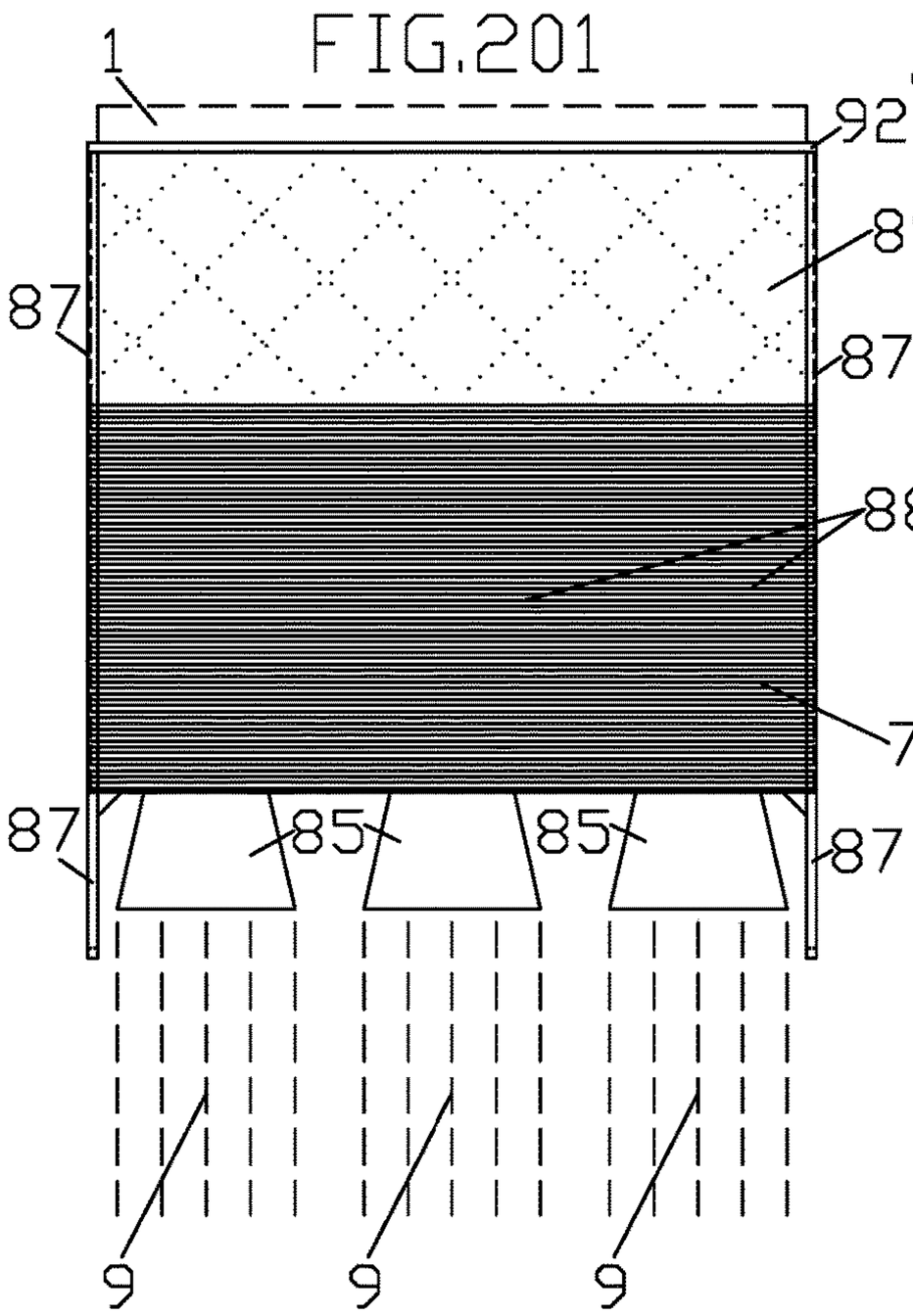


FIG.200

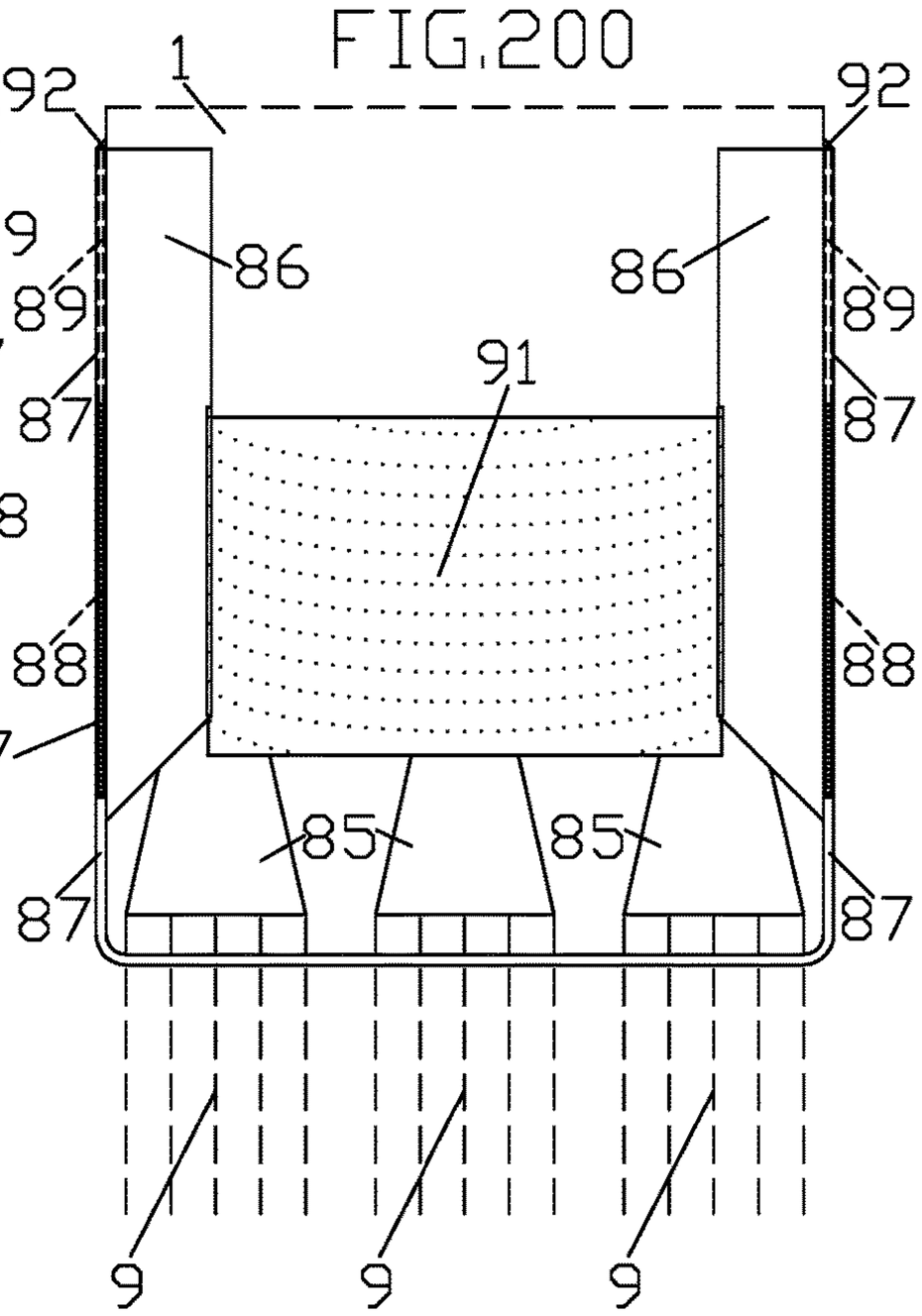


FIG.203

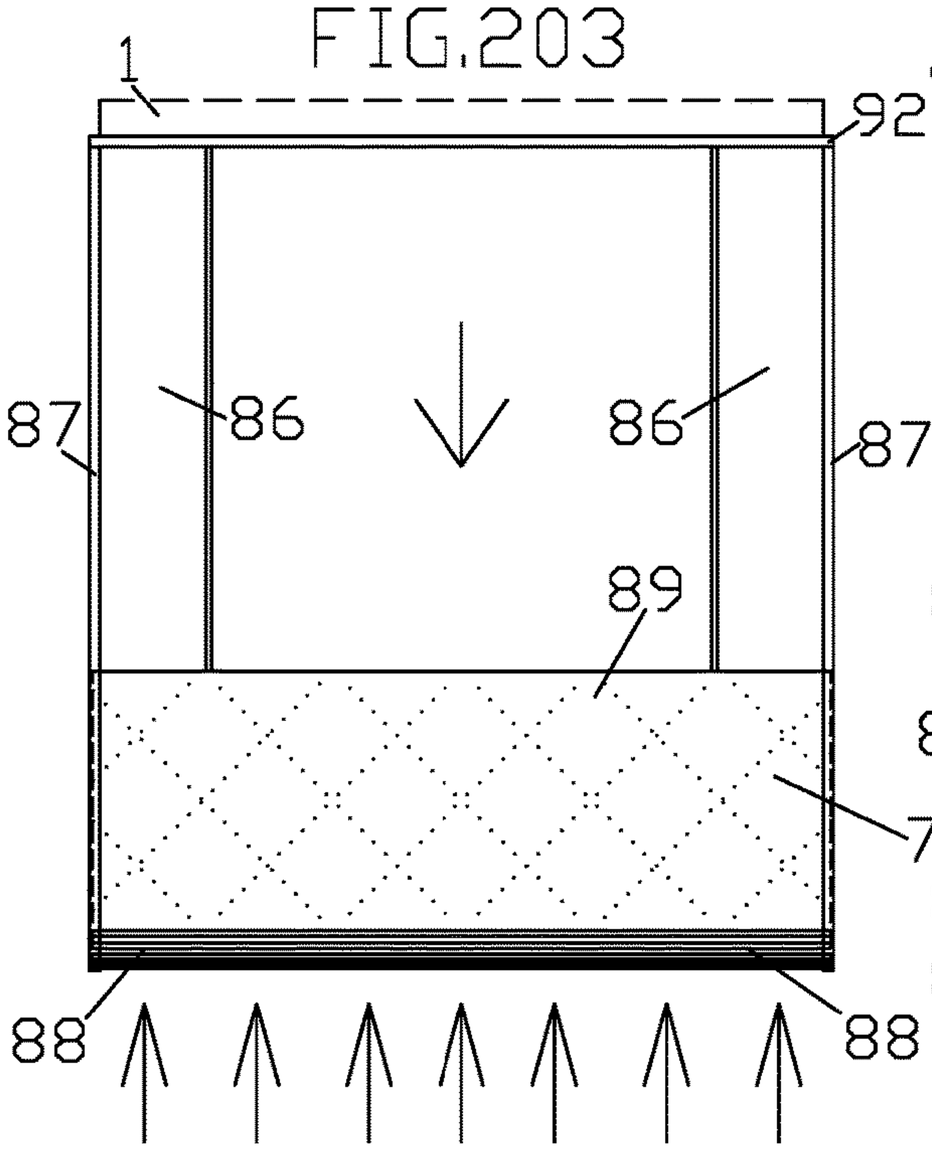


FIG.202

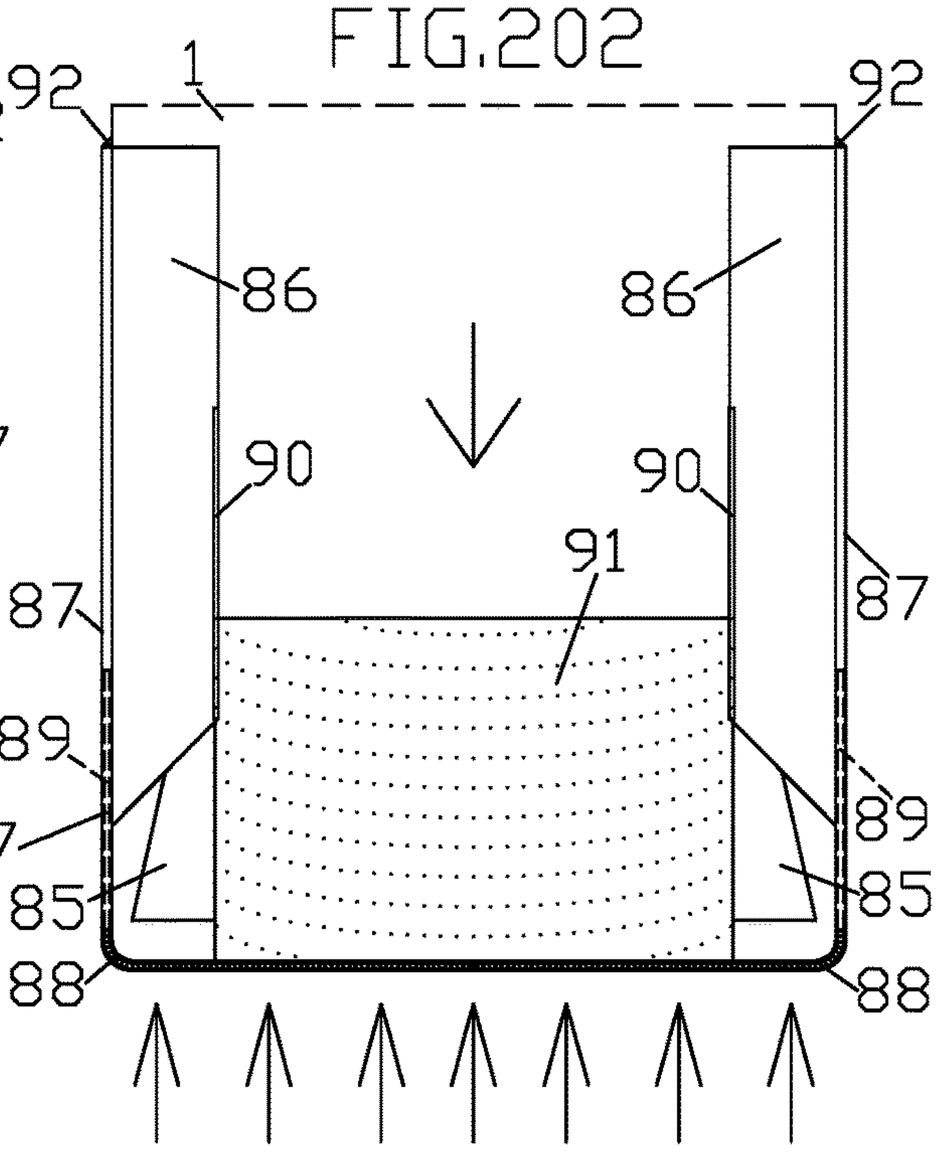


FIG.205

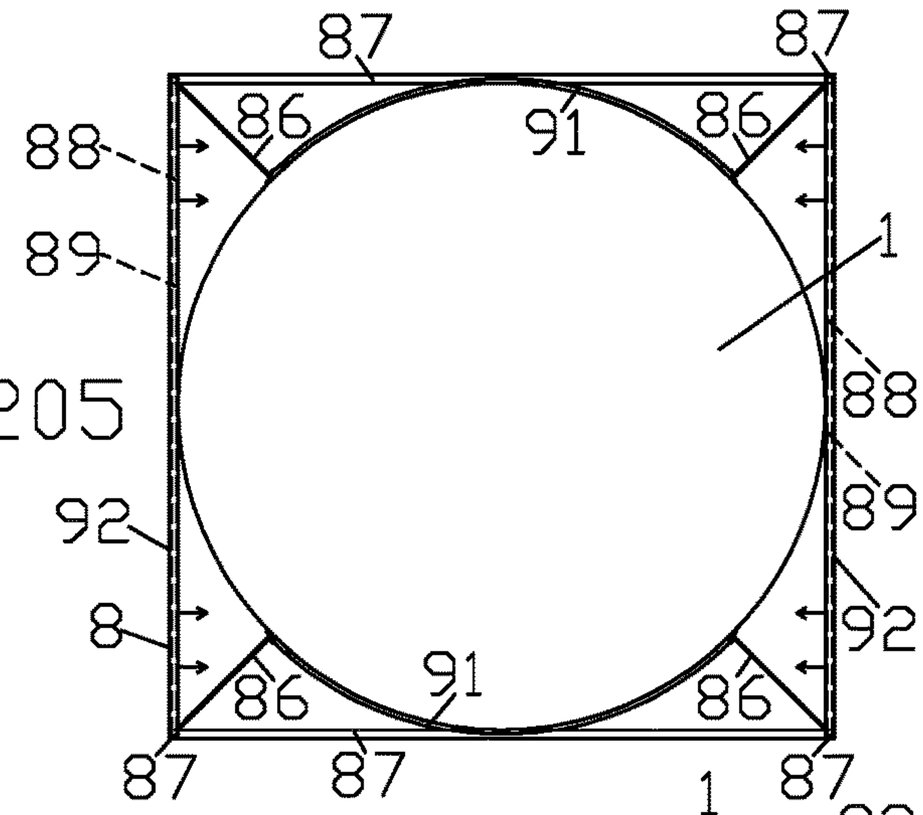


FIG.206

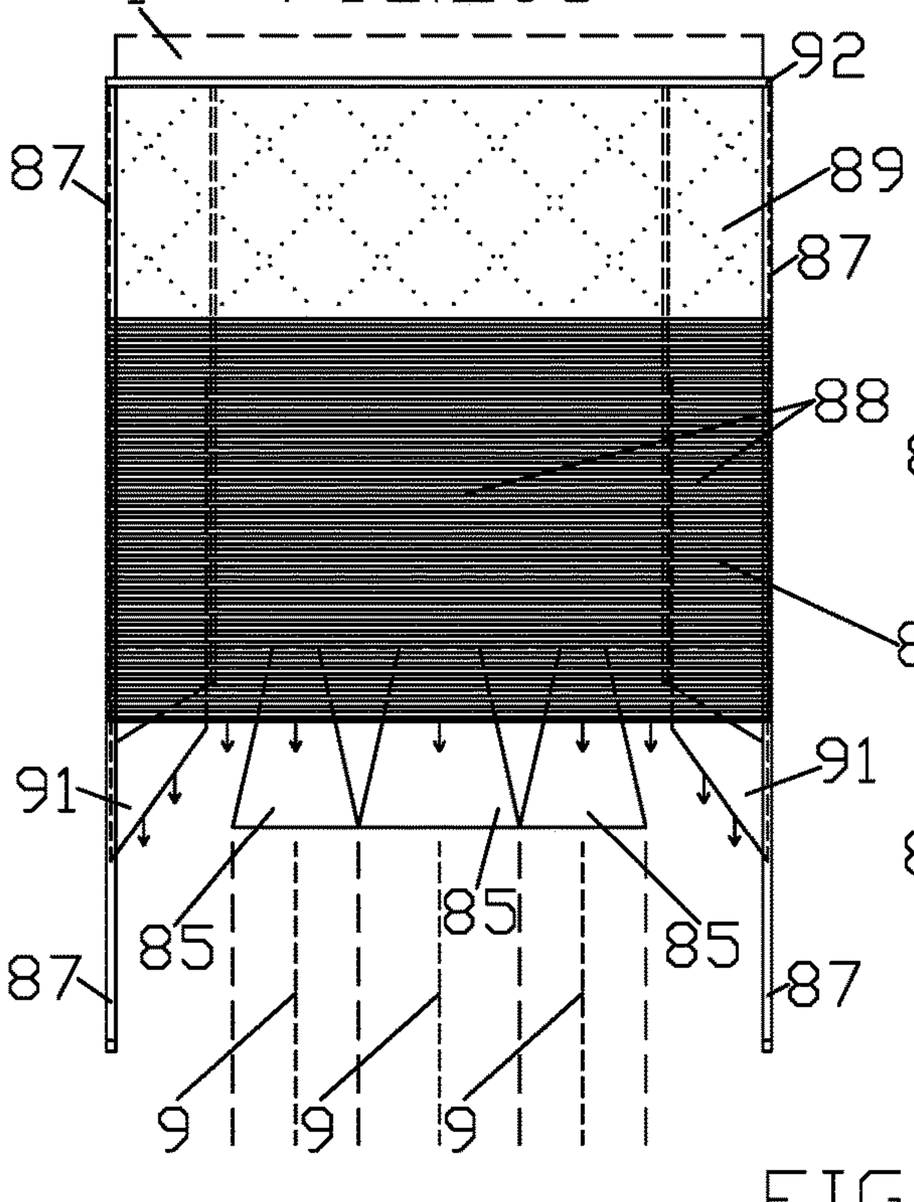


FIG.204

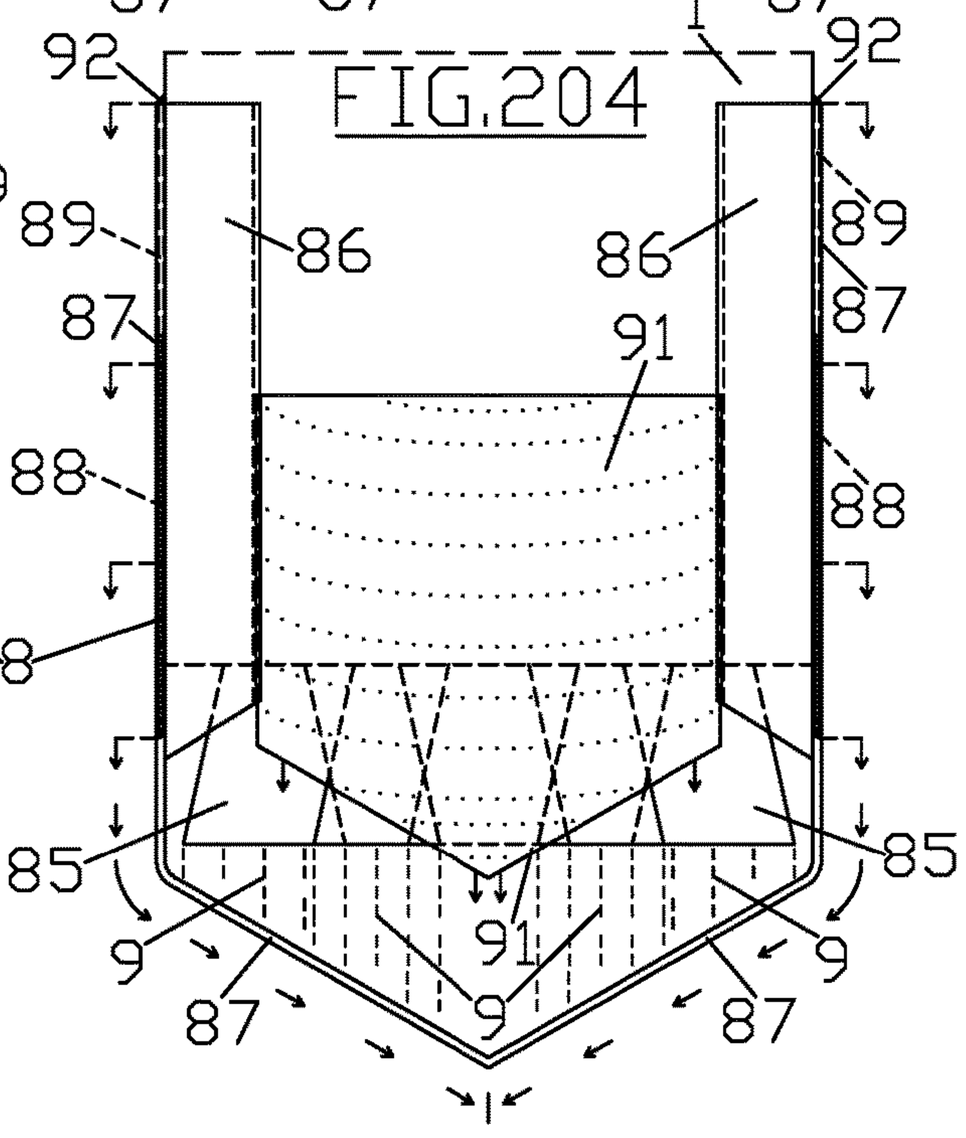


FIG.207

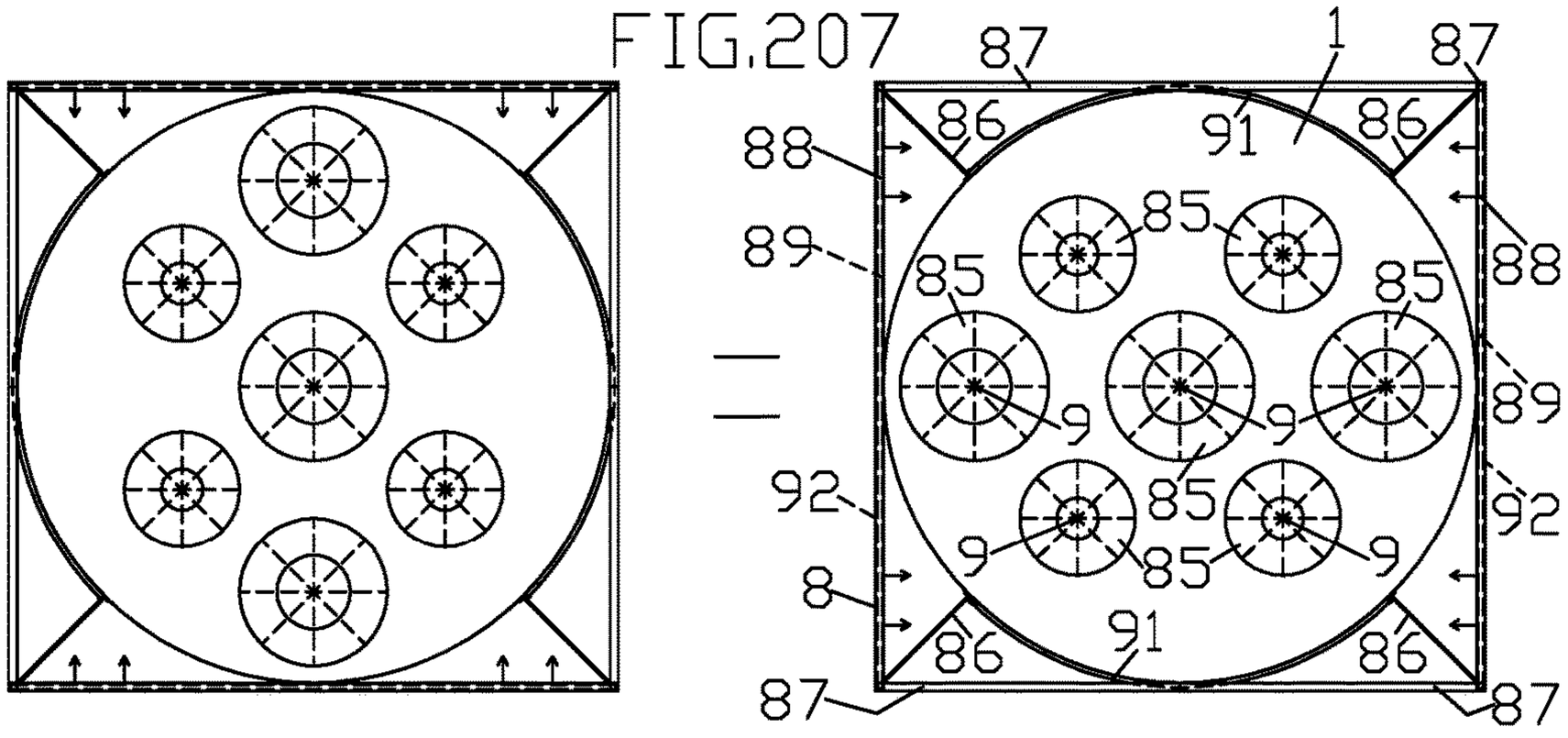


FIG.209

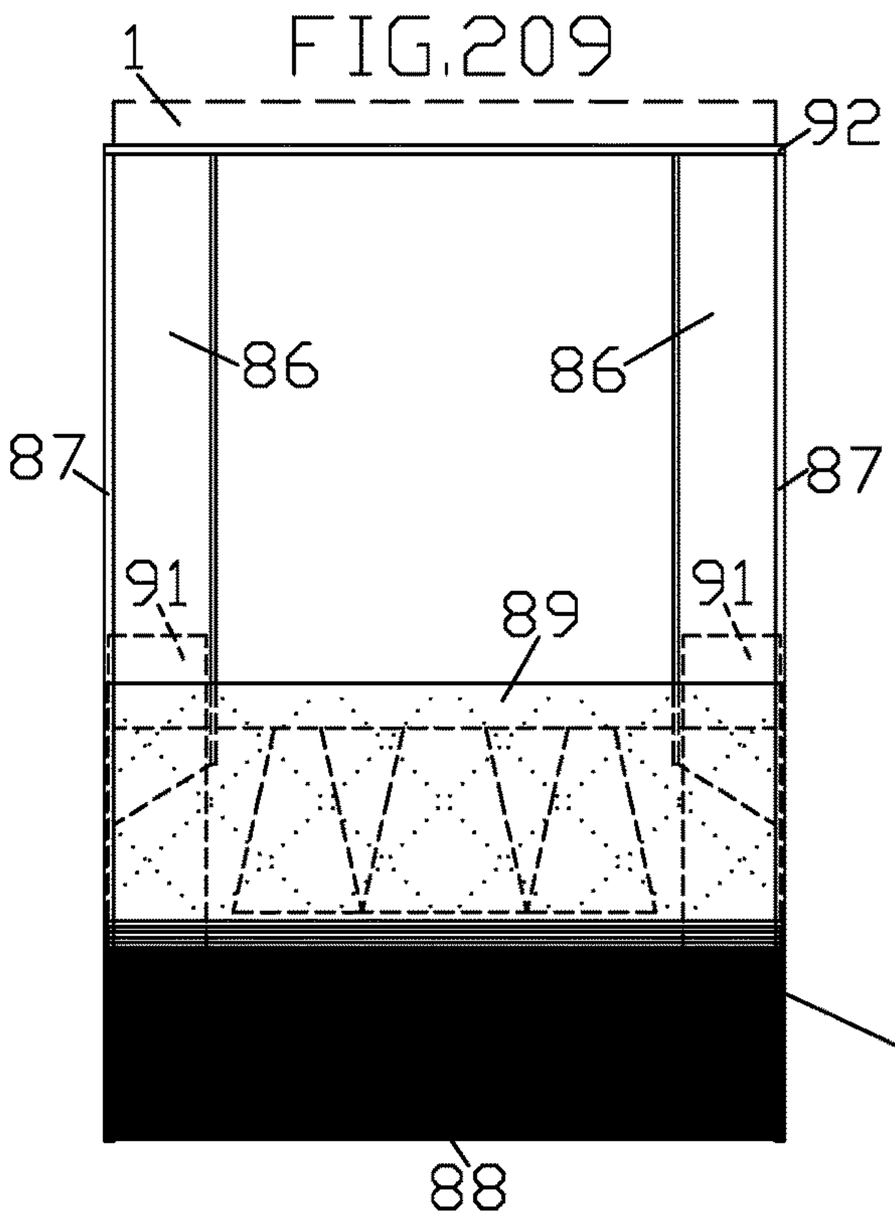


FIG.208

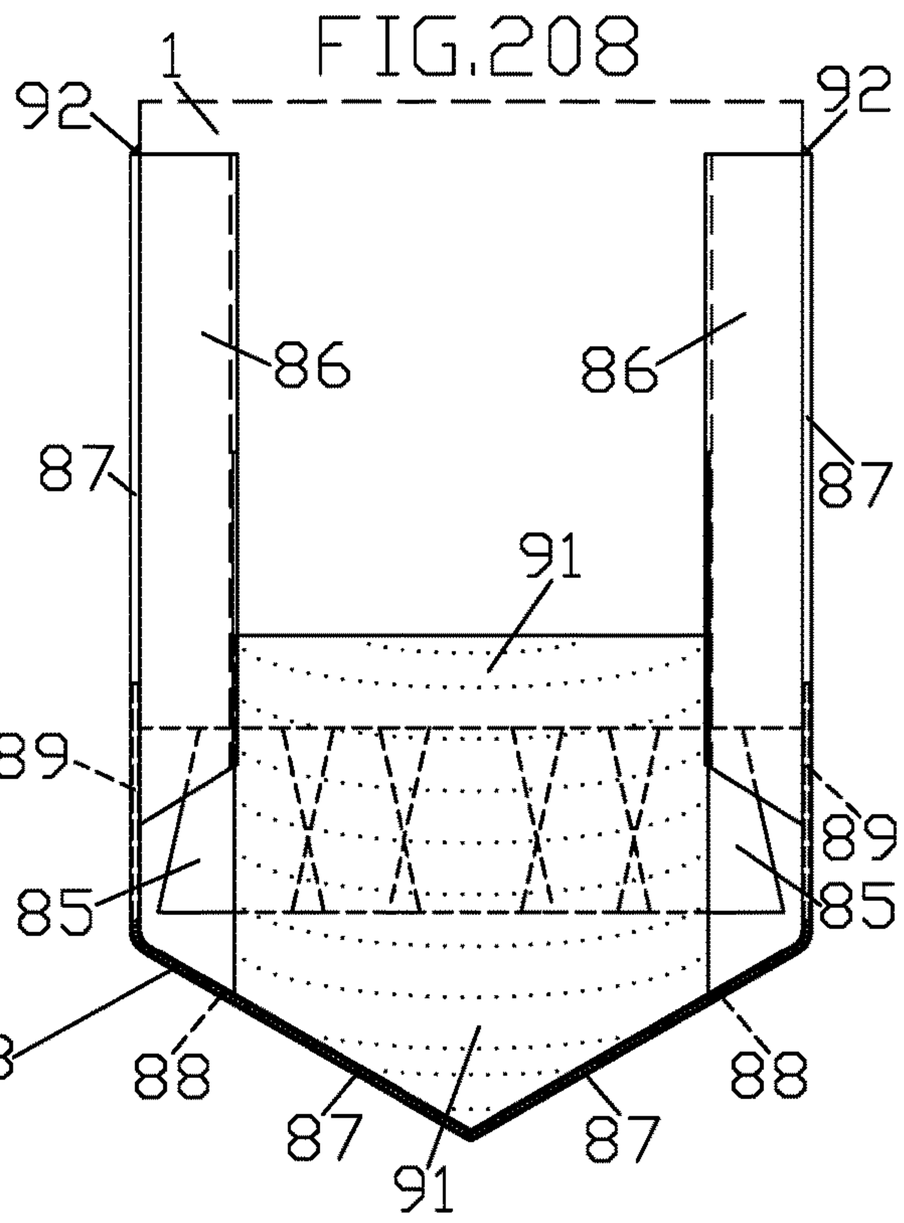


FIG.211

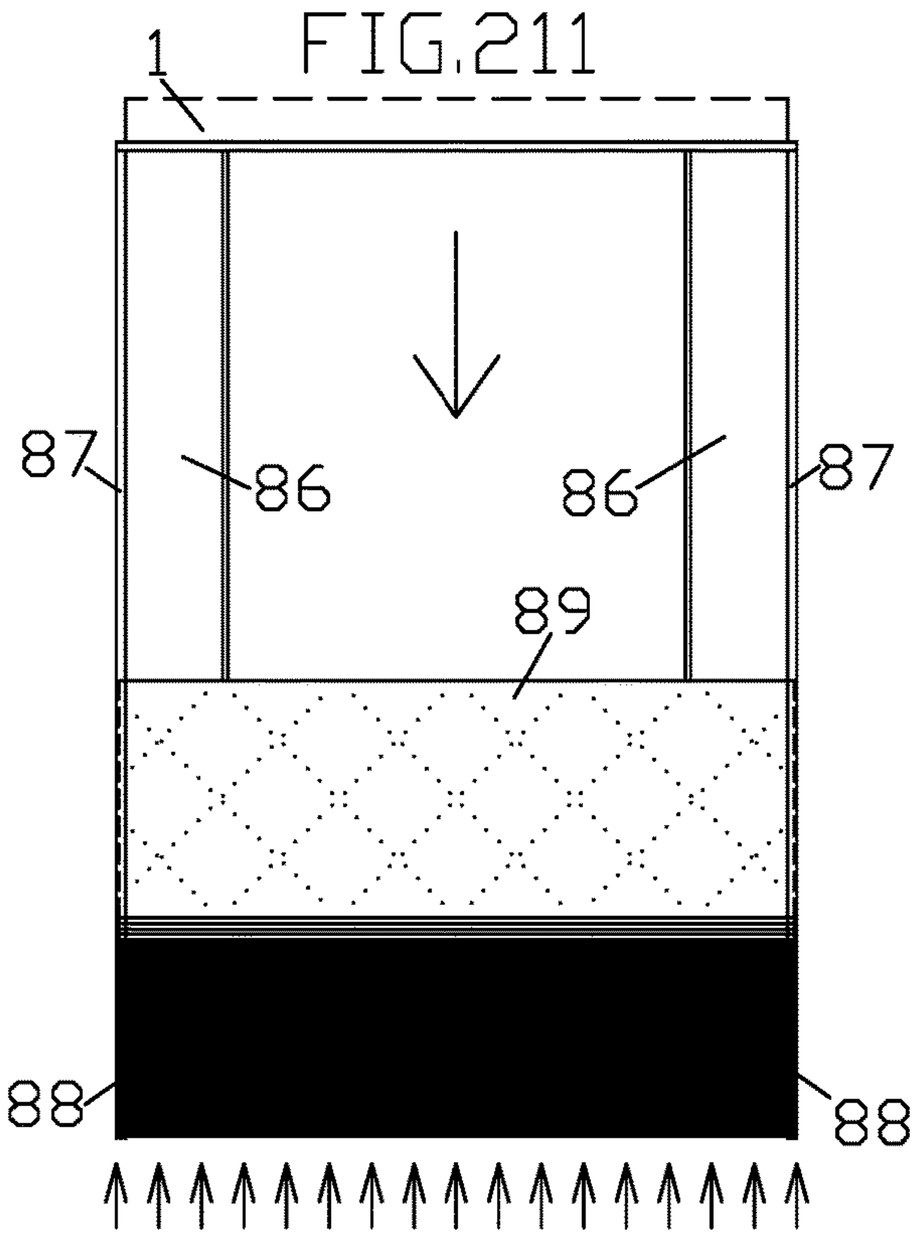
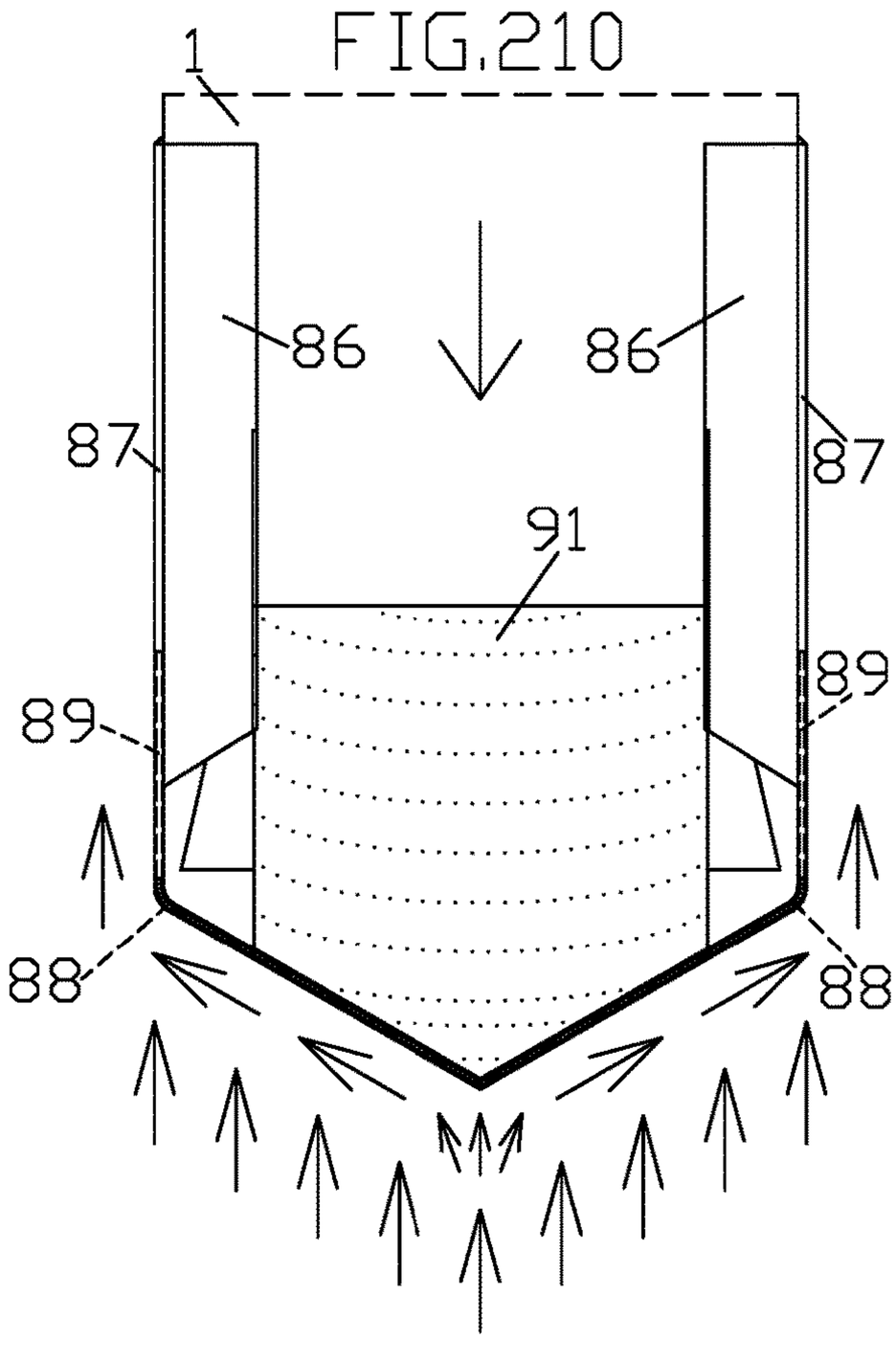


FIG.210



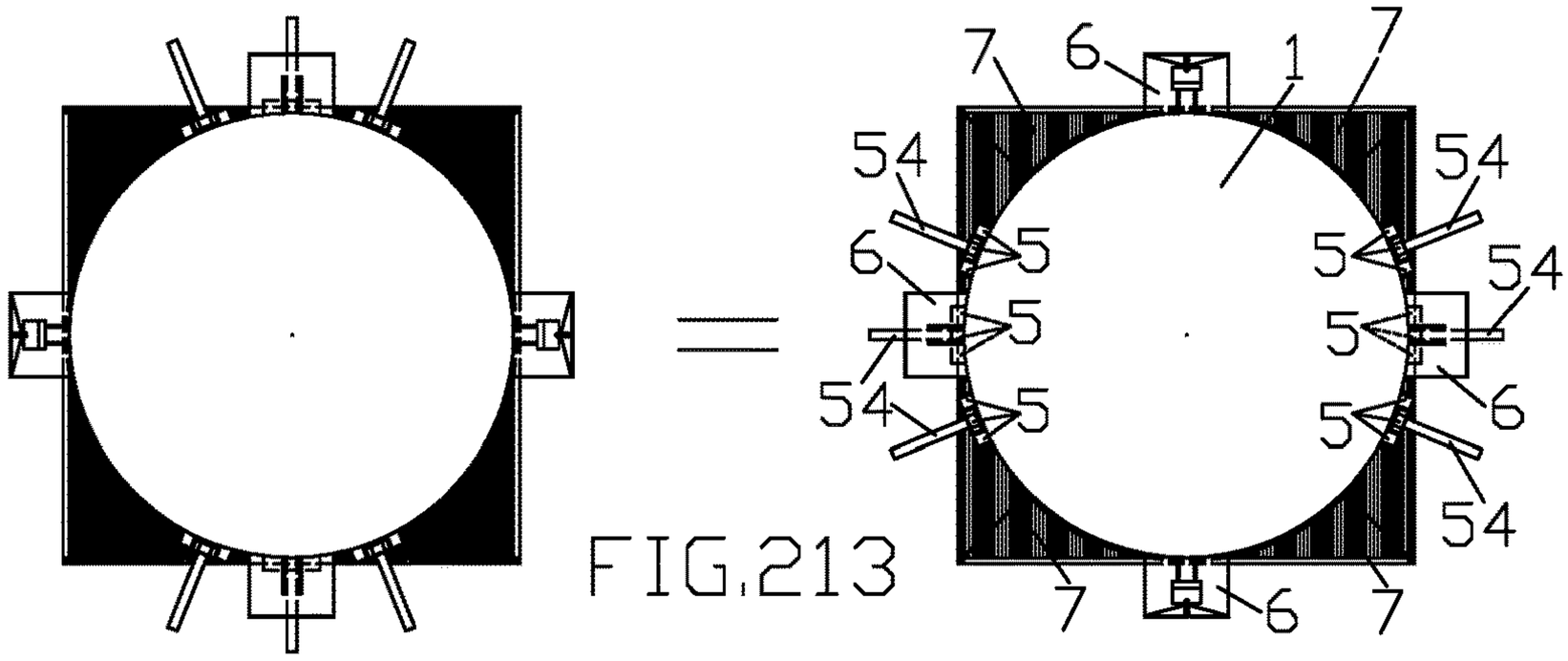


FIG.213

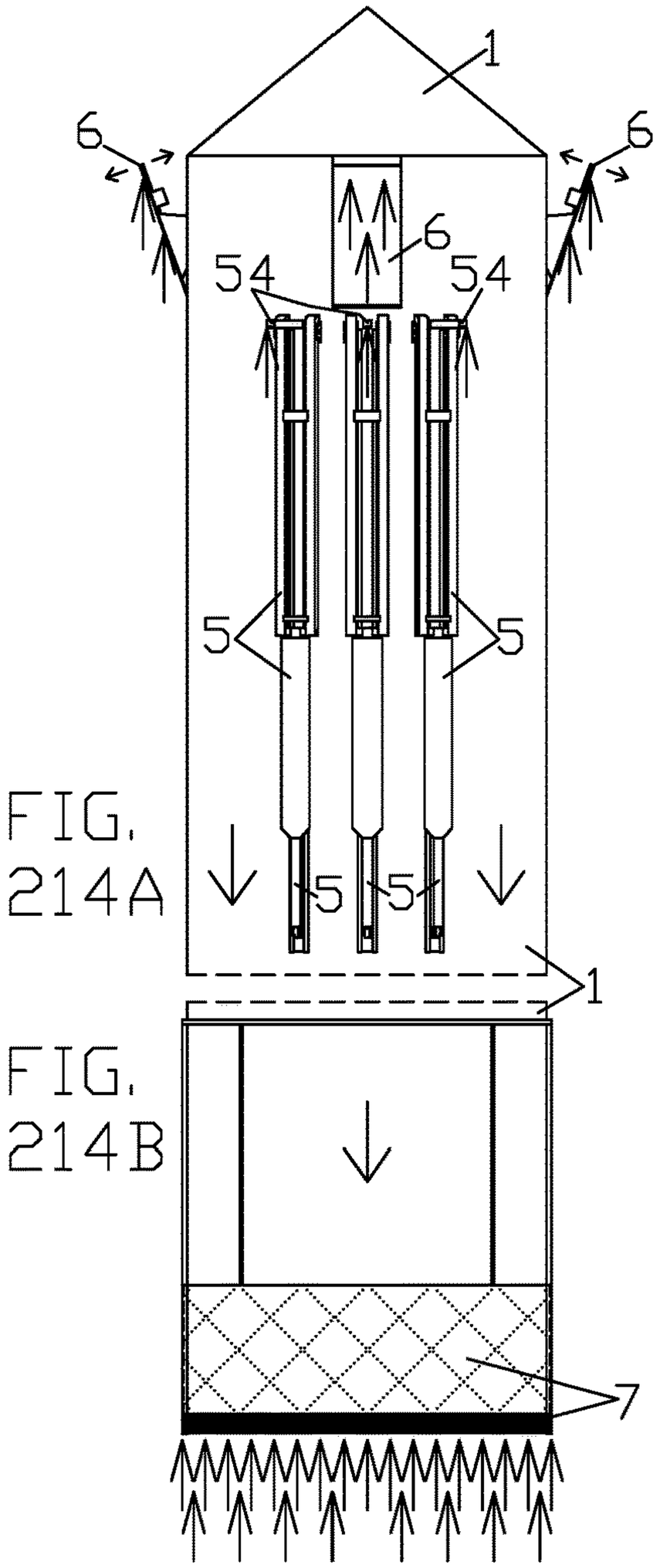


FIG. 214A

FIG. 214B

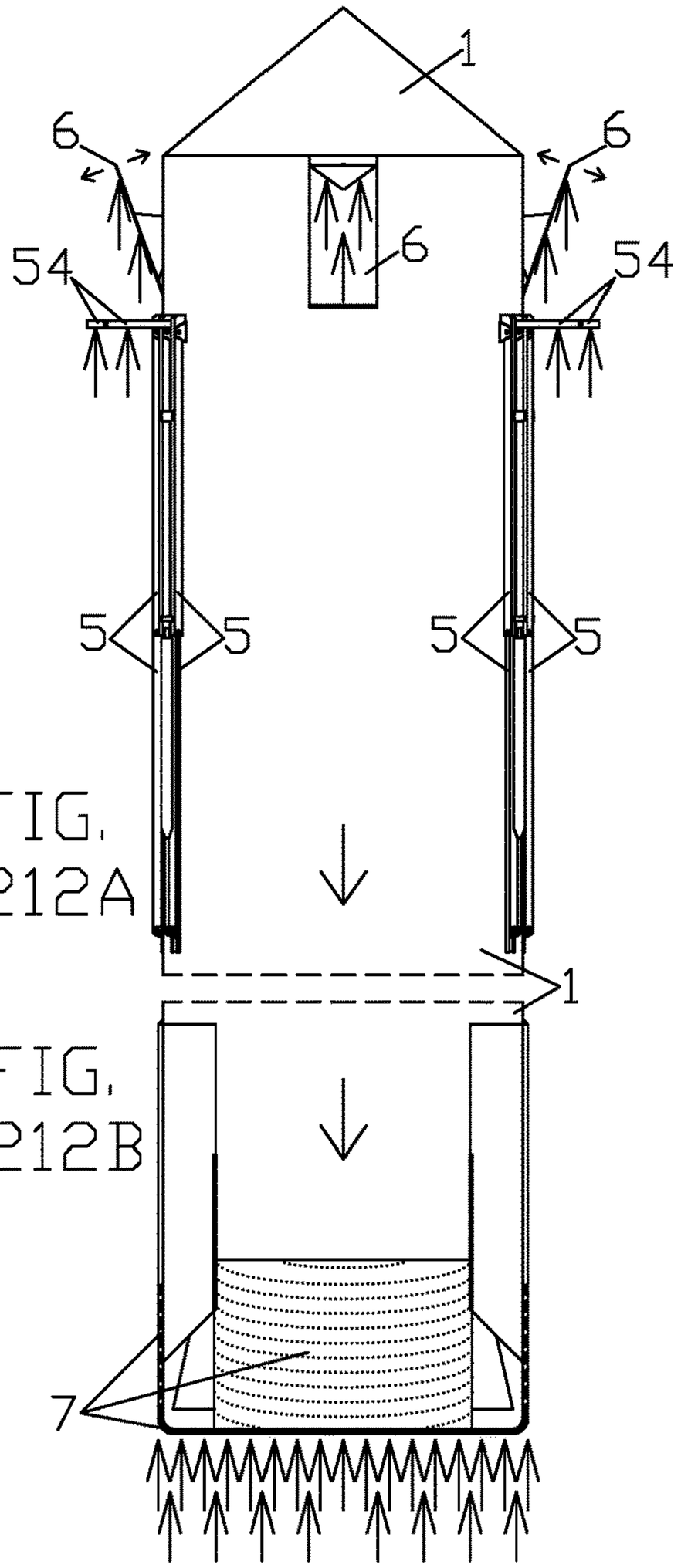


FIG. 212A

FIG. 212B

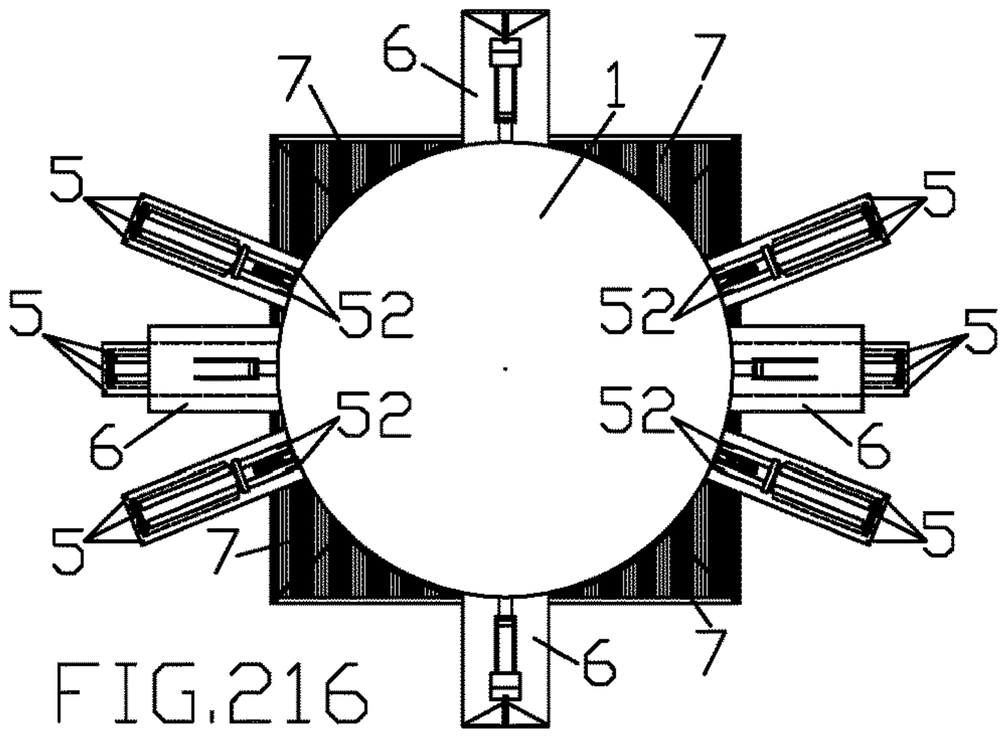


FIG.216

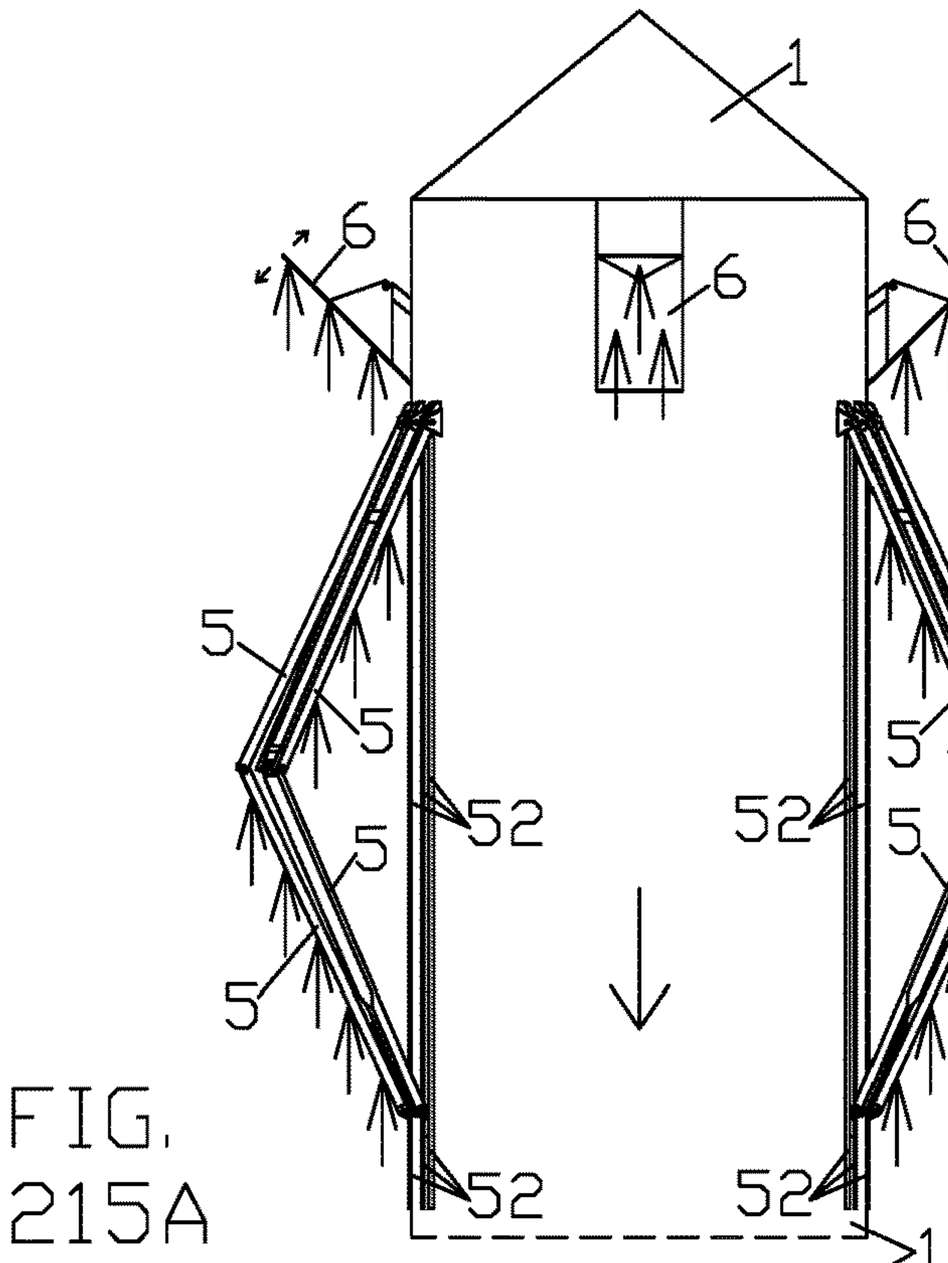


FIG. 215A

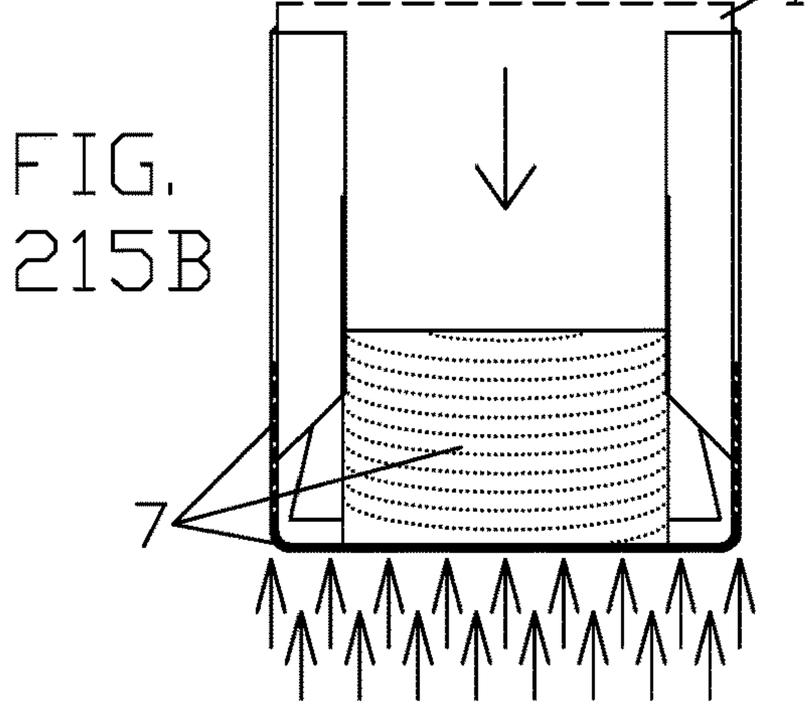


FIG. 215B

FIG. 218

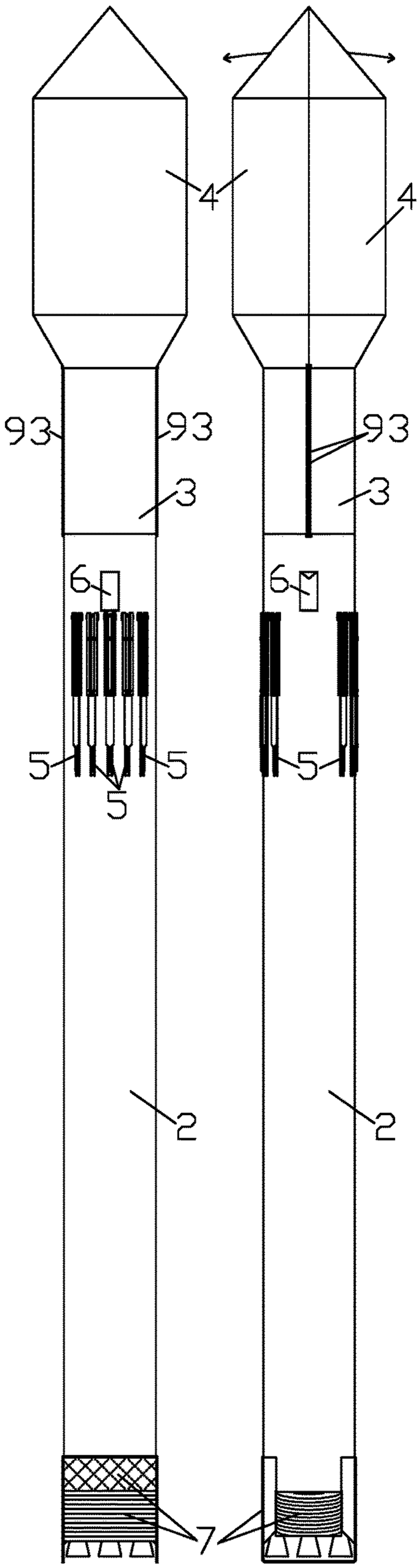


FIG. 217

FIG. 221

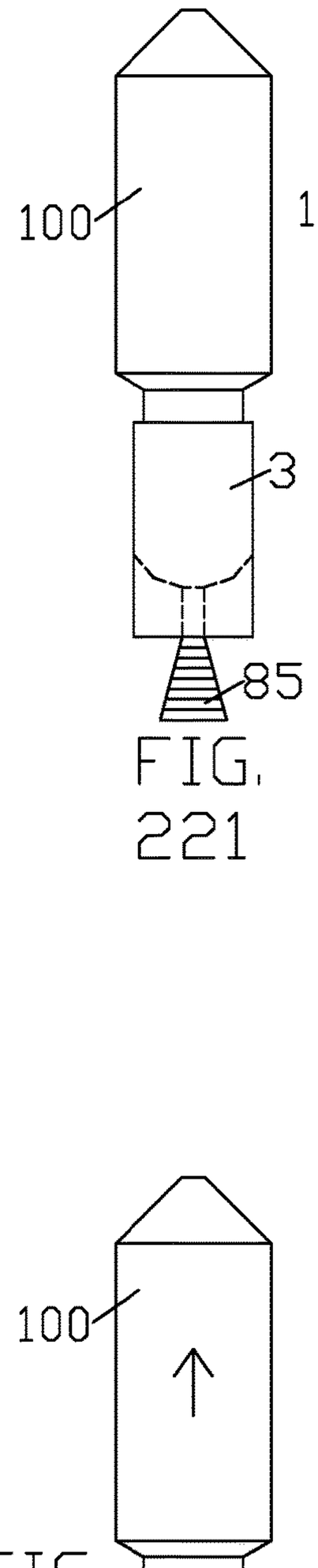


FIG. 222

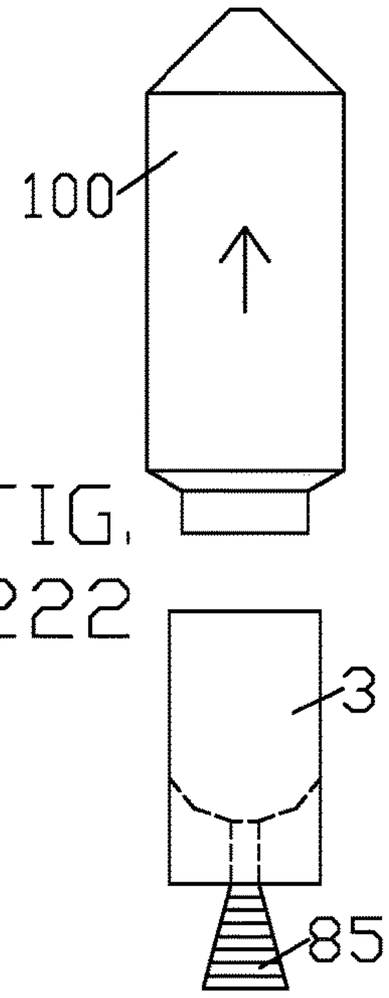


FIG. 220

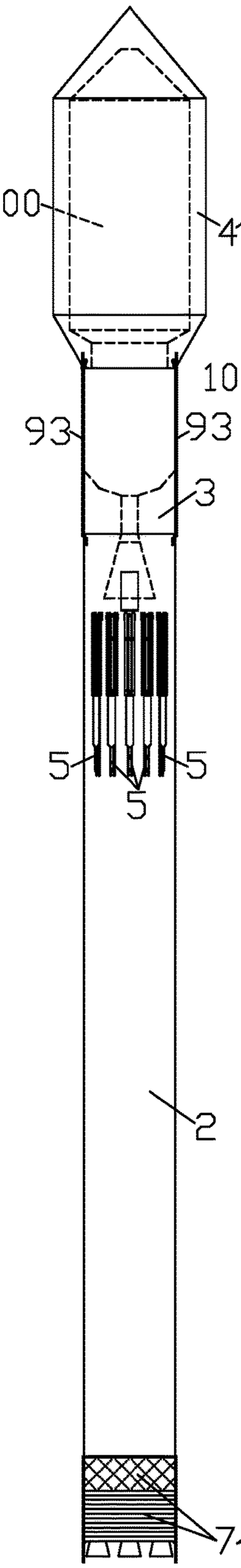


FIG. 219

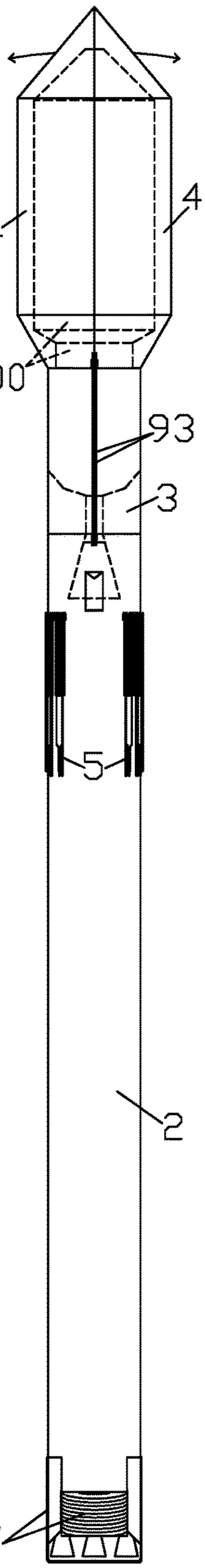


FIG.224

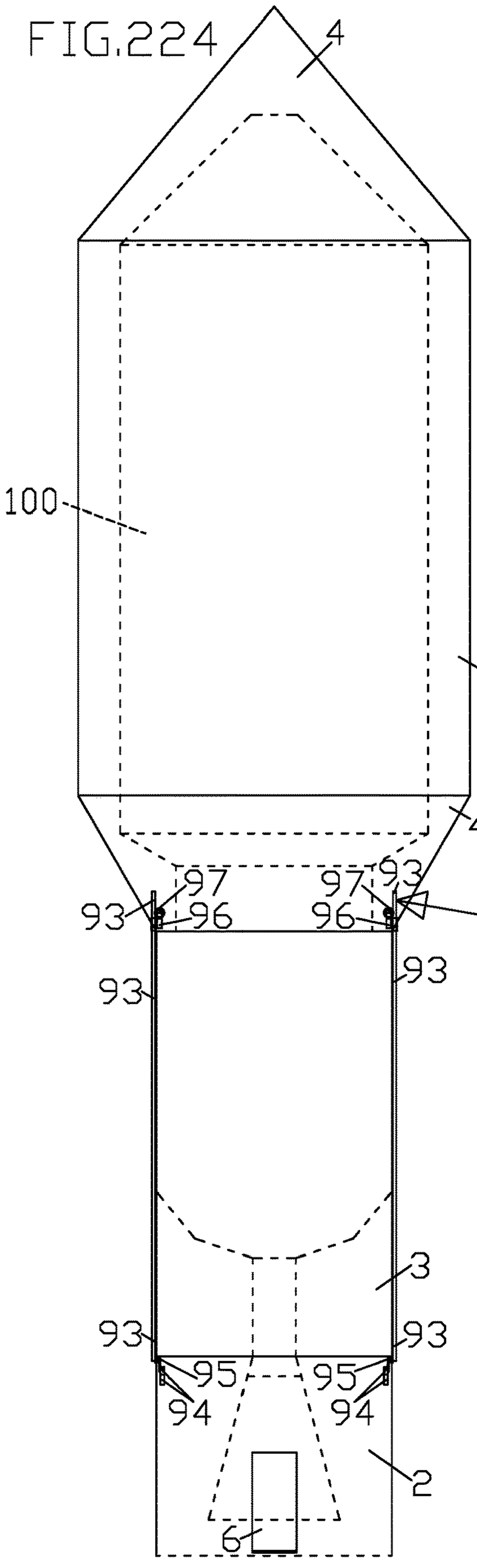


FIG.223

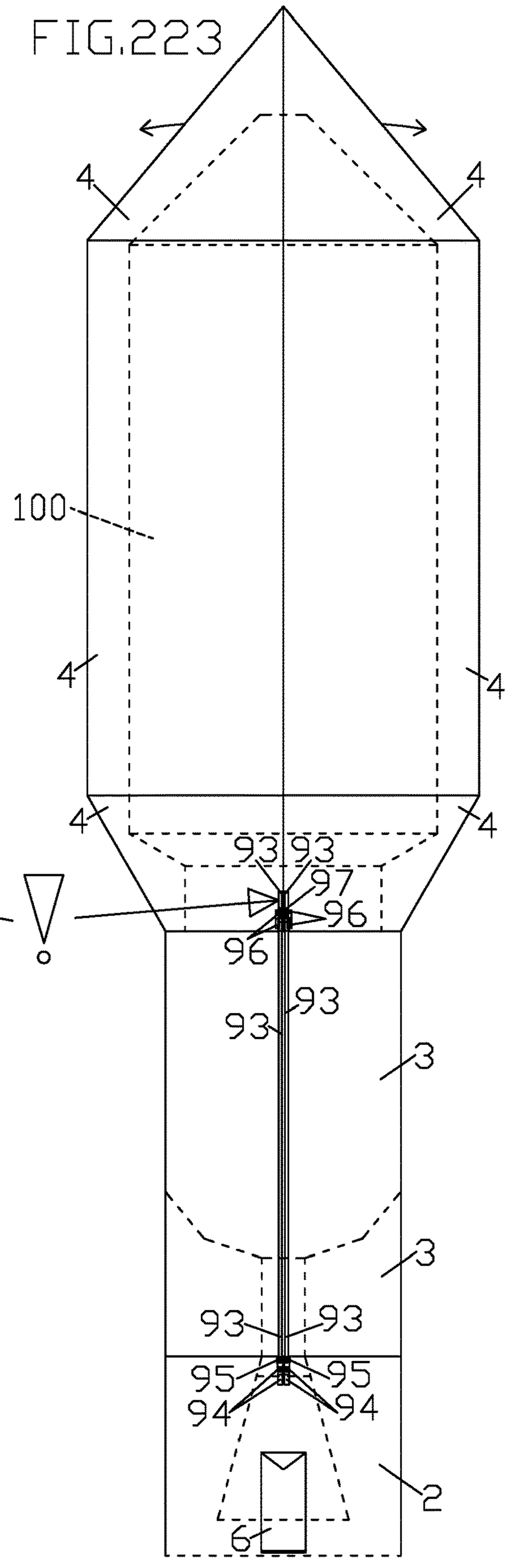


FIG.226

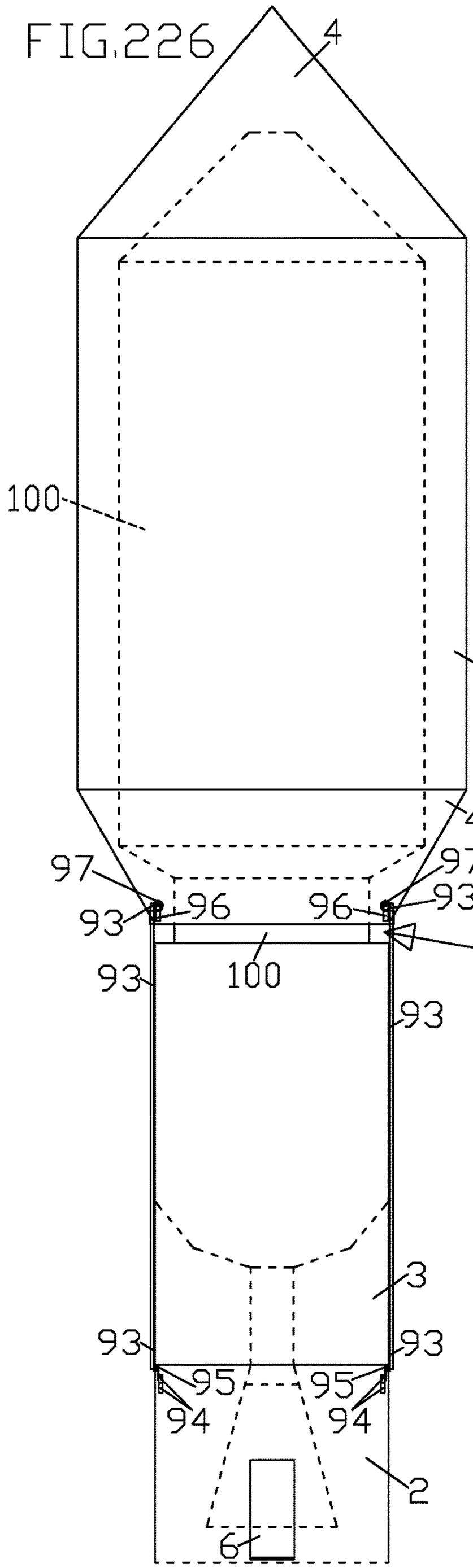
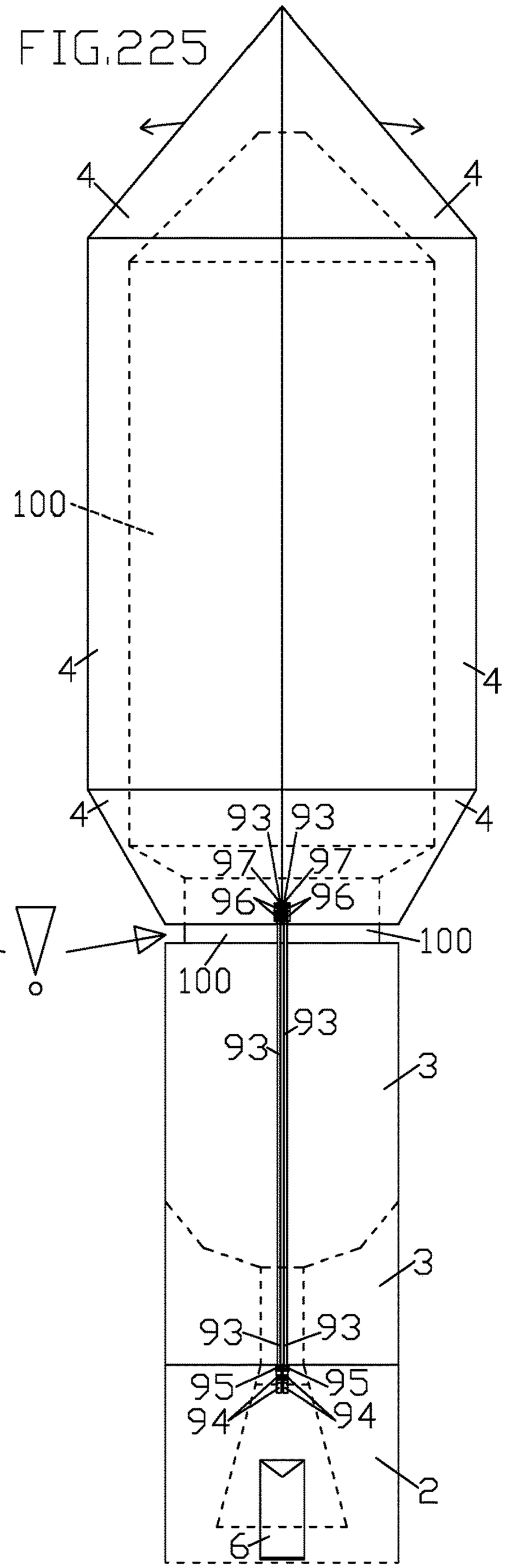


FIG.225



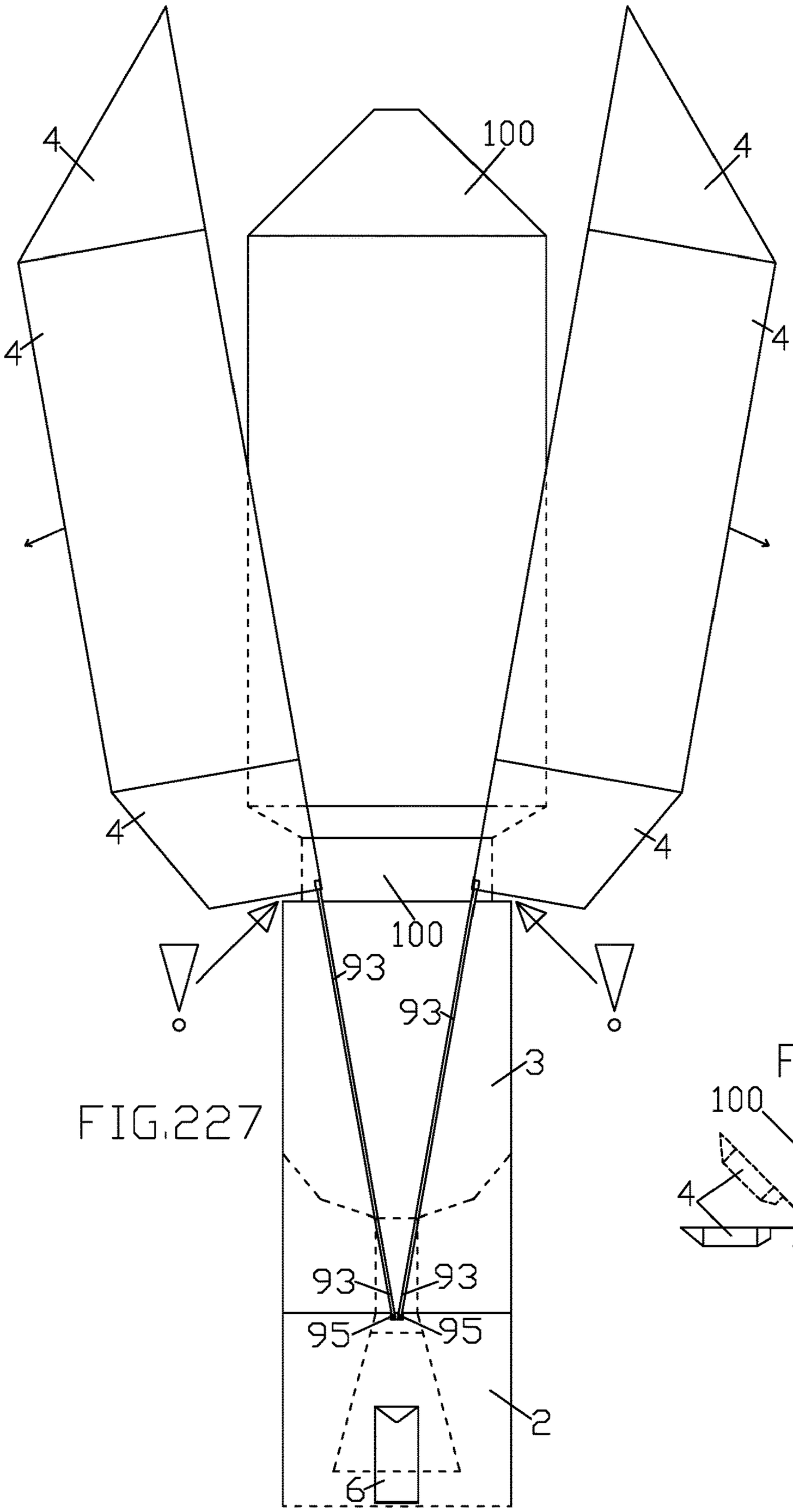


FIG.227

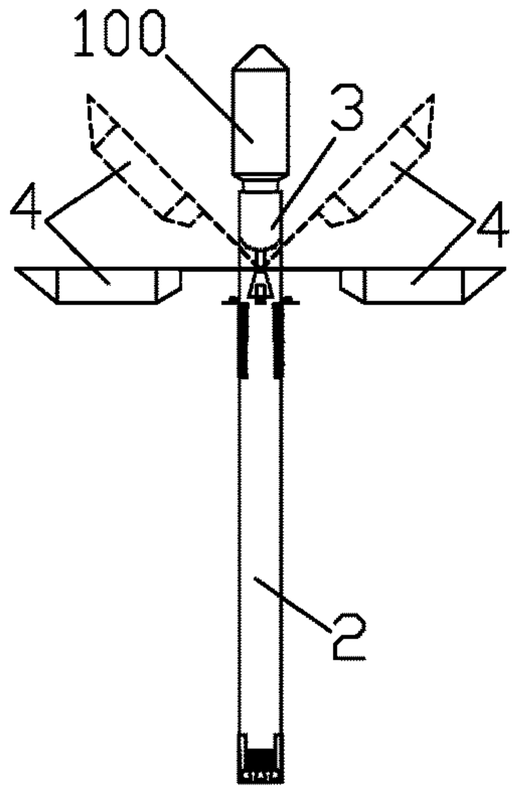


FIG.228

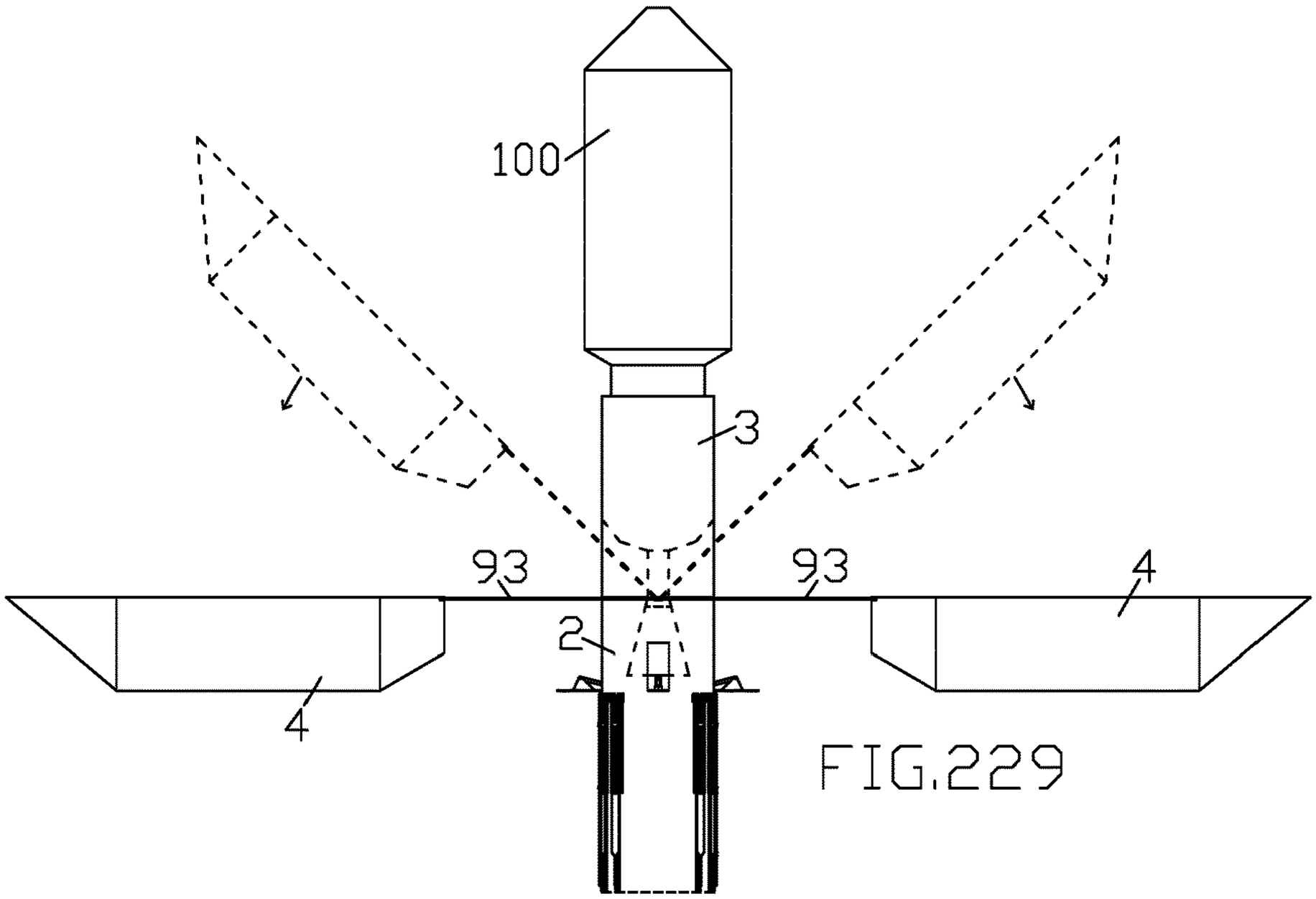


FIG.229

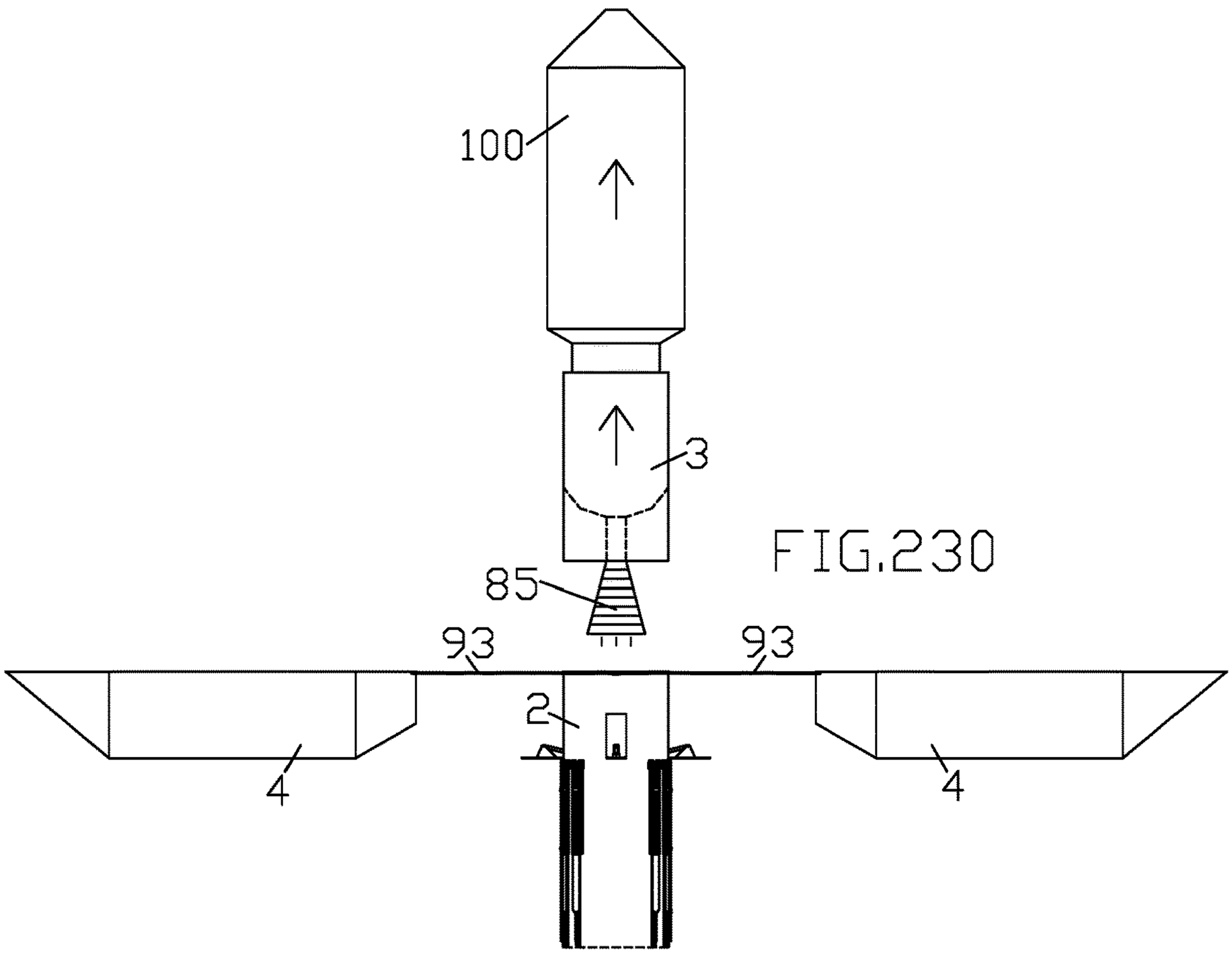


FIG.230

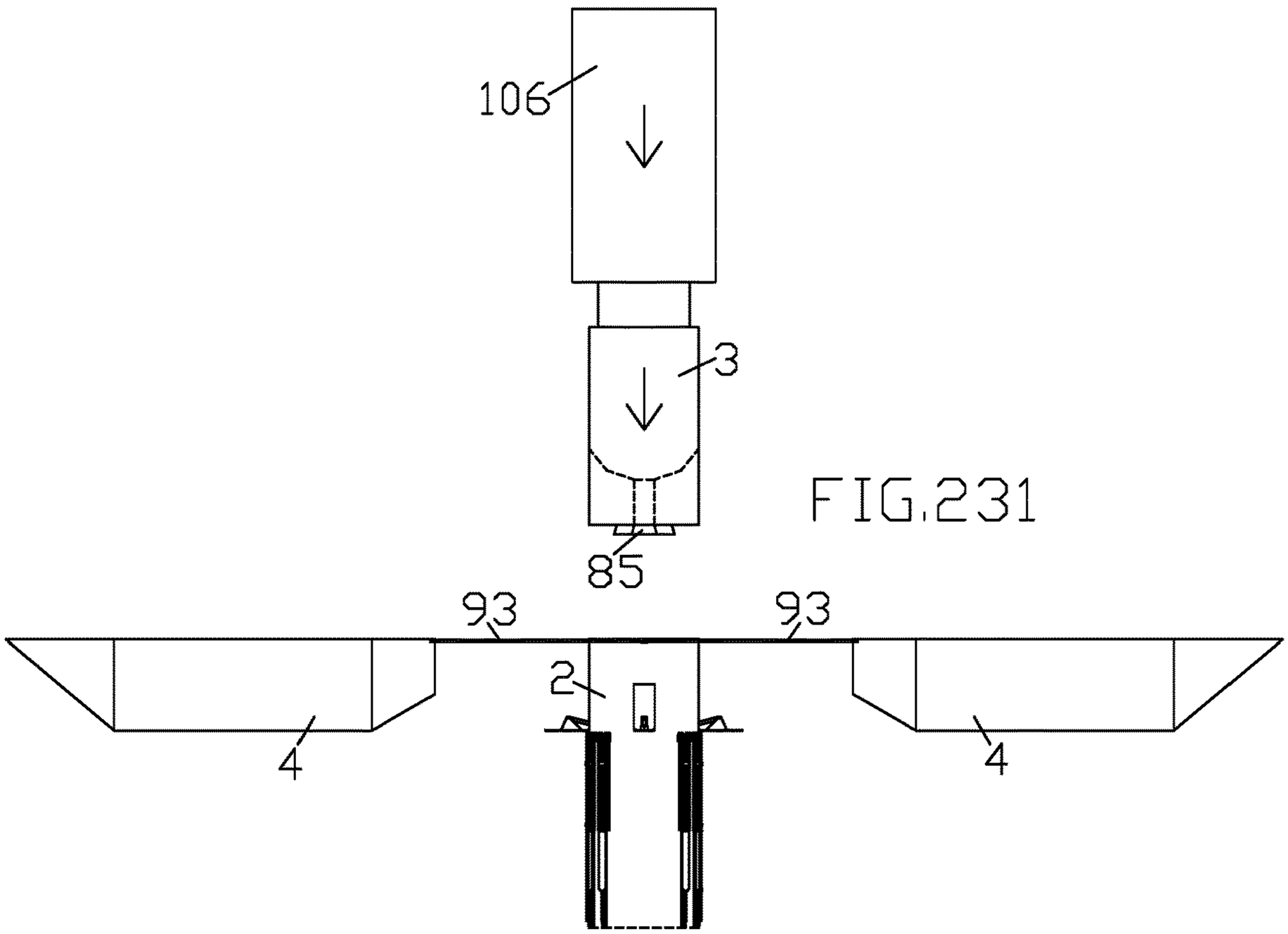


FIG.231

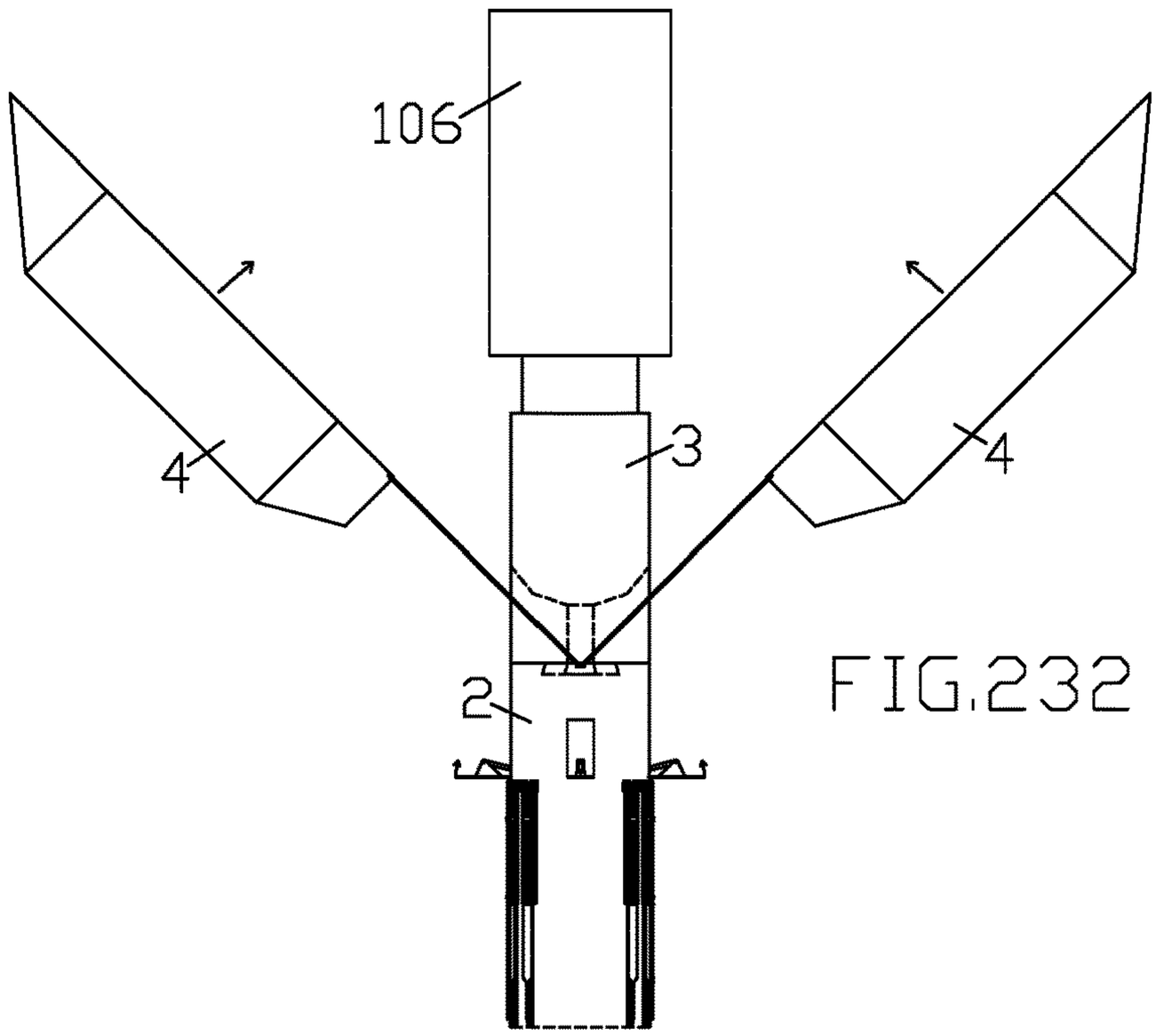


FIG.232

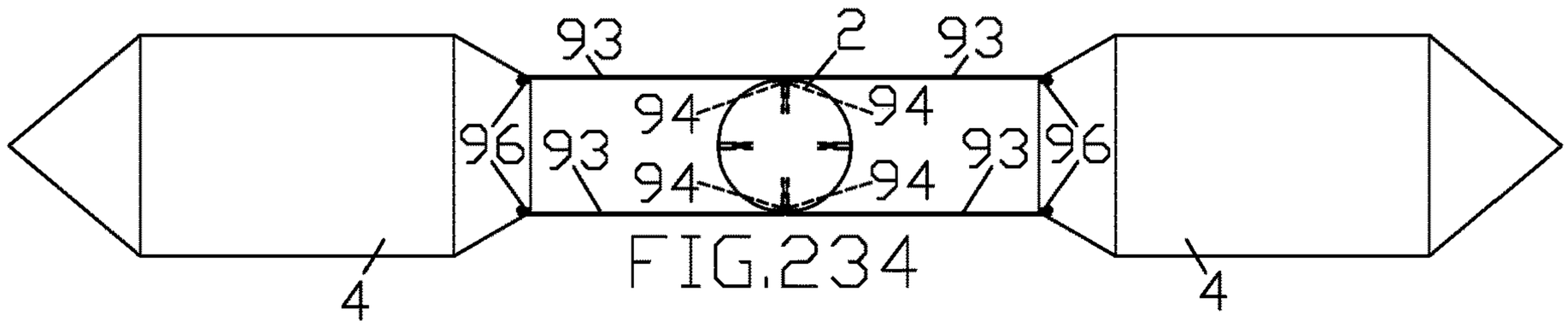


FIG.234

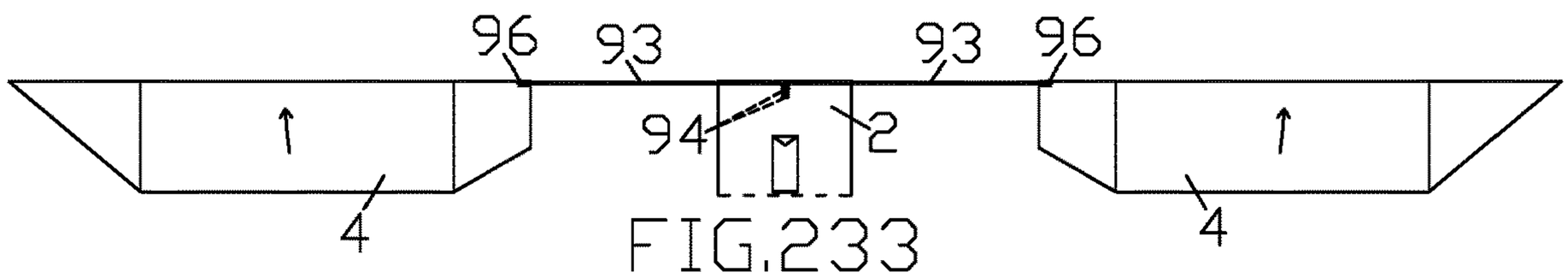


FIG.233

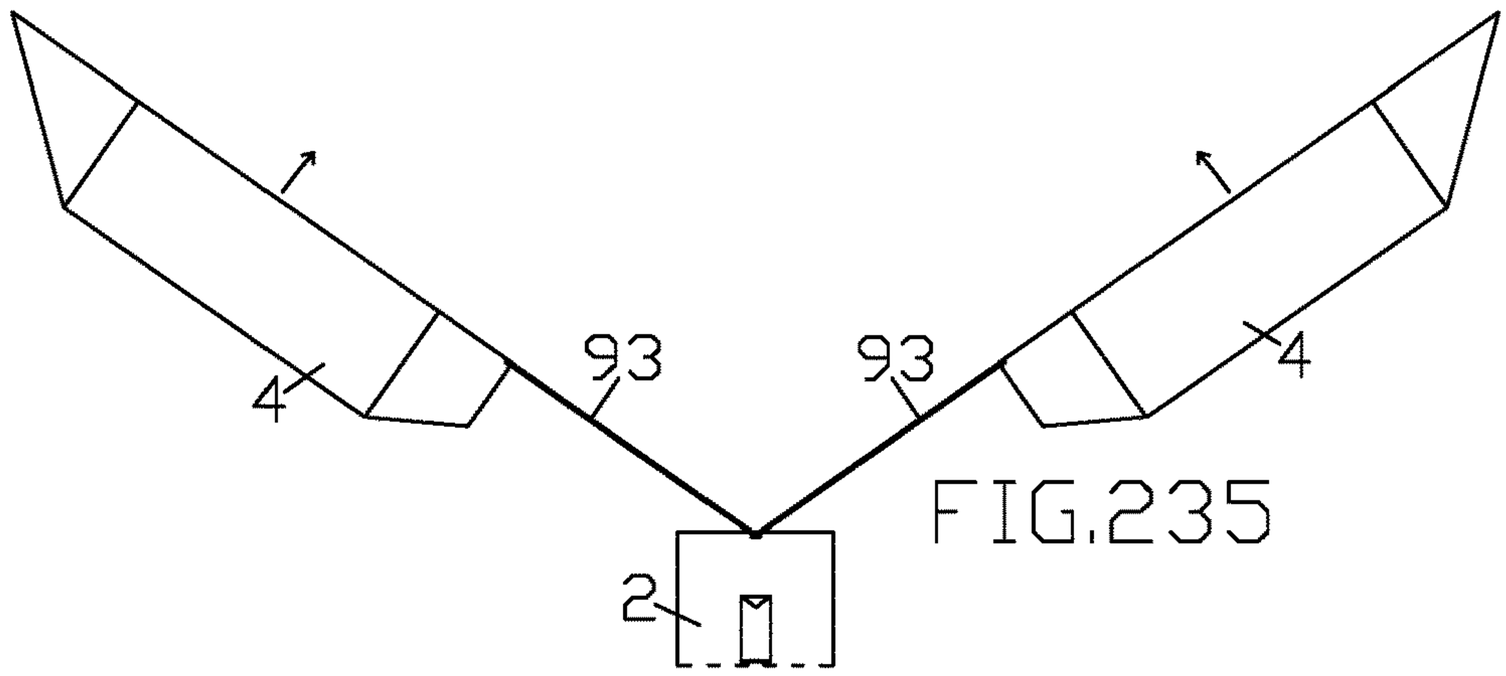


FIG.235

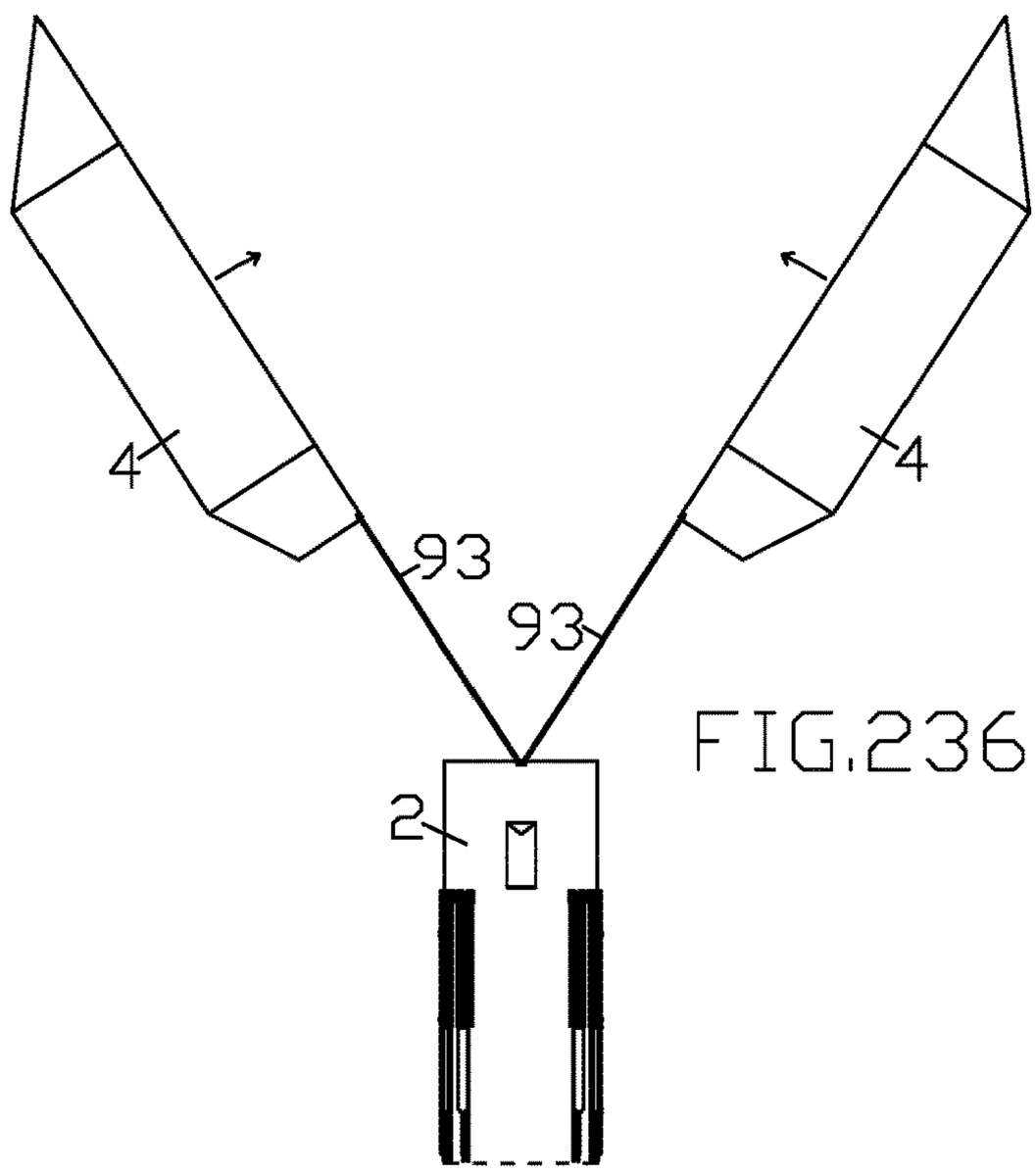


FIG.236

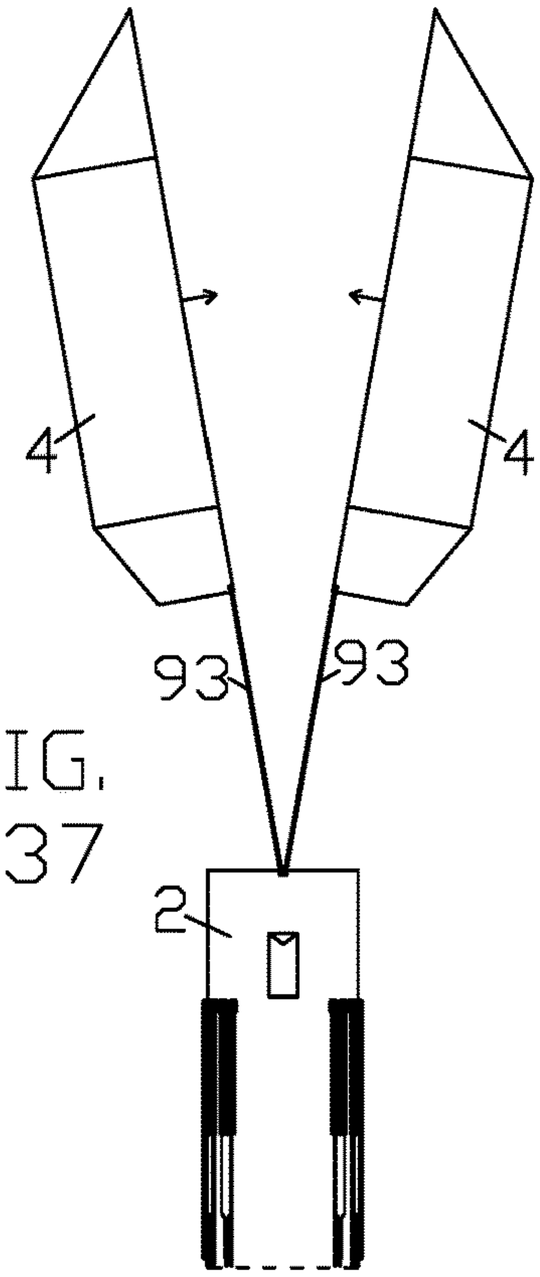


FIG. 237

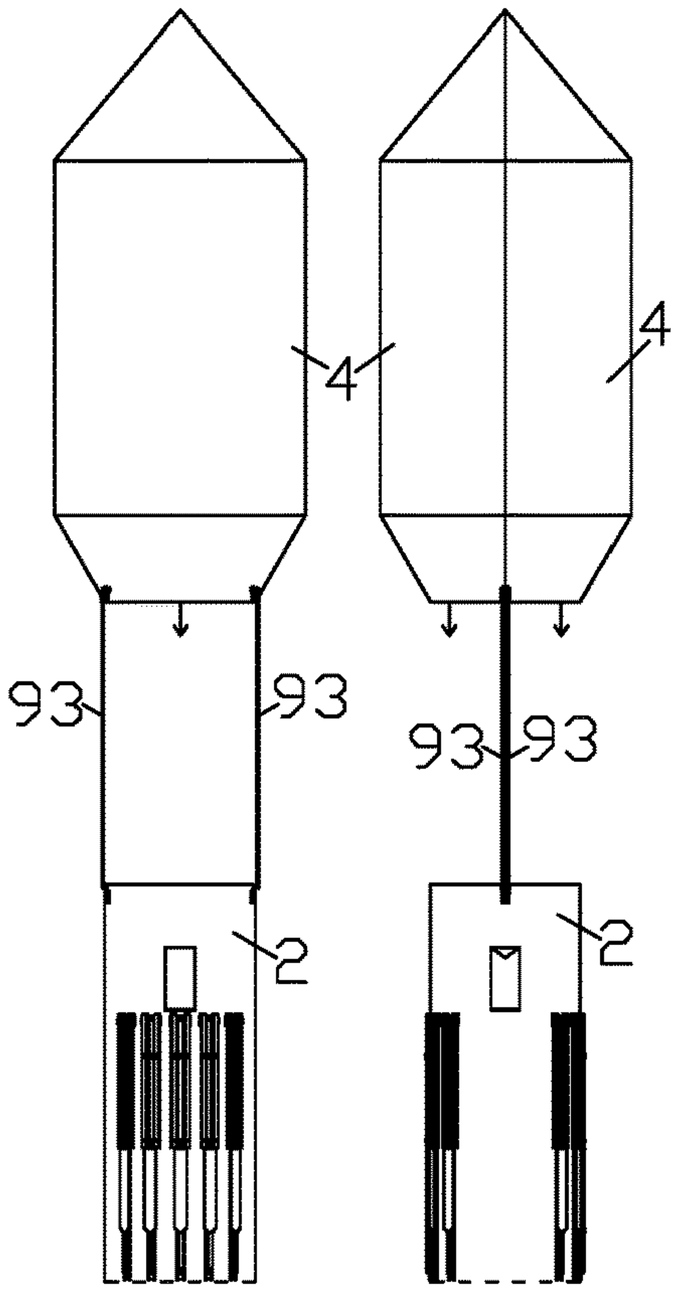


FIG. 239

FIG. 238

FIG. 241

FIG. 240

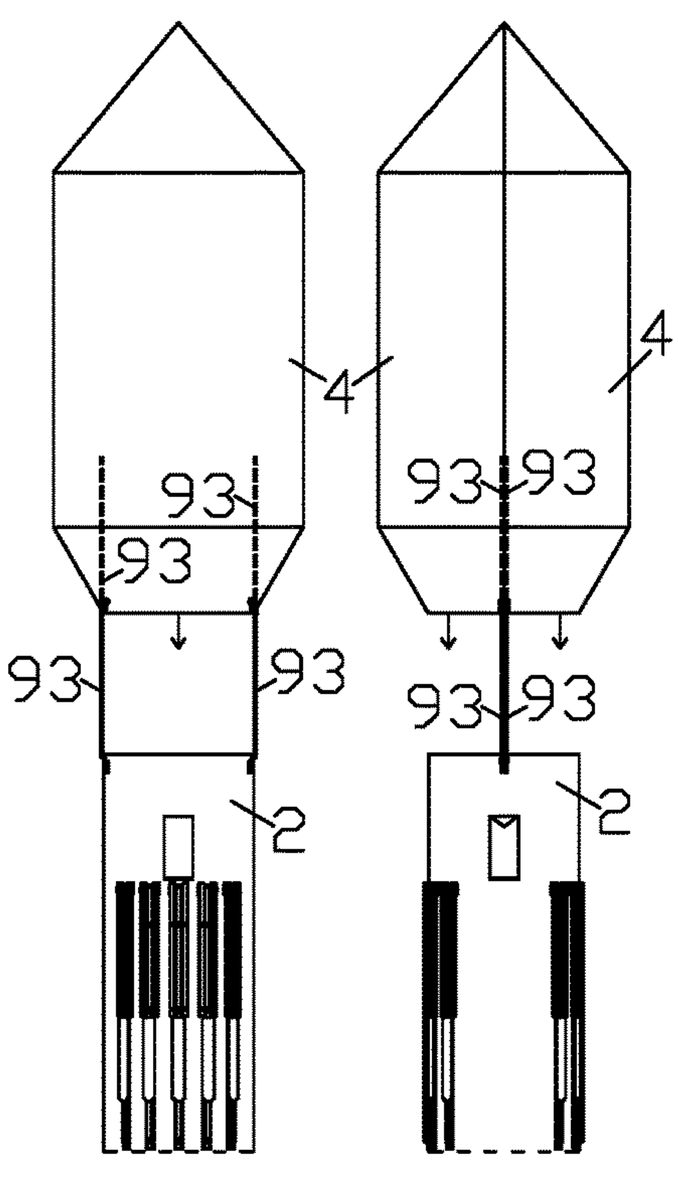


FIG. 243

FIG. 242

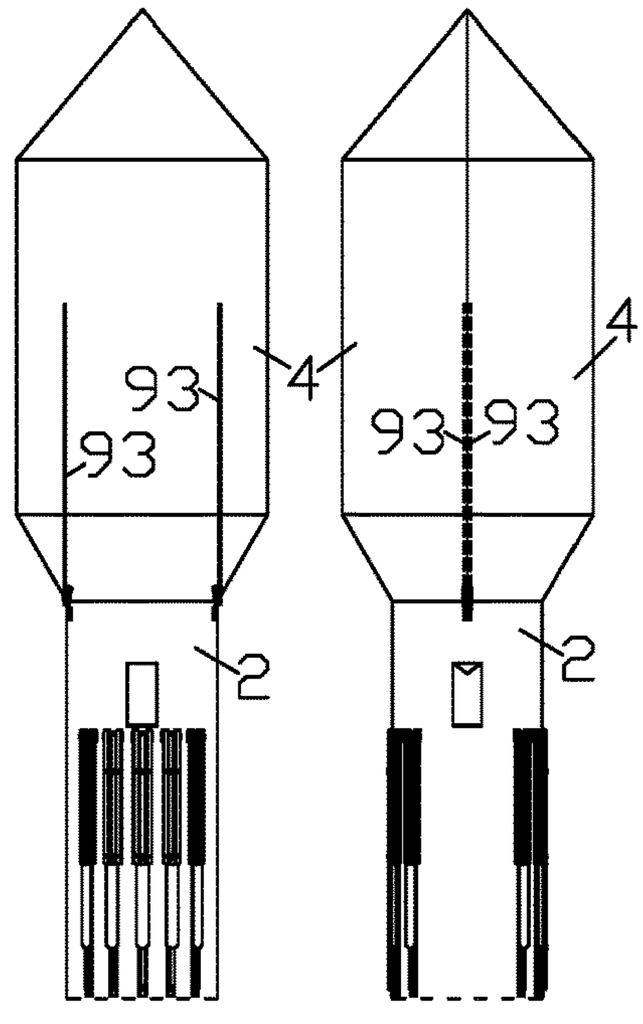
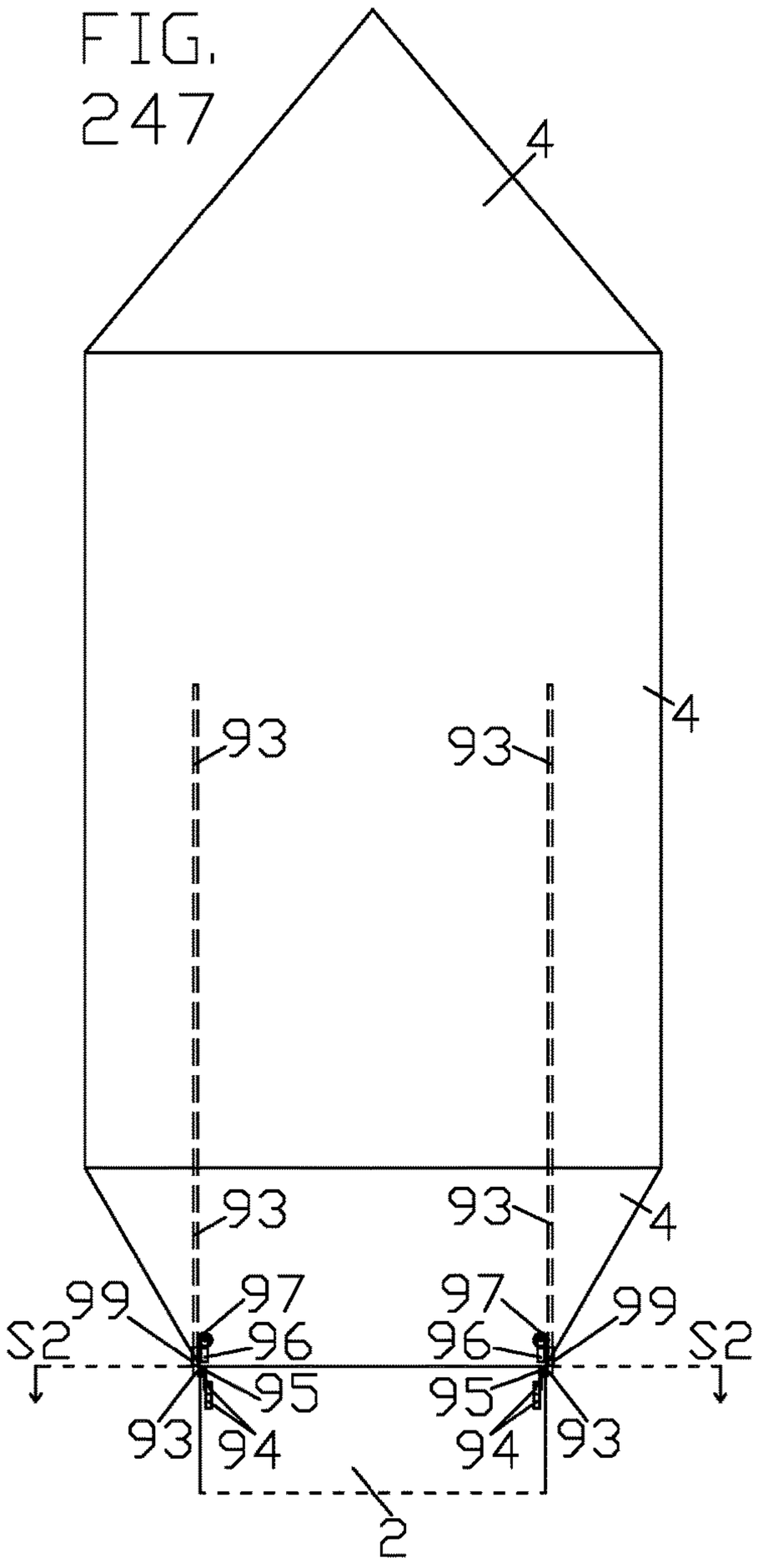
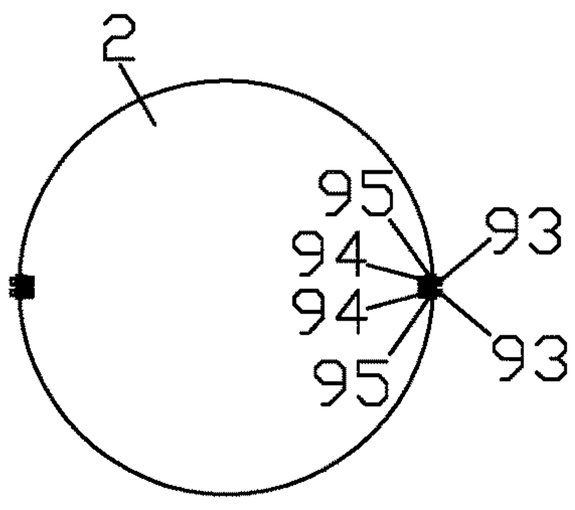


FIG. 247

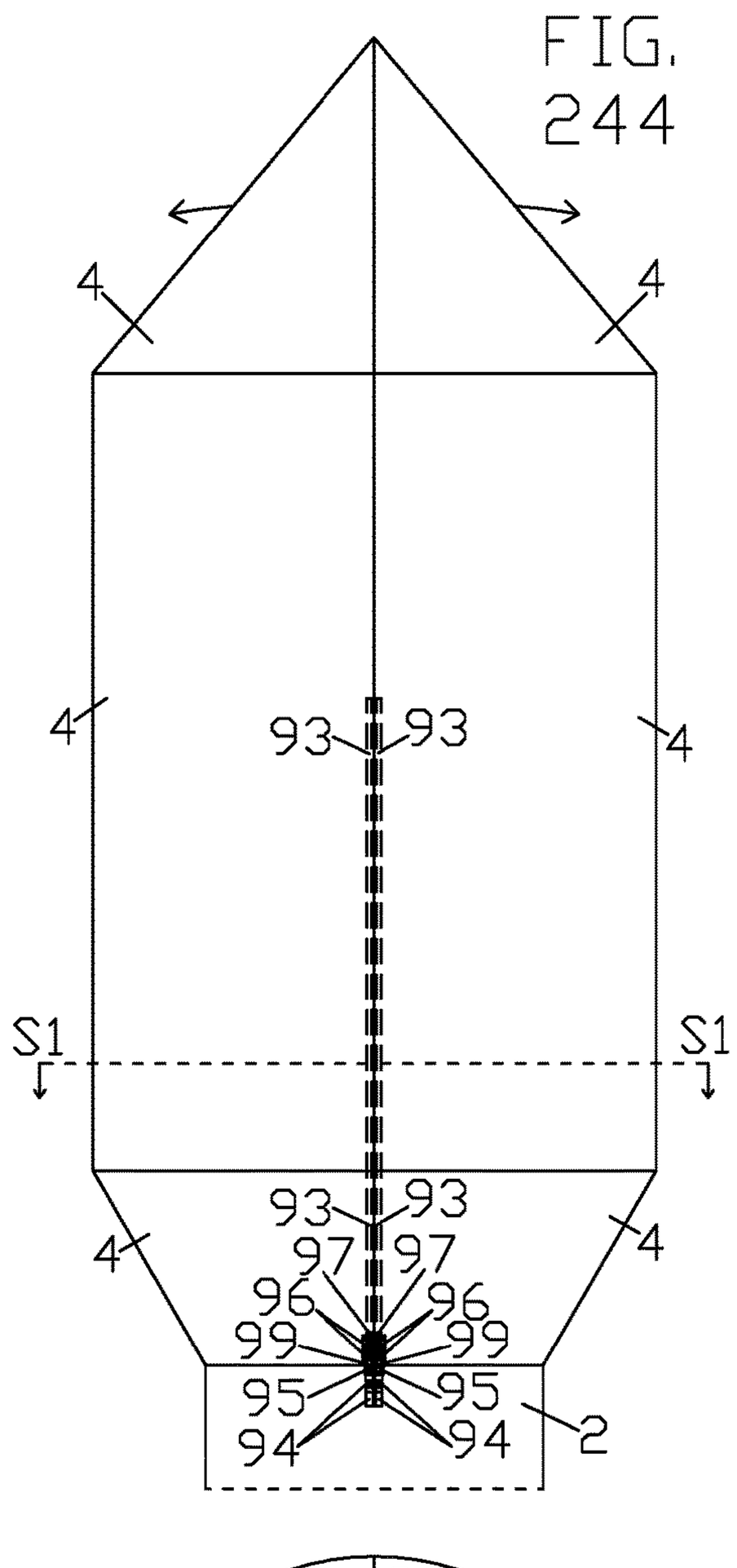


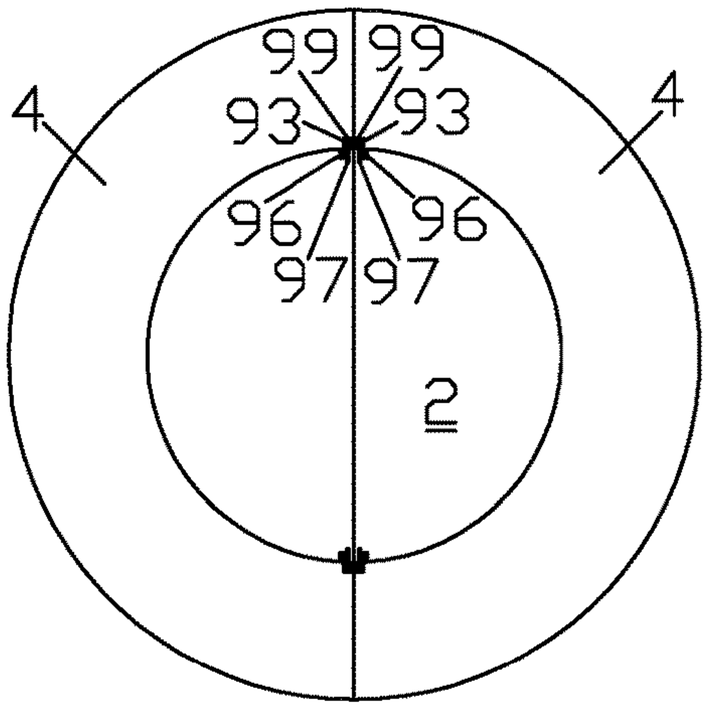


S2-S2

FIG.246

FIG. 244





S1-S1

FIG.245

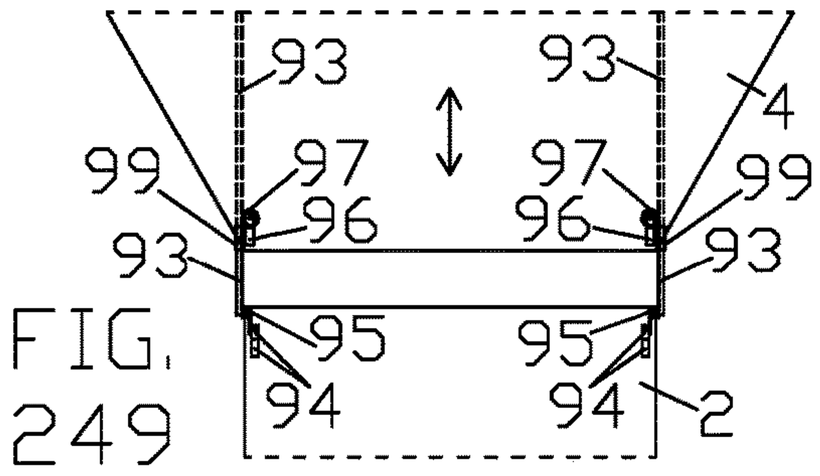


FIG. 249

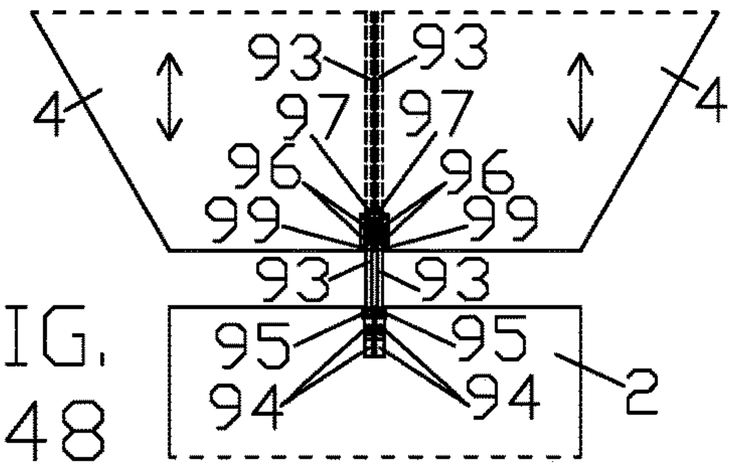


FIG. 248

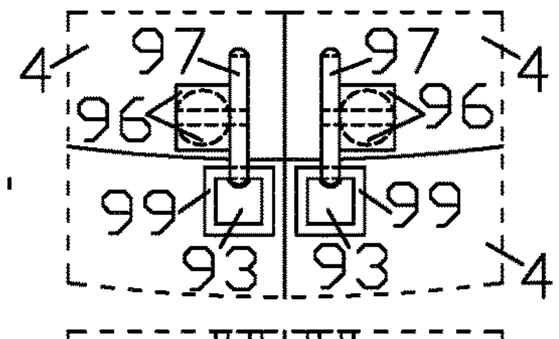


FIG. 251

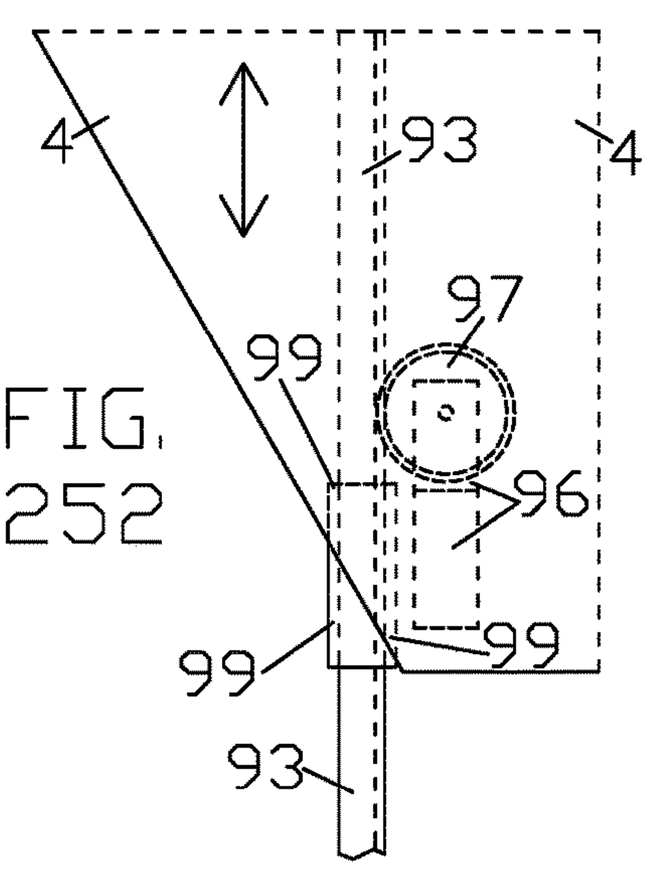


FIG. 252

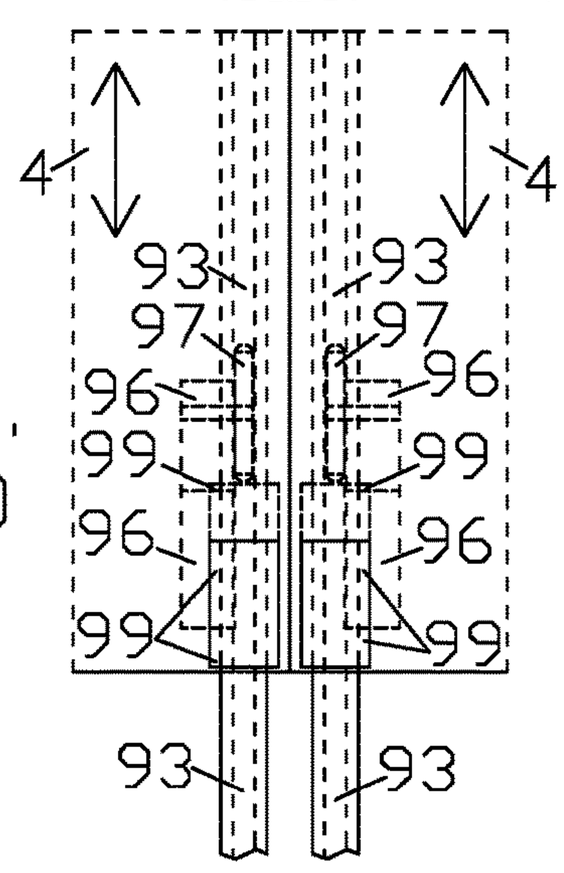


FIG. 250

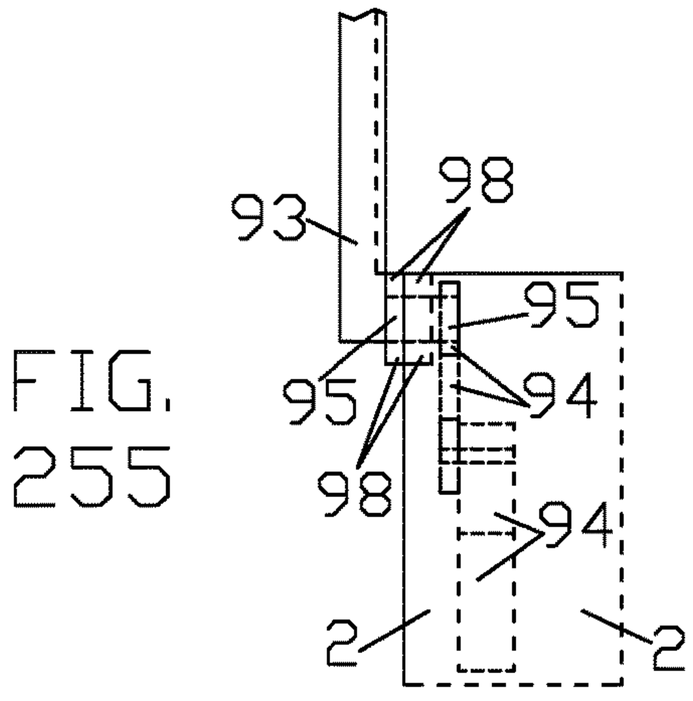


FIG. 255

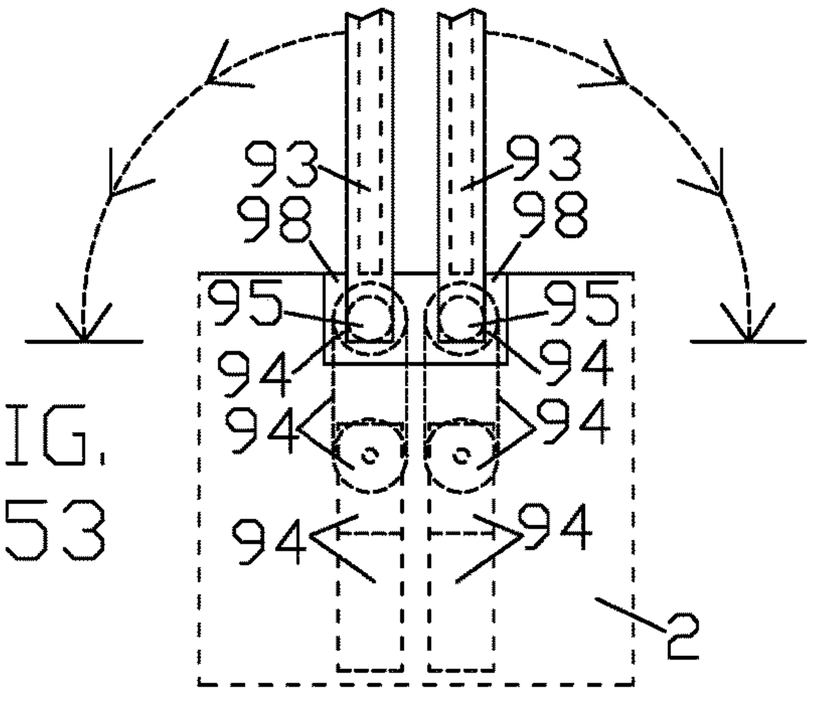


FIG. 253

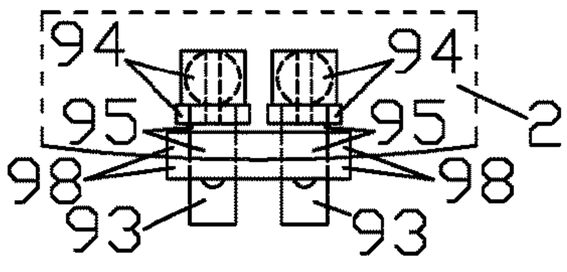


FIG. 254

FIG. 259

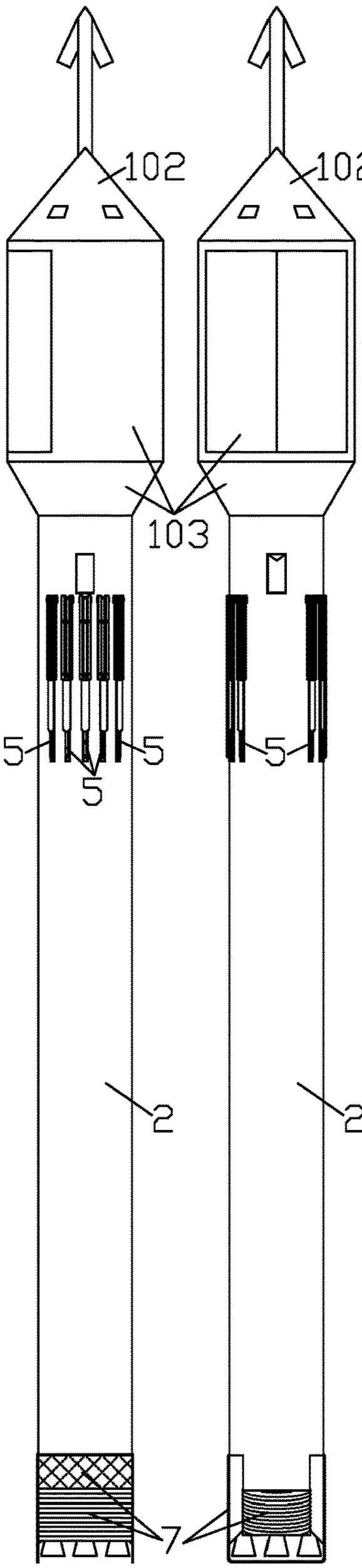


FIG. 258

FIG. 257

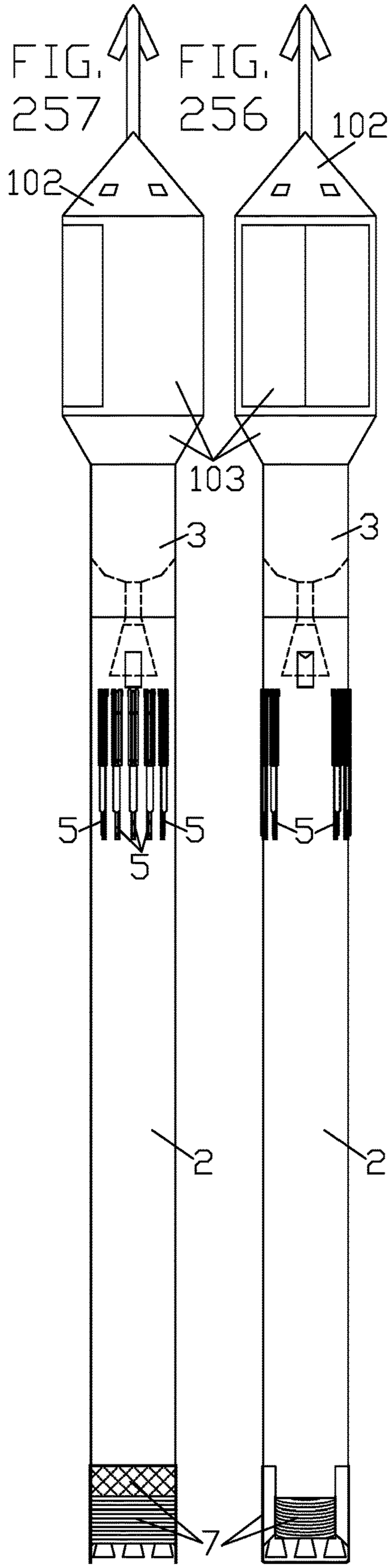


FIG. 256

FIG. 261

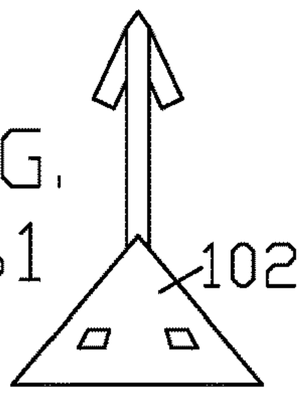


FIG. 260

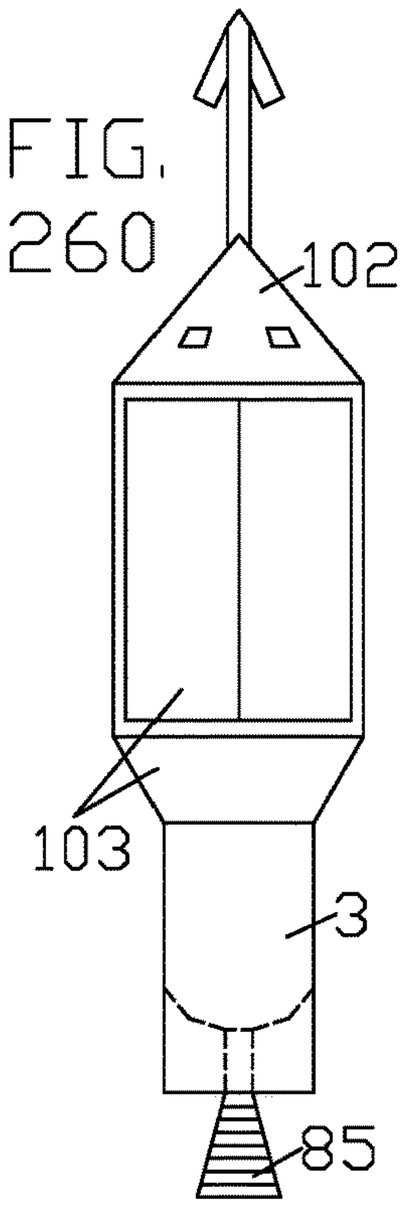


FIG. 265

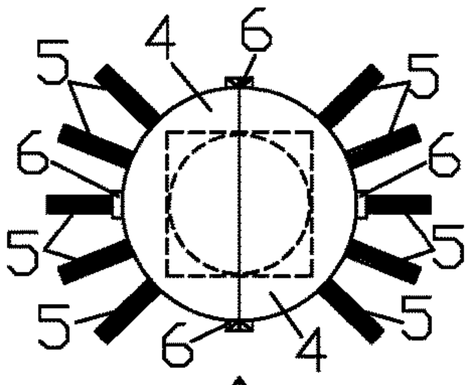


FIG. 263

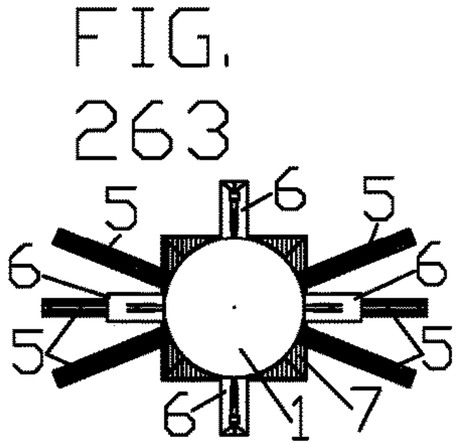


FIG. 262

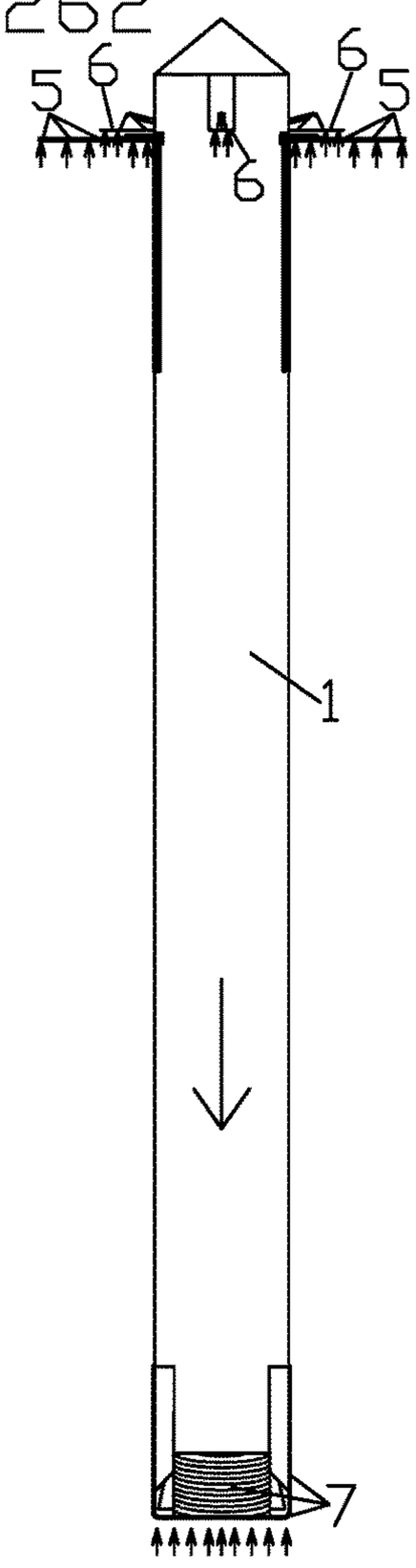


FIG. 264

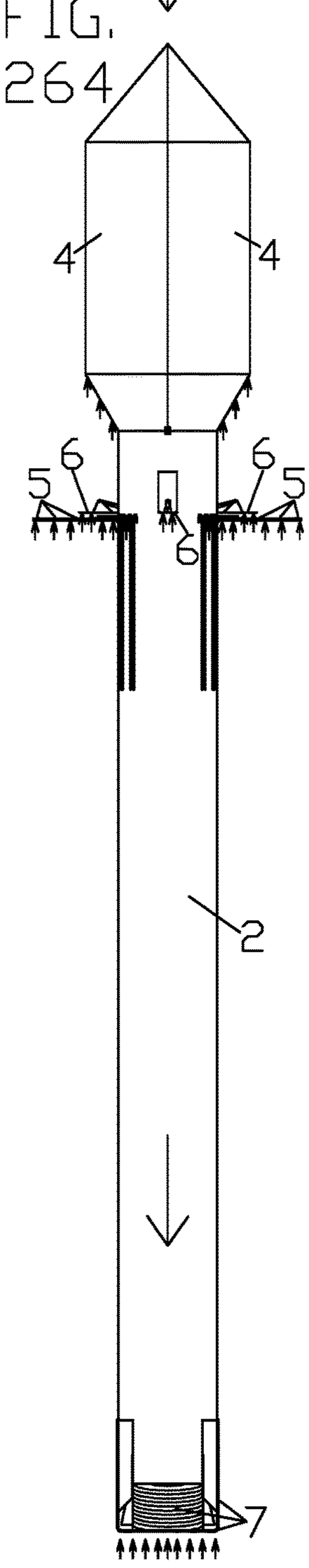


FIG. 266

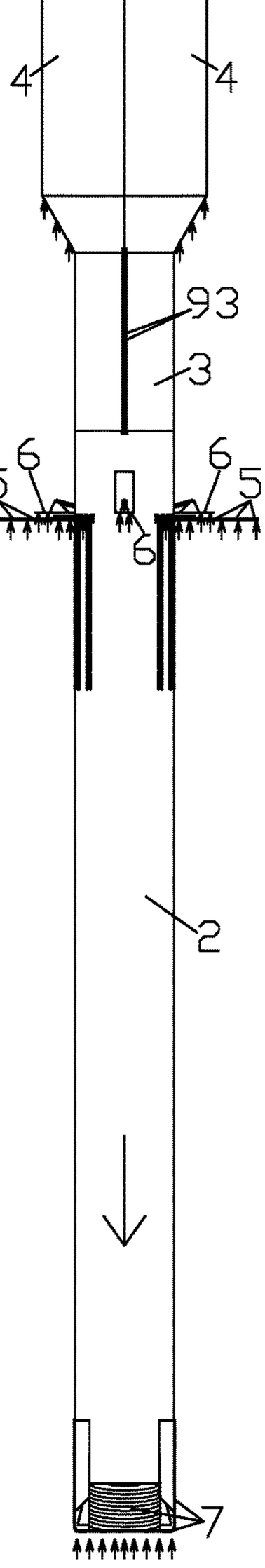
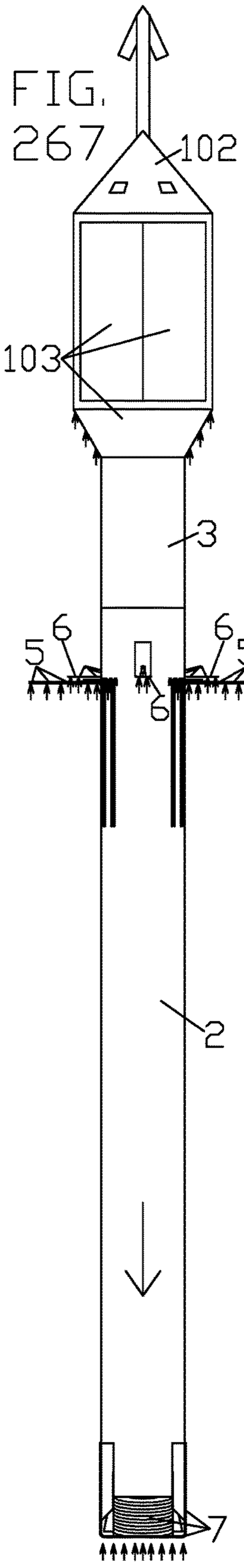


FIG. 267



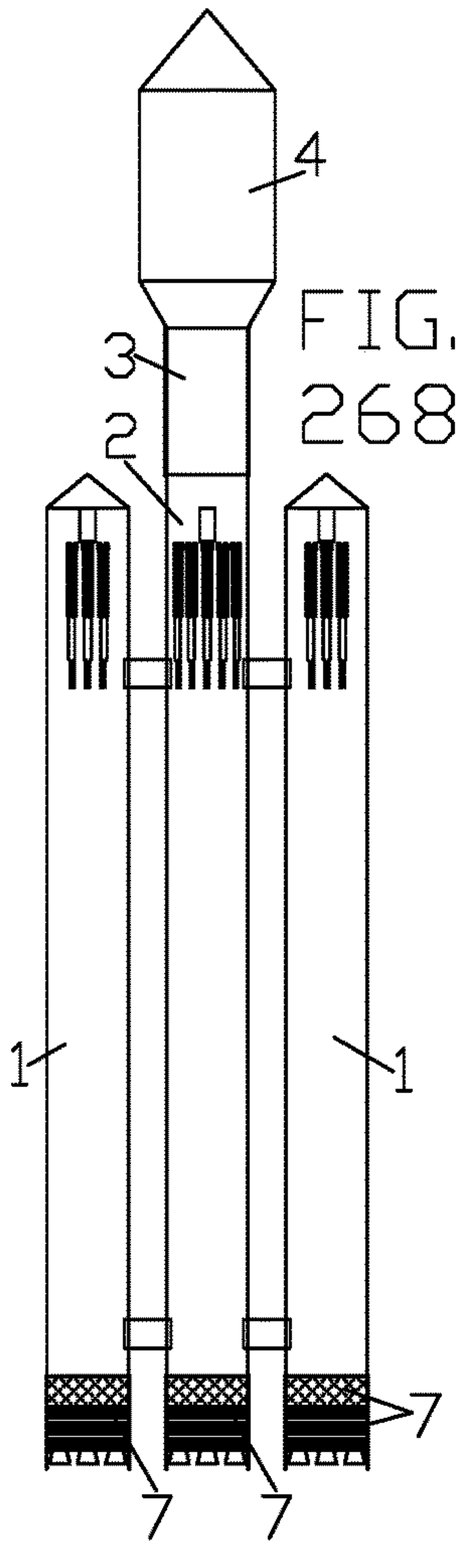


FIG. 268

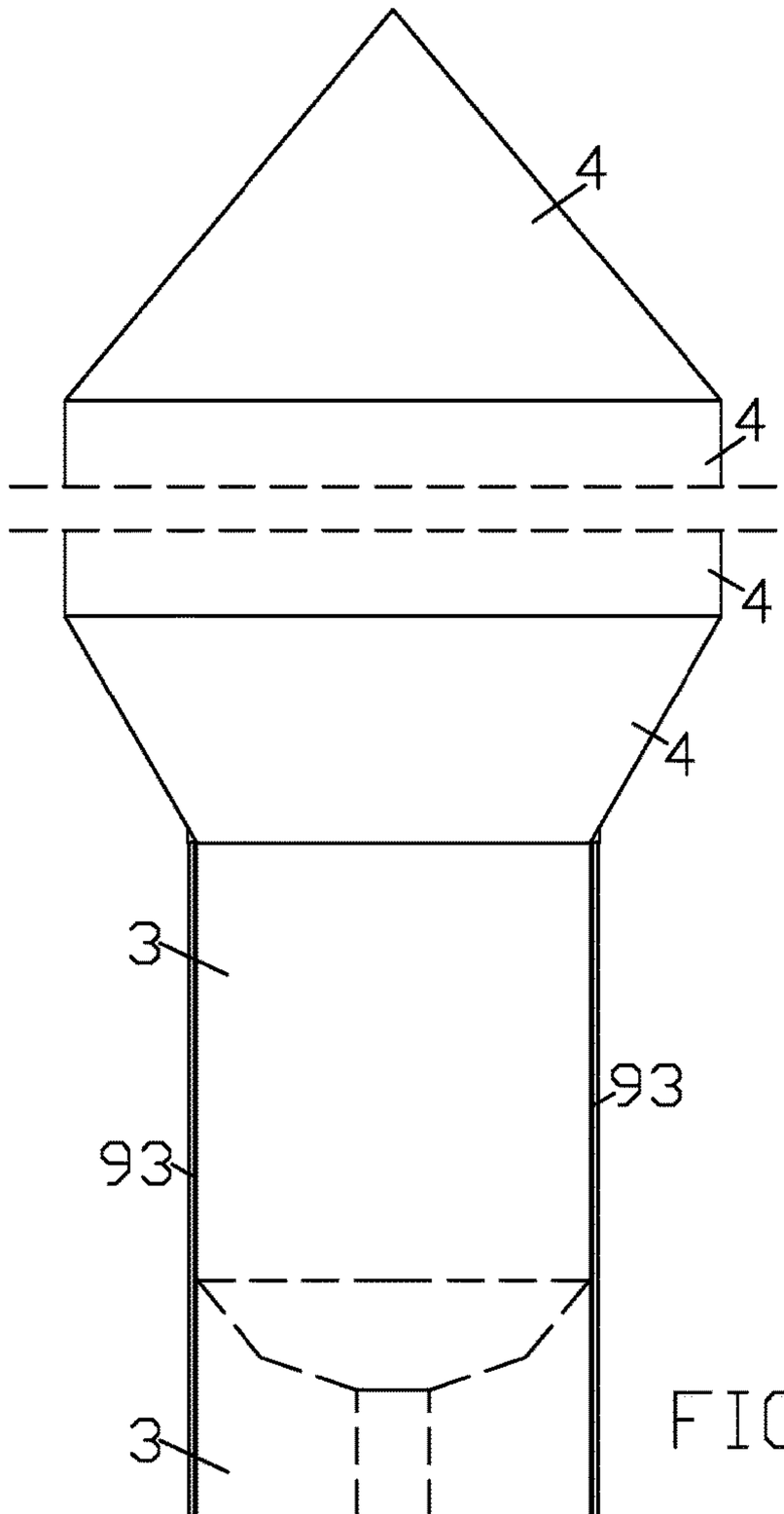
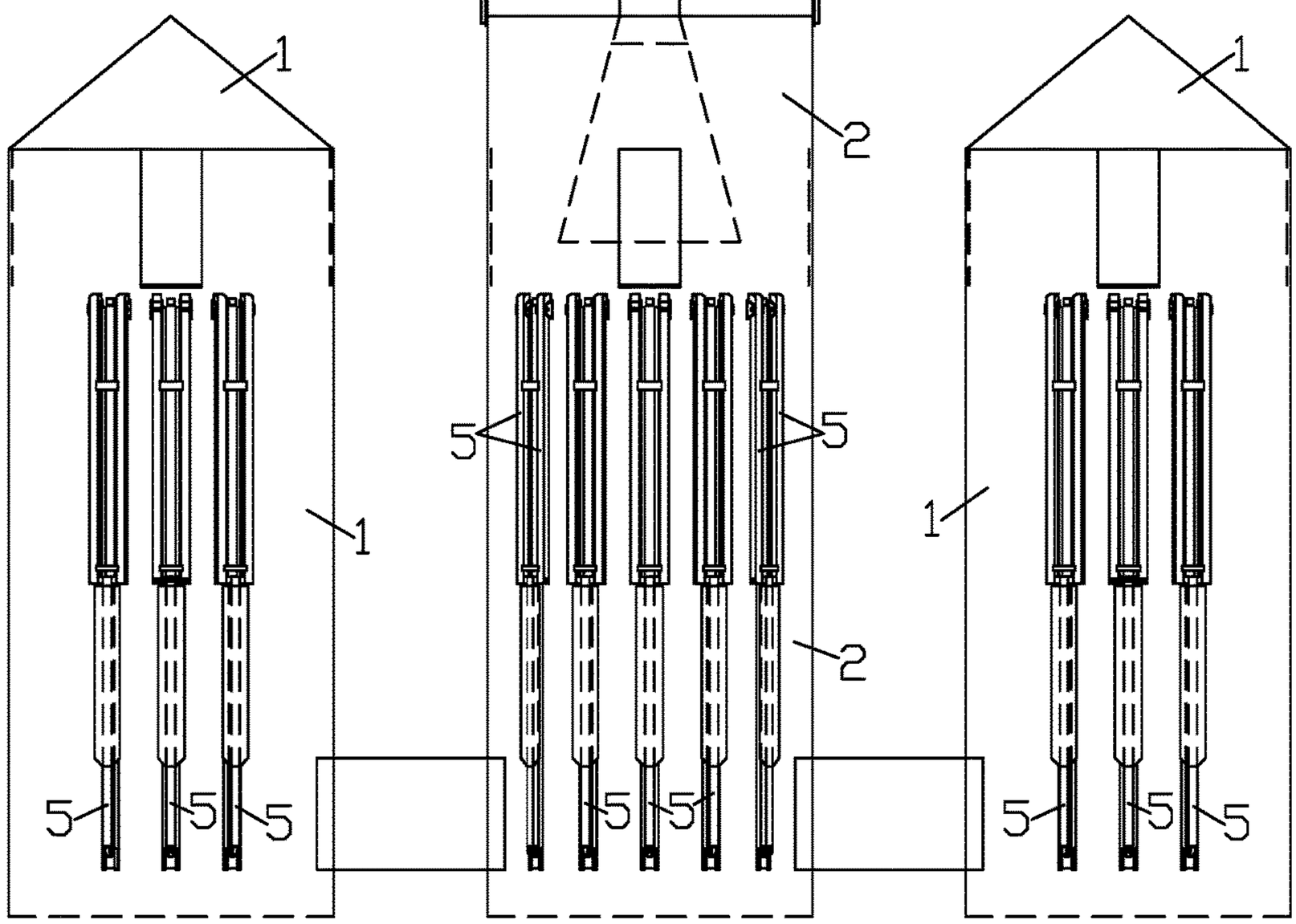


FIG.269



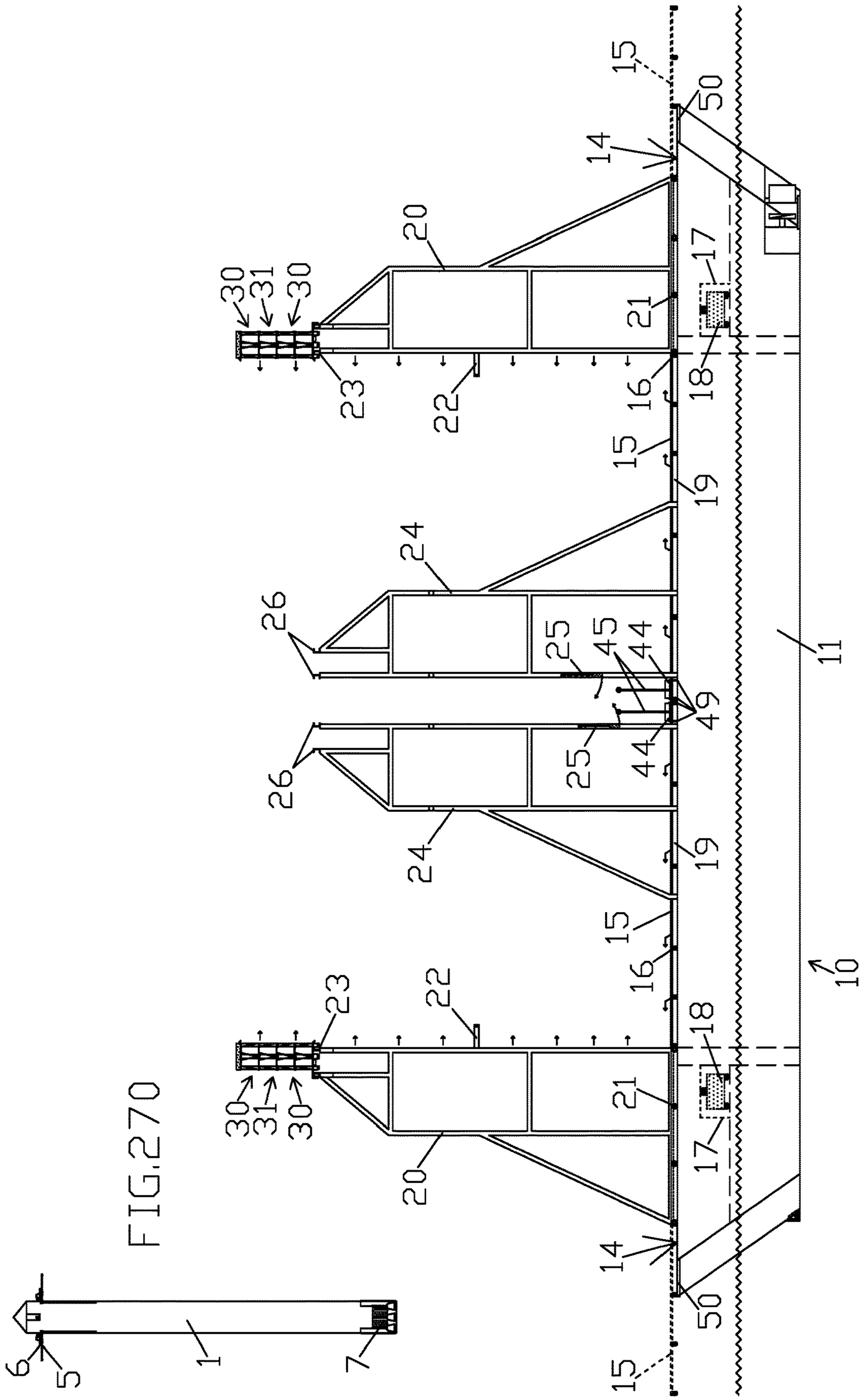

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FIG.270

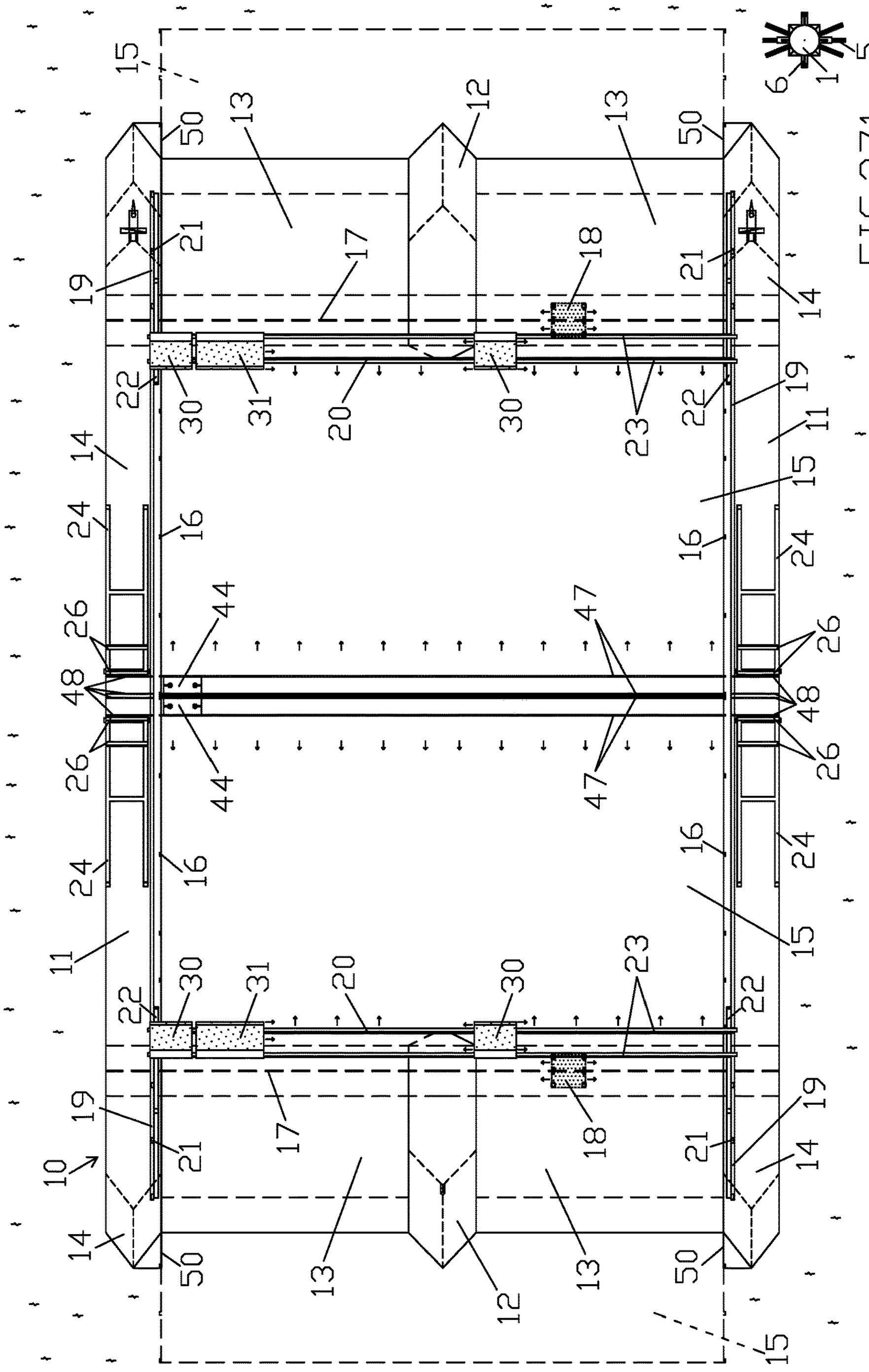
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FIG.271

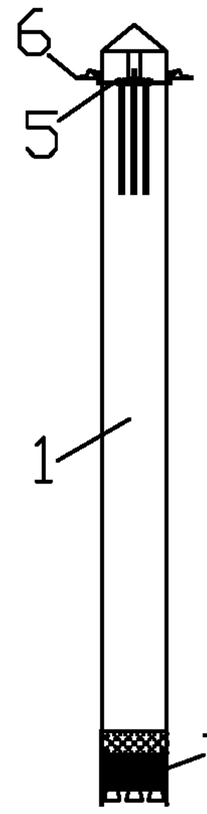
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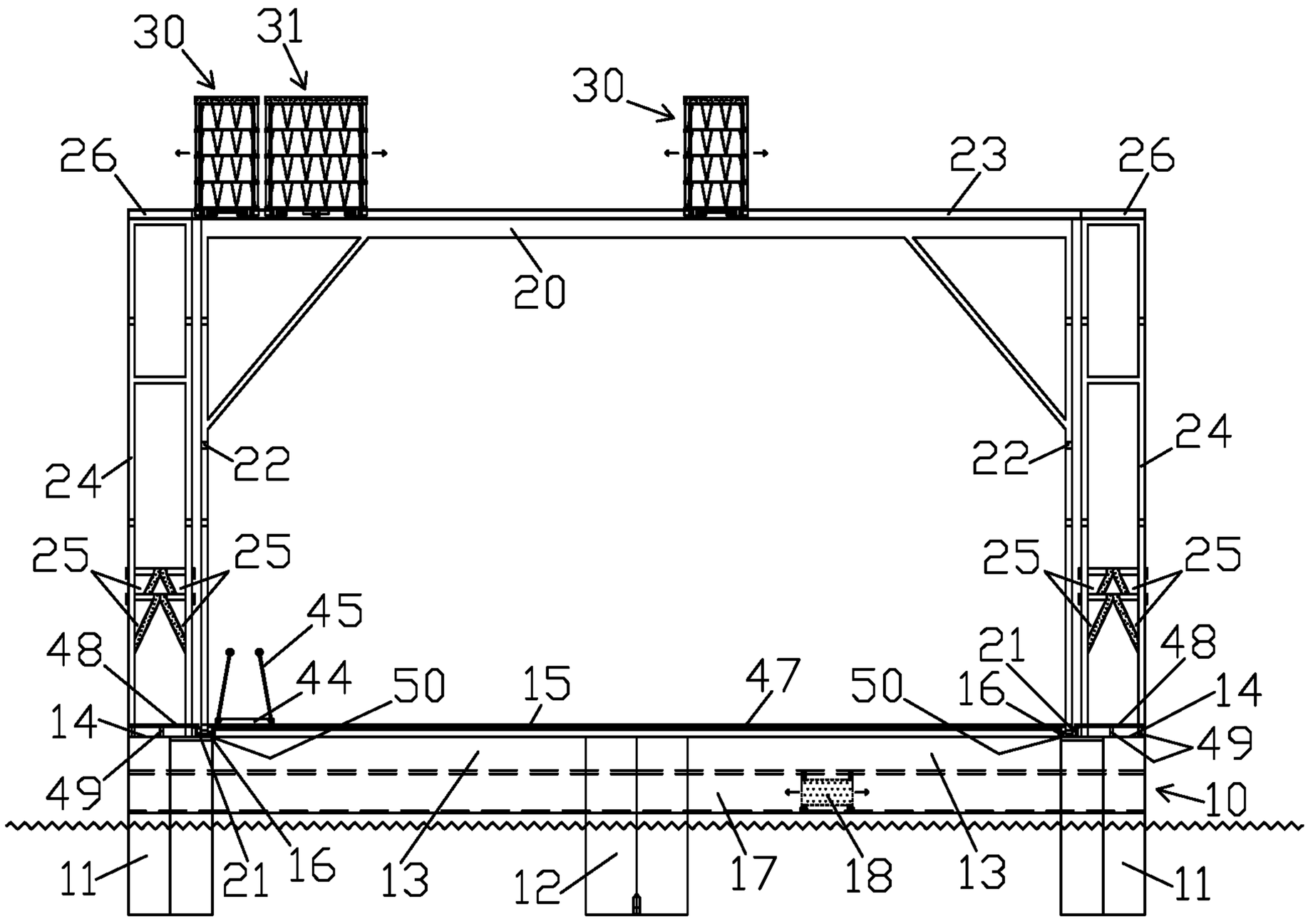
FIG.272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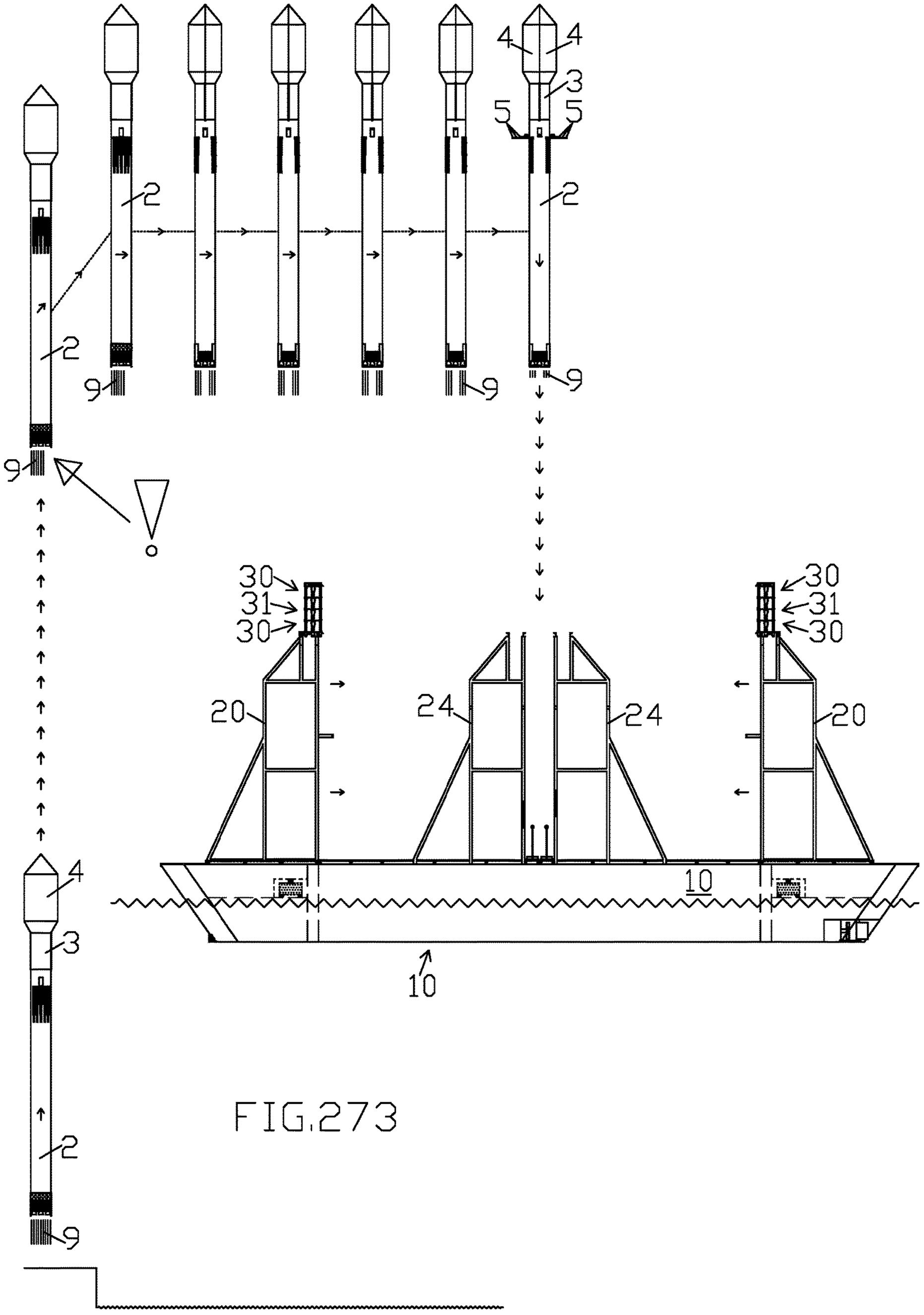


FIG.273

FIG.274

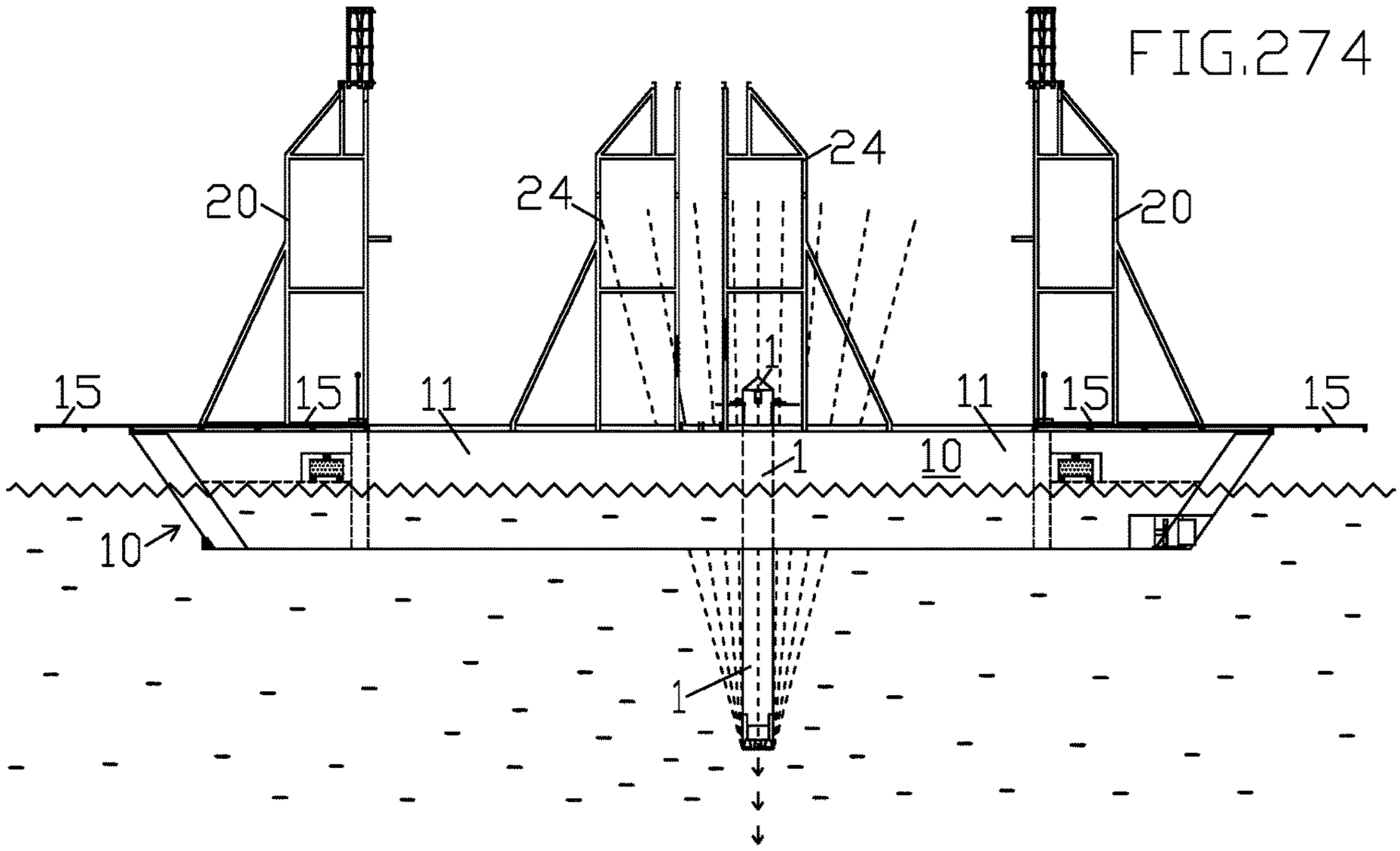
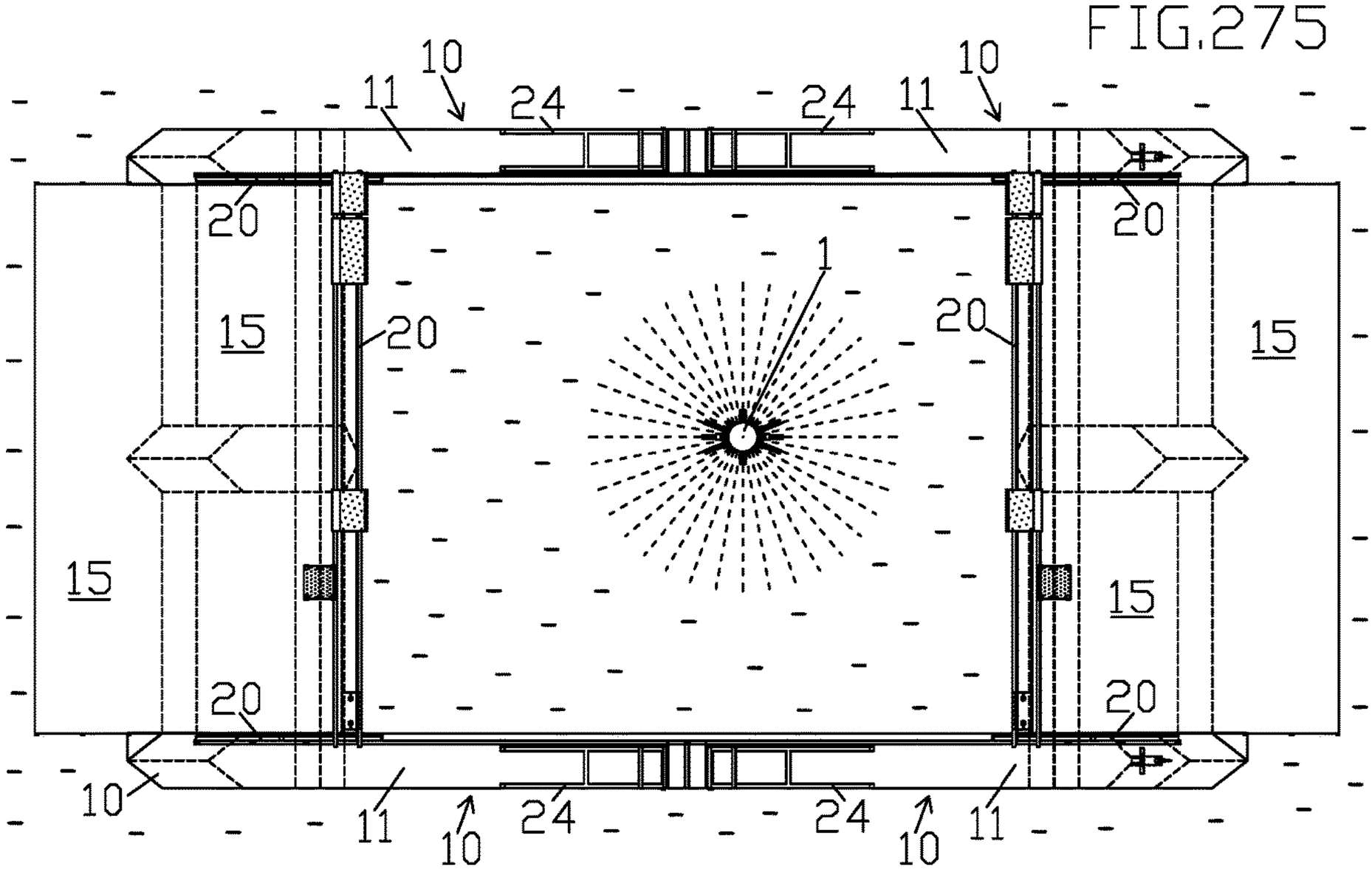


FIG.275



UTTER SYSTEM FOR MULTIPLE USE OF THE SPACE-ROCKETS EQUIPPED WITH SPREADABLE-ARMS AND POSSIBLY MORE DEVICES, AND METHOD OF THESE SPACE-ROCKETS VERTICAL LANDING BY HANGING ON LANDING-STATION HAVING MOVABLE GANTRIES AND MORE APPARATUS

TECHNICAL FIELD OF THE INVENTION

The present invention and its disclosure directs generally to the space rockets overall applying and usage, and their associated systems and methods.

BACKGROUND OF THE INVENTION

Since long time ago the space rockets are applied and used. Nonetheless, to this day one did not invent some system of space rocket launching and landing, which altogether would recover it, and would be very reliable, secure, trouble-free to use. And simultaneously the system that would enable the same space rocket launch several hours after its landing. Nowadays, particularly the space rocket landing is very problematic.

Currently, a few companies land the space rocket first stages on varied spreadable legs but such landings has several disadvantages. For example, during landing, the space rocket legs can be spread out only a few seconds before touchdown, because only then the space rocket descent is at low speed. Otherwise, atmospheric air would too strongly push the legs upward. Landing on the legs is very uncertain and sometimes after touch-down the space rocket can fall over by lots of reasons. In the event of one leg failure the whole space rocket will surely fall over. Landing on the legs makes it difficult to utilize some damping mechanisms in the legs because they would possibly cause the space rocket fall over as well. While, on the other hand a lack of some damping mechanisms in the legs can cause their breakdown. Sometimes after landing on the legs the space rocket stands slanted and can suddenly fall over as well. Therefore the slanted space-rocket will not securely stand on the legs. Such situation is very problematic and danger for all working personnel.

During landing on the legs, the space rocket legs are spread around plenty white-hot flames exhausting from the main engines. During touch-down these flames also rebound from the landing pad toward the legs thus, during this time they are burnt and destroyed in some part. Consequently, the legs have to stand on the landing pad, which is in plenty white-hot flames.

Landing on the legs makes impossible an application of very tall space-rockets, or that these space rockets would have mounted on their tops some modules or loads.

Landings on the legs require almost windless weather conditions because even moderate wind can cause the space rockets fall over and thus their total loss. As result, comes conclusion that at windy conditions the space rockets can not lift-off because later they will not be able to land on the legs. And it further causes that sometimes the space rockets having legs must wait several days for a launch possibility. There would not be such problems when landings would take place on presented in this invention spreadable arms.

The spreadable legs installed in a space rocket fuselage bottom makes it difficult for installing there some foldable thermal cover of main engines, as it is presented in current invention.

Therefore, currently, landings on the space rockets legs have characteristic of continuous attempts and hence all landings are treated as secondary purposes of all space rockets launching. Whereas, plenty other companies do not endeavor the space rocket landings at all. Furthermore, for security reasons it is recommended so that all space rockets landings would take place on the sea ships at sea. And for this reason landing on the space rocket legs and on a rolling sea ships are worse uncertain.

Earlier were applied Space Shuttles, which had plenty advantages, rather secure landing although unsafe lift-off. However, the Space Shuttles had very large and heavy wings and furthermore, several heavy wheels with heavy suspension. The large wings extorted usage of a complex and heavy thermal cover of the whole Space Shuttle. As a result of mentioned disadvantages and high operating costs the Space Shuttles one withdrew from the use.

All-in, currently, all over the world there are not possibilities of returns and regains from an Earth's orbit entire space rockets or entire loads. Yet, there are applied small capsules, which return from the Earth's orbit and land using the parachutes. This is a very primitive solution. Presented here invention does not have all before mentioned disadvantages.

SUMMARY OF THE INVENTION

This invention is the system for multiple use of the space rockets equipped with at least two spreadable arms and more devices. This system includes the space rockets vertical landing method on two movable gantries whereon the space rockets vertically land as hang themselves on their spreadable arms.

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The movable gantries are in two versions, as two movable ship gantries and as two movable ground gantries. Two movable ship gantries are installed in a landing station, which is mounted on a specific sea ship deck. Both movable ground gantries are installed in a multi-task station situated on a solid ground.

The landing station has two movable ship gantries and two pairs of hangers for two space rockets. Both movable ship gantries are huge and are installed over the central part of the specific sea ship. Both movable ship gantries at the chassis bottom have a plurality of driving wheels to precisely roll on the specific sea ship decks length-ways. Both movable ship gantries have on a chassis top two rails each with installed a plurality of damping wagons whereon the space rockets vertically land as hang themselves on their spreadable arms. Furthermore, on the specific sea ship movable decks two grasping wagons help secure the space rockets at their bottoms. Both grasping wagons are installed on the specific sea ship two horizontally movable decks. On the current deck mounted landing station in a few minutes intervals can land three space rockets equipped with the spreadable arms. Two first landing space rockets can be quickly moved on two pairs of hangers and temporary fasten. That is because one pair of hangers is adapted for hanging one space rocket equipped with the spreadable arms and temporary fastening said space rocket at the bottom by means of four rotating wedges. The third landed space rocket can remain on both movable ship gantries and be fastened by both grasping wagons.

The multi-task station has two movable ground gantries and a movable specific ground crane.

This entire system is completely connected with utilization of the plurality of spreadable arms mounted on all space

rockets. Therefor these spreadable arms are the main characteristic feature of this system. Furthermore, each space rocket vertical landing can occur with attached a plurality of modules and possibly a return load, and this feature is very important possibility and advantage of this system. Therefor this system includes that all space rockets and their sub-assemblies and modules are designed and destined for multiple use thus, return with the space rockets on the Earth.

This system comprises that on each space rocket can also be cardinally installed four steering flaps, a dividable sectional load cover and a sliding engines cover having two jalousies.

This system comprises the specific sea ship having a specific multi-hull with inbuilt two tunnels and having two horizontally movable decks. In each tunnel is installed one ballasting wagon. This system comprises that the specific sea ship is adapted for the deck mounted landing station.

Moreover, this whole system comprises also the multi-task station, which is adapted for hanging up, reload, launch preparation, lift-off and vertical landing of the space rockets equipped with the spreadable arms.

And that includes also unloading the space rockets from the specific sea ship.

The multi-task station has two movable ground gantries and one movable specific ground crane. Therefor this system includes also that a plurality of jointed space rockets during hanging on two movable ground gantries can be launch prepared in vertical position thus, while they vertically hang on their spreadable arms. And then these three jointed space rockets can lift-off from these two movable ground gantries thus, while they vertically hang on their spreadable arms as well.

All together, in current system are presented processes of three jointed space rockets lift-off, jointed ascent, their separation, further separated ascent, deployment of a payload, docking of the return load, descent and vertical landing on the specific sea ship having the deck mounted landing station.

In this system more exact description of the space rocket design and its action and multiple use is following. In this system each space rocket vertically lands as hangs itself on its spreadable arms. Therefor each space rocket has installed these sophisticated spreadable arms. And moreover each space rocket can have cardinally installed four steering flaps, the dividable sectional load cover and the sliding engines cover, which can be flat underneath or wedge shaped underneath.

On the space rockets mounted spreadable arms are absolutely necessary and are utilized multiple times. These spreadable arms create lots of possibilities. First of all and the most important is that each space rocket lands on its spreadable arms as hangs itself on them. Before landing, all spreadable arms are used as an aerodynamic brake during the space rocket descent in an Earth's atmosphere. Because all spreadable arms are designed and build as very strong therefor during space rocket descent, they can be lifted (spread out) on a very high altitude for use as the aerodynamic brake. As result of long-lasting aerodynamic braking caused by all spreadable arms, it will be necessary to use far less fuel at landing engine burn. These spreadable arms are mounted on each space rocket upper part. The quantity of spreadable arms mounted on each space rocket depends on its weight. Therefor currently, in one booster space rocket are mounted six spreadable arms and in one main space rocket are mounted ten spreadable arms. These spreadable arms are suitably spaced out in each space rocket fuselage so that they all could completely spread out on two sides. Whereas, all spreadable arms are entirely lowered, they are alongside and adjacent to the space rocket fuselage. Whereas, all spreadable arms are entirely lifted, they are completely spread out and are transverse the space rocket fuselage. Each spreadable arm is moved by one moving mechanism installed inside the space rocket fuselage.

Each spreadable arm consists of two lateral beams, one middle beam and additional sub-assemblies. Over each spreadable arm moving mechanism is installed a pushing mechanism having a blocking bar, which serves for blocking the middle beam in the spreadable arm, while it is entirely lifted.

The blocking bar fulfills blocking function when is maximally slid outside the fuselage. In such state, the blocking bar fulfills its main function, which is total blocking the middle beam in all directions. The middle beam after its blocking gains possibility of carrying burdens in all directions.

Four steering flaps are cardinally installed on each space rocket upper part as well. These flaps serve for steering the space rocket descent in the Earth's atmosphere. All flaps are in large sizes so that they could steer the space rocket descent even at low speeds. Two opposite steering flaps have additionally on top parts rotary mounted one torsional triangle each, which are configured for precise steering of the entire space rocket axial torsion as needed before landing on two movable ship gantries.

The sectional load cover is dividable into two sections and gradually foldable out on two opposite sides. And later this sectional load cover can be gradually folded up by pooling together up to total shutting. The sectional load cover serves for covering inside the payload and this way creates its thermal protection during the space rocket ascent and descent in the Earth's atmosphere. Thus, inside the sectional load cover can be fastened the payload, which will be carried out on the Earth's orbit and later can be fastened the return load, which will be carried on the Earth. The sectional load cover is revolvingly installed on the main space rocket upper part and can be situated over a second stage rocket. The sectional load cover can be completely lowered to the main space rocket upper part as well. Each one section of the sectional load cover is held up and incline by two cog beams. All four cog beams are long and are revolvingly installed to the main space rocket upper part. Whereas, the sectional load cover is shut up then all cog beams are outside and on both sides of the second stage rocket. The sectional load cover can be lifted somewhat over the second stage rocket before folding out on two opposite sides.

The sliding engines covers are flat underneath or wedge shaped underneath after their lowering. Each sliding engines cover serves for covering the space rocket main engines and this way creates their thermal protection during the space rocket descent in the Earth's atmosphere. Both sliding engines covers can be rapidly shut down (by sliding down) or rapidly opened (by sliding up). Each sliding engines cover consists of two sliding jalousies and consists of two sliding rounded plates.

In this system more exact description of the landing station design and its action and multiple use is following. The specific sea ship comprises the deck mounted landing station having two movable ship gantries, two pairs of hangers and two grasping-wagons which help secure the space rockets at their bottoms. Both grasping wagons are installed on the specific sea ship two horizontally movable decks.

On this landing station in a few minutes intervals can land three space rockets equipped with the spreadable arms.

Two first landing space rockets can be quickly moved on two pairs of hangers and temporary fasten.

Because each one pair of hangers is adapted for hanging one space rocket equipped with the spreadable arms and temporary fastening said space rocket at the bottom by means of four rotating wedges.

The third landed space rocket remains on both movable ship gantries and is fastened by means of four raised rotating poles, which reach from two grasping wagons.

Presented here, the specific sea ship with landing station having strong temporary fastening of the space rockets enables sea-transportation even at stormy sea.

Both movable ship gantries are huge and are installed over the central part of the specific sea ship. Both movable ship gantries can precisely and separably roll along the entire specific sea ship. Before landing of every space rocket, both movable ship gantries are entirely spread apart in two opposite directions of this specific sea ship. In such arrangement both movable ship gantries are ready and await landing of every space rocket. Both movable ship gantries can approach to each over and touch on themselves by means of two bumpers. Therefor short time before landing of each space rocket, both movable ship gantries approach to each over and together place themselves under the landing space rocket. In order to accomplish it, each movable ship gantry can roll until direction of the opposite movable ship gantry, if necessary during landing of the space rocket. It causes that each space rocket can land almost on the entire length of the specific sea ship. While, on the drawings there are shown only landings examples in the specific sea ship center.

On both movable ship gantries tops are installed four damping wagons and two large damping wagons. All damping wagons can precisely roll transverse the specific sea ship on both movable ship gantries tops. Short time before landing of each space rocket, two damping wagons place themselves under the landing space rocket. It causes that each space rocket can land almost on an entire width of the specific sea ship. On two damping wagons vertically lands one booster space rocket as hangs itself on its spreadable arms. On the next two damping wagons lands also one booster space rocket. Whereas, on two large damping wagons vertically lands one main space rocket. After the space rocket hanging itself, all damping wagons can be in fullness compressed. Then two compressed damping wagons can roll by from two movable ship gantries tops onto one pair of hangers tops. Because, the rails on the movable ship gantries tops are fitted in with the rails on all hangers tops. This way one pair of hangers is adapted for passing of two damping wagons from both movable ship gantries. And it is possible because constructions of the entire hangers and of the movable ship gantries are entirely adapted with constructions and function of all damping wagons.

Each damping wagon has four layers of a plurality of conic springs in vertical setting, which can be in fullness compressed. Therefor all damping wagons have damping high range during hanging the space rockets equipped with the spreadable arms. Simultaneously all damping wagons maintain unshaken and stable top surfaces during their compressing by the space rocket.

Two space rockets after landing can be quick moved from two movable ship gantries onto two pairs of hangers. Therefor in the landing station are mounted two pairs of hangers this way that one pair of hangers is mounted on each side of the specific sea ship. The hangers in construction remind immovable towers. Each hanger has two rotating wedges. One pair of hangers serve for hanging one space rocket and for strong temporary fastenings it by means of four rotating wedges.

And in the landing-station are installed also two low build grasping-wagons each having two rotating-poles. Both grasping wagons are installed on the specific sea ship two horizontally movable decks. Both grasping wagons have a plurality of driving wheels. And therefore both grasping-wagons can roll on both movable-decks transverse the specific sea ship length. Because both grasping wagons can roll on the long-transverse-rails on both movable decks. Both grasping wagons help secure the space rockets at their bottoms. All rotating poles have spherical ends with flexible coatings, which are adapted for direct contacts with the space rockets.

Moreover, both grasping wagons can together roll on rails between one pair of hangers. Because both grasping wagons are low build and are situated on both horizontally movable decks, they can move under every space rocket, which will hang itself on two damping wagons on both movable ship gantries. After each space rocket landing, both grasping wagons will move under this space rocket bottom and will suppress its swinging bottom by means of four raised rotating poles. Afterward two compressed damping wagons with hanged space rocket and both grasping wagons having grasped this space rocket bottom, as a complete set can move to one side of the specific sea ship side and thus between one pair of hangers. In order to perform it, both damping wagons and both grasping wagons must move at equal speeds toward one pair of hangers. After arriving all wagons between one pair of hangers, the hanged space rocket will be temporary fastened at the bottom by means of four rotating wedges on one pair of hangers. Then it will be possible to loose pressure of four rotating poles and lower them. And then both grasping wagons will be able to move under this hanged space rocket toward the specific sea ship center that mean return on both movable decks. Then the entire landing station will be instantly ready for landing the next space rocket equipped with the spreadable arms. It will be enough to entirely spread apart both movable ship gantries in two directions of the specific sea ship. Both grasping wagons serve also for strong fastening of the last landed space rocket bottom.

In this system more exact description of the specific sea ship design and its action is following. Thus, this system comprises also the specific sea ship having the deck mounted landing station.

The specific sea ship has the specific multi-hull with inbuilt two tunnels and have two horizontally movable decks. In each tunnel is installed one ballasting wagon. Both tunnels are transverse to the specific sea ship. The specific multi-hull construction consists of two long side hulls and two short central hulls, which all are permanently fastened with four over water copular hulls. Inside a central part of the specific multi-hull there are not any hull parts. A top surface of the multi-hull crates a main deck.

Both horizontally movable decks are huge and are installed over the central part of the specific sea ship. Both horizontally movable decks can be quickly and entirely spread apart in two directions of the specific sea ship in order to create inside its multi-hull a giant open interior where-into there is only sea surface. Spreading apart of these horizontally movable decks may be necessary in order to prevent some strike of the space rocket, which failed to stop its descent. Then this space rocket will plunge into sea-water. This kind coincidence is shown for example on FIG. **274**-

275 and there one booster space rocket slips by through the giant open interior of the specific sea ship at sea.

Both ballasting wagons serve for very quick and precise ballasting the entire specific sea ship to a perfectly horizontal position during landing each space rocket and during moving each one on one pair of hangers. Furthermore, both ballasting wagons serve also for automatic, continuous, quick and precise ballasting this specific sea ship during seafaring.

In this system more exact description of the multi-task station design and its action is following. It is recommended that this multi-task station would be at a sea harbor wharf so that it could be possible to reload the space rockets from any specific sea ship. Thus, this system comprises also the multi-task station, which has two movable ground gantries and one movable specific ground crane for the space rockets reloading.

Both movable ground gantries at the chassis bottom have installed a plurality of driving wheels to precisely drive on the solid around and turn on it. Both movable ground gantries on their tops have fastened the rails for possible installing the damping wagons. Both movable ground gantries are adapted to approach to each over before landing of the space rocket. Both movable around gantries are adapted to place themselves precisely under landing space rocket equipped with the spreadable arms.

The movable specific ground crane is a lot bigger than both movable ground gantries. The movable specific ground crane is adapted to play along with both movable ground gantries. The movable specific ground crane has a plurality of beams, which reach up over the specific sea ship so that this movable specific ground crane could lift one space rocket and subsequently shift it on both movable ground gantries. The entire movable specific ground crane will move backwards before the space rocket lift-off. Both movable ground gantries serve for three space rockets lading after unloading from the specific sea ship. And later these two movable ground gantries serve for three joined space rockets launch preparation all time in vertical position thus, during hanging on these two movable ground gantries. And therefor all space rockets can lift-off from two movable ground gantries while these space rockets vertically hang on their spreadable arms. This even includes that three joined space rockets can lift-off this way. Both movable ground gantries will spread apart on two sides immediately after the space rockets lift-off. Summing-up, as result of this whole system with method of the space rockets launches and their quick return to the multi-task station there is possible their very fast renewed launch, for example several hours after landing on the specific sea ship.

The space rocket lift-off from two movable ground gantries creates also a few benefits as possibility of smooth igniting the main engines, smooth adjusting the space rocket initial vertical position. Moreover, it makes possible to abort the space rocket launch plenty seconds after lift-off. It means after lift-off and the space rocket failure, to descend the whole space rocket and hang it back on two movable ground gantries. It would be reverse process in comparison to the lift-off, thus, like from FIG. **7** to FIG. **4**.

Moreover, this whole system makes possible aborting the space rocket ascent any time after lift-off and afterward perform emergency landing of the whole space rocket on the specific sea ship. As result, there is possible total salvage of the whole space rocket together with top mounted all modules and payload.

BRIEF DESCRIPTION OF THE DRAWINGS—275 NUMBERS

FIG. **1** is the side view and shows the space rockets vertical landing method in the system for multiple use of the space rockets equipped with the plurality of spreadable arms **5**. Here, is shown the method of three space rockets vertical landing on the specific sea ship **10**, which has the deck mounted landing station having two pairs of hangers **24**, two grasping-wagons **44**, two movable ship gantries **20** with the plurality of damping wagons **30** or **31** whereon each space rocket vertically lands as hangs itself on its spreadable arms **5**. Both grasping wagons **44** are installed on the specific sea ship **10** two horizontally movable decks **15**. Both grasping wagons **44** help secure the space rockets at their bottoms. On the landing station in a few minutes intervals can land three space rockets equipped with the spreadable arms **5**. Two first space rockets can be quickly moved on two pairs of hangers **24** and fasten. The third landed space rocket remains on both movable ship gantries **20** and is fastened by both grasping wagons **44**. Whereas, FIG. **1** is the side view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. The current view shows just vertically landing one booster space rocket **1** with entirely lifted (spread out) all spreadable arms **5**. This FIG. **1** shows additionally an enlarged drawing fragment with the one damping wagon **30** and the second enlarged drawing fragment of the booster space rocket **1** upper part showing the spreadable arms **5** and the steering flaps **6**. Furthermore, nearby to the specific sea ship **10**, current FIG. **1** shows the second booster space rocket **1** and the main space rocket **2**, which both have also entirely lifted (spread out) all their spreadable arms **5**. This view shows and explains that on the same specific sea ship **10**, which has such landing station can still additionally vertically land these two earlier mentioned space rockets.

FIG. **2** is the top view of the entire specific sea ship **10** in the same situation as on FIG. **1**.

FIG. **3** is the front view of the entire specific sea ship **10** in the same situation as on FIG. **1**.

FIG. **4** is the side view and shows the space rockets launch method in the system for multiple use of the space rockets equipped with the plurality of spreadable arms **5**. Here, is shown the multi-task station for three jointed space rockets launch preparation, lift-off and later unloading from the specific sea ship **10**. The multi-task station comprises two movable ground gantries **104** and one movable specific ground crane **105**. Therefor currently, three joined space rockets hang on all their spreadable arms **5** on two movable ground gantries **104** and will lift-off this way. These three joined space rockets are one main space rocket **2**, which is joined on both sides with two booster space rockets **1**. On the main space rocket **2** top it is mounted the assemblage, which consist of the second stage rocket **3** with attached the sectional load cover **4**. And on this FIG. **4** is also sketched the side drawing of one movable specific ground crane **105**, because it earlier moved away.

FIG. **5** is the top view of FIG. **4** in the same arrangement and situation.

FIG. **6** is the front view of FIG. **4** in the same arrangement and situation.

FIG. **7** is the side view of three joined space rockets, which are awhile after the lift-off and the side view of two movable ground gantries **104**, which are spread somewhat apart on two sides.

FIG. **8** is a prospectus presentation, which shows lots of crowded scenes in the system for multiple use of the space rockets equipped with the plurality of spreadable arms **5**. The current whole presentation shows the methods of three joined space rockets launch and an entire ascent process toward the Earth's orbit, descent and vertical landing with the return load according to the current invention. Therefor this FIG. **8** shows for example plurality drawing statuses of three joined space rockets with their lift-off, joined ascent, their separation, further separated ascent toward the Earth's orbit, deploy the payload, dock the return load, and their individual descending and vertical landing aboard the specific sea ship **10** at open sea. On all space rocket statuses and alongside a plurality of arrows show the directions of their traveling trajectories. These three joined space rockets are the same as on previous FIG. **4**, **5**, **6**, **7** and further FIG. **268**, **269** and these are one main space rocket **2**, which is joined on both sides with two booster space rockets **1**. On the main space rocket **2** top it is mounted the assemblage, which consist of the second stage rocket **3** with attached the sectional load cover **4**. At beginning aforesaid three space rockets statuses are in two front drawings. Thereafter, all space rockets statuses are in the side drawings and show their travel toward the specific sea ship **10**, which is in the side drawing as well. Here, alongside the space rocket drawing statuses are a plurality of numbers in a plurality of small circles, which explain the space rockets landing sequences. Descent process from the Earth's orbit individually by three space rockets will end with vertical landing aboard the specific sea ship **10**. Therefor both movable ship gantries **20** are entirely spread apart in two directions before landing of every space rocket as it is shown on the current view. The entire prospectus presentation on FIG. **8** targets presentation that is possible individual, vertical landing as many as three space rockets equipped with the spreadable arms **5** on one specific sea ship **10** at sea.

FIG. **9** is the top view and shows the space rockets vertical unloading method in the system for multiple use of the space rockets equipped with the plurality of spreadable arms **5**. Here, is shown the method of three space rockets vertical unloading from the specific sea ship **10** at the multi-task station according to the current invention. Therefor this FIG. **9** shows the specific sea ship **10**, which just moored at the multi-task station for unloading of three space rockets, which later can be launch again together or individually. This multi-task station consists of two movable ground gantries **104** and of one movable specific ground crane **105**. Aboard the specific sea ship **10** are hanged and still individually fastened three space rockets.

FIG. **10** is the front view of FIG. **9** in the same arrangement and situation.

FIG. **11** is the side view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. Therefor nearby the specific sea ship **10** is also one booster space rocket **1**, which has entirely lifted (spread out) all spreadable arms **5**. The specific sea ship **10** and the landing station are ready for landing the first booster space rocket **1**. The same side view of the entire specific sea ship **10** is also shown as enlarged on FIG. **270**.

FIG. **12** is the top view of the entire specific sea ship **10** in the same arrangement and situation as on FIG. **11**. The same top view of the entire specific sea ship **10** is also shown as enlarged on FIG. **271**.

FIG. **13** is the front view of the entire specific sea ship **10** in the same arrangement and situation as on FIG. **11**. The same front view of the entire specific sea ship **10** is also shown as enlarged on FIG. **272**.

FIG. **14** is the side view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. This view shows this specific sea ship **10** and the landing station ready for landing the second booster space rocket **1** because on her earlier already landed the first booster space rocket **1**. Therefor here the specific sea ship **10** is with one booster space rocket **1**, which hangs on one pair of hangers **24** and is already fastened at the bottom by means of four rotating wedges **25**.

FIG. **15** is the top view of the entire specific sea ship **10** in the same situation as on FIG. **14**.

FIG. **16** is the front view of the entire specific sea ship **10** in the same situation as on FIG. **14**.

FIG. **17** is the side view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. This view shows this specific sea ship **10** and the landing station ready for landing the third space rocket because earlier already landed two booster space rockets **1**. Therefor the current view shows the specific sea ship **10** with two booster space rockets **1** whereas, each one hangs on one pair of hangers **24** and each one is fastened at the bottom by means of four rotating wedges **25**.

FIG. **18** is the top view of the entire specific sea ship **10** in the same situation as on FIG. **17**.

FIG. **19** is the front view of the entire specific sea ship **10** in the same situation as on FIG. **17**.

FIG. **20** is the side view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. Here, this specific sea ship **10** is with three individually hanged and fastened space rockets and, which are ready for transporting over the sea for unloading at the multi-task station.

FIG. **21** is the top view of the entire specific sea ship **10** in the same situation as on FIG. **20**.

FIG. **22** is the front view of the entire specific sea ship **10** in the same situation as on FIG. **20**.

FIG. **23** is the side view of the entire landing station for individual, vertical landing of three space rockets. This landing station is in the same arrangement as aboard the specific sea ship **10** however the current view is without the grasping wagons **44**.

FIG. **24** is the top view of FIG. **23** in the same arrangement and situation.

FIG. **25** is the front view of FIG. **23** in the same arrangement and situation.

FIG. **26** is the side view of two whole movable ship gantries **20** by themselves, which are in the same arrangement as aboard the specific sea ship **10** and the same as on FIGS. **1-3** and **11-13**.

FIG. **27** is the top view of two whole movable ship gantries **20** in the same arrangement as on FIG. **26**.

FIG. **28** is the front view of two whole movable ship gantries **20** in the same arrangement as on FIG. **26**.

FIG. **29** is the side view of two pairs of hangers **24** in the same arrangement as on the specific sea ship **10**.

FIG. **30** is the top view of two pairs of hangers **24** in the same arrangement as on FIG. **29**.

FIG. **31** is the front view of two pairs of hangers **24** in the same arrangement as on FIG. **29**.

FIG. **32** is the enlarged side view of one pair of hangers **24** wherein each has two rotating wedges **25** lowered and with two arrows showing their rotating directions.

FIG. **33** is the top view of FIG. **32** in the same arrangement.

FIG. **34** is the front view of FIG. **32** in the same arrangement.

FIG. **35** is the enlarged side view of one pair of hangers **24** with a fragment of the space rocket fuselage **51**, which is fastened by means of four rotating wedges **25**.

FIG. **36** is the top view of FIG. **35** in the same arrangement.

FIG. **37** is the front view of FIG. **35** in the same arrangement.

FIG. **38** is the top view of the horizontal sectional view according to the S-S line on FIG. **35**.

FIG. **39** is the enlarged side view of one pair of hangers **24** whereon tops on four upper short rails **26** stand two damping wagons **30**.

FIG. **40** is the top view of FIG. **39** in the same arrangement.

FIG. **41** is the front view of FIG. **39** in the same arrangement.

FIG. **42** is the enlarged side view of one pair of hangers **24** with hanged and fastened one booster space rocket **1**.

FIG. **43** is the top view of FIG. **42** in the same arrangement and situation.

FIG. **44** is the front view of FIG. **42** in the same arrangement and situation.

FIG. **45** is the enlarged side view of the rotating wedges **25** with two hangers **24** fragments sketches, which are performed with the dashed lines. All four rotating wedges **25** are completely lowered and with two arrows showing their rotating directions.

FIG. **46** is the top view of FIG. **45** in the same arrangement.

FIG. **47** is the front view of FIG. **45** in the same arrangement.

FIG. **48** is the enlarged side view of four rotating wedges **25**, which are rotated in such way that they all together tighten up the space rocket fuselage **51** fragment.

FIG. **49** is the top view of FIG. **48** in the same arrangement and situation.

FIG. **50** is the front view of FIG. **48** in the same arrangement and situation.

FIG. **51** is the top view and shows for example the space rocket bottom, which is moved away from correct location.

FIG. **52** is a lot enlarged side view of two rotating wedges **25**, which are wholly lowered.

FIG. **53** is the top view of FIG. **52** in the same arrangement.

FIG. **54** is the front view of FIG. **52** in the same arrangement.

FIG. **55** is a lot enlarged side view of one pair of hangers **24** upper part in the same status as was earlier shown on FIG. **39**. On one pair of hangers **24** tops and on four upper short rails **26** stand two damping wagons **30**.

FIG. **56** is the top view of FIG. **55** in the same arrangement and situation.

FIG. **57** is the front view of FIG. **55** in the same arrangement and situation.

FIG. **58** is a lot enlarged side view of one pair of hangers **24** upper part in the same statuses as were earlier shown on FIG. **42**. Here, on one pair of hangers **24** is hanged one booster space rocket **1**.

FIG. **59** is the top view of FIG. **58** in the same arrangement and situation.

FIG. **60** is the front view of FIG. **58** in the same arrangement and situation.

FIG. **61** is a lot enlarged side view of two damping wagons **30**, which are not compressed, and they stand on four upper short rails **26**, which are on the tops of one pair of hangers **24**.

FIG. **62** is the top view of FIG. **61** in the same arrangement and situation.

FIG. **63** is the front view of FIG. **61** in the same arrangement and situation.

FIG. **64** is a lot enlarged side view of two damping wagons **30**, which for example are compressed and stand on four upper short rails **26**, which are on the tops of one pair of hangers **24**.

FIG. **65** is the top view of FIG. **64** in the same arrangement and situation.

FIG. **66** is the front view of FIG. **64** in the same arrangement and situation.

FIG. **67** is a lot enlarged side view of one entire damping wagon **30**, which is not compressed and in different manner than previously, stands on two upper long rails **23**, which are on one movable ship gantry **20** top.

FIG. **68** is the top view of FIG. **67** in the same arrangement and situation.

FIG. **69** is the front view of FIG. **67** in the same arrangement and situation.

FIG. **70** is the bottom projection of FIG. **67** in the same arrangement and situation.

FIG. **71** is the top view of the horizontal sectional view according to the S-S line on FIG. **69**.

FIG. **72** is a lot enlarged side view of one entire damping wagon **30** which for example is compressed and does not stand on any rails.

FIG. **73** is the top view of FIG. **72** in the same arrangement.

FIG. **74** is the front view of FIG. **72** in the same arrangement.

FIG. **75** is a lot enlarged side view of one large damping wagon **31**, which is not compressed and stands on two upper long rails **23**, which are on one movable ship gantry **20** top.

FIG. **76** is the top view of FIG. **75** in the same arrangement and situation.

FIG. **77** is the front view of FIG. **75** in the same arrangement and situation.

FIG. **78** is the bottom projection of FIG. **75** in the same arrangement and situation.

FIG. **79** is the top view of the horizontal sectional view according to the S-S line on FIG. **75**.

FIG. **80** is the side view of two grasping wagons **44** wherein each with two rotating poles **45**. Both grasping wagons **44** stand on four short transverse rails **48**. The rotating poles **45** are raised.

FIG. **81** is the top view of FIG. **80** in the same arrangement and situation.

FIG. **82** is the front view of FIG. **80** in the same arrangement and situation.

FIG. **83** is the side view of two grasping wagons **44** standing on four long transverse rails **47**. Both grasping wagons **44** by means of four raised rotating poles **45** tighten one main space rocket **2** bottom.

FIG. **84** is the top view of FIG. **83** in the same arrangement and situation.

FIG. **85** is the front view of FIG. **83** in the same arrangement and situation.

FIG. **86**A is the side view of one booster space rocket **1** upper part, which has six spreadable arms **5** and four steering flaps **6**. Here, all spreadable arms **5** are entirely

lowered. Whereat all four flaps **6** are vertically set and are entirely inside the space rocket fuselage.

FIG. **86**B is the side view of one booster space rocket **1** bottom part, which has one sliding engines cover **7** and, which currently is entirely lifted.

FIG. **87** is the top view of FIGS. **86**A and **86**B in two equal views, which are rotated 90 degrees.

FIG. **88**A is the front view of FIG. **86**A in the same arrangement and situation.

FIG. **88**B is the front view of FIG. **86**B in the same arrangement and situation.

FIG. **89**A is the side view of one booster space rocket **1** upper part, which has a bit lifted all six spreadable arms **5**. Whereat all four flaps **6** are a lot deflected out.

FIG. **89**B is the side view of one booster space rocket **1** bottom part, which has one sliding engines cover **7** and, which is entirely lifted.

FIG. **90** is the top view of FIGS. **89**A and **89**B in the same arrangement and situation.

FIG. **91**A is the side view of one booster space rocket **1** upper part, which has entirely lifted (spread out) all six spreadable arms **5**. And whereat all four flaps **6** are entirely deflected out.

FIG. **91**B is the side view of one booster space rocket **1** bottom part, which has one sliding engines cover **7** and, which currently, is entirely lifted.

FIG. **92** is the top view of FIGS. **91**A, **91**B and **93**A, **93**B in the same arrangement and situation. This FIG. **92** is the top view in two equal views, which are rotated 90 degrees.

FIG. **93**A is the front view of FIG. **91**A in the same arrangement and situation.

FIG. **93**B is the front view of FIG. **91**B in the same arrangement and situation.

FIG. **94**A is the side view of one main space rocket **2** upper part, which has all spreadable arms **5** entirely lowered dam. And all four flaps **6** are vertically set and are inside the space rocket fuselage.

FIG. **94**B is the side view of one main space rocket **2** bottom part, which has one sliding engines cover **7** and, which currently, is entirely lifted.

FIG. **95** is the top view of FIG. **94**A, **94**B and FIG. **96**A, **96**B in the same arrangement and situation. This FIG. **95** is the top view in two equal views, which are rotated 90 degrees.

FIG. **96**A is the front view of FIG. **94**A in the same arrangement and situation.

FIG. **96**B is the front view of FIG. **94**B in the same arrangement and situation.

FIGS. **97**A and **97**B are the side views of one main space rocket **2** upper and bottom parts, which has entirely lifted (spread out) all ten spreadable arms **5**. Whereat all four flaps **6** are entirely deflected out. Whereat the sliding engines cover **7** is entirely lifted.

FIG. **98** is the top view of FIGS. **97**A and **97**B in the same arrangement and situation. This FIG. **98** is the top view in two equal views, which are rotated 90.

FIGS. **99**A and **99**B is the front view of FIGS. **97**A and **97**B in the same arrangement and situation.

FIG. **100** is the side view of one booster space rocket **1** upper part and of two movable ship gantries **20** upper part whereon tops stand two damping wagons **30** and, which are not compressed. This view shows just vertically landing one booster space rocket **1**, which in a moment will hang itself on two damping wagons **30**.

FIG. **101** is the top view of FIG. **100** in the same arrangement and situation.

FIG. **102** is the side view of one main space rocket **2** upper part and of two movable ship gantries **20** upper part whereon tops stand two large damping wagons **31** and, which are not compressed. This view shows just vertically landing the main space rocket **2**, which in a moment will hang itself on two large damping wagons **31**.

FIG. **103** is the top view of FIG. **102** in the same arrangement and situation.

FIG. **104** is the side view of four steering flaps **6** installed in the main space rocket **2** upper part. Currently, all four flaps **6** are vertically set and are entirely inside the space rocket fuselage.

FIG. **105** is the top view of FIG. **104** in the same arrangement.

FIG. **106** is the front view of FIG. **104** in the same arrangement.

FIG. **107** is the side view of four steering flaps **6** in the main space rocket **2** upper part. Currently, all four flaps **6** are a lot deflected outside.

FIG. **108** is the top view of FIG. **107** in the same arrangement.

FIG. **109** is the front view of FIG. **107** in the same arrangement.

FIG. **110** is the side view of four steering flaps **6** in the main space rocket **2** upper part. Currently, all four flaps **6** are entirely deflected outside

FIG. **111** is the top view of FIG. **110** in the same arrangement.

FIG. **112** is the front view of FIG. **110** in the same arrangement.

FIG. **113** is the enlarged side view of one steering flap **6** with the sketches of its deflection mechanism in a main space rocket **2** fragment. Currently, this flap **6** is vertically set and entirely inside the space rocket fuselage.

FIG. **114** is the top view of FIG. **113** in the same arrangement.

FIG. **115** is the front view of FIG. **113** in the same arrangement.

FIG. **116** is the enlarged side view of one steering flap **6** with the sketches of its deflection mechanism in the main space rocket **2** fragment. Currently, this flap **6** is entirely deflected outside the space rocket fuselage.

FIG. **117** is the top view of FIG. **116** in the same arrangement.

FIG. **118** is the front view of FIG. **116** in the same arrangement.

FIG. **119** is the side view of a fragment of one main space rocket **2** upper part, which has entirely lowered all ten spreadable arms **5**. Here, is visible in, which way are spaced out all ten spreadable arms **5** outside the space rocket fuselage.

FIG. **120** is the top view of FIG. **119** in the same arrangement. FIG. **120** shows all mechanisms outside and inside space rocket and in, which way are spaced out all ten spreadable arms **5**. This FIG. **120** is the top view in two equal views, which are rotated 90 degrees.

FIG. **121** is the front view of FIG. **119** in the same arrangement.

FIG. **122** is the side view of the fragment of one main space rocket **2** upper part, which has entirely lifted all ten spreadable arms **5** and consequently they are completely spread out on two sides. And therefor these spreadable arms **5** are transverse the space rocket fuselage.

FIG. **123** is the top view of FIG. **122** in the same arrangement. FIG. **123** shows all mechanisms outside and inside space rocket and in, which way are spaced out all ten spreadable arms **5**.

FIG. **124** is the enlarged side view of a fragment of one booster space rocket **1** upper part, which has entirely lifted all six spreadable arms **5** and consequently they are entirely spread out on two sides and are transverse the space rocket fuselage.

FIG. **125** is the top view of FIG. **124** in the same setting. This FIG. **125** shows all mechanisms outside and inside space rocket and in, which way are spaced out all six spreadable arms **5**.

FIG. **126** is the side view of one entire spreadable arm **5** together with its moving mechanism and with one blocking bar **54** and its pushing mechanism. This entire spreadable arm **5** is entirely down to the P1 first setting, while the blocking bar **54** is inside the space rocket fuselage. This FIG. **126** is the side view with the partial vertical sectional view.

FIG. **127** is the top view of FIG. **126** in the same arrangement. This FIG. **127** is the top view in two equal views, which are rotated 90 degrees.

FIG. **128** is the front view of FIG. **126** in the same arrangement. This FIG. **128** is the front view but only of the sub-assemblies outside the space rocket.

FIG. **129** is the enlarged side view of FIG. **126** drawing fragment. Here, are a fragment of one spreadable arm **5** with its moving mechanism and one blocking bar **54** with its pushing mechanism.

FIG. **130** is the enlarged top view of FIG. **127** in the same arrangement. This FIG. **130** is the top view in two equal views, which are rotated 90 degrees.

FIG. **131** is the enlarged front view of FIG. **128** in the same arrangement.

FIG. **132** is the very enlarged side view of the previous drawing fragment of FIG. **129**. It shows in the most detail way the entire moving mechanism construction of the spreadable arm **5** in the space rocket fuselage fragment.

FIG. **133** is the very enlarged top view of FIG. **130** in the same arrangement.

FIG. **134** is the very enlarged front view of FIG. **131** in the same arrangement.

FIG. **135** is the enlarged side view of the alone entire moving mechanism of spreadable arm **5** together with the fragments of two lateral beam **56**, which all are in P1 setting.

FIG. **136** is the top view of FIG. **135** in the same arrangement.

FIG. **137** is the front view of FIG. **135** in the same arrangement.

FIG. **138** is the enlarged side view of alone moving mechanism components of one spreadable arm **5**.

FIG. **139** is the top view of FIG. **138** in the same arrangement.

FIG. **140** is the front view of FIG. **138** in the same arrangement.

FIG. **141** is the enlarged side view of four flat bars **72** (having oval openings), which are permanently fastened to both lateral beams **56** upper bent parts.

FIG. **142** is the top view of FIG. **141** in the same arrangement.

FIG. **143** is the front view of FIG. **141** in the same arrangement.

FIG. **144** is the side view and the partial vertical sectional view, which outside and partly inside the space rocket fragment show one entire spreadable arm **5** in P2 setting, which is in one-quarter lifted and consequently, it protrudes outside the space rocket fuselage. On this FIG. **144** are also sketched intermediate settings of spreadable arm **5**, it means in P3, P4 and P5 settings. There is also marked P6 final setting ergo, while the spreadable arm **5** is entirely lifted.

FIG. **145** is the top view of FIG. **144** in the same arrangement and situation.

FIG. **146** is the front view of FIG. **144** in the same arrangement and situation. This FIG. **146** is the front view but only of the sub-assemblies outside the space rocket.

FIG. **147** is the side view of an enlarged drawing fragment of FIG. **144**. The current view shows the upper part of spreadable arm **5** in P2 setting.

FIG. **148** is the top view of FIG. **147** in the same arrangement.

FIG. **149** is the front view of FIG. **147** in the same arrangement.

FIG. **150** is the side view and the partial vertical sectional view of the space rocket fuselage. And these views show outside and inside the space rocket fragment, the side views of one entire spreadable arm **5** in the P6 setting, which is entirely lifted and consequently it is transverse the space rocket fuselage. Whereat the blocking bar **54** is slid maximally outside the space rocket fuselage, and it entirely blocked in all directions the middle beam **55** in the spreadable arm **5**. The blocking bar **54** has in its bottom-surface a key-seat, which is shaped as a T-groove and, which is fitted in with a T-bar **67** on the middle beam **55**.

FIG. **151** is the top view of FIG. **150** in the same arrangement.

FIG. **152** is the front view of FIG. **150** in the same arrangement.

FIG. **153** is the auxiliary side view and partial vertical sectional view, which show FIG. **152** only in the middle.

FIG. **154** is the side view of an enlarged drawing fragment of FIG. **150**.

FIG. **155** is the top view of FIG. **154** in the same arrangement.

FIG. **156** is the front view of FIG. **154** in the same arrangement.

FIG. **157** is the auxiliary side view and partial vertical sectional view, which show FIG. **156** only in the middle.

FIG. **158** is the side view of alone spreadable arm **5**, which is entirely lowered ergo it is in P1 setting. It shows that each spreadable arm **5** mainly consists of two lateral beams **56** and of one middle beam **55**.

FIG. **159** is the top view of FIG. **158** in the same arrangement.

FIG. **160** is the front view of FIG. **158** in the same arrangement.

FIG. **161** is the side view of an enlarged drawing fragment of FIG. **158** in the same arrangement.

FIG. **162** is the top view of FIG. **161** in the same arrangement.

FIG. **163** is the front view of FIG. **161** in the same arrangement.

FIG. **164** is the side view of alone spreadable arm **5**, which is in one-quarter lifted to the P2 setting.

FIG. **165** is the top view of FIG. **164** in the same arrangement.

FIG. **166** is the front view of FIG. **164** in the same arrangement.

FIG. **167** is the side view of an enlarged drawing fragment of FIG. **164** in the same arrangement.

FIG. **168** is the top view of FIG. **167** in the same arrangement.

FIG. **169** is the front view of FIG. **167** in the same arrangement.

FIG. **170** is the side view of alone spreadable arm **5** together with the entire pushing mechanism of the blocking bar **54**, which is not slid outside. The spreadable arm **5** is entirely lifted to the P6 setting.

FIG. **171** is the top view of FIG. **170** in the same arrangement.

FIG. **172** is the front view of FIG. **170** in the same arrangement.

FIG. **173** is the side view of alone middle beam **55** together with entire pushing mechanism of the blocking bar **54**, which is not slid outside.

FIG. **174** is the top view of FIG. **173** in the same arrangement.

FIG. **175** is the front view of FIG. **173** in the same arrangement.

FIG. **176** is the side view of alone middle beam **55** together with the entire pushing mechanism of the blocking bar **54**, which is slid very little outside.

FIG. **177** is the side view of alone middle beam **55** together with the entire pushing mechanism of the blocking bar **54**, which is slid a lot outside.

FIG. **178** is the side view of alone spreadable arm **5** together with the entire pushing mechanism of the blocking bar **54**, which is maximally slid outside.

FIG. **179** is the top view of FIG. **178** in the same arrangement.

FIG. **180** is the side view of an enlarged drawing fragment of FIG. **170** in the same arrangement.

FIG. **181** is the top view of FIG. **180** in the same arrangement.

FIG. **182** is the front view of FIG. **180** in the same arrangement.

FIG. **183** is the side view of an enlarged drawing fragment of FIG. **173** in the same arrangement.

FIG. **184** is the top view of FIG. **183** in the same arrangement.

FIG. **185** is the front view of FIG. **183** in the same arrangement.

FIG. **186** is the side view of an enlarged drawing fragment of FIG. **176** in the same arrangement.

FIG. **187** is the top view of FIG. **186** in the same arrangement.

FIG. **188** is the side view of the middle beam **55** lowest end with inside visible a frictional brake **68** sketches. Here, this middle beam **55** is vertically set ergo it is in P1 setting.

FIG. **189** is the top view of FIG. **188** in the same arrangement.

FIG. **190** is the front view of FIG. **188** in the same arrangement.

FIG. **191** is side view of alone middle beam **55** lowest end with inside visible the frictional brake **68** sketches. Here, this middle beam **55** is slanted to the P6 full setting.

FIG. **192** is the side view of one sliding engines cover **7**, which can be lowered and, which is flat underneath after lowering. It is installed to a space rocket fuselage bottom. Here this sliding engines cover **7** is entirely lifted and it causes that the main engines all nozzles **85** are entirely uncovered.

FIG. **193** is the top view of FIG. **192** in the same arrangement.

FIG. **194** is the front view of FIG. **192** in the same arrangement.

FIG. **195** is the bottom projection of FIG. **192** and that mean the current space rocket bottom—in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the above views.

FIG. **196** is the side view of one sliding engines cover **7**, which can be lowered and, which is flat underneath after lowering. Currently, this sliding engines cover **7** is entirely lowered and it causes that the space rocket bottom is entirely covered underneath and almost entirely at both sides.

FIG. **197** is the top view of FIG. **196** in the same arrangement and situation.

FIG. **198** is the front view of FIG. **196** in the same arrangement and situation.

FIG. **199** is the bottom projection of FIG. **196** and that mean the current space rocket bottom—in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the above views. On these projections are visible that both jalousies **88** came to each other and touched on themselves in two U-shaped rails **87** bottom and in their middle.

FIG. **200** is the side view of the sliding engines cover **7**, which can be lowered and, which is flat underneath after lowering. Currently, the sliding engines cover **7** is entirely lifted and a plurality of exhaust fumes **9** gush down of the main engines all nozzles **85**.

FIG. **201** is the front view of FIG. **200** in the same arrangement.

FIG. **202** is the side view of the sliding engines cover **7**, which can be lowered and, which is flat underneath after lowering. Currently, the sliding engines cover **7** is entirely lowered and it causes that the space rocket bottom is entirely covered.

FIG. **203** is the front view of FIG. **202** in the same arrangement.

FIG. **204** is the side view of one sliding engines cover **8**, which can be lowered and, which is wedge shaped underneath after lowering. This sliding engines cover **8** is installed to the space rocket fuselage bottom. Currently, the sliding engines cover **8** is entirely lifted and it causes that all main engines nozzles **85** are entirely uncovered. And currently, the exhaust fumes **9** gush down of the main engines all nozzles **85**.

FIG. **205** is the top view of FIG. **204** in the same arrangement and situation.

FIG. **206** is the front view of FIG. **204** in the same arrangement and situation.

FIG. **207** is the bottom projection of FIG. **204** thus, of current space rocket bottom in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the above views.

FIG. **208** is the side view of the sliding engines cover **8**, which can be lowered and, which is wedge shaped underneath after lowering. Here, the sliding engines cover **8** is entirely lowered, and it causes that the space rocket bottom is entirely covered. This view shows a plurality of main components' emplacement of the sliding engines cover **8** in relation to themselves and with the components sketches, which are veiled by a plurality of other members.

FIG. **209** is the front view of FIG. **208** in the same arrangement.

FIG. **210** is the side view of the sliding engines cover **8**, which can be lowered and, which is wedge shaped underneath after lowering. Here, the sliding engines cover **8** is also entirely lowered and it causes that the space rocket bottom is entirely covered. This view shows in what way this sliding engines cover **8** expands and divides in two sides atmospheric air during the space rocket descent.

FIG. **211** is the front view of FIG. **210** in the same arrangement and situation.

FIGS. **212**A and **212**B are the side views of the upper and bottom parts of one booster space rocket **1**, which descends in the first time period at giant speed in the Earth's atmosphere. Currently, all six spreadable arms **5** are entirely lowered; four flaps **6** are a little deflected out; all six blocking bars **54** are entirely slid outside; the sliding engines cover **7** is entirely lowered.

FIG. **213** is the top view of FIGS. **212**A and **212**B in the same situation. The FIG. **213** is in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views.

FIGS. **214**A and **214**B are the front views of FIGS. **212**A and **212**B in the same arrangement and situation.

FIGS. **215**A and **215**B are the side views of the upper and bottom parts of one booster space rocket **1**, which descends at average speed in the Earth's atmosphere. Currently, all six spreadable arms **5** are lifted somewhat; four flaps **6** are a lot deflected out; the sliding engines cover **7** is entirely lowered.

FIG. **216** is the top view of FIGS. **215**A and **215**B in the same arrangement and situation.

FIG. **217** is the side view of one entire main space rocket **2**, which has revolvingly installed the sectional load cover **4**, which is dividable into two sections and gradually foldable out on two opposite sides. This sectional load cover **4** is revolvingly installed to the main space rocket **2** by means of four long cog beams **93**. Currently, to the main space rocket **2** is also attached the second stage rocket **3**. The sectional load cover **4** is shut up, and all cog beams **93** are outside and on both sides of the second stage rocket **3**.

FIG. **218** is the front view of FIG. **217** in the same arrangement and situation.

FIG. **219** is the side view, which is the same as FIG. **217** albeit contains the payload **100** sketches inside the shut up sectional load cover **4** and the second stage rocket **3** sub-assemblies sketches, which are veiled by a plurality of other modules.

FIG. **220** is the front view of FIG. **219** in the same arrangement and situation.

FIG. **221** is the side view of the second stage rocket **3** whereon is attached the payload **100**.

FIG. **222** is the side view of the second stage rocket **3** where-from ascends freely the payload **100**.

FIG. **223** is the enlarged side view of the main space rocket **2** upper part earlier shown on FIG. **219**. This view shows the main space rocket **2** upper part, which has revolvingly installed the sectional load cover **4**, which is dividable into two sections and gradually foldable out on two opposite sides. Now the sectional load cover **4** is shut up. While, inside the sectional load cover **4** is placed the payload **100**, which will be carried out on the Earth's orbit.

FIG. **224** is the front view of FIG. **223** in the same arrangement and situation.

FIG. **225** is the enlarged side view of the main space rocket **2** upper part shown also earlier on similar FIG. **223**. Currently, the sectional load cover **4** is lifted maximally on four cog beams **93**. This enables spreading it out on two sides.

FIG. **226** is the front view of FIG. **225** in the same arrangement and situation.

FIG. **227** is enlarged side view of the main space rocket **2** upper part shown earlier on the similar FIG. **223**, **225**. Here, the sectional load cover **4** is already spread a little out on two sides. Here, the payload **100** is a lot uncovered.

FIG. **228** is significantly diminished the side view of one entire main space rocket **2**, which has the sectional load cover **4** entirely folded out on two sides and shows the sketch of its intermediate folding out.

FIG. **229** is the side view of the main space rocket **2** upper part, which has the sectional load cover **4** entirely folded out on two sides and the sketch of this sectional load cover **4** intermediate folding out. Because of the sectional load cover **4** total folding out on two sides, there is the payload **100** entirely uncovered, and which is attached to the second stage rocket **3**.

FIG. **230** is the side view of the main space rocket **2** upper part, which has also the sectional load cover **4** entirely folded out on two sides. And here, the second stage rocket **3** with the attached payload **100** ascend together because they already separated from the main space rocket **2**.

FIG. **231** is the side view of the main space rocket **2** upper part, which has the sectional load cover **4** entirely folded out on two sides. Here, the second stage rocket **3** with the attached return load **106** approaches to the main space rocket **2** in order to dock with it.

FIG. **232** is the side view of the main space rocket **2** upper part whereto is already docked the second stage rocket **3** with the attached return load **106**. Here, the sectional load cover **4** is already a little shut up.

FIG. **233** is the side view of alone main space rocket **2** upper part, which has the sectional load cover **4** entirely folded out on two sides.

FIG. **234** is the top view of alone main space rocket **2** upper part, which has the sectional load cover **4** entirely folded out on two sides.

FIG. **235** is the side view of the main space rocket **2** upper part with the sectional load cover **4** a little shut up.

FIG. **236** is the side view of the main space rocket **2** upper part with the sectional load cover **4** more shut up.

FIG. **237** is the side view of the main space rocket **2** upper part, with the sectional load cover **4** close to shutting up.

FIG. **238** is the side view of the main space rocket **2** upper part, which has the sectional load cover **4** entirely shut up. This sectional load cover **4** is maximally distant upward from the main space rocket **2** because it is held up by means of four long cog beams **93**.

FIG. **239** is the front view of FIG. **238** in the same arrangement and situation.

FIG. **240** is the side view of the main space rocket **2** upper part, which has also the sectional load cover **4** entirely shut up, which is already a lot lowered on four cog beams **93**.

FIG. **241** is the front view of FIG. **240** in the same arrangement and situation.

FIG. **242** is the side view of the main space rocket **2** upper part, which has also the sectional load cover **4** entirely shut up, which is already entirely lowered on four cog beams **93**. Therefore, this sectional load cover **4** touched on with the main space rocket **2** fuselage.

FIG. **243** is the front view of FIG. **242** in the same arrangement and situation.

FIG. **244** is the enlarged side view of the sectional load cover **4** entirely shut up, which is attached to the main space rocket **2** upper part. Here, is visible in what way are installed four hoisting gears **96** of the sectional load cover **4** and four rotating heads **94** of four cog beams **93**.

FIG. **245** is the top view of the horizontal sectional view according to the S1-S1 line on FIG. **244**.

FIG. **246** is the top view of the horizontal sectional view according to the S2-S2 line on FIG. **247**.

FIG. **247** is the front view of FIG. **244** in the same arrangement and situation.

FIG. **248** is the enlarged side view of a fragment of the sectional load cover **4** entirely shut up, which is a little lifted on four cog beams **93** and therefor a little protrude from the main space rocket **2**.

FIG. **249** is the front view of FIG. **248** in the same arrangement and situation.

FIG. **250** is the very plenty enlarged and detailed side view of two hoisting gears **96** in the fragment of the sectional load cover **4** entirely shut up, which is lifted.

FIG. **251** is the top view of FIG. **250** in the same arrangement and situation.

FIG. **252** is the front view of FIG. **250** in the same arrangement and situation.

FIG. **253** is the very plenty enlarged and detailed side view of two rotating heads **94** of the cog beams **93** in the fragment of the main space rocket **2** fuselage.

FIG. **254** is the top view of FIG. **253** in the same arrangement and situation.

FIG. **255** is the front view of FIG. **253** in the same arrangement and situation.

FIG. **256** is the side view of a attaching variant wherein on the main space rocket **2** top is mounted the assemblage, which consist of the second stage rocket **3** whereon is attached a payload module **103** and whereto is attached a crew module **102**.

FIG. **257** is the front view of FIG. **256** in the same arrangement and situation.

FIG. **258** is the side view of the attaching variant wherein on the main space rocket **2** top is mounted the assemblage, which only consists of the payload module **103** with the crew module **102**.

FIG. **259** is the front view of FIG. **258** in the same arrangement and situation.

FIG. **260** is the side view of the separated assemblage, which consist of the second stage rocket **3** with attached the payload module **103** whereto is attached the crew module **102**.

FIG. **261** is the side view of alone crew module **102**.

FIG. **262** is the side view of example of one booster space rocket **1** descending in the atmosphere. This booster space rocket **1** has entirely lifted (spread out) its all six spreadable arms **5**.

FIG. **263** is the top view of FIG. **262** in the same arrangement and situation.

FIG. **264** is the side view of example of one main space rocket **2** descending in the atmosphere. This main space rocket **2** has entirely lifted (spread out) its all ten spreadable arms **5**. And this main space rocket **2** has on its top installed the sectional load cover **4**.

FIG. **265** is the top view of FIG. **264** in the same arrangement and situation.

FIG. **266** is the side view of example of one main space rocket **2** descending in the atmosphere. This main space rocket **2** has also entirely lifted (spread out) all ten spreadable arms **5**. This view shows the attaching variant wherein on the main space rocket **2** top is mounted the assemblage, which consist of the second stage rocket **3** and the sectional load cover **4**.

FIG. **267** is the side view of example of one main space rocket **2** descending in the atmosphere. This main space rocket **2** has also entirely lifted (spread out) all ten spreadable arms **5**. This view shows the attaching variant wherein on the main space rocket **2** top is mounted the assemblage, which consist of the second stage rocket **3** with attached the payload module **103** and the crew module **102**.

FIG. **268** is the diminished front view of three joined space rockets. They are one main space rocket **2**, which is joined on both sides with two booster space rockets **1**. On the main space rocket **2** top is mounted the assemblage, which consist of the second stage rocket **3** and the sectional load cover **4**.

FIG. **269** is the enlarged front view of the upper parts of three joined space rockets, which are on FIG. **268**.

FIG. **270** is the enlarged side view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. This view is the same as FIG. **11** albeit is enlarged. This view shows the specific sea ship **10** and the landing station ready for landing the first booster space rocket **1** and alongside very such space rocket.

FIG. **271** is the enlarged top view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. This view is the same as FIG. **12** albeit is enlarged. This view shows this specific sea ship **10** and the landing station ready for landing the first booster space rocket **1** and alongside very such space rocket.

FIG. **272** is the enlarged front view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. This view is the same as FIG. **13** albeit is enlarged. This view shows this specific sea ship **10** and the landing station ready for landing the first booster space rocket **1** and alongside very such space rocket.

FIG. **273** is prospectus presentation, which shows for example a few drawing statuses of one main space rocket **2**, which lifted-off and its further traveling trajectory, while unexpectedly happened one main engine failure. The whole presentation shows process of this entire space rocket salvation and its emergency landing aboard the specific sea ship **10** at open sea. This view targets display that each space rocket equipped with the spreadable arms **5** can in emergency land aboard the specific sea ship **10**.

FIG. **274** is the side view, which shows for example one booster space rocket **1**, which slips by through the giant open interior of the specific sea ship **10** at open sea. According to a plan, this booster space rocket **1** was supposed to land on this specific sea ship **10**. However, during this space rocket descent happened some failure of the main engines, which were supposed to bring total stop of the space rocket descent and make possible landing aboard the specific sea ship **10**. In order to prevent any strike of this space rocket onto the specific sea ship **10** there were quick and entirely spread apart in two directions both horizontally movable decks **15**.

FIG. **275** is the top view of FIG. **274** in the same situation.

DISCLOSURE and DETAILED DESCRIPTION OF THE INVENTION AND DRAWINGS

The views on FIG. **1**, **2**, **3** show space rockets vertical landing method in the system for multiple use of the space rockets equipped with the plurality of spreadable arms **5**. Here, is shown the method of three space rockets vertical landing on the specific sea ship **10**, which has the deck mounted landing station having two pairs of hangers **24**, two grasping wagons **44**, two movable ship gantries **20** having the plurality of damping wagons **30** or **31** whereon each space rocket vertically lands as hangs itself on its spreadable arms **5**. On the movable decks **15** two grasping wagons **44** help secure the space rockets at their bottoms.

On the current landing station in a few minutes intervals can land three space rockets equipped with the spreadable arms **5**. Two first space rockets can be quickly moved on two pairs of hangers and fasten. The third landed space rocket can remain on both movable ship gantries **20** and is be fastened by both grasping wagons. This system is completely connected with utilization of the plurality of spreadable arms **5** mounted on all space rockets. Therefor the spreadable arms **5** are the main characteristic feature of this system. More information about these spreadable arms **5** is in description of further FIG. **86-88**. Moreover, in this system, each space rocket (equipped with the plurality of

spreadable arms **5**) can vertically land with the attached modules and the return load and this feature is super important possibility and advantage. Therefor this system includes that all space rockets and their sub-assemblies and modules are designed and destined for multiple use thus, return with the space rockets on the Earth. Consequently, here presented the system for multiple use of suchlike space rockets regard vertical landing as very important purpose of this here invention. Whereas, here FIG. **1** is the side view, FIG. **2** is the top view, FIG. **3** is the front view. Current FIG. **1**, **2**, **3** show three views of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and fastening of three space rockets equipped with the plurality of spreadable arms **5**.

And therefor here FIG. **1**, **2**, **3** show just vertically landing one booster space rocket **1** with entirely lifted (spread out) all spreadable arms **5**. Near to the specific sea ship **10**, FIG. **1** shows also the second booster space rocket **1** and the main space rocket **2**, which both have entirely lifted (spread out) their all spreadable arms **5**. All views show and explain that on this specific sea ship **10**, which has such landing station can still additionally vertically land these two earlier mentioned space rockets. Moreover, all these landings can progress in a few minutes intervals. And FIG. **1** shows additionally the enlarged drawing fragment with one damping wagon **30** and the second enlarged drawing fragment with the booster space rocket **1** upper part showing the spreadable arms **5** and the steering flaps **6**. All current views show just vertically landing one booster space rocket **1** and therefor from this space rocket all main engines gush the exhaust fumes **9**. This vertically landing booster space rocket **1** will soon hang up on two damping wagons **30**, which stand on two movable ship gantries **20** tops. These two damping wagons **30** stand almost in centers of both movable ship gantries **20** tops. Whereat both movable ship gantries **20** approached close to each other in the specific sea ship **10** center. Because the specific sea ship **10** has the landing station, the first and second landed space rockets can be quickly moved on two pairs of hangers **24** and be strong temporary fastened by means of four rotating wedges **25** each. The third thus the last landed space rocket will remain on both movable ship gantries **20** and will be fastened by means of four raised rotating poles **45**, which reach from two grasping wagons **44**.

Presented here, the specific sea ship **10**, which has the landing station with strong fastening of the space rockets enables sea-transportation even at stormy sea. Simultaneously, all mentioned feature are very important possibilities and advantages of this system. Therefor current views on FIG. **1**, **2**, **3** show the entire landing station construction, which consists of two pairs of hangers **24** having the rotating wedges **25**, two huge movable ship gantries **20** whereon tops are installed four damping wagons **30** and two large damping wagons **31**, two low build grasping wagons **44** having two rotating poles **45** each. Both grasping wagons **44** help fasten the space rockets bottom. All rotating poles **45** have spherical ends with flexible coatings, which are adapted for direct contacts with the space rockets. Both grasping wagons **44** have the plurality of driving wheels **46**.

Here, is visible that four upper short rails **26** on all hangers **24** tops are fitted in with four upper long rails **23** on both movable ship gantries **20** tops while these both movable ship gantries **20** stand at the specific sea ship **10** center. This system comprises also that the specific sea ship **10** has the specific multi-hull with inbuilt two tunnels **17** and has two horizontally movable decks **15**. In each tunnel **17** is installed one ballasting wagon **18**.

The specific sea ship **10** has exceptional construction and is designed as sea-going sea ship. The views on FIG. **1**, **2**, **3** show the entire specific sea ship **10** having the specific multi-hull, which consists of two long side hulls **11** and two short central hulls **12** and which are permanently fastened with four over water copular hulls **13**. The top surface of the multi-hull crates the main deck **14**.

The specific sea ship **10** has also two huge horizontally movable decks **15**, which are installed over the multi-hull central part. Both horizontally movable decks **15** can roll on the main deck **14** that is on two long side hulls **11**. Both horizontally movable decks **15** can be quickly and entirely spread apart in two directions of the specific sea ship **10** in order to create inside its multi-hull the giant open interior where-into there is only sea surface. More information about these horizontally movable decks **15** is in description of further FIG. **11-13** and in FIG. **274-275**.

Inside the specific sea ship **10** multi-hull are installed two ballasting wagons **18**. Both ballasting wagons **18** are placed in two tunnels **17**, which are transverse to the multi-hull. Currently, in both tunnels **17** both ballasting wagons **18** are shifted into such side setting, which maintains an exactly horizontal position of this specific sea ship **10**. Both ballasting wagons **18** serve for very quick and precise ballasting the entire specific sea ship **10** to the perfectly horizontal position. FIG. **1-3** show the booster space rocket **1** and the main space rocket **2** with attached on top the second stage rocket **3** whereon on its top is the sectional load cover **4**. Furthermore, FIG. **1-3** show a plurality of sophisticated components and sub-assemblies of each space rocket construction and these are the space rocket fuselage, the plurality of spreadable arms **5**, four steering flaps **6**, the sectional load cover **4**, the sliding engines cover **7** flat underneath, the sliding engines cover **8** wedge shaped underneath.

The views on FIG. **4**, **5**, **6**, **7** show the space rockets launch method in the system for multiple use of the space rockets equipped with the plurality of spreadable arms **5**. Here, is shown the multi-task station for three jointed space rockets launch preparation, lift-off and later unloading from the specific sea ship **10**. Whereas, FIG. **4** is the side view, FIG. **5** is the top view, FIG. **6** is the front view and FIG. **7** is also the side view. This multi-task station is at the sea harbor wharf. The multi-task station comprises two movable ground gantries **104** and one movable specific ground crane **105** for the space rockets reloading. The movable specific ground crane **105** is a lot bigger than both movable ground gantries **104**. The movable specific ground crane is adapted to play along with both movable ground gantries. The movable specific ground crane **105** is movable because it has at the chassis bottom installed a plurality of driving wheels to precisely drive on the solid ground and turn on it. The movable specific ground crane **105** has the beams, which reach up somewhat over the specific sea ship **10** so that this movable specific ground crane **105** could lift one space rocket and subsequently shift it on both movable ground gantries **104**. The entire movable specific ground crane **105** will move backwards shortly before the space rockets launch. Both movable ground gantries **104** serve for three space rockets lading after unloading from the specific sea ship **10**. And later these two movable ground gantries **104** serve for three space rockets launch preparation all time in vertical position thus, during hanging on these two movable ground gantries **104**. And therefor all space rockets can lift-off from two movable ground gantries **104** while these space rockets vertically hang on their spreadable arms **5**. It even includes that three joined space rockets can lift-off this way. Both movable ground gantries **104** will spread apart on

two sides immediately after the space rockets lift-off. Current FIG. **4-6** show the method of three space rockets lift-off from the multi-task station according to the current invention. Here, three joined space rockets hang on their all spreadable arms **5** on two movable ground gantries **104** and will lift-off this way. These three joined space rockets are the same as on the further FIG. **268-269** and these are one main space rocket **2**, which is joined on both sides with two booster space rockets **1**. On the main space rocket **2** top it is mounted the assemblage, which consist of the second stage rocket **3** and the sectional load cover **4**. Inside this sectional load cover **4** is fastened the payload **100**, which will be carried out on the Earth's orbit. These three joined space rockets all time had entirely lifted (spread out) their all spreadable arms **5** and all time hung on them on two movable ground gantries **104** until the launch. All time in such vertical position these three space rockets were overhauled, refit and prepared for launching. And in such status these three joined space rockets are entirely ready for launch toward space self-evidently from these two movable ground gantries **104**.

On FIGS. **4** and **5** a few small arrows show the moving directions of both movable ground gantries **104** after three joined space rockets lift-off. It is so, because both movable ground gantries will spread apart on two sides immediately after the space rockets lift-off. And on the current FIG. **4** is also sketched the side drawing of one movable specific ground crane **105**, because it earlier moved away. This movable specific ground crane **105** is shown in its working place on the further FIG. **9**, **10**. And FIG. **7** is the side view of these three joined space rockets, which are awhile after the lift-off and the side view of two movable ground gantries **104**, which are spread somewhat apart on two sides. Thereby, the exhaust fumes **9** gush down of all main engines of these three joined space rockets. Currently, these three joined space rockets have already a lot lowered their all spreadable arms **5**. The flow of atmospheric air pushes down all spreadable arms **5**, which by a while will be entirely lowered thus, will be alongside their space rockets fuselages. Current views show that there is possible lift-off of three joined space rockets, which before the lift-off hanged on their all spreadable arms **5** and, which were laid on two movable ground gantries **104**.

The space rocket lift-off from two movable ground gantries creates also a few benefits as possibility of smooth igniting the main engines, smooth adjusting the space rocket initial vertical position. Moreover, it makes possible to abort the space rocket launch plenty seconds after lift-off. That mean after lift-off and the space rocket failure to descend the whole space rocket and hang it back on two movable ground gantries. It would be reverse process in comparison to the launch, thus, as from FIG. **7** to FIG. **4**. Furthermore, current views target presentation that construction of such multi-task station is very simple and is very suitable for unloading the hanging space rockets from the specific sea ship **10** after her arriving to this multi-task station and such coincidence is shown on the further FIG. **9-10**. As result of such method space rockets launches and their quick return to this multi-task station there is possible their very fast renewed launch, for example several hours after landing on the specific sea ship **10**. Therefor this system includes the method of three jointed space rockets launch preparation all time in vertical position.

FIG. **8** is a prospectus presentation, which shows a lot of crowded scenes in the system for multiple use of the space rockets equipped with the plurality of spreadable arms **5**. The current whole presentation shows the methods of three joined space rockets launch and entire ascent process toward the Earth's orbit, descent and vertical landing with the return load according to the current invention. Hence, this FIG. **8** shows for example plurality drawing statuses of three joined space rockets with their lift-off, joined ascent, their separation, further separated ascent toward the Earth's orbit, deploy the payload **100**, dock the return load **106**, and their individual descending and vertical landing aboard the specific sea ship **10** at open sea. On all space rocket statuses and alongside the plurality of arrows show the directions of their traveling trajectories. On the space rocket statuses in right moments the exhaust fumes **9** gush down off the space rockets main engines in actual statuses. These three joined space rockets are the same as on FIG. **4-7** and FIG. **268-269** and these are one main space rocket **2**, which is joined on both sides with two booster space rockets **1**. On the main space rocket **2** top it is mounted the assemblage, which consist of the second stage rocket **3** and the sectional load cover **4**. Inside the sectional load cover **4** is fastened the payload **100**, which will be carried out on the Earth's orbit. At beginning these three space rockets statuses are in two front drawings. The first front drawing shows three joined space rockets in the first status thus, their launch from the multi-task station and show that directly after the lift-off they entirely lowered their all spreadable arms **5**. The second front drawings show three separated space rockets in the second statuses thus, after their separation on a suitable height. Whereat the main space rocket **2** still ascends because its all main engines continuously run. While, two booster space rockets **1** already cut-off their main engines and will soonly steer toward the specific sea ship **10**. Thereafter, all space rockets statuses are in the side drawings and show their travel trajectories toward the specific sea ship **10**, which is in the side drawing as well. The main space rocket **2** with attached the second stage rocket **3** and with the payload **100** inside the sectional load cover **4** ascend together toward space until a stop moment on an Earth's low orbit. Whereas, at the same time, both booster space rockets **1** steer themselves down towards the specific sea ship **10**. One booster space rocket **1** endeavors to as quick as possible landing so that it could be quickly moved sideways onto one pair of hangers **24**. While, the second booster space rocket **1** endeavors to as late as possible landing so that it would be as plenty time as possible for moving sideways the first already landed booster space rockets **1** onto one pair of hangers **24**. Probably, it will be enough only a few delay minutes so that the second booster space rocket **1** landing could take place. The current view shows the descent trajectories of these two booster space rockets **1**. Here, alongside the space rocket drawing statuses are the numbers in the small circles, which explain the space rockets landing sequences. The first landing booster space rocket **1** has the number one in the small circle and in its last status before landing it has also the top drawing. At this juncture, it is already situated exactly over the specific sea ship **10**. This space rocket has already lifted all its six spreadable arms **5** whereon it will hang up itself on two damping wagons **30**. The second landing booster space rocket **1** has the number two in the small circle. As the third will later land the main space rocket **2** and therefor it has the number three in the small circle and in its last status before landing it has also the top drawing. After arriving to the Earth's low orbit the main space rocket **2** folded out on two sides the sectional load cover **4** so that the second stage rocket **3** with the payload **100** could separate and ascend away toward an Earth's high

orbit. It means that the main space rocket **2** remains on the Earth's low orbit with continuously folded out on two sides the sectional load cover **4**.

The current space rocket status shows as the main space rocket **2** circles around an Earth's globe **101** on the low orbit. Whereas, the second stage rocket **3** with the payload **100** after arrival in the Earth's high orbit releases aforesaid payload **100**, which travel freely away. The current space rocket status shows as the second stage rocket **3** circles around the Earth's globe **101** on the high orbit. And later the second stage rocket **3** in a right moment steer itself back to the Earth's low orbit so that there dock back to the main space rocket **2**. In order to both space rockets could attach themselves, they will have to circle the Earth's globe **101** and it can take plenty hours. After both space rockets attached themselves on the low orbit then there will be the entirely shut up sectional load cover **4**, which in this example is empty. And then the main space rocket **2** rotates suitably and ignites its main engines for losing speed and steer earthwards. After cut-off all main engines there is rapidly shut down the sliding engines cover **7** and then this main space rocket **2** enters into the Earth's atmosphere. On the space rockets drawing statuses, only the shut-down sliding engines covers **7** are marked with a plurality of numbers. On one suitable status of this main space rocket **2**, plenty external arrows show from what direction strongly crowds atmospheric air into the sliding engines cover **7** and into bottom conic part of the sectional load cover **4**. Such space rocket status will occur during the space rocket initial entering into the Earth's atmosphere. At that time, the suitable flaps **6** will be very little deflected outside so that only steer the space rocket descent direction. While, ten blocking bars **54** can be entirely slid outside in order to generate aerodynamic braking and stabilization in this space rocket uppermost part. Furthermore, the sectional load cover **4** bottom conic part generates large aerodynamic braking and stabilization in the space rocket uppermost part.

After considerable speed losing by the main space rocket **2**, it enters into second time period of descent in the atmosphere. Then all ten spreadable arms **5** are a little lifted and all four flaps **6** are a lot deflected out. After a little lifting of all ten spreadable arms **5**, they generate large aerodynamic braking and stabilization in the space rocket upper part. At the same time the sliding engines cover **7** can be still shut-down. After following considerable speed losing by the main space rocket **2**, it lifted entirely all ten spreadable arms **5** and maximally deflected out all four flaps **6**. In this descent time period, the flows of atmospheric air strongly pushes upward all spreadable arms **5** and therefor it is necessary to use all brakes installed in these spreadable arms **5**. After entire lifting of all ten spreadable arms **5**, they generate maximal aerodynamic braking. Steering of the space rocket descent direction progress by a deflection reduction of the suitable flaps **6**. All four flaps **6** are in large sizes so that they could steer the space rocket descent direction even at low speeds.

The main space rocket **2** in the same status is shown on the larger view on the further FIG. **266**. The main space rocket **2** descends all time toward the specific sea ship **10**. In a right moment is rapidly opened the sliding engines cover **7**. Then in a right moment ignites the main engines to bring total stop of this space rocket descent and so that it could hang up itself on two large damping wagons **31** on both movable ship gantries **20**. Previous entire landing processes of both booster space rockets **1** required performing similar stages as for the main space rocket **2**.

Earlier described descent processes from the Earth's orbit individually by three space rockets will end with their vertical landing aboard the specific sea ship **10**. Therefor both movable ship gantries **20** are entirely spread apart in two directions before landing of every space rocket as it is shown on the current view and on the plenty other views. In such arrangement both movable ship gantries **20** are ready and await landing of every space rocket. Both movable ship gantries **20** are huge and are installed directly over the central part of the specific sea ship **10**. Both movable ship gantries **20** at the chassis bottom have the plurality of driving wheels **21** to precisely roll on the specific sea ship **10** decks length-ways. Therefor both movable ship gantries **20** can precisely and separably roll along the entire specific sea ship **10** on two deck rails **19**. Each one deck rail **19** is permanently fastened on each long side hull **11** along the specific sea ship **10** length-ways. The deck rails **19** are common for both movable ship gantries **20** and it causes that both movable ship gantries **20** can roll on their whole-length. Therefor each movable ship gantry **20** can roll until direction of the opposite movable ship gantry **20**, if necessary during landing of the space rocket. It causes, each space rocket can land almost on the entire length of the specific sea ship **10**. It shows for example FIG. **26** whereon are the sketches of both movable ship gantries **20**, which rolled together maximally to the left side on both deck rails **19**.

During descent from the Earth's orbit every space rocket aims to land exactly in the specific sea ship **10** center however it is not possible so that each space rocket would achieve it with one centimeter accuracy. Therefor short time before landing of each space rocket, both movable ship gantries **20** approach to each over and together place themselves under the landing space rocket just with one centimeter accuracy because they can precisely roll along the specific sea ship **10**.

Furthermore, both movable ship gantries **20** have on the chassis top two upper long rails **23** each with installed the plurality of damping wagons **30** or **31** whereon the space rockets vertically land as hang themselves on their spreadable arms **5**. Therefore, the damping wagons **30** or **31** can also place themselves under the landing space rocket with one centimeter accuracy because these damping wagons can precisely roll transverse the specific sea ship **10** on both movable ship gantries **20** tops. It causes that each space rocket can land almost on the entire width of the specific sea ship **10**. Then each vertically landing space rocket with lifted all spreadable arms **5** will be able to carefully, gently and precisely hang up itself on two damping wagons **30** or two **31**. Both movable ship gantries **20** and all movable damping wagons **30** or **31** are absolutely essential at juncture of each space rocket hanging itself. On two damping wagons **30** vertically lands one booster space rocket **1** as hangs itself on its six spreadable arms **5**. On the next two damping wagons **30** vertically lands one booster space rocket **1** as well.

Whereas, on two large damping wagons **31** vertically lands one main space rocket **2**. After each space rocket hanging itself, all damping wagons can be in fullness compressed. Then two compressed damping wagons **30** can roll by from two movable ship gantries **20** tops onto one pair of hangers **24** tops. It is possible because, the upper long rails **23** on the movable ship gantries tops are fitted in with the upper short rails **26** on all hangers **24** tops. This way one pair of hangers **24** is adapted for passing of two damping wagons **30** from both movable ship gantries **20**.

And it is possible because constructions of the entire hangers **24** and of the movable ship gantries **20** are entirely adapted with constructions and function of the damping wagons **30** and **31**.

Whereas, inside the specific sea ship **10** two ballasting wagons **18** will very quickly and precisely ballast this entire specific sea ship **10** to the perfectly horizontal position during landing of each space rocket and during moving each one on the hangers **24**. All three space rockets after their individual landing, hanging itself and fastening aboard the specific sea ship **10** are shown on the next FIG. **9-10** and on the further FIG. **20-22**.

The entire current prospectus presentation on FIG. **8** targets presentation that is possible individual, vertical landing as many as three space rockets equipped with the spreadable arms **5** on one specific sea ship **10** at sea. Simultaneously it is very important that these space rockets can land with an attached load and that these landings can progress at very short time intervals for example a few minutes intervals. These landing progresses enable this here entire construction of the specific sea ship **10**, which has its elaborated landing station for individual landing, quick sideways moving and fastening of these space rockets. If necessary, it is possible to redesign construction of the presented here landing station to a version for landing five space rockets and, which could also land in a few minutes intervals.

The views on FIG. **9**, **10** show space rockets vertical unloading method in the system for multiple use of the space rockets equipped with the plurality of spreadable arms **5**. Here, is shown the method of three space rockets vertical unloading from the specific sea ship **10** at the multi-task station according to the current invention. This multi-task station is at the sea harbor wharf and was earlier shown on FIG. **4-7**. This multi-task station consists of two movable ground gantries **104** and of one movable specific ground crane **105**. And FIG. **9** is the top view, FIG. **10** is the front view. Therefor these FIG. **9-10** show the views of the specific sea ship **10**, which just moored at the multi-task station for unloading of three space rockets, which later can be again launch together or individually.

The specific sea ship **10** has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. Aboard the specific sea ship **10** are hanged and still individually fastened three space rockets. These are the main space rocket **2** and two booster space rockets **1** in the same status as shown on the further FIG. **20-22**. The main space rocket **2** has on its top mounted the assemblage, which consist of the second stage rocket **3** and the sectional load cover **4**. The movable specific ground crane **105** is a lot bigger than both movable ground gantries **104**. The movable specific ground crane **105** has the beams, which reach up somewhat over the specific sea ship **10** so that this movable specific ground crane **105** could lift one space rocket and subsequently shift it on both movable ground gantries **104**. In order to lift from the specific sea ship **10** the next space rockets, they must by themselves move over sideways until the specific sea ship **10** side. Those space rockets during moving over will hang on two damping wagons **30** and on the current views the arrows show their moving directions. Before such sideways moving of each space rocket on two damping wagons **30** or **31** there must be first released all fastenings of each space rocket.

Inside the specific sea ship **10** two ballasting wagons **18** will quickly and precisely ballast this entire specific sea ship **10** to the perfectly horizontal position after unloading each space rocket and during moving over each space rocket sideways.

On a wharf within reach of the movable specific ground crane **105** stands a next payload **100**, which will be carried out on the Earth's orbit, a reserve second stage rocket **3** and a reserve sectional load cover **4**.

On the current views, the arrows show the moving directions of the entire movable specific ground crane **105** and its top-crossbar with a hook. The movable specific ground crane **105** will move backwards before the space rockets launch.

On the earlier FIG. **4** is sketched the side drawing of the movable specific ground crane **105** because it earlier moved away. Current views target presentation that construction of such multi-task station is very simple and well-fitted for taking delivery of the space rockets from the specific sea ship **10** after hers arriving to this multi-task station. As result of the space rockets such return to this multi-task station there is possible their very fast renewed launch just from this multi-task station. Current FIG. **9-10** together with earlier FIG. **4-7** show also that all space rockets can be all the time and constantly in the vertical position during their transport, unloading and launch preparation.

FIG. **11**, **12**, **13** show three views of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. Therefor nearby the specific sea ship **10** the views show also one booster space rocket **1**, which has entirely lifted (spread out) all spreadable arms **5**. These views show the specific sea ship **10** and the landing station ready for landing the first booster space rocket **1**. And FIG. **11** is the side view, FIG. **12** is the top view, FIG. **13** is the front view. These FIG. **11-13** are also shown as enlarged on FIG. **270-272**.

Both movable ship gantries **20** are entirely spread apart in two directions before landing of every space rocket as it is shown on the current view. In such arrangement these both movable ship gantries **20** are ready and await landing of every space rocket. Therefor readiness for landing of the first booster space rocket **1** relies on entirely spreading apart both movable ship gantries **20** on two opposite directions of this specific sea ship **10**. Furthermore, readiness for landing of the first booster space rocket **1** relies also on a proper setting of four damping wagons **30** and two large damping wagons **31** on both movable ship gantries **20** tops. For this reason almost at centers of both movable ship gantries **20** tops stand two damping wagons **30** so that it could hang up on them the first landing booster space rocket **1**. Whereas, remaining two damping wagons **30** and two large damping wagons **31** stand inactively on one side of both movable ship gantries **20** tops. Furthermore, readiness for landing of every space rocket relies also on leveling of the entire specific sea ship **10**. For this reason, inside the specific sea ship **10** multi-hull are installed two ballasting wagons **18**. Both ballasting wagons **18** are placed in two tunnels **17**, which are transverse to the multi-hull. Currently, in both tunnels **17**, both ballasting wagons **18** are shifted into such side setting, which maintains the exactly horizontal position of this specific sea ship **10**. Both ballasting wagons **18** serve for very quick and precise ballasting the entire specific sea ship **10** to the perfectly horizontal position.

Whereas, the right places for setting all damping wagons on both movable ship gantries **20** tops are selected in such way, which enable carrying out individual landing of three space rockets. During descent from the Earth's orbit every space rocket aims to land exactly in the specific sea ship **10**

center however is not possible so that every space rocket would achieve it with one centimeter accuracy. Therefor shortly before landing of every space rocket both movable ship gantries **20** place themselves under this landing space rocket just with one centimeter accuracy because they can precisely roll along the entire specific sea ship **10**. Furthermore, all damping wagons **30** or **31** place themselves also under this landing space rocket with one centimeter accuracy because all damping wagons can precisely roll transverse the specific sea ship **10** on both movable ship gantries **20** tops. It causes that each space rocket can land almost on the entire width of the specific sea ship **10**. Thereat every landing space rocket with lifted all spreadable arms **5** will be able to softly and precisely hang up itself on two damping wagons **30** or two **31**.

All current views show the entire specific multi-hull construction of the specific sea ship **10**, which consists of two long side hulls **11** and two short central hulls **12**, which are permanently fastened with four over water copular hulls **13**. The top surface of the multi-hull crates the main deck **14**.

The specific sea ship **10** has also installed two huge horizontally movable decks **15**, which are installed directly over the central part of the specific sea ship **10** multi-hull. Both horizontally movable decks **15** can roll on the main deck **14** that is on both long side hulls **11**. Furthermore, FIG. **11** and FIG. **12** show also possibility and range of spreading apart in two directions of both horizontally movable decks **15**. And a plurality of arrows show the directions of spreading apart of these horizontally decks **15**. Currently, both movable decks **15** are pushed to each other and touch on themselves in the specific sea ship **10** center. Furthermore, both horizontally movable decks **15** are sketched with the dashed lines after their complete spreading apart in two directions.

Inside the central part of the specific sea ship **10** multi-hull there are not any hull parts. Therefore, after the horizontally movable decks **15** have been completely spread apart there are not any hull parts of the multi-hull. As result, inside the specific sea ship **10** multi-hull arises the giant open interior where-into there is only sea surface. Spreading apart of horizontally both movable decks **15** is adapted to prevent them from strike of the space rocket, which failed to stop its descent from the space.

The specific sea ship **10**, which has entirely spread apart in two directions both horizontally movable decks **15**, is also shown on FIG. **274-275**. Currently, the movable ship gantries **20** are also entirely spread apart in two directions and therefor here are well visible four long transverse rails **47**, which are permanently fastened on both movable decks **15**. Furthermore, on the hangers **24** there are not hanged any space rockets and therefor between every pair of hangers **24** there are well visible four short transverse rails **48**. Furthermore, here are marked a plurality of additional following component members and sub-assemblies of this specific sea ship **10**; the main deck **14**, the plurality of wheels **16** in both movable decks **15**, two deck rails **19** (for rolling both movable ship gantries **20**), the plurality of wheels **21** in both movable ship gantries **20**.

FIG. **14**, **15**, **16** show three views of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. Whereas, FIG. **14** is the side view, FIG. **15** is the top view, FIG. **16** is the front view. These views show this specific sea ship **10** and the landing station ready for landing the second booster space rocket **1** because on her earlier already landed the first booster space rocket **1**. Therefor here, the specific sea ship **10** is with one booster space rocket **1**, which hangs on one pair of hangers **24** and is already fastened at the bottom by means of four rotating wedges **25**. This booster space rocket **1** earlier landed and moreover it is still fastened also at the bottom by means of four raised rotating poles **45**, which reach from two grasping wagons **44**. Both grasping wagons **44** are currently, under this booster space rocket **1**.

Landing process of this booster space rocket **1** aboard the specific sea ship **10** was following. The booster space rocket **1** earlier during landing hung up itself by means of its all spreadable arms **5** on two damping wagons **30**, which were earlier suitably placed on both movable ship gantries **20** tops as on FIG. **11-13**. After hanging itself of this first booster space rocket **1** on two damping wagons **30**, they became entirely compressed and, which are well visible on FIG. **45-51** and FIG. **61-66**. Furthermore, after hanging itself of this first booster space rocket **1** on two damping wagons **30** under this space rocket moved in two grasping wagons **44** wherein each having two rotating poles **45**. Jointly four rotating poles **45** were raised suitably to suppress swinging this space rocket bottom. After hanging itself of every space rocket on two damping wagons **30** or two **31**, the space rocket can swing. Hence, under every space rocket can roll two grasping wagons **44** in order to suppress this swinging. Both grasping wagons **44** can precisely roll on the long transverse rails **47** on both movable decks **15** and so transverse the specific sea ship **10**.

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Moreover, both grasping wagons **44** can together roll on the short transverse rails **48** thus between one pair of hangers **24**. It is so, because all short transverse rails **48** are fitted in with all long transverse rails **47** on both movable decks **15**.

Each grasping wagon **44** has two rotating poles **45**, which serve for suppressing swinging of the space rockets bottoms and for strong fastening of the last landed space rocket bottom. It is so because both grasping wagons **44** are low build and are situated on both movable decks **15** thus, they can roll under every space rocket, which will hang itself on two damping wagons on both movable ship gantries **20**. Both grasping wagons **44** can roll underneath every space rocket providing they would lower their all rotating poles **45**. And then four rotating poles **45** are raised so that they could suitably suppress swinging of every space rocket bottom.

It is necessary for quick moving of the space-rocket onto one pair of hangers **24**. While, the non-swinging booster space rocket **1** hangs on two damping wagons **30** and is blocked at the bottom by four raised rotating poles **45**, so just then it is possible to move this space rocket onto one side of the specific sea ship and thus between one pair of hangers **24**, in order to hang this space rocket onto one pair of hangers **24**. Because one pair of hangers **24** is adapted for passing of two damping wagons **30** from both movable ship gantries **20**.

In order to perform it, both damping wagons **30** and both grasping wagons **44** must roll at equal speeds toward one pair of hangers **24**. Then both grasping wagons **44** will roll by from four long transverse rails **47** onto four short transverse rails **48**, which are between one pair of hangers **24**. Whereat both damping wagons **30** with hanged on them one booster space rocket **1** will roll by from the upper long rails **23** onto the upper short rails **26**. Currently, both damping wagons **30** stand on four upper short rails **26** being situated on one pair of hangers **24** tops. Both these damping wagons **30** stand precisely in centers of one pair of hangers **24** tops. It enabled fastening this hanging booster space rocket **1** at its bottom by means of four rotating wedges **25**. Therefor after arriving of all wagons between one pair of hangers, the hanged space rocket will be fastened at the bottom by means

of four rotating wedges **25** in one pair of hangers. After fastening at the bottom this booster space rocket **1** by means of four rotating wedges **25** it will be possible to loose pressure of four rotating poles **45**. Currently, both grasping wagons **44** are still under the booster space rocket **1**. Then it will be possible to lower two external rotating poles **45** as it show the current views with the sketches. And afterward both grasping wagons **44** will be able to roll under the hanged booster space rocket **1** toward the specific sea ship **1** center. Here, show it the sketches of the grasping wagons **44** in two statuses and arrangements. At that time both grasping wagons **44** will roll by from four short transverse rails **48** onto four long transverse rails **47**. Among those rails are long intervals however the grasping wagons **44** are a lot longer and have the plurality of wheels **43** and therefor these grasping wagons **44** will easily roll by from the short transverse rails **48** onto the long transverse rails **47** on both movable decks **15**. It is well visible on the further FIG. **81**, **82** and there these long intervals are indicated with the large exclamation marks.

After moving of an entire assemblage with all wagons (with hanged space rocket) between one pair of hangers **24**, this specific sea ship **10** and the landing station are immediately ready for landing the next space rocket. It is only enough to entirely spread apart both movable ship gantries **20** onto the specific sea ship **10** two directions.

Described here, course of action for landing of the first space rocket enables very quick readiness for landing of the next space rocket. During moving of the booster space rocket **1** on one pair of hangers **24**, inside the specific sea ship **10** in two tunnels **17** both ballasting wagons **18** were moving at suitable speeds to reverse direction so that continually maintain the exactly horizontal position of the entire specific sea ship **10**. As result, both ballasting wagons **18** moved almost entirely aside of the specific sea ship **10**. In current status on both movable ship gantries **20** tops stand remaining two damping wagons **30** and two large damping wagons **31**. After moving of the first booster space rocket **1** on one pair of hangers **24** all remaining damping wagons rolled by on the upper long rails **23** on both movable ship gantries **20** to a suitable arrangement for landing of the second booster space rocket **1**. Thereby in current status the views show the specific sea ship **10** and the landing station ready for landing the second booster space rocket **1**.

Readiness for landing of the second booster space rocket **1** as previously relies on entirely spreading apart both movable ship gantries **20** on two opposite directions of this specific sea ship **10**. Moreover, readiness for landing of the second booster space rocket **1** relies also on proper setting of two damping wagons **30** on both movable ship gantries **20** tops as are on the current views. These two damping wagons **30** stand almost in centers of two movable ship gantries **20** tops so that it could hang up on them the second landing booster space rocket **1**. Whereas, two large damping wagons **31** inactively stand on one side of both movable ship gantries **20** tops. Furthermore, readiness for landing of every space rocket relies also on leveling of the entire specific sea ship **10**. For this reason, inside the specific sea ship **10** multi-hull are installed two ballasting wagons **18**. These two ballasting wagons **18** are placed in two tunnels **17**, which are transverse to the multi-hull. Whereat in two tunnels **17**, both ballasting wagons **18** are currently, shifted almost entirely on the specific sea ship **10** one side because on an opposite side is hanged the booster space rocket **1**. It causes that the entire specific sea ship **10** has equal level.

FIG. **17**, **18**, **19** show three views of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the Plurality of spreadable arms **5**. And FIG. **17** is the side view, FIG. **18** is the top view, FIG. **19** is the front view. These views show this specific sea ship **10** and the landing station ready for landing the third space rocket because earlier already landed two booster space rockets **1**. Lately landed the second booster space rocket **1**, which hung up itself by means of its all spreadable arms **5** on two damping wagons **30**, which were earlier suitably placed on both movable ship gantries **20** tops as on previous FIG. **14-16**. The entire landing process, hanging itself and moving of the second booster space rocket **1** on one pair of hangers **24** was the same as during the entire process of the first booster space rocket **1** and, which was described in FIG. **14-16**. Current views show the specific sea ship **10** with two booster space rockets **1** whereas, each one hangs on one pair of hangers **24** and each one is fastened at the bottom by means of four rotating wedges **25**. These two space rockets earlier landed and currently, the views show this specific sea ship **10** and the landing station ready for landing the third space rocket, which will be the main space rocket **2**. Readiness for landing of the main space rocket **2** relies as previously on entirely spreading apart both movable ship gantries **20** on two opposite directions of this specific sea ship **10**. Furthermore, this readiness also relies on setting two large clamping wagons **31** at centers of two movable ship gantries **20** tops as on the current views. These two large damping wagons **31** stand now in centers of two movable ship gantries **20** tops so that it could hang up on them the main space rocket **2**. Furthermore, readiness for landing of every space rocket relies also on leveling of the entire specific sea ship **10**. For this reason, inside the specific sea ship **10** multi-hull are installed two ballasting wagons **18**. These two ballasting wagons **18** are placed in two tunnels **17**, which are transverse to the multi-hull. Whereat in two tunnels **17**, both ballasting wagons **18** are currently, shifted to the specific sea ship **10** center and it currently, maintains the exactly horizontal position of this specific sea ship **10**.

FIG. **20**, **21**, **22** show three views of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. Whereas, FIG. **20** is the side view, FIG. **21** is the top view, FIG. **22** is the front view. These views show the specific sea ship **10** with three individually hanged and fastened space rockets and, which are ready for transporting over the sea for unloading at the multi-task station. On this specific sea ship **10** earlier landed two booster space rockets **1** and furthermore, the third landed the main space rocket **2**. Here, this main space rocket **2** hangs at centers of two movable ship gantries and is fastened at the bottom by means of four raised rotating poles **45**, which reach from two grasping wagons **44**. the last, landed just this main space rocket **2**, which hung up itself by means of its all ten spreadable arms **5** on two large damping wagons **31**, which were earlier placed at centers of two movable ship gantries **20** tops as on previous FIG. **17-19**. After the main space rocket **2** hanging itself, both large damping wagons **31** became entirely compressed, which are visible on FIG. **20**, **22**. During the same time, both grasping wagons **44** stood inactively on the specific sea ship **10** one side and had raised all four rotating poles **45**. And after the main space rocket **2** completely hanged up itself, both grasping wagons **44** completely lowered two rotating poles **45** on one side to a horizontal setting. It enabled unrestricted rolling of both grasping wagons **44** underneath this hanged main space rocket **2**.

Therefor then these two grasping wagons **44** moved under this main space rocket **2** until two rotating poles **45**, which were continuously raised touched on with the main space rocket **2**. And then both grasping wagons **44** raised two before horizontally set rotating poles **45**, which afterward touched on with the main space rocket **2** as well. And then all four rotating poles **45** together suitably and gradually suppressed swinging of this space rocket bottom. Afterwards all four rotating poles **45** strongly tightened themselves to this main space rocket **2** and it strongly fastened this main space rocket **2** bottom part. On FIG. **22** are shown the grasping wagons **44** rolling under this space rocket by means of the sketches in two statuses. Further views on FIG. **83-85** show the enlarged views of the grasping wagons **44**, which by means of four rotating poles **45** strongly fastened one main space rocket **2** bottom. This main space rocket **2** landed with attached the second stage rocket **3** and the sectional load cover **4**, which could have inside the return load **106** from the Earth's orbit. Whereat in two tunnels **17**, both ballasting wagons **18** are now shifted to the specific sea ship center and it maintains the exactly horizontal position of this specific sea ship **10**. As it was earlier mentioned the current views show the specific sea ship **10** in fullness loaded with three space rockets and ready for seafaring for unloading at the multi-task station. Presented here, the specific sea ship **10**, which has landing station having strong fastening of the space rockets enables sea-transportation even at stormy sea. Whereat in two tunnels **17**, both ballasting wagons **18** serve also for automatic, continuous, quick and precise ballasting of this specific sea ship **10** during seafaring. Furthermore, the current views somewhat show that the upper short rails **26** on all hangers **24** are fitted in with the upper long rails **23** on both movable ship gantries **20** while these both movable ship gantries **20** stand at specific sea ship **10** center. Consequently, the damping wagons **30** with the hanged space rockets could earlier roll by on one pair of hangers **24**. Such fitting of these rails will be later also necessary for vertical unloading all space rockets from this specific sea ship **10**. It is shown on previous FIG. **9-10**.

FIG. **23**, **24**, **25** show three views of the entire landing station for individual, vertical landing of three space rockets. FIG. **23** is the side view, FIG. **24** is the top view, FIG. **25** is the front view. This landing station is in the same arrangement as aboard the specific sea ship **10** however the current views are without the grasping wagons **44**. This landing station for vertical landing of three space rockets consist of two pairs of hangers **24** and of two movable ship gantries **20**. Two space rockets after landing can be quick moved from two movable ship gantries **20** to two pairs of hangers **24**. Hence, in the landing station are mounted two pairs of hangers **24** this way that one pair of hangers **24** is mounted on each side of the specific sea ship **10**.

The hangers **24** in construction reminds immovable towers. Each hanger **24** has two rotating wedges **25** which serve for fastenings of one space-rocket. One pair of hangers **24** serve for hanging one space rocket and for strong temporary fastening it by means of four rotating wedges **25**. On each hanger **24** top are two upper short rails **26**. Whereas, on each movable ship gantry **20** top are two upper long rails **23**. Therefor on both movable ship gantries **20** tops are together four upper long rails **23** whereon stand four damping wagons **30** and two large damping wagons **31**. Both movable ship gantries **20** can separably roll along the entire specific sea ship **10** on two deck rails **19**. For rolling, both movable ship gantries **20** use their own plurality of wheels **21**. Furthermore, in both movable ship gantries **20**, each one has two bumpers **22** distinctly protruding forwards. Currently, both movable ship gantries **20** are entirely spread apart in two directions, the same as on the earlier FIG. **11-19** and further FIG. **270-272**.

FIG. **26**, **27**, **28** show three views of two whole movable ship gantries **20** by themselves, which are in the same arrangement as aboard the specific sea ship **10** and the same as on FIGS. **1-3** and **11-13**. And FIG. **26** is the side view, FIG. **27** is the top view, FIG. **28** is the front view. Currently, both movable ship gantries **20** approached to each other because earlier rolled on their own plurality of wheels **21** on two deck rails **19**. After approaching to each other, both movable ship gantries **20** touch on themselves with the bumpers **22**. Both movable ship gantries **20** can precisely and separably roll on two deck rails **19** along the entire specific sea ship **10**. Each deck rail **19** is permanently fastened on each long side hull **11** along the specific sea ship **10** length-ways. These deck rails **19** are common for both movable ship gantries **20** and it causes that both movable ship gantries **20** can roll on both deck rails **19** whole-length. Therefor each movable ship gantry **20** can roll until direction of the opposite movable ship gantry **20**, if necessary during landing of the space rocket. It causes that each space rocket can land almost on the entire length of the specific sea ship **10**. While, on all drawings there are only shown landings examples in the specific sea ship center. While, FIG. **26** shows the sketch of both movable ship gantries **20**, which rolled together maximally to the left side on the deck rails **19**.

Hence, on both movable ship gantries **20** tops are together four upper long rails **23** whereon stand four damping wagons **30** and two large damping wagons **31**.

FIG. **29**, **30**, **31** show three views of two pairs of hangers **24** in the same arrangement as aboard the specific sea ship **10**. Whereas, FIG. **29** is the side view, FIG. **30** is the top view, FIG. **31** is the front view. All hangers **24** are permanently fastened onto the deck **14** of both long side hulls **11** of the specific sea ship **10** and therefor are immobile. The hangers **24** in construction reminds immovable towers. On each hanger **24** top there are two upper short rails **26**. Moreover, each hanger **24** has two rotating wedges **25**, which serve for fastening of the space rockets. In one pair, the opposite hangers **24** have the rotating wedges **25** mounted on varied heights so that they would not hook on each over. Consequently, every space rocket can be fastened by four rotating wedges **25**, which are on one pair of hangers **24**. Furthermore, here are also visible a plurality of rotary actuators **27**, which rotate the rotating wedges **25**.

FIG. **32**, **33**, **34** show three enlarged views of one pair of hangers **24** wherein each has two rotating wedges **25** lowered and with the arrows showing their rotating directions. Each rotating wedge **25** has its own rotary actuator **27**. And FIG. **32** is the side view, FIG. **33** is the top view, FIG. **34** is the front view. The hangers **24** are permanently fastened onto the deck **14** of the specific sea ship **10** and thus, are immobile. On each hanger **24** top there are two upper short rails **26** whereon can roll in one damping wagon **30**.

FIG. **35**, **36**, **37** show the enlarged views of one pair of hangers **24** with the fragment of the space rocket fuselage **51**, which is fastened by means of four rotating wedges **25**. These four rotating wedges **25** are rotated in such way that they all together tighten up this space rocket fuselage **51** fragment. Whereas, FIG. **35** is the side view, FIG. **36** is the top view, FIG. **37** is the front view.

FIG. **38** is the top view of the horizontal sectional view according to the S-S line on FIG. **35**. Here, from above are visible four rotating wedges **25** tightening the space rocket

fuselage **51** fragment. The enlarged views of the rotating wedges **25** are shown on FIG. **45-54**.

FIG. **39**, **40**, **41** show three enlarged views of one pair of hangers **24** whereon tops on the upper short rails **26** stand two damping wagons **30**. FIG. **39** is the side view, FIG. **40** is the top view, FIG. **41** is the front view. Two damping wagons **30** are not compressed because they are not loaded with any space rocket.

FIG. **42**, **43**, **44** show three enlarged views of one pair of hangers **24** with hanged and fastened one booster space rocket **1**. And FIG. **42** is the side view, FIG. **43** is the top view, FIG. **44** is the front view. This booster space rocket **1** all six spreadable arms **5** lay on two damping wagons **30**, which are entirely compressed by a weight of this space rocket. Simultaneously the booster space rocket **1** in its bottom is fastened by means of four rotating wedges **25**. The current views are very similar to previous FIG. **32-38** however here are additionally two damping wagons **30** and the entire booster space rocket **1**. Aboard the specific sea ship **10** fastening of every space rocket bottom is absolutely necessary for seagoing even at small sea-waving. Without fastening of the space rocket bottoms, these space rockets would swing during a little rolling of the specific sea ship **10**. Presented here, the fastening solutions of the space rockets bottoms are very strong and these enable the sea-transportation of these space rockets even at hefty sea-waving.

FIG. **45**, **46**, **47** show three enlarged views of the rotating wedges **25** with the hanger **24** fragments sketches, which are performed with the dashed lines. All four rotating wedges **25** are completely lowered and with the arrows showing their rotating directions. And FIG. **45** is the side view, FIG. **46** is the top view, FIG. **47** is the front view. In one pair the opposite hangers **24** have the rotating wedges **25** mounted on the varied heights so that they would not hook each over.

FIG. **48**, **49**, **50** show three enlarged views of four rotating wedges **25**, which are rotated in such way that they all together tighten up the space rocket fuselage **51** fragment. FIG. **48** is the side view, FIG. **49** is the top view, FIG. **50** is the front view. Each rotating wedge **25** has flexible coatings in suitable places, marked with a plurality of dots on the views. These flexible coatings are intended for direct contacts with the space rockets.

FIG. **51** is the top view and shows for example the space rocket bottom, which is moved away from correct location. If the space rocket accidentally hung up itself aslant then all rotating wedges **25** will enable pushing this space rocket to as best location as its possible in order to fasten this space rocket. It shows this FIG. **51** and here two upper rotating wedges **25** are pushing this space rocket bottom.

FIG. **52**, **53**, **54** show three a lot enlarged views of two rotating wedges **25**, which are completely lowered. Whereas, FIG. **52** is the side view, FIG. **53** is the top view, FIG. **54** is the front view. Two rotating wedges **25**, which are installed on one hanger **24**, have a common support axle **28**. Each rotating wedge **25** has its own rotating axle **29** with its own rotary actuator **27**. Thus, each rotating wedge **25** can rotate apart other rotating wedges **25**.

FIG. **55**, **56**, **57** show three a lot enlarged views of one pair of hangers **24** upper parts in the same statuses as were earlier shown on FIG. **39-41**. Whereas, FIG. **55** is the side view, FIG. **56** is the top view, FIG. **57** is the front view. On one pair of hangers **24** tops and on four upper short rails **26** stand two damping wagons **30**. These two damping wagons **30** are not compressed because they are not loaded with any load. On both damping wagon **30** tops are permanently fastened thick flexible layers **32**, which are marked with the dots on the views. Furthermore, there are also permanently fastened two flexible wedge shaped fenders **33**, one in the uppermost part and one in a bottom part of each damping wagon **30**. There are also visible all leading shafts **34** in not compressed both damping wagons **30**.

FIG. **58**, **59**, **60** show three a lot enlarged views of one pair of hangers **24** upper part in the same statuses as were earlier shown on FIG. **42-44**. Whereas, FIG. **58** is the side view, FIG. **59** is the top view, FIG. **60** is the front view. Here, on one pair of hangers **24** is hanged one booster space rocket **1**. All six spreadable arms **5** of this one booster space rocket **1** lay on two damping wagons **30**, which are in fullness compressed by the weight of this space rocket. All six spreadable arms **5** penetrated and couched on two thick flexible layers **32** on both damping wagons **30** tops. Each thick flexible layer **32** is adapted for direct contacts with the spreadable arms **5** of the space rockets. Furthermore, there are also visible four flexible wedge shaped fenders **33** whereon is leaned against the booster space rocket **1** fuselage. It is also visible that compressed both damping wagons **30** lowered their all leading shafts **34** and, which do not hook and collide with any components of all hangers **24** and of the movable ship gantries **20**. On FIG. **59** from above are visible four rotating wedges **25**, which fastened the booster space rocket **1** bottom. Consequently, constructions of the entire hangers **24** and of the movable ship gantries **20** are entirely adapted with constructions and function of all damping wagons **30** and large damping wagons **31**. Therewith the compressed damping wagons **30** are able to roll by from two movable ship gantries **20** onto one pair of hangers **24**. All current views also show that the damping wagons **30** and the large damping wagons **31** have damping high range during hanging on them the space rockets equipped with the plurality of spreadable arms **5**. This damping high range of all damping wagons is very beneficial on durability of all fastenings, which up-bear the spreadable arms **5** onto the space rocket fuselage.

FIG. **61**, **62**, **63** show three a lot enlarged views of two damping wagons **30**, which are not compressed and they stand on four upper short rails **26**, which are on the tops of one pair of hangers **24**. FIG. **61** is the side view, FIG. **62** is the top view, FIG. **63** is the front view. These two damping wagons **30** are in the same setting as on previous FIG. **55-57**. Here, is visible construction of two damping wagons **30** and their interrelation because for one space rocket hanging itself there are necessary two damping wagons **30**.

FIG. **64**, **65**, **66** show three a lot enlarged views of two damping wagons **30** and, which for example are compressed and stand on four upper short rails **26**, which are on the tops of one pair of hangers **24**. FIG. **64** is the side view, FIG. **65** is the top view, FIG. **66** is the front view. These two damping wagons **30** are in the same setting as on previous FIG. **58-60**. Here, is visible that compressed both damping wagons **30** lowered their all leading shafts **34**. Here, except of the upper short rails **26** there are not other fragments of the hangers **24**. The damping wagons **30** are described in fullness on the next FIG. **67-71**.

FIG. **67**, **68**, **69**, **70**, **71** show a lot enlarged views and the horizontal sectional view and a bottom projection of one entire damping wagon **30**, which is not compressed and in different manner than previously, stands on two upper long rails **23**, which are on one movable ship gantry **20** top. Whereas, FIG. **67** is the side view, FIG. **68** is the top view in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. And FIG. **69** is the front view, FIG. **70** is the bottom projection. And FIG. **71** is the top view of the horizontal sectional view

according to the S-S line on FIG. **69**. There are visible all sub-assemblies and construction of one damping wagon **30**.

Each damping wagon **30** has one main plate **35** with on both sides permanently fastened six high leading tubes **36**. Under the main plate **35** are installed four driving wheels **41**, four leading wheels **42** and a battery **43**. In all driving wheels **41** are installed electric motors powered of the battery **43**. Over the main plate **35** are permanently fastened the bottoms of six conic springs **39** in vertical setting. Whereat these six conic springs **39** tops are permanently fastened to being situated over them a middle plate **38**. This middle plate **38** has on both sides permanently fastened six low leading tubes **37**, which are the very same spaced out as the high leading tubes **36** in the main plate **35**. Over the middle plate **38** are permanently fastened the bottoms of six conic springs **39** in vertical setting and the very same way as on the main plate **35**. Whereat those six conic springs **39** tops are permanently fastened to being situated over them the next middle plate **38**. This next middle plate **38** is the same as the previous middle plate **38**. Presented here, one damping wagon **30** has three middle plates **38** with the plurality of conic springs **39** in the very same settings and fastenings. Whereat tops of six uppermost conic springs **39** are permanently fastened to being situated over them a top plate **40**. This top plate **40** has on both sides permanently fastened six leading shafts **34**, which are spaced out suitably to being situated under them the low leading tubes **37** in all middle plates **38** and all high leading tubes **36** in the main plate **35**. Presented here, the construction solution of one damping wagon **30** has the leading shafts **34** in two diameters. It is not needed and they can be equal. Over the top plate **40** is permanently fastened the thick flexible layer **32**, which is marked with the dots on the views. On two flexible layers **32** will couch all six spreadable arms **5**, which are applied in the booster space rocket **1**. Moreover, to the top plate **40** and to the flexible layer **32** one side is permanently fastened one flexible wedge shaped fender **33**. A similar flexible wedge shaped fender **33** is also permanently fastened to the main plate **35** one side. As result of such solution, one damping wagon **30** has four layers with the conic springs **39**, which can be in fullness compressed and this create damping high range.

The damping wagons **30** are designed for rolling by from the upper long rails **23** on both movable ship gantries **20** onto the upper short rails **26** on one pair of hangers **24**. It is possible because the upper short rails **26** on all hangers **24** are fitted in with the upper long rails **23** on both movable ship gantries **20** while these both movable ship gantries **20** stand at the specific sea ship **10** center. It means the damping wagons **30** can be situated on two movable ship gantries **20** or on two pairs of hangers **24**. All upper long rails **23** and all upper short rails **26** are shaped as C-beams and thus, all damping wagons cannot fall out off them.

FIG. **72**, **73**, **74** show three a lot enlarged views of one entire damping wagon **30**, which for example is compressed and does not stand on any rails. And FIG. **72** is the side view. And FIG. **73** is the top view of one damping wagon **30** in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. And FIG. **74** is the front view. Here, is visible that all conic springs **39** are entirely compressed. Whereat all conic springs **39** in the highest layer are entirely compressed. Whereat all conic springs **39** in the lower three layers are compressed to the low leading tubes **37** height. Here, is also visible that all leading shafts **34** over-passed all low leading tubes **37** and all high leading tubes **36**. As result all leading shafts **34** are hanging by themselves down under the damping wagon **30**. This solution of the leading shafts **34**, which are fitted in with all leading tubes creates damping high range and simultaneously maintains unshaken and stable top surface of all damping wagons during compressing by the space rocket.

FIG. **75**, **76**, **77**, **78**, **79** show a lot enlarged views and the horizontal sectional view and the bottom projection of one large damping wagon **31**, which is not compressed and stands on two upper long rails **23**, which are on one movable ship gantry **20** top. Whereas, FIG. **75** is the side view. And FIG. **76** is the top view of one large damping wagon **31** in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. And FIG. **77** is the front view, FIG. **78** is the bottom projection. And FIG. **79** is the top view of the horizontal sectional view according to the S-S line on FIG. **77**. This large damping wagon **31** has the same construction as the damping wagon **30** however is longer. For this reason each large damping wagon **31** has six driving wheels **41** and ten conic springs **39** in each layer. The large damping wagons **31** are longer so that could lay on them all ten spreadable arms **5**, which are applied in the main space rocket **2**. Increased number of the conic springs **39** create also damping larger capacity, which is necessary during hanging itself of the main space rocket **2** with the attached additional modules or assemblages. The large damping wagons **31** are not designed for rolling by on the upper short rails **26** on the hangers **24**. Instead, both large damping wagons **31** are designed only for remaining and rolling on the upper long rails **23** on both movable ship gantries **20**.

FIG. **80**, **81**, **82** show three views of two grasping wagons **44** wherein each with two rotating poles **45**. These two grasping wagons **44** stand on four short transverse rails **48**. The current views show the rotating poles **45** lifted to a similar setting as during holding the space rocket. Whereat the sketches of two right rotating poles **45** together with the arrows show their total possible rotation range. Whereas, FIG. **80** is the side view, FIG. **81** is the top view, FIG. **82** is the front view. The short transverse rails **48** are permanently fastened on a plurality of pillars **49**, which are situated between one pair of hangers **24** and visible on lots of views. All pillars **49** are permanently fastened on the main deck **14**, which is on two long side hulls **11**. Both grasping wagons **44** have the plurality of wheels **46** in order to they could roll by long intervals, which are between the short transverse rails **48** and the long transverse rails **47**. These intervals are the best visible on FIG. **81-82** and are indicated with the large exclamation marks Both grasping wagons **44** wherein each has two rotating poles **45** with spherical ends, which have flexible coatings. These flexible coatings are intended for direct contacts with the space rockets.

FIG. **83**, **84**, **85** show three views of two grasping wagons **44**, which stand on four long transverse rails **47**. These both grasping wagons **44** by means of four rotating poles **45** tighten one main space rocket **2** bottom in the same way as on the earlier FIG. **20-22** though on those FIGS., lots of components are veiled by other members. Whereas, FIG. **83** is the side view, FIG. **84** is the top view, FIG. **85** is the front view. Furthermore, on the current views, the sketches of all inclined down rotating poles **45** together with the arrows show their required inclination down, so that the entire grasping wagons **44** could roll underneath this hanged main space rocket **2**. It is the best visible on FIG. **85** and somewhat on FIG. **83** and it is indicated with two large exclamatory signs. Furthermore, on FIG. **81-82**, **84-85** the arrows on the grasping wagons **44** show their possible moving rolling directions.

FIG. **86**A, **86**B, FIG. **87**, FIGS. **88**A and **88**B show three views of one booster space rocket **1** upper and bottom parts, which has six spreadable arms **5**, four steering flaps **6** and one sliding engines cover **7**. Whereas, FIG. **86**A is the side view of one booster space rocket **1** upper part. And FIG. **86**B is the side view of one booster space rocket **1** bottom part. And FIG. **87** is the top view in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. And FIGS. **88**A and **88**B are the front views. On the current views the sliding engines cover **7** is entirely lifted and it uncovered all nozzles **85** of this space rocket main engines. Here, all spreadable arms **5** are entirely lowered and consequently are alongside the space rocket fuselage. Whereat all four flaps **6** are vertically set and are entirely inside the space rocket fuselage. On FIG. **86**A, **86**B and FIG. **88**A, **88**B the external arrows show the spreading directions of the spreadable arms **5** and deflections of the flaps **6**.

More information about the spreadable arms **5** mounted on each space rocket.

The quantity of the spreadable arms **5** mounted on each space rocket depends on its weight. Therefor currently, in one booster space rocket **1** are mounted six spreadable arms **5**. These spreadable arms **5** are suitably spaced out in each space rocket fuselage **51**, so that they all could completely spread out on two sides. Here, presented system for multiple use of the space rockets is completely connected with utilization of the plurality of spreadable arms **5** mounted on all space rockets. Therefor these spreadable arms **5** are absolutely necessary, are utilized multiple times and are the main characteristic feature of this system. These spreadable arms **5** create lots of possibilities. First of all and the most important is that each space rocket lands on its spreadable arms **5** as hangs itself on them.

And later spreadable arms **5** are used as the aerodynamic brake and the space rockets land as hang themselves on these spreadable arms **5**. Because all spreadable arms **5** are designed and build as very strong therefor during space rocket descent they can be lifted (spread out) on the very high altitude for use as the aerodynamic brake. As result of long-lasting aerodynamic braking caused by the spreadable arms **5**, it will be necessary to use far less space rocket fuel at landing engine burn so that each space rocket could hang up itself. Each spreadable arm **5** is moved by one moving mechanism installed inside the space rocket fuselage. Therefor every spreadable arm **5** is moved independently of other spreadable arms **5**. And it causes that if some spreadable arm **5** fail to lift itself thus, then the others will lift anyway and the whole space rocket will be able to land on them. In some circumstances, the spreadable arms **5** can also be used for emergency steering direction of the space rocket descent. It is so because the spreadable arms **5** can be differently and fluently lowered and lifted for emergency steering the space rocket descent. In this system, the spreadable arms **5** are mounted on the space rockets upper parts and it causes that the space rockets bottom parts are without some legs for landing. As result, in the space rockets bottom parts is plenty room for installing the sliding engines covers **7** or **8**, which are presented in current invention. More information about construction of each spreadable arm **5** begins in description of further FIG. **119-121**.

FIG. **89**A, **89**B and FIG. **90** show two views of one booster space rocket **1** upper and bottom parts, which has a little lifted all six spreadable arms **5** and consequently, they protrude a little outside the space rocket fuselage. Whereat all four flaps **6** are a lot deflected out and consequently, they protrude outside the space rocket fuselage. Whereat the sliding engines cover **7** is entirely lifted. Whereas, FIG. **89**A is the side view of one booster space rocket **1** upper part. And FIG. **89**B is the side view of one booster space rocket **1** bottom part. And FIG. **90** is the top view of FIGS. **89**A and **89**B in the same arrangement and situation. On FIGS. **89**A and **89**B the arrows show the spreading directions of the spreadable arms **5** and deflections of the flaps **6**. On FIGS. **89**A and **89**B, on the space rocket fuselage are clearly visible a plurality of corner beams **52**, which lead a plurality of sliders **53** of the spreadable arms **5**.

FIG. **91**A, **91**B, FIG. **92**, FIGS. **93**A and **93**B show three views of one booster space rocket **1** upper and bottom parts. This booster space rocket **1** has entirely lifted all six spreadable arms **5** and consequently they are completely spread out on two sides. And therefor these spreadable arms **5** are transverse the space rocket fuselage. Furthermore, currently, all blocking bars **54** are entirely slid outside the space rocket fuselage, and it entirely blocked all middle beams **55** in all spreadable arms **5**. Whereat all four flaps **6** are entirely deflected out and consequently are horizontal and transverse the space rocket fuselage **51**. Whereat the sliding engines cover **7** is entirely lifted and it uncovered all nozzles of the main engines. Whereas, FIG. **91**A is the side view of one booster space rocket **1** upper part. And FIG. **91**B is the side view of one booster space rocket **1** bottom part. And FIG. **92** is the top view in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. And FIG. **93**A is the front view of one booster space rocket **1** upper part. And FIG. **93**B is the front view of one booster space rocket **1** bottom part. On FIG. **91**A and FIG. **93**A, on the space rocket fuselage are also clearly visible the plurality of corner beams **52**, which lead the plurality of sliders **53** of the spreadable arms **5**.

FIG. **94**A, **94**B, FIG. **95**, FIGS. **96**A and **96**B show three views of one main space rocket **2** upper and bottom parts, which has ten spreadable arms **5**, four steering flaps **6** and one sliding engines cover **7**. Currently, all spreadable arms **5** are entirely lowered and consequently are alongside the space rocket fuselage. The quantity of spreadable arms **5** mounted on each space rocket depends on its weight. Therefor currently, in one main space rocket **2** are mounted ten spreadable arms **5**. These spreadable arms **5** are suitably spaced out in each space rocket fuselage so that they all could completely spread out on two sides. Whereat all four flaps **6** are vertically set and entirely inside the space rocket fuselage. Whereat the sliding engines cover **7** is entirely lifted, and it uncovered all nozzles of the main engines. And FIGS. **94**A and **94**B are the side views, FIG. **95** is the top view in two equal views, which are rotated 90 degrees in relation to each other so that they cohere to the below views. And FIGS. **96**A and **96**B are the front views. On FIG. **94**A, **94**B and FIG. **96**A, **96**B the arrows show the spreading directions of the spreadable arms **5** and deflections of the flaps **6**. On FIG. **95** are visible a plurality of linear actuators **60**, which steer deflections of the flaps **6**. On FIG. **94**A, **94**B and FIG. **96**A, **96**B, these linear actuators **60** are sketched with the dashed lines because they are situated inside the space rocket fuselage.

FIG. **97**A, **97**B, FIG. **98** and FIG. **99**A, **99**B show three views of one main space rocket **2** upper and bottom parts, which has entirely lifted all ten spreadable arms **5** and consequently they are completely spread out on two sides. And therefor these spreadable arms **5** are transverse the space rocket fuselage. Moreover, now all blocking bars **54** are entirely slid outside the space rocket fuselage, and it entirely blocked all middle beams **55** in all spreadable arms **5**. Whereat all four flaps **6** are entirely deflected out and

consequently are horizontal and transverse the space rocket fuselage. On all views are visible the linear actuators **60**, which steer deflections of the flaps **6**. Whereat the sliding engines cover **7** is entirely lifted. And FIGS. **97**A and **97**B is the side view. And FIG. **98** is the top view in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. And FIGS. **99**A and **99**B is the front view. On FIGS. **97**A and **97**B are clearly visible the plurality of whole corner beams **52** on this space rocket fuselage. These corner beams **52** lead the sliders **53** of the spreadable arms **5**.

FIG. **100**, **101** show two views of one booster space rocket **1** upper part and of two movable ship gantries **20** upper part whereon tops stand two damping wagons **30** and, which are not compressed. These views show just vertically landing the booster space rocket **1**, which in a moment will hang itself on two damping wagons **30**. This space rocket has entirely lifted (spread out) all six spreadable arms **5**, which are not yet lying on the flexible layers **32** on the damping wagons **30**. Whereat four flaps **6** are entirely deflected outside the space rocket fuselage. And FIG. **100** is the side view, FIG. **101** is the top view. On FIG. **101** are visible four flexible wedge shaped fenders **33** whereon the space rocket fuselage is already leaned against in despite of, this space rocket does not yet hang up itself on both damping wagons **30**.

On FIG. **101** is not shown below situated the sliding engines cover **7**. Current views show fitting way of both damping wagons **30** with six spreadable arms **5** in one booster space rocket **1**. Current views are a little similar to FIG. **42-43** and FIG. **58-59** and there one booster space rocket **1** already hangs on compressed two damping wagons **30** but, which stand on one pair of hangers **24**.

FIG. **102**, **103** show two views of one main space rocket **2** upper part and of two movable ship gantries **20** upper part whereon tops stand two large damping wagons **31** and, which are not compressed. These views show just vertically landing the main space rocket **2**, which in a moment will hang up itself on two large damping wagons **31**. This space rocket has entirely lifted (spread out) all ten spreadable arms **5**, which are not yet lying on the flexible layers **32** on these large damping wagons **31**. Whereat four flaps **6** are entirely deflected outside the space rocket fuselage.

Whereas, FIG. **102** is the side view, FIG. **103** is the top view. On FIG. **103** are visible four flexible wedge shaped fenders **33** whereon is already leaned against this space rocket fuselage in despite of this space rocket does not hang up yet on both large damping wagons **31**. On FIG. **103** is not shown below situated the sliding engines cover **7**. The current views target showing fitting way of both large damping wagons **31** with ten spreadable arms **5** in one main space rocket **2**.

FIG. **104**, **105**, **106** show three views of four steering flaps **6** cardinally installed in the main space rocket **2** upper part. Currently, all four flaps **6** are vertically set and are entirely inside the space rocket fuselage. They are set this way during the space rocket ascent toward space. Here, the arrows show the deflections out directions of the flaps **6**. Whereas, FIG. **104** is the side view, FIG. **105** is the top view, FIG. **106** is the front view. All four flaps **6** are in large sizes so that they could steer the space rockets even at low speeds of their descent in the Earth's atmosphere. Each space rocket has cardinally installed four steering flaps **6**. Two opposite steering flaps **6** on the top parts have additionally rotary mounted the torsional triangles **59**, which serve for precise steering of the entire space rocket axial torsion, needed before landing on two movable gantries used in current system. Each torsional triangle **59** is grasped and axially steered by the rotary actuator **58** fastened on the steering flap **6**. The torsional triangles **59** installing way and triangular shapes are adapted for use at gigantic, medium and low speeds of the space rocket descent in the atmosphere.

FIG. **107**, **108**, **109** show three views of four steering flaps **6** in the main space rocket **2** upper part. Currently, all four flaps **6** are a lot deflected outside ergo mainly for steering the space rocket at average speed of its descent in the Earth's atmosphere as on FIG. **215-216**. And FIG. **107** is the side view, FIG. **108** is the top view, FIG. **109** is the front view. On the current views the arrows show the possible deflections out directions of the flaps **6**. Moreover, on FIG. **109** two torsional triangles **59** are sketched in a few settings varies twisted.

FIG. **110**, **111**, **112** show three views of four steering flaps **6** in the main space rocket **2** upper part. Currently, all four flaps **6** are entirely deflected outside ergo mainly for aerodynamic braking and steering the space rocket at low speed of its descent in the Earth's atmosphere as on FIG. **262-267**. And FIG. **110** is the side view, FIG. **111** is the top view, FIG. **112** is the front view.

On the current views the arrows show the return direction of flaps **6**. Moreover, here the torsional triangles **59** are also sketched in a few settings varied twisted. The views on FIG. **104-112** show also four deflection mechanisms of the flaps **6**. Each such deflection mechanism consists of one linear actuator **60** and of two ample brackets **57**. The linear actuators **60** steer deflections of the flaps **6** while the ample brackets **57** are auxiliary. These ample brackets **57** are not marked on the current views but only on the next FIG. **113-118**. On the current top views the deflection mechanisms are in fullness visible. While, the side views and the front views contain both the views and the sketches of the deflection mechanisms.

FIG. **113**, **114**, **115**, **116**, **117**, **118** show the enlarged views of one steering flap **6** together with the sketches of its deflection mechanism in the main space rocket **2** fragment.

And FIG. **113-115** show three enlarged views of one steering flap **6**, which is vertically set and entirely inside the space rocket fuselage. Whereas, FIG. **113** is the side view, FIG. **114** is the top view, FIG. **115** is the front view. On FIG. **113** the arrows show direction of deflection out of the flap **6**. And FIG. **116-118** show three enlarged views of one flap **6**, which is entirely deflected outside the space rocket fuselage. Whereas, FIG. **116** is the side view, FIG. **117** is the top view, FIG. **118** is the front view. Moreover, here one torsional triangle **59** is sketched in a few variously twisted settings.

Each deflection mechanism of the flap **6** consists of one linear actuator **60** and of two ample brackets **57**. Each flap **6** is cardinally installed by means a plurality of hinges to the space rocket fuselage. Each flap **6** has permanently fastened two ample brackets **57** whereto are rotatably installed the linear actuator **60**. The linear actuator **60** second end is rotatably installed inside the space rocket fuselage. The linear actuators **60** steer deflections of the entire flaps **6**. On the top parts of two opposite flaps **6** are installed the rotary actuators **58**, which strongly grasp and steer axial torsion of the torsional triangles **59**. Therewith both torsional triangles **59** serve for precise steering of the entire space rocket axial torsion, needed before landing on two movable ship gantries **20**. The torsional triangles **59** can be rotary installed on all four flaps **6**. The torsional triangles **59** are triangular shaped so that they could be used at all speeds and stages of the space rocket descent in the Earth's atmosphere. During the first time period of the space rocket descent in the Earth's

atmosphere occur gigantic pushing forces on all flaps **6** and on both torsional triangles **59**, which are shown on the further FIG. **212-214**.

FIG. **119**, **120**, **121** show three views of the fragment of one main space rocket **2** upper part, which has entirely lowered all ten spreadable arms **5** and consequently they are alongside the space rocket fuselage. Whereas, FIG. **119** is the side view. And FIG. **120** is the top view, which is in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. And FIG. **121** is the front view. Whereas, FIG. **119** shows only the sub-assemblies outside the space rocket fuselage.

Here, is visible that all ten spreadable arms **5** are suitably spaced out in the space rocket fuselage so that they all could spread out on two sides. Furthermore, it is visible that each spreadable arm **5** consists of two lateral beams **56** and one middle beam **55** with permanently fastened a long plate **64**. The middle beam **55** lowest end is rotatably joined with the slider **53**. Whereat the middle beam **55** top end is rotatably joined with the lowest ends of both lateral beams **56**. Furthermore, both lateral beams **56** upper ends are bent and are inside the space rocket fuselage.

Both lateral beams **56** in both bent corners are rotatably joined with the space rocket fuselage by two bearing axles **63**, which are situated in four bearing brackets **80**. These lateral beams **56** upper bent parts are very close to the moving mechanism, which moves this entire spreadable arm **5**. Each moving mechanism is adapted for moving together both lateral beams **56** upper bent ends and in consequence for moving the entire spreadable arm **5**. It is visible on FIG. **120** and there simultaneously it is visible that these moving mechanisms do not overlap and collide with each other during moving. This FIG. **120** shows the moving mechanisms outside and inside space rocket. These views show in this space rocket interior—an arrangement of ten moving mechanisms, which spread out the spreadable arms **5**.

Furthermore, over each spreadable arm **5** moving mechanism is installed a pushing mechanism having the blocking bar **54**, which serves for blocking the middle beam **55** in the spreadable arm **5** while it is entirely lifted. The blocking bar **54** has in its bottom-surface the key-seat, which is shaped as the T-groove and, which is fitted in with the T-bar **67** on the middle beam **55**.

The pushing mechanism consists of a large C-shaped beam **69**, a linear actuator **70** and of a vertical low bar **71**. Here, is shown in the space rocket interior, the arrangement of ten large C-shaped beams **69**, which have inside the blocking bars **54**, which are moved slidingly and lineally by the linear actuators **70**. And FIG. **121** is the front view of the fragment of one main space rocket **2** upper part. This view shows only the sub-assemblies outside the space rocket fuselage. Here, outside the space rocket fuselage is visible in what way are spaced out all ten spreadable arms **5**. On all views FIG. **119-121**, all blocking bars **54** are entirely inside the space rocket fuselage **51**. Thus, each blocking bar **54** is situated in the large C-shaped beam **69**.

FIG. **122**, **123** show two views of the fragment of one main space rocket **2** upper part, which has entirely lifted all ten spreadable arms **5** and consequently they are completely spread out on two sides. And therefor these spreadable arms **5** are transverse the space rocket fuselage. Whereas, FIG. **122** is the side view. And FIG. **123** is the top view. And FIG. **122** shows only the sub-assemblies outside the space rocket fuselage.

Here, outside the space rocket fuselage is visible in what way are spaced out all ten spreadable arms **5** after their lifting. Furthermore, here are clearly visible the whole corner beams **52** on the space rocket fuselage because all spreadable arms **5** are lifted. Two corner beams **52** serve for leading one slider **53**.

And FIG. **123** is the top view and shows the sub-assemblies outside and inside the space rocket fuselage after lifting all ten spreadable arms **5**. Here, is visible that all ten spreadable arms **5** are suitably spaced out in the space rocket fuselage so that they all could spread out on two sides. Furthermore, is visible in the space rocket interior, arrangement of ten moving mechanisms, which spread out ten spreadable arms **5**. And is visible in the space rocket interior, arrangement of ten large C-shaped beams **69** wherein inside are the blocking bars **54**, which can be moved slidingly and lineally by the linear actuators **70**. Currently, all blocking bars **54** are entirely slid outside the space rocket fuselage and it entirely blocked all middle beams **55** in all spreadable arms **5**. While, the lateral beams **56** upper bent parts are inside the space rocket fuselage and currently, are alongside the space rocket fuselage. And consequently they are very close to the moving mechanisms, which spread out the entire spreadable arms **5**. They are better visible on the further FIG. **150**, **153**, **154**, **156**. On the current FIG. **123** it is visible that all lateral beams **56** bent parts do not collide with themselves during moving. There are also visible ten half empty interiors of all ten large C-shaped beams **69** because all ten blocking bars **54** half-lengths moved slidingly and lineally outside the space rocket fuselage. Here, are also marked the long plates **64** and the sliders **53**. Current FIG. **122-123** are similar to the earlier FIG. **102-103**.

FIG. **124**, **125** show two enlarged views of the fragment of one booster space rocket **1** upper part, which has entirely lifted all six spreadable arms **5** and consequently they are completely spread out on two sides. And therefor these spreadable arms **5** are transverse the space rocket fuselage. And FIG. **124** is the side view, FIG. **125** is the top view. And FIG. **124** shows only the sub-assemblies outside the space rocket fuselage.

Here, outside the space rocket fuselage is visible in what way are spaced out all six spreadable arms **5** after their little. And FIG. **125** shows the sub-assemblies outside and inside space rocket after lifting all six spreadable arms **5**. Here, is visible that all six spreadable arms **5** are suitably spaced out in the space rocket fuselage so that they all could spread out on two sides. Furthermore, all views show in the space rocket interior, arrangement of six moving mechanisms of six spreadable arms **5**. And show in the space rocket interior, arrangement of six large C-shaped beams **69** wherein inside are the blocking bars **54**, which can be moved slidingly and lineally by the linear actuators **70**. Now all blocking bars **54** are entirely slid outside the space rocket fuselage and it entirely blocked all middle beams **55** in all spreadable arms **5**. There are visible the half empty interiors of all six large C-shaped beams **69** because all six blocking bars **54** half-lengths moved slidingly and lineally outside the space rocket fuselage. Here, are marked also the long plates **64**, the sliders **53** and the corner beams **52** on the space rocket fuselage. Current FIG. **124-125** are similar to previous FIG. **122-123**, FIG. **100-101**.

FIG. **126**, **127**, **128** show three views of one entire spreadable arm **5** together with its moving mechanism and with one blocking bar **54** and its pushing mechanism. These views are in the space rocket fuselage fragments with the sub-assemblies outside and inside. This spreadable arm **5** is entirely lowered to the P1 first setting and consequently it is alongside the space rocket fuselage. While, the blocking bar **54** is inside the space rocket fuselage.

And FIG. **126** is the side view with the partial vertical sectional view. And FIG. **127** is the top view in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. FIG. **127** is the view only of the components situated upwards of a common long axle **65**. And FIG. **128** is the front view but only of the sub-assemblies outside the space rocket. Furthermore, here are auxiliary one sectional view and the bottom projection both without some drawing numbers. On FIG. **126** the arrows show the moving directions of the spreadable arm **5** components. And the arrows show the moving direction of the blocking bar **54**. Here, is also visible a fragment of a pressure tank **61** inside the space rocket fuselage. It shows and explains that all mechanisms are designed in such way that they fit into vacant space over this pressure tank **61**.

Each spreadable arm **5** mainly consists of two lateral beams **56** and one middle beam **55**, which are joined in suitable way with themselves and with the additional components. Both lateral beams **56** lowest ends are rotatably joined with the middle beam **55** top end by means of the common long axle **65**. Between the middle beam **55** and both lateral beams **56** on the common long axle **65** are inserted two distance blocks **81**. The middle beam **55** lowest end is rotatably joined with the slider **53** by means of a holding axle **66**. The slider **53** can move slidingly between two corner beams **52** on the space rocket fuselage. To the middle beam **55** is permanently fastened the T-bar **67** and the long plate **64** for aerodynamic purposes. Inside the middle beam **55** lowest end is installed the frictional brake **68**.

Whereat, both lateral beams **56** in both bent corners are rotatably joined with the space rocket fuselage by means of two bearing axles **63**, which are situated in four bearing brackets **80**. Both lateral beams **56** upper bent parts are situated inside the space rocket fuselage. To each upper bent part are permanently fastened two flat bars **72**, which have the oval openings. In current setting, both lateral beams **56** upper bent parts with all flat bars **72** are transverse the space rocket fuselage. These lateral beams **56** upper bent parts are very near the moving mechanisms, which spread out the entire spreadable arms **5**. Here, is also shown that over each spreadable arm **5** moving mechanism is installed the pushing mechanism of the blocking bar **54**. This pushing mechanism consists of the large C-shaped beam **69**, the linear actuator **70** and of the vertical low bar **71**. Currently, the entire blocking bar **54** is inside the large C-shaped beam **69** and consequently it is inside the space rocket fuselage.

FIG. **129**, **130**, **131** show three enlarged drawing fragments of previous FIG. **126**, **127**, **128**. Whereas, FIG. **129** is the side view with the partial vertical sectional view. And FIG. **130** is the top view in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. And FIG. **131** is the front view but only of the sub-assemblies outside the space rocket fuselage. On FIG. **129**, **130**, **131** are already more clearly visible the moving mechanism components of one spreadable arm **5**. These are following components and sub-assemblies; one servomotor **73**, two worm gears **74**, one common roller **78**, two threaded pipes **75**, two special nuts **76**, two cylindrical pegs **77** and two bearing seats **79**. Furthermore, here are better visible both bearing axles **63** and four bearing brackets **80**. On FIG. **129** the arrows show the moving directions of the lateral beams **56** upper bent parts, which are inside the space rocket fuselage. And together with them move the flat bars **72**, which have the oval openings. Here, is also better visible the pushing mechanism of the blocking bar **54**.

This pushing mechanism consists of the large C-shaped beam **69**, the linear actuator **70** and of the vertical low bar **71**. Now the entire blocking bar **54** is inside the large C-shaped beam **69** and consequently is inside the space rocket fuselage. The blocking bar **54** is situated and move slidingly and lineally inside the large C-shaped beam **69**. The blocking bar **54** is the same long as the large C-shaped beam **69**. The blocking bar **54** with its half total length can slide outside the space rocket fuselage and it is visible on the following FIGS. **150-157** and **178-179**. The blocking bar **54** has in its bottom-surface the key-seat, which is shaped as the T-groove and, which is fitted in with the T-bar **67** on the middle beam **55**. Over the large C-shaped beam **69** is permanently fastened the linear actuator **70**. This linear actuator **70** is permanently joined with the blocking bar **54** by means of the vertical low bar **71**. Consequently, the linear actuator **70** serves for pushing the blocking bar **54** outside the space rocket fuselage and pulling it back. While, the spreadable arm **5** is entirely lifted and after sliding outside the blocking bar **54** then its T-groove enters into the T-bar **67** on the middle beam **55**. The blocking bar **54** serves for blocking in all directions the middle beam **55** while it is entirely lifted to the P6 setting.

The middle beam **55** after its blocking gains possibility of carrying burdens in all directions. Consequently, the middle beam **55** after its blocking carries burdens together with both lateral beams **56**. It significantly influences upon full-load capacity of one spreadable arm **5**. The middle beam **55** blocking causes also strengthening of the entire spreadable arm **5** in all directions.

Burdens upon every spreadable arm **5** will occur during the space rocket descent in the Earth's atmosphere and during the space rocket hanging itself on two damping wagons **30** or two **31**. All blocking bars **54** can also be slide outside space rockets while the spreadable arms **5** are not entirely lifted. Such situation can be favorable during the first time period of the space rocket descent in the Earth's atmosphere and that is shown on FIGS. **212**A, **212**B and **214**A, **214**B. During giant speed of the space rocket descent in the Earth's atmosphere slid outside all blocking bars **54** will cause aerodynamic braking, which will stabilize this space rocket descent. Further description of the current views are the same as previous FIG. **126**, **127**, **128** and therefor are not fully quoted here.

FIG. **132**, **133**, **134** show three very enlarged drawing fragments of previous FIG. **129**, **130**, **131**. And current FIG. **132** is the side view with the partial vertical sectional view. And FIG. **133** is the top view. And FIG. **134** is the front view but only of the sub-assemblies outside the space rocket and the sketches of four limiters **62** in the space rocket interior. The front view of alone moving mechanism of the spreadable arm **5** is on the next FIG. **137**. All current views, show in the most detail way the entire moving mechanism construction of the spreadable arm **5** in the space rocket fuselage fragment. Thereby, there is well visible the servomotor **73**, which by means of the common roller **78** propels two worm gears **74**, which rotate two threaded pipes **75** and whereon move two special nuts **76** with the cylindrical pegs **77**. Both threaded pipes **75** tops are rotatably installed by means of two bearing seats **79**. Both lateral beams **56** upper bent parts have permanently fastened the flat bars **72**, which have the oval openings. These are the best visible on the further FIG. **141-143**. Such solution is necessary so that the spreadable arm **5** entire moving mechanism would require the least space over the pressure tank **61**. In the flat bars **72** oval openings can move slidingly the cylindrical pegs **77**. Whereas, at the same time each entire special nut **76** moves

slidingly and tightly between two flat bars **72**. This entire moving mechanism by means of two cylindrical pegs **77** push all flat bars **72** and consequently both lateral beams **56** upper bent parts, and it consequently moves the entire spreadable arm **5**. The spreadable arm **5** entire moving mechanism is driven by one servomotor **73** driving simultaneously two worm gears **74**, so that both lateral beams **56** would always slant equally out. Both lateral beams **56** are rotatably installed to the space rocket fuselage by means of the bearing axles **63**. Each bearing axle **63** is up-borne to the space rocket fuselage by means of two bearing brackets **80**. There are also four limiters **62** permanently fastened inside the space rocket fuselage. On the limiters **62** will lean against all flat bars **72** while the entire spreadable arm **5** will be entirely lifted to the P6 setting. Between two lateral beams **56** upper bent parts is situated the pushing mechanism of the blocking bar **54**, which was earlier exactly described. Further description of the current views are the same as previous FIG. **126-131** and therefor are not fully quoted here.

FIG. **135**, **136**, **137** show three enlarged views of the entire moving mechanism of one spreadable arm **5** together with the fragments of two lateral beams **56** of the spreadable arm **5** in P1 setting. And FIG. **135** is the side view, FIG. **136** is the top view, FIG. **137** is the front view. Here, are not any space rocket fragments except of four limiters **62**. Here, are also visible the limiters **62** whereon will lean against the flat bars **72** while the entire spreadable arm **5** will be entirely lifted to the P6 setting. All these views show in most detail way the entire moving mechanism construction of one spreadable arm **5**. Further description of this moving mechanism construction of one spreadable arm **5** is in previous FIG. **132-134**.

FIG. **138**, **139**, **140** show three enlarged views of alone moving mechanism components of one spreadable arm **5**. On these views are very well visible all components of this moving mechanism, which were described in previous FIG. Whereas, FIG. **138** is the side view, FIG. **139** is the top view, FIG. **138** is the front view. This FIG. **138** shows also for example two sketches of one special nut **76** with the cylindrical peg **77** in two locations on one threaded pipe **75**. These sketches show in what way the special nuts **76** can move on the threaded pipes **75**.

FIG. **141**, **142**, **143** show the enlarged views of four flat bars **72** (having the oval openings), which are permanently fastened to both lateral beams **56** upper bent parts. These views are related to FIG. **138-140**.

FIG. **144**, **145**, **146** show outside and partly inside the space rocket fragment, three views of one entire spreadable arm **5** in P2 setting, which is in one-quarter lifted and consequently, it protrudes outside the space rocket fuselage. Whereas, FIG. **144** is the side view and the partial vertical sectional view of the space rocket fuselage. And FIG. **145** is the top view. And FIG. **146** is the front view but only outside the space rocket fuselage. This FIG. **146** has also an auxiliary bottom projection without some drawing number. On FIG. **144** are also sketched intermediate settings of the spreadable arm **5**, it means in P3, P4 and P5 settings. There is also marked P6 final setting thus, while the spreadable arm **5** is entirely lifted. Here, the arrows show the spreading direction of this spreadable arm **5** from its P1 first setting up to its last P6 setting. Inside the space rocket fragment FIG. **144** shows all components and moving mechanism of the spreadable arm **5**. The lateral beams **56** upper bent parts with the flat bars **72** are in P2 setting and are also sketched in P3 setting. There is also the pressure tank **61** fragment in the space rocket interior and it shows and explain that the flat bars **72** during their moving do not hook with this pressure tank **61**. On the space rocket fuselage one large arrow shows the space rocket descent direction in the Earth's atmosphere while the external arrows show from what direction comes flying atmospheric air and consequently in what way this atmospheric air strongly crowds into spreadable arm **5** in P2, P3, P4 and P5 settings. Currently, the entire blocking bar **54** is inside the space rocket fuselage. Here, are visible a lot of components mentioned in FIG. **126**, **127**, **128**. Here, and on a few further FIGs., the lateral beams **56** ends and the middle beams **55** ends are marked with crossed lines as an X letter so that those ends would be better visible.

FIG. **147**, **148**, **149** show three enlarged drawing fragments of previous FIG. **144**, **145**, **146**. Current views show the upper part of the spreadable arm **5** in P2 setting. And FIG. **147** is the side view and the partial vertical sectional view of the space rocket fuselage. Here, is visible the pressure tank **61** fragment inside the space rocket fuselage. And FIG. **148** is the top view and here are visible a plurality of subjacent components, which are not visible on FIG. **147**, **149**. And FIG. **149** is the front view but only of the sub-assemblies outside the space rocket. All current views show in the most detail way surrounding of the flat bars **72** with the lateral beams **56** upper bent parts in P2 setting in relation to the spreadable arm **5** all moving mechanism components. Here, is a visible way of acting of one spreadable arm **5** entire moving mechanism. The servomotor **73** propelled the common roller **78** whereby propelled two worm gears **74**, and they caused rotation of both threaded pipes **75**. It then caused that both special nuts **76** with both cylindrical pegs **77** moved down on these both threaded pipes **75**. Hence, both cylindrical pegs **77** pushed down all flat bars **72** together with both lateral beams **56** upper bent parts, and it caused that the entire spreadable arm **5** lifted itself outside the space rocket fuselage. During moving down of both special nuts **76** their both cylindrical pegs **77** move slidingly in the flat bars **72** oval openings. On FIG. **147** are also visible the limiters **62** whereon will lean against the flat bars **72** while the entire spreadable arm **5** will be entirely lifted to the P6 setting. It is shown on the next FIG. **150-157**. Here, is also the linear actuator **70**, which moves slidingly the blocking bar **54** inside the large C-shaped beam **69**. Currently, the blocking bar **54** is entirely inside the space rocket fuselage.

FIG. **150**, **151**, **152**, **153** show outside and inside the space rocket fragment the views of one entire spreadable arm **5** in the P6 setting, which is entirely lifted and consequently it is transverse the space rocket fuselage. Whereat the blocking bar **54** is slid maximally outside the space rocket fuselage and it entirely blocked the middle beam **55** in the spreadable arm **5**. And FIG. **150** is the side view with partial vertical sectional view of the space rocket fuselage. And FIG. **151** is the top view and with all components and mechanisms and this view has one auxiliary right-side-view without some drawing number. And FIG. **152** is the front view outside the space rocket fuselage. This view in the space rocket interior has the sketches of the flat bars **72** together with both lateral beams **56** upper bent parts. On the space rocket fuselage are visible two whole corner beams **52**, which lead the slider **53** of the spreadable arm **5**. This view has also the auxiliary bottom projection without some drawing number. On FIG. **150** on the space rocket fuselage one large arrow shows the space rocket descent direction in the Earth's atmosphere. Whereas, the external arrows show from what direction comes flying atmospheric air and consequently in what way this atmospheric air strongly crowds into the spreadable arm **5** entirely lifted. FIG. **153** is an auxiliary side view and the

partial vertical sectional view, which show FIG. **152** only in the middle. Namely, FIG. **153** shows the fragments of the middle beam **55**, of the slider **53** and of a blocking bar **54** fragment. All views show that the flat bars **72** together with the lateral beams **56** upper bent parts are directed down inside the space rocket fuselage and consequently are alongside of the space rocket fuselage. On FIG. **150** is well visible that all flat bars **72** are leaned against on the limiters **62** in the space rocket fuselage. The blocking bar **54** is slid maximally outside the space rocket fuselage and it entirely blocked the middle beam **55** in the spreadable arm **5**. There is visible an empty part of the large C-shaped beam **69** because the blocking bar **54** moved slidingly and lineally outside. Whereas, the linear actuator **70** is folded entirely up. The middle beam **55** after its blocking gains possibility of carrying burdens in all directions.

Burdens carrying ability by this middle beam **55** is very beneficial for the entire spreadable arm **5**. During aerodynamic braking and during hanging of the space rocket on two damping wagons **30** or two **31**, all spreadable arms **5** will be maximally burden. Recommended is therefor so that all middle beams **55** would carry also burdens together with all lateral beams **56**. Current views descriptions are tied with descriptions of the pushing mechanism of the blocking bar **54** in earlier FIG. **129-131**.

FIG. **154**, **155**, **156**, **157** show the enlarged drawing fragments of earlier FIG. **150-153**. Whereas, FIG. **154** is the side view, FIG. **155** is the top view And FIG. **156** is the front view, FIG. **157** is the auxiliary side view and the partial vertical sectional view, which show FIG. **156** only in the middle. Whereat on the current FIG. **155** are visible a plurality of subjacent components, which are not visible on FIG. **154**, **156**. Current views descriptions are the same as descriptions of previous FIG. **150-153** and descriptions of the pushing mechanism of the blocking bar **54** on the earlier FIG. **129-131**. On the current views are more clearly visible the blocking bar **54** with the T-groove, the large C-shaped beam **69**, the vertical low bar **71**, the linear actuator **70** and the middle beam **55** with the T-bar **67**.

FIG. **158**, **159**, **160** show three views of alone spreadable arm **5**, which is entirely lowered ergo it is in P1 setting. These views are similar to FIG. **126**, **127**, **128** however do not contain the moving mechanism of this spreadable arm **5** except of the cylindrical pegs **77**. There are also not the space rocket fuselage fragments except of four bearing brackets **80** and four limiters **62**. While, here is also the entire pushing mechanism of the blocking bar **54**, which is not slid outside. And FIG. **158** is the side view and here the arrows show the moving directions of the spreadable arm **5** components and of the blocking bar **54**. And FIG. **159** is the top view, FIG. **160** is the front view together with five auxiliary horizontal sectional views and with one bottom projection, all without any drawing numbers. All views show that each such spreadable arm **5** mainly consists of two lateral beams **56** and of one middle beam **55**. Both lateral beams **56** are bent in the upper part and are rotatably installed to the space rocket fuselage by means of two bearing axles **63**. Both lateral beams **56** upper bent parts have permanently fastened the flat bars **72** having the oval openings. Both lateral beams **56** are subsidiary permanently fastened with themselves by means of two plates without some numbers. Whereat each bearing axle **63** is up-borne to the space rocket fuselage by means of two bearing brackets **80**. Both lateral beams **56** are rotatably joined by one common long axle **65** with the middle beam **55**. On the common long axle **65** are also two distance blocks **81**, which are between the middle beam **55** and each lateral beam **56**. On the middle beam **55** upper part is permanently fastened the long plate **64** for aerodynamic purposes. In the middle beams **55** one side is permanently fastened the T-bar **67**. In the middle beam **55** lowest end is rotatably installed the slider **53** by means of the holding axle **66**. Furthermore, inside the middle beam **55** lowest end is installed the frictional brake **68**.

FIG. **161**, **162**, **163** show three enlarged drawing fragments of FIG. **158**, **159**, **160**. And FIG. **161** is the side view, FIG. **162** is the top view, FIG. **163** is the front view together with five auxiliary horizontal sectional views and with one bottom projection. Current views descriptions are the same as descriptions of previous FIG. **158-160**. Here, are more clearly visible all smaller components as the vertical low bar **71**, the T-bar **67**, the slider **53**, the frictional brake **68**. Furthermore, in the blocking bar **54** is visible the T-groove.

FIG. **164**, **165**, **166** show three views of alone spreadable arm **5**, which is in one-quarter lifted to the P2 setting. These views are similar to FIG. **144**, **145**, **146** however do not contain the moving mechanism of this spreadable arm **5** except of the cylindrical pegs **77**. There are also not the space rocket fragments except of four bearing brackets **80** and four limiters **62**. While, here is also the entire pushing mechanism of the blocking bar **54**, that is not slid outside. And FIG. **164** is the side view and here is visible in what way stoop flown the lateral beams **56** upper bent parts and together with them stoop down the flat bars **72**, which have the oval openings. Here, the arrows show the directions of further moving of the spreadable arm **5** components and of the blocking bar **54**. And FIG. **165** is the top view, FIG. **166** is the front view.

FIG. **167**, **168**, **169** show three enlarged drawing fragments of FIG. **164**, **165**, **166**. Whereas, FIG. **167** is the side view, FIG. **168** is the top view, FIG. **169** is the front view. Current views descriptions are the same as descriptions of previous FIG. **164**, **165**, **166**. Here, are better visible all smaller components. Furthermore, in the blocking bar **54** is visible the T-groove.

FIG. **170**, **171**, **172** are three views of alone spreadable arm **5** together with the entire pushing mechanism of the blocking bar **54**, which is not slid outside while the arrows show its sliding direction and range. The spreadable arm **5** is entirely lifted to the P6 setting. And FIG. **170** is the side view, FIG. **171** is the top view, FIG. **172** is the front view. Current views do not contain the moving mechanism of the spreadable arm **5** except the cylindrical pegs **77**. Current views are in the same arrangement as previous FIG. **150-153** yet here are not any space rocket fragments except four bearing brackets **80** and four limiters **62**.

FIG. **173**, **174**, **175** are three views of alone middle beam **55** together with entire pushing mechanism of the blocking bar **54**, that is not slid outside while lots of small arrows show its sliding direction and range. The middle beam **55** is entirely lifted to the P6 setting as on previous FIG. **170-172**. And FIG. **173** is the side view, FIG. **174** is the top view, FIG. **175** is the front view.

FIG. **176** is the side view of alone middle beam **55** together with the entire pushing mechanism of the blocking bar **54**. Here, the blocking bar **54** is slid very little outside to a location where it will soon begin to slip into the T-bar **67**, which is permanently fastened to the middle beam **55**.

FIG. **177** is the side view of alone middle beam **55** together with the entire pushing mechanism of the blocking bar **54**. Here, the blocking bar **54** is slid a lot outside and consequently is inserted already into the T-bar **67** half length. Here, is visible the empty part of the large C-shaped beam **69** because the blocking bar **54** slid a lot outside.

FIG. **178**, **179** are two views of alone spreadable arm **5** together with the entire pushing mechanism of the blocking bar **54**. And FIG. **178** is the side view, FIG. **179** is the top view. Here, the blocking bar **54** is maximally slid outside and consequently is already entirely inserted into the T-bar **67**. Here, is visible the empty part of large C-shaped beam **69** because the blocking bar **54** moved slidingly and lineally maximally outside. In maximally slid outside location the blocking bar **54** fulfills its main function, which is total blocking the middle beam **55** in all directions. The middle beam **55** after its blocking gains possibility of carrying burdens in all directions. Therefore, the middle beam **55** after its blocking carries burdens together with both lateral beams **56**. It significantly influences upon full-load capacity of one spreadable arm **5**. The middle beam **55** blocking causes also strengthening of the entire spreadable arm **5** in all directions. Burdens upon all spreadable arms **5** will occur during the space rocket descent in the Earth's atmosphere and during the space rocket hanging itself on two damping wagons **30** or two **31**. During the space rocket descent in the atmosphere it will maneuver, which will cause strong torsional forces on all spreadable arms **5**. Although the most important is that the middle beam **55** after its blocking—gains upward carrying capacity, which is necessary during the space rocket hanging itself on two damping wagons **30** or two **31**. Hence, the middle beam **55** blocking by the blocking bar **54** is very important for each spreadable arm **5**.

FIG. **180**, **181**, **182** show the enlarged drawing fragments of FIG. **170**, **171**, **172** in the same arrangement. And FIG. **180** is the side view, FIG. **181** is the top view, FIG. **182** is the front view.

FIG. **183**, **184**, **185** show the enlarged drawing fragments of FIG. **173**, **174**, **175** in the same arrangement. And FIG. **183** is the side view, FIG. **184** is the top view, FIG. **185** is the front view.

FIG. **186** is the side view and shows the enlarged drawing fragment of FIG. **176** in the same setting.

FIG. **187** is the top view and shows the enlarged drawing fragments of FIG. **177** in the same setting.

FIG. **188**, **189**, **190**, **191** show the views of the frictional brake **68** installed inside the middle beam **55** lowest end together with the slider **53**. One frictional brake **68** consists of one brake block **82** and of one linear actuator **83**. On all views this frictional brake **68** is sketched because it is inside the middle beam **55** lowest end. And FIG. **188** is the side view, FIG. **189** is the top view, FIG. **190** is the front view. On these views the middle beam **55** is vertically set ergo it is in P1 setting. And FIG. **191** is side view of alone middle beam **55** lowest end, which is slanted to the P6 full setting. On all views is visible the slider **53**, which has a side-ward protruding part and wherein is situated the holding axle **66**. In the middle beam **55** lowest end are permanently fastened two ending brackets **84** with the holes. Here, is also visible the T-bar **67** permanently fastened to the middle beam **55**. All views display mutual setting of the brake block **82**, the linear actuator **83**, the slider **53** and of the holding axle **66**. And on all views, the arrows show the moving direction of the brake block **82**. The brake block **82** pressure on the side-ward protruding part of the slider **53** will brake its rotation against the middle beam **55**. The whole frictional brake **68** is supposed to enable blocking this rotation, which will step-by-step immobilize the slider **53** between two corner beams **52** on the space rocket fuselage. While, the holding axle **66** fulfills here only guiding function. Step-by-step immobilizing of the slider **53** by the frictional brake **68** will step-by-step immobilize the spreadable arm **5** lowermost part. Step-by-step immobilizing of all spreadable arms **5** lowermost parts will be necessary during the space rocket descent in the Earth's atmosphere. The frictional brake **68** fulfills subsidiary function because the entire spreadable arm **5** will be lifted and set to the suitable setting by its moving mechanism, which contains in itself also blocking function and braking function.

FIG. **192**, **193**, **194**, **195** show the views of one sliding engines cover **7**, which can be lowered and here is in a version flat underneath after its lowering. The sliding engines cover **7** is installed to the space rocket fuselage bottom because there are its main engines. All current views show only the booster space rocket **1** bottom.

Currently, the sliding engines cover **7** is entirely lifted, and it causes that all main engines nozzles **85** are entirely uncovered. And FIG. **192** is the side view. And FIG. **193** is the top view only of the current space rocket fragment. And FIG. **194** is the front view. And FIG. **195** is the bottom projection of FIG. **192** and that mean the current space rocket bottom in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the above views.

The whole sliding engines cover **7** is installed to the space rocket fuselage bottom by means of four flat carrying plates **86** and four angle profiles **90**. The whole sliding engines cover **7** consists of two sliding jalousies **88**, two sliding rounded plates **9**, two U-shaped rails **87**, two stiffening beams **92**, two side plates **89**. Wherewith each jalousie **88** is joined by a plurality of hinges with one side plate **89**. Whereas, each rounded plate **91** slides in two angle profiles **90**.

All flat carrying plates **86** are permanently fastened to this space rocket fuselage and are perpendicular to this space rocket fuselage. To the carrying plates **86** opposite sides are permanently fastened two U-shaped rails **87**. These two U-shaped rails **87** are long and are installed on the space rocket fuselage opposite sides. Each U-shaped rail **87** is permanently fastened to two carrying plates **86**. Thereby both U-shaped rails **87** stretch on from the space rocket fuselage one side to its bottom and further to the space rocket fuselage opposite side. Consequently, each U-shaped rail **87** reminds with its shape an extensive U letter. The opposite U-shaped rails **87** upper ends are permanently fastened with themselves and with the space rocket fuselage by means of two stiffening beam **92**. In both U-shaped rails **87** are placed two jalousies **88** wherewith each one is joined by the plurality of hinges with one side plate **89**. Both jalousies **88** with the side plates **89** are placed on two opposite sides of the space rocket fuselage. Both jalousies **88** with the side plates **89** can move slidingly in two U-shaped rails **87**. As result of their sliding down, they will slide to the U-shaped rails **87** bottom part. Then both jalousies **88** will come to each other, touch on themselves and then tighten up to each other in the U-shaped rails **87** bottom and in their middle. During moving down of both jalousies **88**, there will move slidingly down also both side plates **89**, which will remain in the vertical part of the U-shaped rails **87**. And as result, underneath the space rocket arises a square flat surface after coming to each other and touching on themselves of both jalousies **88**. This square flat surface will cover the main engines underneath whereas, this space rocket enters into the Earth's atmosphere.

Furthermore, to the space rocket fuselage are installed said two rounded plates **91**, which are situated on two opposite sides of the space rocket fuselage that mean the sides, which are not cover in fullness by both jalousies **88**. Each rounded plate **91** slides in two angle profiles **90**. All four angle profiles **90** are permanently fastened to the space

rocket fuselage. In two angle profiles **90** is placed one rounded plate **91**, which can move slidingly and up in these two angle profiles **90**. Both rounded plates **91** after their lowering shield almost the entire main engines on the both sides, which are not entirely covered by both jalousies **88**. Consequently, both rounded plates **91** create two extensive side shields of the main engines. On all views, the arrows show the sliding directions of both jalousies **88** with the side plates **89** and of both rounded plates **91**. The sliding engines cover **7** will be entirely lifted during running the space rocket main engines ergo during the space rocket launch and during braking action at space rocket landing Both jalousies **88** can be very easy and quickly replace by two new after each space rocket landing. On FIGS. **193** and **195** are visible airy spaces between the space rocket fuselage and the sliding engines cover **7** all components. Throughout these airy spaces can freely breeze air. These airy spaces for air cause that during the space rocket launch there will not be aero-dynamic braking caused by the sliding engines cover **7**. Shown here, the solution of the sliding engines cover **7** does not contain some sliding mechanisms of the jalousies **88** and of the rounded plates **91**. These sliding mechanisms can be made according to a general known solutions.

FIG. **196**, **197**, **198**, **199** show the views of one sliding engines cover **7**, which can be lowered and here is in the version flat underneath after its lowering. The sliding engines cover **7** is installed to the space rocket fuselage bottom because there are its main engines. All current views show only the booster space rocket **1** bottom. Currently, this sliding engines cover **7** is entirely lowered and it causes that the space rocket bottom is entirely covered underneath and almost entirely at both sides. And FIG. **196** is the side view, FIG. **197** is the top view only of the current space rocket fragment, FIG. **198** is the front view, FIG. **199** is the bottom projection of FIG. **196** and that mean the current space rocket bottom in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the above views. On these projections are visible that both jalousies **88** came to each other and touched on themselves in the U-shaped rails **87** bottom and in their middle. Whereat on FIGS. **196** and **198** are visible that both rounded plates **91** are entirely lowered until both jalousies **88**. Here, are also visible all components mentioned in description of previous FIG. **192-195**. The sliding engines cover **7** will be rapidly and entirely lowered before the space rocket entry into the Earth's atmosphere. It will cover all space rocket main engines against a blast of air and consequently becoming overheated. Thereafter, the sliding engines cover **7** will remain shut down during the space rocket further descent in the Earth's atmosphere until a moment while it will be necessary the main engines firing blast for braking action at space rocket landing. Lifting of the sliding engines cover **7** can occur rapidly quickly.

FIG. **200**, **201**, **202**, **203** show the views of the sliding engines cover **7**, which can be lowered and here is in the version flat underneath after its lowering. The sliding engines cover **7** is installed to the space rocket fuselage bottom because there are its main engines. All current views show only the booster space rocket **1** bottom. On FIG. **200-201** the sliding engines cover **7** is entirely lifted and the exhaust fumes **9** gush down of all main engines nozzles **85**. Whereas, FIG. **200** is the side view. And FIG. **201** is the front view. Here, is visible that all exhaust fumes **9** gush down but beside both U-shaped rails **87** and consequently they cannot melt them. Furthermore, the U-shaped rails **87** do not brake gushing down the exhaust fumes **9** of all nozzles **85**. Such space rocket status will occur during the space rocket launch and for beginning of the space rocket descent from the Earth's orbit and later also at final phase for braking action at space rocket landing Whereat on FIG. **202-203** the sliding engines cover **7** is entirely lowered and it causes that the space rocket bottom is entirely covered. And FIG. **202** is the side view. And FIG. **203** is the front view. Such space rocket status will occur during the space rocket entering into the Earth's atmosphere and its further descent until a moment while there will be necessary the main engines firing blast for braking action at space rocket landing. Lifting of the sliding engines cover **7** can occur rapidly quickly. Here, on the space rocket fuselage, the large arrows show the space rocket descent direction in the Earth's atmosphere. Whereat the external arrows show from what direction comes flying atmospheric air and consequently in what way this air strongly crowds into both jalousies **88**, which came to each other inside the U-shaped rails **87**. While, both rounded plates **91** shield almost entirely at both sides the main engines nozzles **85**. Here, are also visible the components mentioned in descriptions of FIG. **192-195**.

FIG. **204**, **205**, **206**, **207** show the views of one sliding engines cover **8**, which can be lowered and here is in a version wedge shaped underneath after its lowering. This sliding engines cover **8** is installed to the space rocket fuselage bottom because there are its main engines. All current views show only the booster space rocket **1** bottom. Currently, the sliding engines cover **8** is entirely lifted and it causes that all main engines nozzles **85** are entirely uncovered. Whereas, FIG. **204** is the side view. And FIG. **205** is the top view only of the current space rocket fragment. And FIG. **206** is the front view. And FIG. **207** is the bottom projection of the current space rocket bottom in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the above views. This version of the sliding engines cover **8** is very similar in construction to the version flat underneath shown on FIG. **192-195**. Current version, the sliding engines cover **8** creates a wedge underneath the space rocket after coming to each other and touching on themselves of both jalousies **88**. This wedge underneath the space rocket entirely cover underneath the space rocket main engines. Furthermore, both rounded plates **91** are pointed in two bottom edges so that they adjoin to both jalousies **88**. Here, in the space rocket fuselage are different arrangements and kinds of the main engines nozzles so that the exhaust fumes **9** completely pass by the U-shaped rails **87**. On all views, the arrows show the sliding directions of both jalousies **88** and both rounded plates **91**. Here, is visible that the exhaust fumes **9** gush down but beside both U-shaped rails **87** and consequently they cannot melt them. Furthermore, the U-shaped rails **87** do not brake gushing down of the exhaust fumes **9** of all nozzles **85**. Here, are also visible the components mentioned in description FIG. **192-195**.

FIG. **208**, **209**, **210**, **211** show the views of the sliding engines cover **8**, which can be lowered and here is in the version wedge shaped underneath after its lowering. This sliding engines cover **8** is installed to the space rocket fuselage bottom because there are its main engines. Current views show only the booster space rocket **1** bottom. On all views the sliding engines cover **8** is entirely lowered and it causes that the space rocket bottom is entirely covered. The views on FIG. **208**, **209** show the plurality of main components' emplacement of the sliding engines cover **8** in relation to themselves and with the components sketches, which are veiled by a plurality of other members. And FIG. **208** is the side view, FIG. **209** is the front view. Whereat the views on FIG. **210-211** do not have the components sketches, which

are veiled by the plurality of other members. And FIG. **210** is the side view, FIG. **211** is the front view. These views show in what way this sliding engines cover **8** expands and divides in two sides atmospheric air during the space rocket descent in the Earth's atmosphere. Underneath the space rocket arose the large wedge-shape after coming to each other and touching on themselves of both jalousies **88**. This large wedge-shape underneath the space rocket covers the main engines whereas, this space rocket enters into the Earth's atmosphere. Furthermore, this large wedge-shape will divide and bend an air stream in two directions outside the space rocket fuselage. Here, on the space rocket fuselage, the large arrows show this space rocket descent direction in the Earth's atmosphere. Whereat the external arrows show from what direction comes flying atmospheric air and consequently in what way this atmospheric air strongly crowds into both jalousies **88**, which came to each other inside the U-shaped rails **87**. While, both rounded plates **91** shield almost entirely the main engines on both sides, which are not entirely covered by the jalousies **88**. Such space rocket status will occur during the space rocket entering the Earth's atmosphere and its further descent until the moment while there will be necessary the main engines firing blast for braking action at landing. Lifting of the sliding engines cover **8** can occur rapidly quickly. Here, are also visible the components mentioned in descriptions of FIG. **192-195**.

FIGS. **212**A, **212**B, **213**, **214**A and **214**B show the views of the upper and bottom parts of one booster space rocket **1**, which descends in the first time period at giant speed in the Earth's atmosphere. Whereas, FIG. **212**A is the side view of the upper part, and FIG. **212**B is the side view of the bottom part. And FIG. **214**A is the front view of the upper part, and FIG. **214**B is the side view of the bottom part. And FIG. **213** is the top view in two equal views, which are rotated 90 degrees in relation to each other so that they cohere with the below views. This booster space rocket **1** has six spreadable arms **5**, four steering flaps **6**, six blocking bars **54** and the sliding engines cover **7** flat underneath. Currently, all six spreadable arms **5** are entirely lowered and consequently are alongside the space rocket fuselage; four flaps **6** are a bit deflected out from the space rocket fuselage for steering this space rocket descent direction; all six blocking bars **54** are entirely slid outside so that causing small aerodynamic braking, which will stabilize this space rocket descent; the sliding engines cover **7** is entirely lowered and it causes that the space rocket bottom is entirely covered. Such arrangement of all components and sub-assemblies of this entire booster space rocket **1** will occur during its descent in the first time period at giant speed in the Earth's atmosphere. On FIG. **212**A, **212**B and FIG. **214**A, **214**B, on the space rocket fuselage the large arrows show the space rocket descent direction in the Earth's atmosphere. Whereat remaining arrows show in several places what happens with the space rocket and its sub-assemblies in such situation. These arrows show from what direction comes flying atmospheric air and consequently in what way this atmospheric air strongly crowds into sliding engines cover **7**, into six blocking bars **54** and into four flaps **6**. Simultaneously the arrows also show the deflection directions of the flaps **6** for steering the space rocket's descent direction.

And FIGS. **215**A, **215**B and **216** show the views of the upper and bottom parts of one booster space rocket **1**, which descends in the second time period at average speed in the Earth's atmosphere. Whereas, FIG. **215**A is the side view of the upper part, and FIG. **215**B is the side view of the bottom part. And FIG. **216** is the top view. This booster space rocket **1** has six spreadable arms **5**, four steering flaps **6** and the sliding engines cover **7** flat underneath. Currently, all six spreadable arms **5** are lifted somewhat and consequently, they protrude outside the space rocket fuselage; four flaps **6** are a lot deflected out the space rocket fuselage; the sliding engines cover **7** is entirely lowered and it causes that the space rocket bottom is entirely covered. Whereas, all six blocking bars **54** are entire in the space rocket interior because now they would not cause any aerodynamic braking. Moreover, here are well visible the corner beams **52** on the space rocket fuselage because all spreadable arms **5** are lifted somewhat. Such arrangement of all components and sub-assemblies of this entire booster space rocket **1** will occur during its descent in the second time period at average speed in the Earth's atmosphere. This average speed of the space rocket descent enables tiny lifting of all spreadable arms **5** as on the current views. On FIGS. **215**A, and **215**B on the space rocket fuselage, the large arrows show the space rocket's descent direction in the Earth's atmosphere. Whereat the remaining arrows show in several places what happens with the space rocket and its sub-assemblies in such situation. These arrows show from what direction comes flying atmospheric air and consequently in what way this atmospheric air strongly crowds into sliding engines cover **7**, into six spreadable arms **5**, which are lifted somewhat, into four flaps **6**, which are a lot deflected out of the space rocket fuselage. Simultaneously the arrows also show the deflection directions of the flaps **6** for steering the descent direction. During the space rocket descent and at the same time lifting of each spreadable arm **5**, airflow exerts very large pressure on two lateral beams **56** and the middle beam **55** with the long plate **64**. The long plate **64** permanently fastened on the middle beam **55** causes that pressure exerted on them even out with pressure exerted on two lateral beams **56**. Without the long plate **64** pressure exerted on two lateral beams **56** would be probably twice bigger than on one middle beam **55**, and it might too strongly push the entire spreadable arm **5** upward.

The final arrangement status of all components and sub-assemblies of this entire space rocket will occur during its descent in the third time period at slow speed in the Earth's atmosphere and which is shown on the further FIG. **262-267**. Then slow speed of the space rocket descent in the Earth's atmosphere will enable total lifting of all spreadable arms **5**.

FIG. **217**, **218**, **219**, **220** show the views of one entire main space rocket **2**, which has revolvingly installed the sectional load cover **4** and, which is dividable into two sections by gradually folding out on two opposite sides. And the sectional load cover **4** is adapted to gradually folding up by pooling together both sections to total shutting. This sectional load cover **4** serves for covering inside the payload **100** and this way creates its thermal protection during the space rocket ascent and descent in the Earth's atmosphere. Thus, inside the sectional load cover **4** can be fastened the payload **100**, which will be carried out on the Earth's orbit and later can be fastened the return load **106**, that will be carried down on the Earth. The sectional load cover **4** is revolvingly installed on the main space rocket **2** upper part and can be situated over the second stage rocket **3**. The sectional load cover **4** can be completely lowered to the main space rocket **2** upper part as well. This sectional load cover **4** is attached to the main space rocket **2** by means of four long cog beams **93**. Currently, to the main space rocket **2** is also directly attached the second stage rocket **3**. Here, the sectional load cover **4** is shut up, and all cog beams **93** are outside and on both sides of the second stage rocket **3**. While, inside the sectional load cover **4** is placed the payload **100**, which will be carried out on the Earth's orbit. This

payload **100** is attached to the second stage rocket **3**. Whereas, FIG. **217** shows the side view of one entire main space rocket **2**, which is ready for launch. And FIG. **218** shows the front view of the same main space rocket **2**. Whereat FIG. **219** is the same as FIG. **217** albeit contains the payload **100** sketches inside the shut up sectional load cover **4** and the second stage rocket **3** sub-assemblies sketches, which are veiled by a plurality of other modules. Whereat FIG. **220** is the same as FIG. **218** albeit contains the same sketches as FIG. **220**. Moreover, on FIGS. **217** and **219** the external arrows show the spreading directions of the sectional load cover **4** into two sections on two sides.

FIG. **221** is the side view of the second stage rocket **3** whereon is attached the payload **100**, which will be carried out on the Earth's orbit. Here, the second stage rocket **3** has one nozzle **85**, which is foldable.

FIG. **222** is the side view of the second stage rocket **3** where-from ascends freely the payload **100**.

FIG. **223**, **224** show the enlarged views of the main space rocket **2** upper part, which were earlier shown on FIG. **219-220**. Here, the main space rocket **2** upper part has revolvingly installed the sectional load cover **4**, which is dividable into two sections and gradually foldable out on two opposite sides. And later this sectional load cover can be gradually pooled together up to total shutting. This sectional load cover **4** is revolvingly installed to the main space rocket **2** by means of four cog beams **93**. Now to the main space rocket **2** is also directly attached the second stage rocket **3**. Here, the sectional load cover **4** is shut up, and all cog beams **93** are outside and on both sides of the second stage rocket **3**. While, inside the sectional load cover **4** is placed the pia load **100**, that will be carried out on the Earth's orbit. This payload **100** is attached to the second stage rocket **3**. And FIG. **223** shows the side view of the main space rocket **2** upper part and contains the payload **100** sketches inside the shut up sectional load cover **4** and contains the second stage rocket **3** fragments sketches, which are veiled by other modules. Here, the external arrows also show the spreading directions of the sectional load cover **4** into two sections on two sides. This view shows that the sectional load cover **4** can divide into two sections and can fold out on two opposite sides, because it is two-sectional and is installed to the main space rocket **2** by means of four cog beams **93**. And FIG. **224** shows the front view of the main space rocket **2** upper part and contains the same fragments as FIG. **223**. Here, is visible that to the main space rocket **2** upper part are installed four rotating heads **94** of the cog beams **93**. These rotating heads **94** are in this space rocket interior and are in two opposite sides of this space rocket fuselage. Each rotating head **94** is driven by one servomotor with one reduction gear, which rotate one rotating axle **95**. The rotating axles **95** of the rotating heads **94** are permanently fastened to the cog beams **93**, which are outside the space rocket fuselage. Therefor all four cog beams **93** can incline on the sides and with them also both sections of the sectional load cover **4**. Each one section of the sectional load cover **4** is held up and incline by two cog beams **93**. The cog beams **93** are long and are outside on both sides of the second stage rocket **3**. All cog beams **93** come up and enter inwards both sections of the sectional load cover **4**. While, inside the sectional load cover **4** each cog beam **93** is held up by means of one hoisting gear **96**. Each one section of this sectional load cover **4** has installed its own two hoisting gears **96**, namely of lifting itself. Each hoisting gear **96** is driven by one servomotor with one reduction gear, which rotates one cog wheel **97**, which is fitted in with one cog beam **93**. All cog beams **93** protrude suitably up over the hoisting gears **96** so that it would be possible to initially lift the entire sectional load cover **4**. The cog beams **93** protruding up inside the sectional load cover **4** are visible on the current views and are indicated with the large exclamatory sign.

FIG. **225**, **226** show the enlarged views of the main space rocket **2** upper part shown also earlier on the similar FIG. **223-224**. Currently, the sectional load cover **4** is lifted maximally on four long cog beams **93**. This enables spreading it out on two sides. On the current FIG. **225**, the external arrows show spreading directions of the sectional load cover **4** into two sections on two sides. Whereas, FIG. **225** is the side view, FIG. **226** is the front view. Here, is visible vacant space between the sectional load cover **4** bottom edge and the second stage rocket **3** upper edge. This vacant space is visible on the current views and is indicated with the large exclamatory sign. In this vacant space is already visible a fragment of the payload **100**, that will be carried out on the Earth's orbit. The sectional load cover **4** became lifted maximally on four cog beams **93** because rotating four cog wheels **97** climbed up on four cog beams **93**. Four cog wheels **97** are driven by four hoisting gears **96**.

FIG. **227** shows enlarged side view of the main space rocket **2** upper part shown earlier on FIG. **223-225**. Here, the sectional load cover **4** is already spread a little out on two sides. It is possible because there is vacant space between the sectional load cover **4** bottom edge and the second stage rocket **3** upper edge. This vacant space is visible on the current view and is indicated with two large exclamation marks. This view well shows, in what way the sectional load cover **4** can be folded out on two sides because it is two-sectional and is installed to the main space rocket **2** by means of four cog beams **93**. Simultaneously it is visible that the cog beams **93** are rotatably installed to the main space rocket **2** fuselage. These cog beams **93** are permanently fastened to the rotating axles **95**, which are rotated by the rotating heads **94**. All rotating axles **95** became rotated tiny angle, and it rotated the same tiny angle all entire cog beams **93** and with them also both sections of the sectional load cover **4**. Here, the entire cog beams **93** are continuously outside and on both sides of the second stage rocket **3**. Currently, is already a lot uncovered the payload **100**, which will be carried out on the Earth's orbit.

FIG. **228** shows very diminished the side view of one entire main space rocket **2**, that has entirely folded out on two sides the sectional load cover **4** and shows the sketch its intermediate folding out. Because of total folding out on two sides the sectional load cover **4** there is entirely uncovered the pia load **100**, which is attached to the second stage rocket **3**.

FIG. **229** shows the side view of the main space rocket **2** upper part, which has entirely folded out on two sides the sectional load cover **4** and the sketch its intermediate folding out. Because of total folding out on two sides the sectional load cover **4**, there is entirely uncovered the payload **100**, which is attached to the second stage rocket **3**. While, this second stage rocket **3** is still attached to the main space rocket **2**.

FIG. **230** shows the side view of the main space rocket **2** upper part, which has also the entirely folded out sectional load cover **4**. And here, the second stage rocket **3** with attached the payload **100** ascend together because they already separated from the main space rocket **2**. All earlier views well show in what way the sectional load cover **4** can be folded out on two sides because it is two-sectional and is installed to the main space rocket **2** by means of four cog beams **93**. Simultaneously it is visible that the cog beams **93** are rotatably installed to the main space rocket **2** fuselage.

FIG. **231** shows the side view of the main space rocket **2** upper part, which has entirely folded out on two sides the sectional load cover **4**. Here, the second stage rocket **3** with attached the return load **106** approach together to the main space rocket **2** in order to dock with it. The second stage rocket **3** has the nozzle **85**, which is folded for more safely docking.

FIG. **232** shows the side view of the main space rocket **2** upper part whereto is already docked the second stage rocket **3** with attached the return load **106**. Here, the sectional load cover **4** is already a little shut up. Sequentially the sectional load cover **4** will be shut totally up and consequently will hide inside the entire return load **106** from the Earth's orbit.

FIG. **233**, **234**, **235**, **236** show the views of alone main space rocket **2** upper part ergo without docked the second stage rocket **3**. Whereas, FIG. **233** shows the side view of alone main space rocket **2** upper part, which has entirely folded out on two sides the sectional load cover **4**. And FIG. **234** shows the top view of alone main space rocket **2** upper part, which has entirely folded out on two sides the sectional load cover **4**. And FIG. **233-234** well show in what way the sectional load cover **4** can be folded out on two sides because it is two-sectional and is installed to the main space rocket **2** by means of four cog beams **93**. Simultaneously it is visible that the cog beams **93** are rotatably installed to the main space rocket **2** fuselage. And here is clearly visible emplacement of four uncovered hoisting gears **96** of the sectional load cover **4** both sections. Moreover, it is clearly visible emplacement of four uncovered rotating heads **94** of the cog beams **93**. And FIG. **235** shows the side view of the main space rocket **2** upper part, which has a little shut up sectional load cover **4**. And FIG. **236** shows the side view of the main space rocket **2** upper part, which has even more shut up sectional load cover **4**.

FIG. **237-243** show the views of alone main space rocket **2** upper part ergo without docked the second stage rocket **3**. Whereas, FIG. **237** shows the side view of the main space rocket **2** upper part, which is very close to shutting up the sectional load cover **4**. This view and the earlier views from FIG. **232** well show in what way both sections of the sectional load cover **4** can be gradually pooled together up to total shutting. And FIG. **238**, **239** show the side view and the front view of the main space rocket **2** upper part, which has the sectional load cover **4** entirely shut up. This sectional load cover **4** is maximally distant upward from the main space rocket **2**, and it is held up by means of four long cog beams **93**. The entire cog beams **93** are by themselves over the main space rocket **2** and are under the sectional load cover **4**. Here, the arrows under the sectional load cover **4** show the direction its lowering to the main space rocket **2**. This entire sectional load cover **4** will be lowered further on four cog beams **93**. And FIG. **240**, **241** show the side view and the front view of the main space rocket **2** upper part, which has also the entirely shut up sectional load cover **4**. This sectional load cover **4** is already a lot lowered on four cog beams **93**. After lowering the sectional load cover **4**, four cog beams **93** upper ends entered a lot inwards this sectional load cover **4**. Here, the arrows under the sectional load cover **4** show the direction its further lowering to the main space rocket **2**. And FIG. **242**, **243** show the side view and the front view of the main space rocket **2** upper part, which has also the entirely shut up sectional load cover **4**. This sectional load cover **4** is already entirely lowered on four cog beams **93**. Consequently, this sectional load cover **4** touched on with the main space rocket **2** fuselage. Therewith four entire cog beams **93** entered entirely inwards this sectional load cover **4**. Lowering of the sectional load cover **4** targets its fastening with the main space rocket **2** fuselage, which is necessary for landing without the second stage rocket **3**.

FIG. **244**, **245**, **246**, **247** show the enlarged views of the totally shut up sectional load cover **4**, which is revolvingly installed to the main space rocket **2** upper part. This sectional load cover **4** was earlier lowered on four cog beams **93** to the main space rocket **2** fuselage as it were shown on previous FIG. Therewith four entire cog beams **93** entered entirely inwards the sectional load cover **4**. For this reason these entire cog beams **93** are sketched with the dashed lines. Here, is visible in what way are installed four hoisting gears **96** of the sectional load cover **4** and four rotating heads **94** of four cog beams **93**. And FIG. **244** is the side view. And FIG. **245** is the top view of the horizontal sectional view according to the S1-S1 line on FIG. **244**. Here, are visible only components inside the sectional load cover **4** thus, its four hoisting gears **96**. Each one hoisting gear **96** is driven by one servomotor with one reduction gear, which rotates one cog wheel **97**, which is fitted in with a plurality of cogs in each cog beam **93**. All cog beams **93** have plenty internal cogs in their internal insides. All cog beams **93** are rectangular in cut-view and are placed slidingly inside four rectangular tubes **99**. These rectangular tubes **99** are permanently fastened to both bottoms of the sectional load cover **4**. All cog beams **93** and all rectangular tubes **99** must be rectangular in cut-view so that there would not occur angular con-torsion of any section of the sectional load cover **4**. And FIG. **246** is the top view of the horizontal sectional view according to the S2-S2 line on FIG. **247**. Here, are visible only components inside the main space rocket **2** thus, four rotating heads **94** of the cog beams **93** whereby incline the sectional load cover **4**. These rotating heads **94** are in the space rocket interior and are on two opposite sides of this space rocket fuselage. Each one rotating head **94** is driven by one servomotor with one reduction gear, which rotates the rotating axles **95**. The rotating axles **95** are permanently fastened to the cog beams **93**, which are outside the space rocket fuselage. Therefor all four cog beams **93** can incline on the sides and with them also both sections of this sectional load cover **4**. And FIG. **247** is the front view of FIG. **244** in the same arrangement and situation.

FIG. **248**, **249** show the enlarged views of fragments of the entirely shut up sectional load cover **4** and of the main space rocket **2** upper part. Whereas, FIG. **248** is the side view. And FIG. **249** is the front view. Here, the sectional load cover **4** is a bit lifted on four cog beams **93** and therefor a little protrude from the main space rocket **2**. For this reason all four cog beams **93** upper ends are situated inside the sectional load cover **4**. And inside the sectional load cover **4** are visible its four hoisting gears **96**. Furthermore, inside the main space rocket **2** are visible four rotating heads **94** of the cog beams **93**.

FIG. **250**, **251**, **252** show very plenty enlarged and detailed views of two hoisting gears **96** in the fragments of the entirely shut up sectional load cover **4** that is lifted. And FIG. **250** is the side view, FIG. **251** is the top view, FIG. **252** is the front view. Here, is well visible installation way and construction of one entire hoisting gear **96**, which is driven by one servomotor with one reduction gear, which rotates one cog wheel **97** and, which is fitted in with the cog beam **93**. All cog beams **93** have plenty internal cogs in their internal insides. All four cog beams **93** are rectangular in cut-view and are placed slidingly inside four rectangular tubes **99**. There are two rectangular tubes **99** permanently fastened to each one section bottom of the sectional load cover **4**.

FIG. **253**, **254**, **255** show very plenty enlarged and detailed views of two rotating heads **94** of the cog beams **93** in the fragments of the main space rocket **2** fuselage. And FIG. **253** is the side view, FIG. **254** is the top view, FIG. **255** is the front view. Here, is visible installation way and construction of these entire rotating heads **94** of the cog beams **93**. All four rotating heads **94** are installed to two thick plates **98**, which are permanently fastened to the fuselage upper part of this main space rocket **2**. Each rotating head **94** is driven by one servomotor with one reduction gear, which rotates one rotating axle **95**.

Each rotating axle **95** is placed in a hole in one thick plate **98**.

Each rotating axle **95** is permanently fastened to one cog beam **93**, which is outside the space rocket fuselage. Therefor all four cog beams **93** will incline while the rotating axles **95** will somewhat rotate. And together with the cog beams **93** will incline also suitable sections of this sectional load cover **4**. Here, the arrows show the moving directions of a few components.

FIG. **256**, **257**, **258**, **259** show the views of the entire main space rocket **2**, which is attached in two variants with the payload module **103** and the crew module **102** and, which were not shown on any earlier views. The payload module **103** has two gates with a cargo bay while the crew module **102** has a few windows. Here, the main space rocket **2** is also equipped with ten spreadable arms **5** so that this space rocket with current assemblage could land aboard the specific sea ship **10**, which has the deck mounted landing station. Whereas, FIG. **256-257** show the attaching variant wherein on the main space rocket **2** top is mounted the assemblage, which consist of the second stage rocket **3** whereon is attached the payload module **103** and whereto is attached the crew module **102**. Whereat FIG. **256** is the side view, FIG. **257** is the front view. This attaching variant will be applied while on the Earth's low orbit this assemblage will separate from the main space rocket **2**. Separating purpose can be that this assemblage will schedule ascend toward the Earth's high orbit. Later this entire separated assemblage will be able to come back and dock to the same main space rocket **2** so that afterward together return on the Earth. Whereas, FIG. **258-259** show the attaching variant wherein on the main space rocket **2** top is mounted the assemblage, which only consists of the payload module **103** with attached the crew module **102**. And FIG. **258** is the side view, FIG. **259** is the front view. Such attaching variant will be applied while on the Earth's orbit this assemblage will not separate from the main space rocket **2**. Thus, here is not the second stage rocket **3**.

FIG. **260** is the side view of the separated assemblage, which consist of the second stage rocket **3** with attached the payload module **103** whereto is attached the crew module **102**. It is the same assemblage, that is attached to the main space rocket **2** on FIG. **256-257**.

FIG. **261** is the side view of alone crew module **102**, which in such status would be used only for emergency separation from the assemblage and thus, from the space rocket.

Purposes of the views on FIG. **256-261** are presentations that the main space rocket **2** equipped with ten spreadable arms can have mounted on its top a plurality of various assemblages or modules and together with them can also land aboard the specific sea ship **10**, that has the deck mounted landing station. Shown here, the attaching variants of the main space rocket **2** with the payload module **103** and with the crew module **102** enable the same possibilities of utilization as had earlier applied Space Shuttles.

FIG. **262-267** show examples of descending in the Earth's atmosphere of one booster space rocket **1** and of the main space rocket **2** with on its top mounted various assemblages and in various variants. These space rockets descend in the Earth's atmosphere during the third so the last time period at slow speeds and therefor all space rockets could already entirely lift their all spreadable arms **5** and entirely deflected out their all steering flaps **6**. All space rockets still have totally shut down their sliding engines cover **7**. On all space rocket fuselages the large arrows show their descent direction in the atmosphere. Whereat the external arrows show from what direction comes flying atmospheric air. Therefore, these arrows show in what way atmospheric air strongly crowds into all sub-assemblies, sections, assemblages and modules of these space rockets. Whereas, FIG. **262-263** show the side view and the top view of one booster space rocket **1**, which has entirely lifted (spread out) its all six spreadable arms **5**. This booster space rocket **1** has not attached any module. Whereas, FIG. **264-265** show the side view and the top view of one main space rocket **2**, which has entirely lifted (spread out) its all ten spreadable arms **5**. This main space rocket **2** has on its top attached the sectional load cover **4**. This attaching and landing variant of the main space rocket **2** could be while the second stage rocket **3** will remain on the Earth's orbit. This attaching and landing variant can also occur if the sectional load cover **4** is installed in different way, for example by a plurality of hinges to the main space rocket **2**. Whereas, FIG. **266** shows the side view of one main space rocket **2**, which has also entirely lifted (spread out) all ten spreadable arms **5**. Here, is the attaching variant wherein on the main space rocket **2** top is mounted the assemblage, that consist of the second stage rocket **3** with the sectional load cover **4**. Here, is visible that all cog beams **93** are outside and on both sides of the second stage rocket **3**. This attaching and landing variant of the main space rocket **2** will be while the second stage rocket **3** will be taken back from the Earth's orbit. And this attaching variant causes that inside the sectional load cover **4** can be the load taken back from the Earth's orbit. For example, a large satellite taken back for repair. Whereas, FIG. **267** shows the side view of one main space rocket **2**, which has also entirely lifted (spread out) all ten spreadable arms **5**. The view shows the attaching variant wherein on the main space rocket **2** top is mounted the assemblage, that consist of the second stage rocket **3** with attached the payload module **103** and the crew module **102**. This attaching variant of the main space rocket **2** will be while the second stage rocket **3** will be taken back from the Earth's orbit with attached the payload module **103** and the crew module **102**. This attaching variant causes that inside the payload module **103** can be the load taken back from the orbit.

FIG. **268**, **269** show the front views of one main space rocket **2**, which is joined on both sides with two booster space rockets **1**. And FIG. **268** is the diminished front view of three joined space rockets. And FIG. **269** is the enlarged front view of the upper parts of the same three joined space rockets, which are on FIG. **268**. On the main space rocket **2** top is mounted the assemblage, which consist of the second stage rocket **3** with sectional load cover **4**. Whereat the sectional load cover **4** is attached to the second stage rocket **3** and is revolvingly installed to the main space rocket **2** by means of the cog beams **93**. And inside the sectional load cover **4** is fastened the payload **100**, which will be carried out on the Earth's orbit. In such status and arrangement these three joined space rockets are entirely ready for launch toward space. These views target presentation that the spreadable arms **5** fastened to the main space rocket **2** and

to two booster space rockets **1** do not hinder joining them with themselves. These three space rockets are joined with themselves by means of a plurality of foldable crossbars without any numbers.

FIG. **270** shows the enlarged side view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. And alongside is just such space rocket. This view is the same as FIG. **11** albeit is enlarged. On the current view are the best visible two edge bars **50**, which are permanently fastened on two long side hulls **11**. Both edge bars **50** lead all wheels **16** of both movable decks **15** while they roll on the main-decks **14**. Accurate description of this view is the same as previous FIG. **11** and therefor is not quoted here.

FIG. **271** shows the enlarged top view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. And alongside is just such space rocket. This view is the same as FIG. **12** albeit is enlarged. On the current view are the best visible two edge bars **50**, which are permanently fastened on two long side hulls **11**. Both these edge bars **50** lead all wheels **16** of both movable decks **15** while they roll on the main-decks **14**. Accurate description of this view is the same as previous FIG. **12** and therefor is not quoted here.

FIG. **272** shows the enlarged front view of the entire specific sea ship **10**, which has the deck mounted landing station for individual, vertical landing and also for fastening of three space rockets equipped with the plurality of spreadable arms **5**. And alongside is just such space rocket. This view is the same as FIG. **13** albeit is enlarged. On the current view are the best visible two edge bars **50**, which are permanently fastened on two long side hulls **11**. Both these edge bars **50** lead all wheels **16** of both movable decks **15** while they roll on the main-deck **14**. Accurate description of this view is the same as previous FIG. **13** and therefor is not quoted here.

FIG. **273** is prospectus presentation, which shows for example several drawing statuses of one main space rocket **2**, which lifted-off and its further traveling trajectory while unexpectedly happened failure of some main engine. The current presentation shows process of this entire main space rocket **2** salvation and its emergency landing aboard the specific sea ship **10** at open sea. On this space rocket drawing statuses and alongside the arrows show the directions of its traveling trajectory. As result of such method, in some circumstances there is possible total salvage of the main space rocket **2** together with the entire assemblage. And this view display also that each space rocket equipped with the spreadable arms **5** can in some other emergency land aboard the specific sea ship **10**.

The views on FIG. **274**, **275** show for example one booster space rocket **1**, which slips by through the giant open interior of the specific sea ship **10** at open sea. And FIG. **274** is the side view, FIG. **275** is the top view. According to the plan, this booster space rocket **1** was supposed to land on this specific sea ship **10**. However, during this space rocket descent happened some failure of the main engines, which were supposed to bring total stop of the space rocket descent and make possible landing aboard the specific sea ship **10**. In order to prevent any strike of this space rocket onto the specific sea ship **10** there were quick and entirely spread apart in two directions both horizontally movable decks **15**. Both movable ship gantries **20** were already earlier entirely spread apart in two directions of the specific sea ship **10**. As result, inside the specific sea ship **10** multi-hull arose the giant open interior where-into there is only sea surface. Accurately into this giant open interior filled with sea-water struck hard this booster space rocket **1** and plunged in sea-water. Therefore, this booster space rocket **1** did not strike into any member of the specific sea ship **10**. This space rocket became lost but the entire specific sea ship **10** survived and that is giant economic profit. Moreover, this specific sea ship **10** and the landing station are immediately ready for landing the next space rocket, because there will only be enough to push together both horizontally movable decks **15**. On the views are distinctly visible water splashes, which arose after the space rocket stroke onto sea surface.

INFORMATION about the present invention. While, the present invention has been described in terms of particular embodiments and applications, in both summarized and detailed forms, it is not intended that these descriptions in any way limit its scope to any such embodiments and applications, and it will be understood that many substitutions, changes and variations in the described embodiments, applications and details of the method and system illustrated herein and of their operation can be made by those skilled in the art without departing from the spirit of this invention.

REFERENCE NUMBERS

Main Numbers.

1 booster space rocket, **2** main space rocket, 3 second stage rocket, **4** sectional load cover (dividable into two sections), **5** spreadable arm (six or ten), **6** flap (four), **7** sliding engines cover flat underneath (one), **8** sliding engines cover wedge shaped underneath (one), **9** exhaust fume (gushing from the space rocket main engines), **10** specific sea ship.

Sub-Assemblies of the Specific Sea Ship **10**.

11 long side hull (two), **12** short central hull (two), **13** copular hull (four), **14** deck, **15** horizontally movable (two), **16** wheel (lots in both movable decks **15**), **17** tunnel (two inside the specific sea ship **10** multi-hull), **18** ballasting wagon (two in tunnels **17**), **19** deck rail (two fastened on both long side hulls **11**).

Sub-Assemblies of the Movable Ship Gantries **20**.

20 movable ship gantry (two), **21** wheel (lots), **22** bumper (two), **23** upper long rail (two on each movable ship gantry **20**).

Sub-Assemblies of the Hangers **24**.

24 hanger (four), **25** rotating wedge (two in each hangers **24**), **26** upper short rail (two on each hangers **24**), **27** rotary actuator (two), **28** support axle (one), **29** rotating axle (one for each rotary actuator **27**).

Sub-Assemblies of the Damping Wagons **30** and **31**.

30 damping wagon (four), **31** large damping wagon (two), **32** flexible layer, **33** wedge shaped fender, **34** leading shafts, **35** main plate, **36** high leading tube, **37** low leading tube, **38** middle plate, **39** conic spring, **40** top plate, **41** driving wheel, **42** leading wheel, **43** battery.

Sub-Assemblies of the Grasping Wagons **44**.

44 grasping wagon (two), **45** rotating poles (two in each grasping wagon **44**), **46** wheel (lots).

Sub-Assemblies of the Specific Sea Ship **10**.

47 long transverse rail (two on each movable **15**), **48** short transverse rail (four on the pillars **49**), **49** pillar (lots on the deck **14**), **50** edge bar (two fastened on both long side hulls **11**).

Sub-Assemblies of the Space Rockets.

51 space rocket fuselage (one), **52** corner beam (lots on the space rocket fuselage).

Sub-Assemblies of the Spreadable Arms **5** and in Each One.

53 slider (one), **54** blocking bar (one), **55** middle beam (one), **56** lateral beam (two).

Sub-Assemblies of the Steering Flaps **6** and their Deflection Mechanisms.

57 ample bracket, **58** rotary actuator, **59** torsional triangle, **60** linear actuator.

Sub-Assemblies of the Space Rockets.

61 pressure tank, **62** limiter.

Sub-Assemblies of the Spreadable Arms **5**.

63 bearing axle, **64** long plate, **65** common long axle, **66** holding axle, **67** T-bar, **68** frictional brake.

Sub-Assemblies of the Pushing Mechanisms of the Blocking Bars **54**.

69 large C-shaped beam, **70** linear actuator, **71** vertical low bar.

Sub-Assemblies of the Spreadable Arms **5** and their Moving Mechanisms.

72 flat bar (has oval opening), **73** servomotor, **74** worm gear, **75** threaded pipe, **76** special nut, **77** cylindrical peg, **78** common roller, **79** bearing seat, **80** bearing bracket (with the hole), **81** distance block.

Sub-Assemblies of the Frictional Brakes **68**.

82 brake block, **83** linear actuator, **84** ending bracket (with the hole).

Sub-Assemblies of the Space Rockets.

85 nozzle (of the space rocket main engine).

Sub-Assemblies of the Sliding Engines Covers **7** and **8**.

86 flat carrying plate (four), **87** U-shaped rail (two), **88** jalousie (two), **89** side plate (two), **90** angle profile (four), **91** rounded plate (two), **92** stiffening beam (two).

Sub-Assemblies of the Sectional Load Cover **4**.

93 cog beam (four), **94** rotating head (four), **95** rotating axle (four), **96** hoisting gear (four), **97** cog wheel (four), **98** thick plate (two), **99** rectangular tube (four in the sectional load cover **4**).

Other Numbers.

100 payload (will be carried on the Earth's orbit), **101** Earth's globe, **102** crew module, **103** payload module, **104** movable ground gantry (two), **105** movable specific ground crane (one), **106** return load (from the Earth's orbit).

The invention claimed is:

1. A system for multiple use of space rockets equipped with spreadable arms and sliding engines covers, and the system includes that said space rockets vertically land on two movable ship gantries situated on a specific sea ship or land on two movable ground gantries and said system comprising:

a plurality of space rockets, each comprising:

a fuselage;

the plurality of spreadable arms;

a plurality of pushing mechanisms;

a plurality of steering flaps having torsional triangles;

the sliding engine cover having two jalousies and two rounded plates; and

one of the space rockets further comprising a dividable sectional load cover;

the specific sea ship comprising:

a plurality of joined hulls which create a specific multi-hull;

two horizontally movable decks; and

a plurality of tunnels with installed a plurality of ballasting wagons;

a landing station on the specific sea ship and comprising:

two movable ship gantries having installed a plurality of damping wagons;

two pairs of hangers each having two rotating wedges; and

two grasping wagons each having two rotating poles;

a multi-task station situated on a solid ground and comprising:

two movable ground gantries;

a specific movable ground crane;

wherein each space rocket is configured for vertical landing by lifting its spreadable arms and descending until at least two of the spreadable arms contact two damping wagons on two movable gantries, whereby said space rocket hangs on two movable gantries.

2. The system according to claim **1**,

wherein each space rocket comprises: at least two spreadable arms located on the opposite sides of the fuselage;

wherein all spreadable arms are mounted on each fuselage top part;

wherein all spreadable-arms are suitably spaced out on each fuselage so that they could spread out on two sides;

wherein all spreadable arms are completely spread out and are transverse to the space rocket fuselage when are entirely lifted;

wherein all spreadable arms are alongside and adjacent the space rocket fuselage when are entirely lowered;

wherein all spreadable arms are configured to be lowered during an ascent phase of the space rocket;

wherein the at least two spreadable arms are configured to be at least partially lifted during a descent phase of the space rocket such that the spreadable arms provide aerodynamic braking to the space rocket;

wherein the at least two spreadable arms are configured to be fully lifted during a landing phase of the space rocket such that the at least two spreadable arms support said space rocket on two gantries, whereby said space rocket hangs on two gantries.

3. The system according to claim **1**,

wherein each spreadable arm comprises:

at least two lateral beams;

a middle beam having a T-bar;

a moving mechanism having one servomotor driving simultaneously two worm-gears;

a frictional brake;

two corner beams fastened on the space rocket fuselage; and

a slider movable between two corner beams;

wherein both lateral beams top ends are bent and are inside the space rocket fuselage;

wherein both lateral beams in both bent corners are rotatably joined with the space rocket fuselage by two bearing axles which are situated in four bearing brackets;

wherein both lateral beams top ends are rotatably joined with the moving mechanism;

wherein the moving mechanism is installed inside the space rocket fuselage;

wherein each moving mechanism is adapted for moving together both lateral beams top bent ends and in consequence for moving the entire spreadable arm;
wherein both lowest ends of both lateral beams are rotatably joined with a top end of the middle beam;
wherein a lowest end of the middle beam is rotatably joined with the slider;
wherein inside the lowest end of the middle beam is installed the frictional brake; and
wherein on one side of the middle beam is permanently fastened the T-bar adapted to fit with a T-groove in a blocking bar.

4. The system according to claim **1**,
wherein each pushing mechanism comprises:
a C-shaped beam;
a linear actuator;
a vertical low bar; and
the blocking bar having the T-groove;
wherein each pushing mechanism is installed inside the space rocket fuselage, and over each spreadable-arm;
wherein inside each C-shaped beam is slidingly installed the blocking bar;
wherein each blocking bar is permanently fastened by the vertical low bar with the linear actuator;
wherein each linear actuator is adapted for pushing and pulling the blocking bar;
wherein each blocking bar has the T-groove which is adapted to fit with the T-bar on the middle beam in the spreadable arm;
wherein said blocking bar is configured to block the middle beam in all directions once the spreadable arm is entirely lifted;
wherein the blocking bar fulfills blocking function when it is maximally slid outside the fuselage;
wherein the blocking bar causes that the middle beam after its blocking gains possibility of carrying burdens in all directions.

5. The system according to claim **1**,
wherein the steering flaps are cardinally installed on an upper part of each space rocket fuselage by means of a plurality of hinges;
wherein each steering flap is deflected by a deflection mechanism having one linear actuator and two ample brackets;
wherein the steering flaps are adapted to steer the space rocket during its descent in the atmosphere;
wherein the steering flaps on their top parts have rotary fastened the torsional triangles which are configured to torsion-ally steer the space rocket as needed before landing on two movable gantries;
wherein each torsional triangle is grasped and axially steered by a rotary actuator fastened on the steering flaps; and
wherein the torsional triangles installing way and triangular shapes are adapted for use at various speeds of the space rocket descent in the atmosphere.

6. The system according to claim **1**,
wherein the dividable sectional load cover comprises:
four cog beams that are rectangular in a cut-view;
two sections of load cover each comprising;
two rectangular tubes;
two hoisting gears each comprising;
one servomotor with a reduction gear; and
one cog wheel fitted with all cogs on the cog beam;
two rotating heads each comprising;
one servomotor with a reduction gear; and
one rotating axle;
wherein all cog beams are rectangular in the cut-view and are placed slidingly inside the rectangular tubes;
wherein inside the sectional load cover each cog beam is held up by means of one hoisting gear;
wherein each hoisting gear is mounted adjacent the rectangular tubes and inside the sectional load cover;
wherein all cog beams protrude suitably up over the hoisting gears inside the sectional load cover to enable its initial lifting;
wherein each hoisting gear is driven by one servomotor with one reduction gear which rotates the cog wheel that is fitted with all cogs on the cog beam;
wherein each cog beam is revolvingly installed to the space rocket fuselage by means of the rotating head;
wherein each rotating head is mounted inside the space rocket;
wherein each rotating head is driven by one servomotor with one reduction gear which rotates the rotating axle;
wherein to each rotating axle is permanently fastened one cog beam;
wherein each one section of the sectional load cover is held up and inclined by two cog beams;
wherein all cog beams are situated outside of the space rocket and outside of a second stage rocket;
wherein two cog beams are situated on one side of the space rocket and two other cog beams are situated on the opposite side of the space rocket;
wherein the entire dividable sectional load cover is configured to be revolvingly installed on the space rocket upper part and being situated over the second stage rocket;
wherein the dividable sectional load cover is configured to open by parting into two sections by folding outward, and is configured to close by folding up both sections, and is configured to cover a payload when closed, thereby creating thermal protection during the space rocket ascent and descent in the atmosphere;
wherein the dividable sectional load cover is adapted to be suitably lifted over the second stage rocket before folding out on two opposite sides; and
wherein the dividable sectional load cover is adapted to be thoroughly lowered to the space rocket upper part when the second stage rocket is not used.

7. The system according to claim **1**,
wherein the sliding engines cover comprises:
four flat carrying plates;
two jalousies;
two side plates;
two U-shaped mils;
two stiffening beams;
four angle profiles; and
two rounded plates;
wherein the sliding engines cover is installed to the space rocket fuselage bottom by means of permanently fastened four flat carrying plates and four angle profiles;
wherein both U-shaped rails are permanently fastened to all four flat carrying plates;
wherein both U-shaped rails extend out from the space rocket fuselage one side to its bottom and further to the space rocket fuselage opposite side;
wherein the opposite U-shaped rails upper ends are permanently fastened with themselves and with the space rocket fuselage by means of two stiffening beams;

wherein in both U-shaped rails are placed two jalousies wherewith each one is joined by hinges with one side plate;

wherein both jalousies with the side plates are placed on two opposite sides of the space rocket fuselage;

wherein both jalousies with the side plates are adapted to move slidingly in two U-shaped rails;

wherein both jalousies are adapted to come to each other, touch on themselves and then tighten up to each other in the U-shaped rails bottom and in their middle;

wherein after lowering of both jalousies underneath the space rocket arises a square flat surface or a wedge shaped surface which covers the space rocket main engines underneath;

wherein both rounded plates are situated on two opposite sides of the space rocket fuselage;

wherein each rounded plate moves slidingly down and up in two angle profiles;

wherein both rounded plates after their lowering are adapted to shield the main engines on their both sides which are not entirely covered by the jalousies;

wherein the sliding engines cover is adapted to cover the space rocket main engines by sliding down or uncover them by sliding up; and

wherein the sliding engines cover is adapted to cover the space rocket main engines during atmospheric reentry to provide their thermal protection, and is adapted to uncover the main engines during the space rocket liftoff and during braking action at space rocket landing.

8. The system according to claim **1**,

wherein the landing station comprises:

two movable ship gantries having installed the plurality of damping wagons;

two pairs of hangers; and

two grasping wagons;

wherein the landing station is adapted to be deck mounted on the specific sea ship;

wherein the landing station is adapted for landing the space rockets equipped with the spreadable arms;

wherein both movable ship gantries are adapted to be installed on a central part of the specific sea ship;

wherein one pair of hangers is adapted to be installed on each side of the movable ship gantries; and

wherein both grasping wagons are adapted to be installed underneath both ship gantries.

9. The system according to claim **8**,

wherein both movable ship gantries comprise:

at a chassis bottom a plurality of driving wheels to precisely roll on two deck rails along the specific sea ship length-ways; and

on a chassis top two upper long rails with placed the plurality of damping wagons;

wherein both movable ship gantries are adapted to suitably approach each over before landing of the space rocket;

wherein both movable ship gantries are adapted to place themselves precisely under the landing space rocket equipped with the spreadable arms; and

wherein both movable ship gantries are adapted to approach each over and touch on themselves with bumpers.

10. The system according to claim **8**,

wherein each hanger comprises:

two upper short rails on its top; and

two rotating wedges;

wherein both upper short rails are fitted with the upper long rails on the movable ship gantries tops;

wherein one pair of hangers is adapted for hanging one space rocket equipped with the spreadable arms and fastening said space rocket at bottom by means of four rotating wedges;

wherein one pair of hangers is permanently fastened on each side of the ship gantries;

wherein all hangers are permanently fastened on a deck of both long side hulls of the specific sea ships;

wherein one pair of hangers is adapted for passing of two damping wagons from both movable ship gantries;

wherein between one pair of hangers on the deck are permanently fastened four short transverse rails fitted with four long transverse rails on both movable decks;

wherein all rotating wedges are adapted for swinging suppressing and strong fastening of one space rocket equipped with the spreadable arms; and

wherein each rotating wedge has its own a rotating axle and a rotary actuator adapted to be rotated apart the other rotating wedges.

11. The system according to claim **8**,

wherein each damping wagon comprises:

a main plate;

one or a plurality of middle plates;

a top plate;

one or a plurality of layers with conic springs in a vertical setting;

a plurality of tubes;

a plurality of leading shafts;

a plurality of driving wheels; and

a thick flexible layer;

wherein the main plate has on both sides permanently fastened the plurality of tubes;

wherein over the main plate are permanently fastened all bottoms of the plurality of conic springs in vertical setting which are adapted to be compressed;

wherein the plurality of conic springs tops are permanently fastened to being situated over them the middle plate or the top plate;

wherein to the top plate on both sides are permanently fastened the plurality of leading shafts;

wherein all leading shafts are adapted to fit with the plurality of tubes in the middle plates and the main plate;

wherein all lowered leading shafts are adapted to not hook up and not collide with any components of the hangers and of the movable ship gantries;

wherein the thick flexible layer is placed over the top plate;

wherein each thick flexible layer is adapted for direct contacts with the spreadable arms of the space rocket;

wherein all damping wagons are adapted to precisely roll on the upper long rails on both movable ship gantries tops;

wherein all damping wagons are adapted to place themselves under the landing space rocket;

wherein the damping wagons are adapted to be in various sizes;

wherein two damping wagons are adapted to one vertically landing space rocket which hangs itself on its spreadable arms;

wherein the damping wagons are adapted to be compressed after the space rocket hangs itself;

wherein the compressed damping wagons are adapted to roll by from two movable ship gantries tops onto one pair of hangers tops;

wherein all damping wagons constructions are adapted with constructions and function of the hangers and of the movable ship gantries;

wherein all damping wagons are adapted to have suitable damping range during hanging the space rockets equipped with the spreadable arms;

wherein all damping wagons are adapted to maintain unshaken and stable top surfaces during their compression by the space rocket; and

wherein two compressed damping wagons with one hanged space rocket and both grasping wagons having grasped said space rocket bottom, all together are adapted to roll sideways and between one pair of hangers.

12. The system according to claim **8**,

wherein each grasping wagon comprises:

at least two rotating poles having spherical ends with flexible coatings; and

a plurality of driving wheels;

wherein the spherical ends with flexible coatings are adapted for direct contacts with the space rockets;

wherein the grasping wagons are adapted to completely lower all rotating poles on the sides to the horizontal setting;

wherein the grasping wagons are adapted to roll under bottom of the space rocket which hangs itself on two ship gantries;

wherein the grasping wagons are adapted for swinging suitable suppressing of the landed space rocket bottom by means of four rotating poles;

wherein the grasping wagons are also adapted for strong fastening of the landed space rocket bottom by means of four rotating poles;

wherein each grasping wagon is adapted to roll on two long transverse rails on one movable and thus transverse to the specific sea ship length-ways;

wherein each grasping wagons is adapted to roll on two short transverse rails between one pair of hangers;

wherein each grasping wagon is adapted to roll by from two long transverse rails onto two short transverse rails.

13. The system according to claim **1**,

wherein the specific sea ship comprises:

two long side hulls;

two short central hulls;

four over water copular hulls;

two horizontally movable decks;

the plurality of tunnels inbuilt in all hulls;

the plurality of ballasting wagons installed in the tunnels; and

a deck rail on each long side hull all along the specific sea ship length-ways;

wherein two long side hulls and two short central hulls are permanently fastened with four over water copular hulls;

wherein all joined hulls create the specific multi-hull;

wherein inside the central part of the specific multi-hull there are not any hull parts;

wherein all top surfaces of all hulls create the deck;

wherein on each long side hull surface is permanently fastened one deck rail all along the specific multi-hull length-ways;

wherein both deck rails are adapted for rolling both movable ship gantries;

wherein the horizontally movable decks are installed over the central part of the specific sea ship;

wherein the horizontally movable decks are adapted to completely spread apart in two directions;

wherein after the horizontally movable decks have been completely spread apart there inside the specific sea ship multi-hull is exposed its central part without any hull parts and as result arises there a open space where-into there is only a sea surface;

wherein spreading apart of both movable decks is adapted to prevent them from strike of the space rocket which failed to stop its descent from the space;

wherein on each horizontally movable deck are permanently fastened two long transverse rails that are transverse to the specific sea ship length-ways;

wherein on each horizontally movable two long transverse rails is installed one grasping wagon;

wherein the plurality of tunnels are inbuilt inside the specific multi-hull;

wherein the tunnels are transverse to the specific sea ship length-ways;

wherein the tunnels have a plurality of rails with installed the plurality of ballasting wagons;

wherein the ballasting wagons are adapted for quick and precise ballasting this specific sea ship to the perfectly horizontal position during landing each space rocket and during moving each one on one pair of hangers,

wherein the ballasting wagons are also adapted for continuous, quick and precise ballasting this specific sea ship during seafaring; and

wherein the entire specific sea ship is adapted to the deck mounted landing station for landing the space rockets equipped with the spreadable arms.

14. The system according to claim **1**,

wherein the multi-task station comprises:

two movable ground gantries; and

the specific movable ground crane;

wherein both movable ground gantries at a chassis bottom have installed a plurality of driving wheels to precisely drive on the solid ground and turn on it;

wherein both movable ground gantries on their tops have fastened the rails for possible installing the damping wagons;

wherein the multi-task station is adapted to be situated on the solid ground;

wherein the multi-task station is adapted for hanging up, reload, launch and vertical landing of the space rockets equipped with the spreadable arms;

wherein both movable ground gantries are adapted to approach each over before landing of the space rocket;

wherein both movable ground gantries are adapted to place themselves precisely under landing space rocket equipped with the spreadable arms;

wherein the specific movable ground crane is adapted to play along with both movable ground gantries;

wherein the specific movable ground crane at a chassis bottom has installed a plurality of driving wheels to precisely drive on the solid ground and turn on it;

wherein the specific movable ground crane is adapted to be installed at a sea harbor for reloading the space rockets from the specific sea ships having deck mounted landing station;

wherein the specific movable ground crane has a plurality of beams which reach up over the specific sea ship; and

wherein the specific movable ground crane is adapted to lift one space rocket from the specific sea ship and subsequently shift it on both movable ground gantries.

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