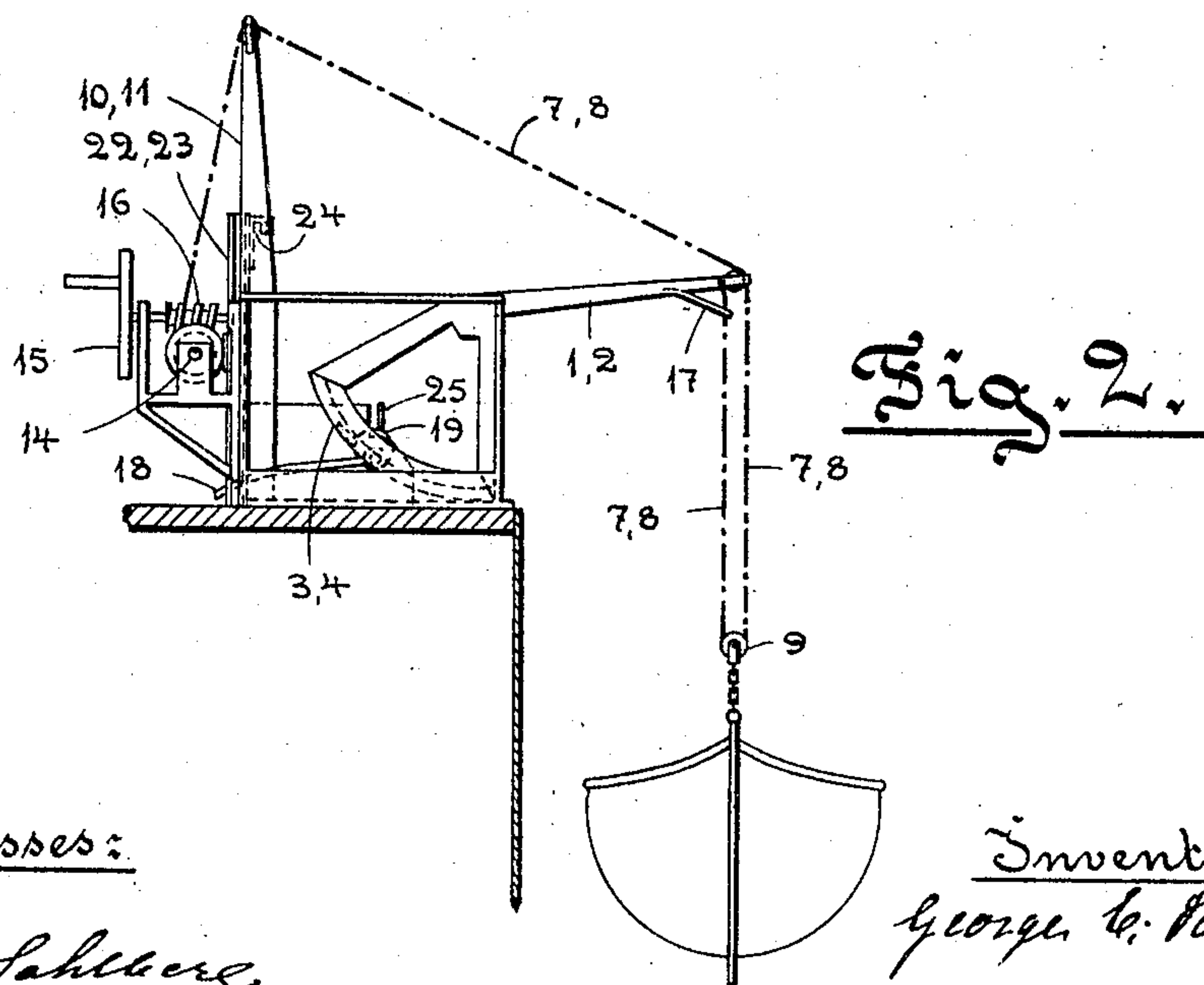
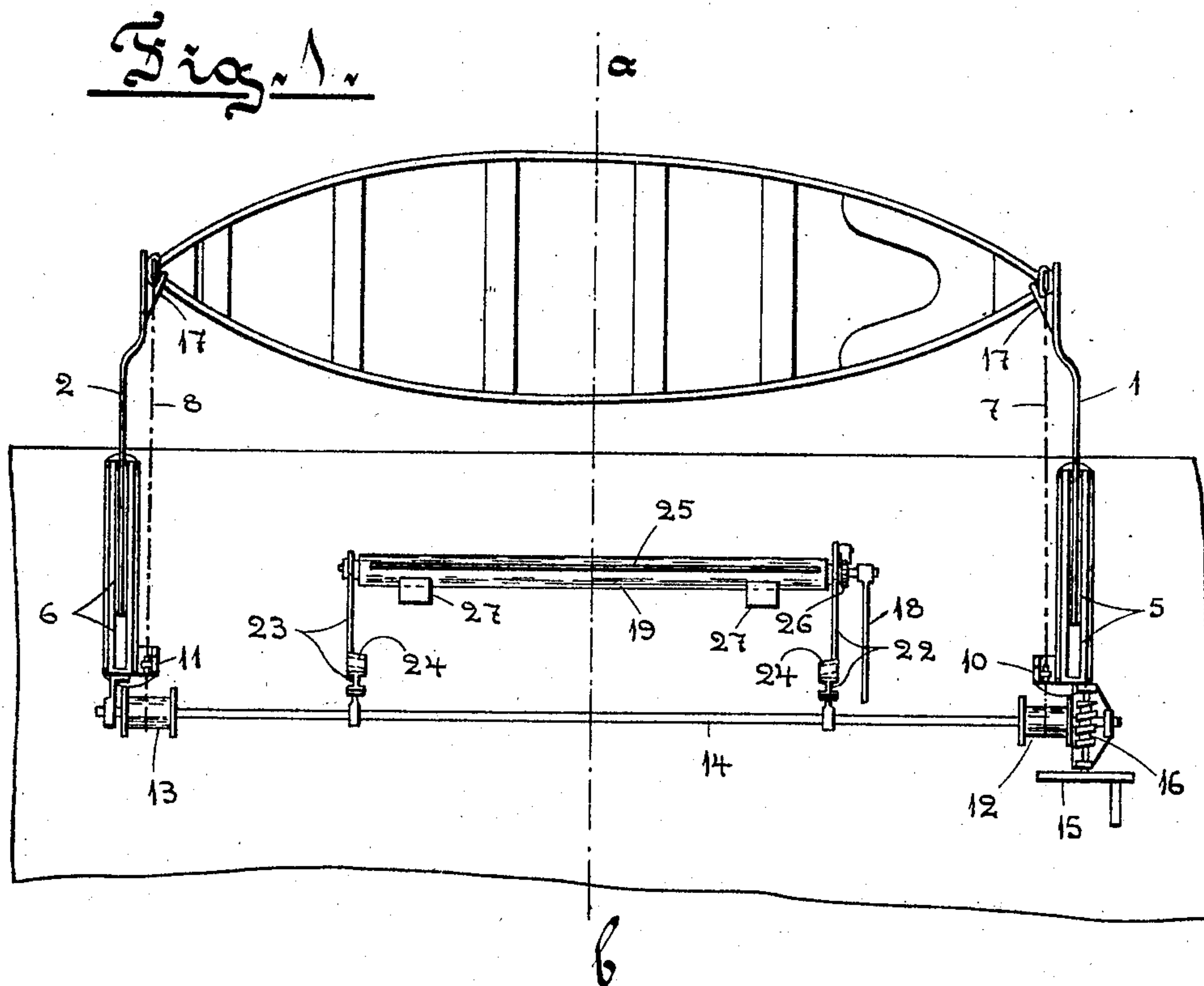


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 APPARATUS FOR RAPID LAUNCHING OF LIFE BOATS.

APPLICATION FILED OCT. 17, 1904.

2 SHEETS—SHEET 1.

Witnesses:

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2 SHEETS—SHEET 2.

Fig. 3.

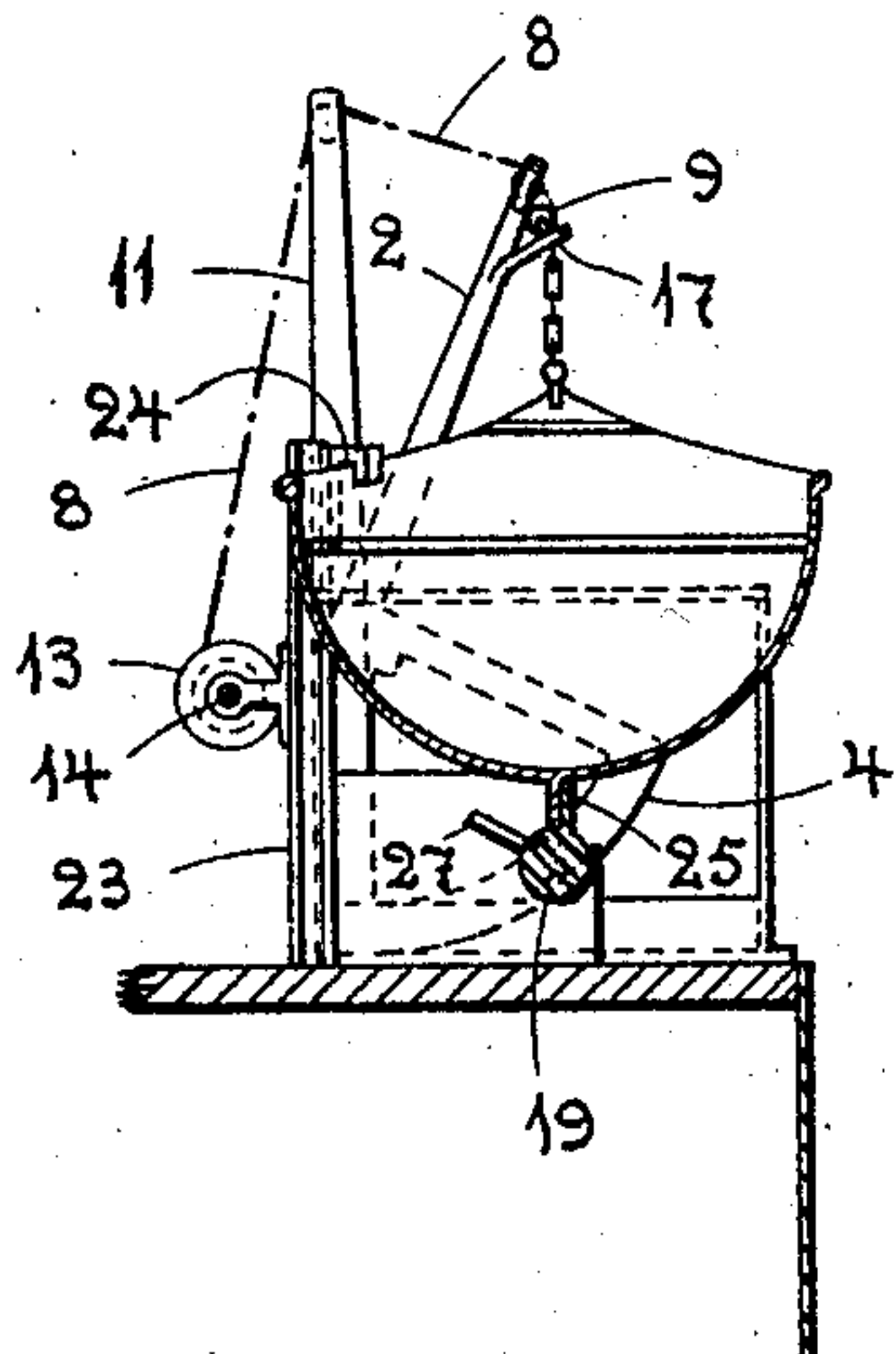


Fig. 4.

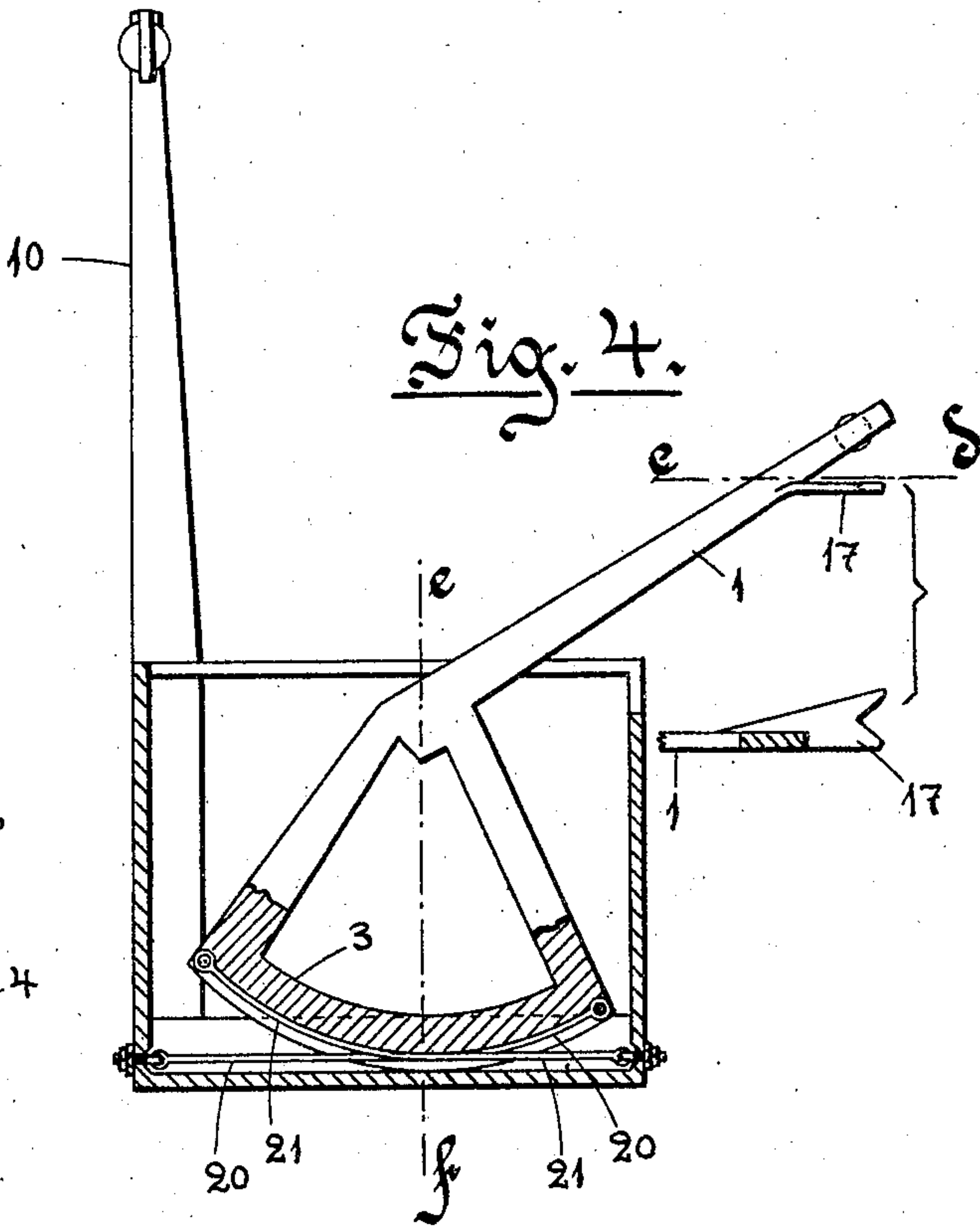


Fig. 5.

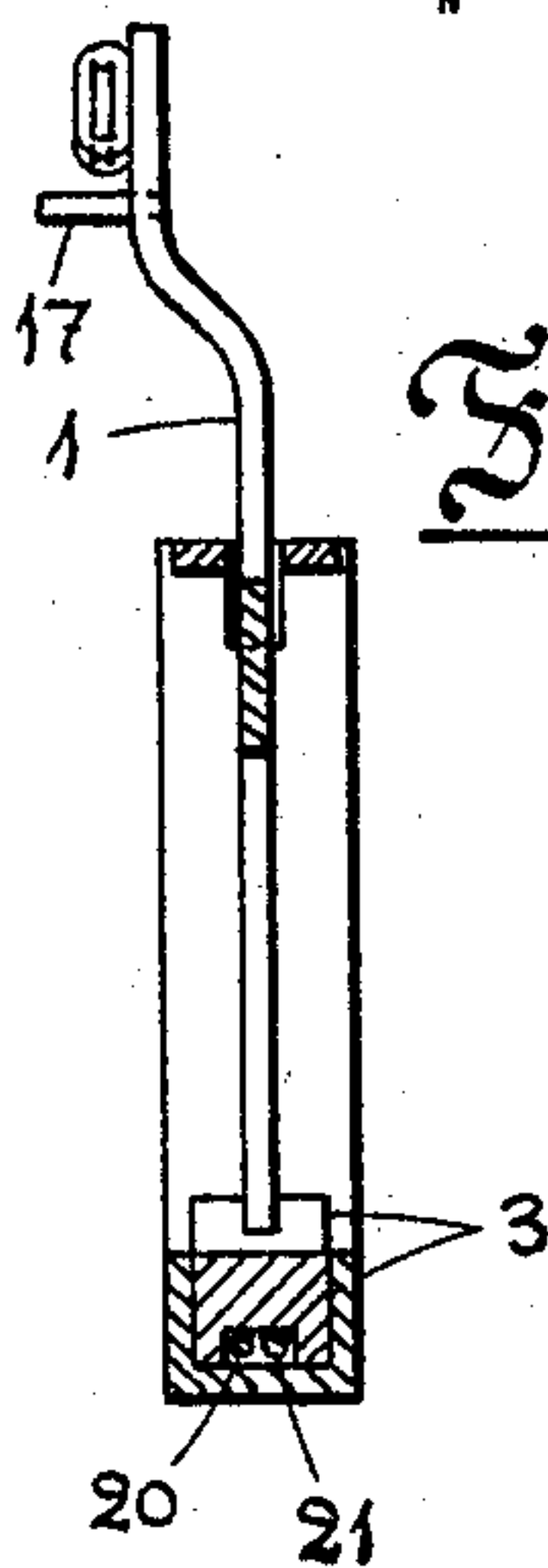
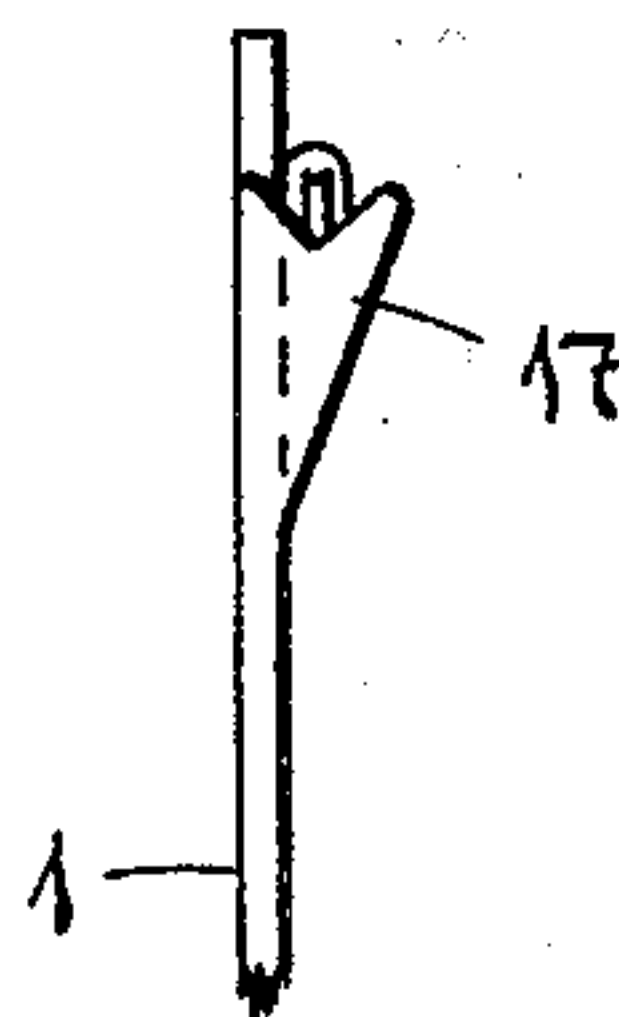


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE CHRISTIAN SCHMIDT, OF GÖTEBORG, SWEDEN.

APPARATUS FOR RAPID LAUNCHING OF LIFE-BOATS.

No. 795,937.

Specification of Letters Patent.

Patented Aug. 1, 1905.

Application filed October 17, 1904. Serial No. 228,888.

To all whom it may concern:

Be it known that I, GEORGE CHRISTIAN SCHMIDT, a subject of the King of Sweden and Norway, residing at Göteborg, in the Kingdom of Sweden, have invented certain new and useful Improvements in Arrangements for a Rapid Launching of Life-Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention has for its object an arrangement for the rapid launching of life-boats. Such an arrangement has long been needed in order to secure the safety of the passengers and the crew in the event of an accident at sea. The means and arrangements hitherto employed for the launching of life-boats require much labor, and, moreover, the launching cannot be performed with the desirable speed.

This invention therefore has for its object to improve these arrangements, so that the launching can be accomplished with a minimum of time and labor. Moreover, the special aim of this invention is to make the arrangement as simple and cheap as possible, so that expense may put no obstacle in the way of an extensive use of the same.

The invention is shown in the accompanying drawings.

Figure 1 represents the device as seen from above when the life-boat is swung out over the ship's side. Fig. 2 represents the device as seen from the right in Fig. 1. Fig. 3 shows the device in the position when the life-boat is hoisted up and secured to the supports, the figure representing a section on line *a b* of Fig. 1. Figs. 4 to 6 show details on a larger scale. Fig. 4 shows one davit partly in section and a section of the davit-arm on line *c d* viewed from above. Fig. 5 shows a section of the same davit on line *e f* in Fig. 4 viewed from the left. Fig. 6 shows the outer end of a davit-arm 1 or 2 viewed from below.

For each life-boat there are at the deck of the ship arranged two davits provided with arms 1 2, revoluble in vertical planes, which when the boat is being lowered carry the same over the ship's side or when it is raised carry it in over the deck. The davit-arms

1 2 are each connected with a sector-shaped or in other way curved piece 3 or 4, rolling in a guide-groove or other support applied to the davit-standard. In the upper end of each davit-standard there is a guide 5 or 6, in which the davit-arm 1 or 2 moves. (See Fig. 1.) The davit-arms 1 2 thus by the rolling of the sector-shaped pieces 3 4 in their grooves can be swung from a position in an upward direction (see Fig. 3) to a horizontal or outward-pointing direction, (see Fig. 2,) so that the life-boat will be carried out over the ship's side. In the davit-standards ropes 20 21 are fastened by one end, (see Figs. 4 5,) one rope at each end of the guide-groove, the other ends of which ropes are secured to the curved pieces 3 or 4 each on the opposite side to where the former end is fastened. The pieces 3 4, therefore, are allowed to roll in their respective guide-grooves, but are prevented from sliding. The ropes 20 21 are placed in a groove in the sector-shaped piece 3 or 4, as shown in Fig. 5. Moreover, the ropes 20 21 are provided with tightening devices, so as to be stretched suitably taut. At the outer end of each davit-arm 1 or 2 there is fastened a hoisting-rope 7 or 8, running over a pulley 9, attached to a piece of chain or the like, which has been secured to the boat in such a manner as to be readily removed. When the hoisting-ropes 7 8 have been passed around their respective pulleys 9, they are passed over pulleys at the outer ends of the davit-arms and then over pulleys at the top ends of posts 10 11, rising from the davit-standards, and finally pass on to drums 12 13 on a shaft 14 mounted longitudinally to the ship. This shaft can be revolved by means of the worm 16, connected with the crank-wheel 15 and engaging with a worm-gear mounted on the shaft 14. Thus by turning the worm 16 to one side or the other the life-boat will be lowered or raised from the position shown in Fig. 2. By the use of forks 17 the davit-arms 1 2 will at the proper time be set in motion during the lowering and raising of the life-boat, so as to move either out over the ship's side or in over the deck. Such a fork 17 projects from each davit-arm 1 2 in such a way as to form between the fork 17 and the davit-arm a crutch of suitable size to receive the pulley 9. When the life-boat is being raised from the position shown in Fig. 2, the davit-arms 1 2 will at first remain at rest, since the hoisting-ropes run with two parts underneath the davit-arms, their ends being fastened to said

arms, so that a downward-turning movement results, while the pulleys 9 rise until they are finally carried into the crutches formed between the davit-arms 1 2 and their forks 17. As the hoisting is continued the davit-arms will be made to take part in the movement, so that the life-boat will be carried in over the ship's deck. The life-boat is fastened to two blocks or supports 22 23, mounted on the deck by the aid of a revolubly-mounted eccentric 19, provided with the lever 18, flange 25, and lugs 27. When the life-boat is to be fastened to the supports, the eccentric 19 should be previously revolved to a low position, so that the keel of the boat may be carried above or past the flange 25, but not the lugs 27. The eccentric 19 is subsequently turned until it has reached its highest position, as shown in the drawings, the boat being consequently raised by the eccentric 19, against which the keel of the boat rests. As a result the upper edge of the boat will be forced upward into notches 24, arranged at the upper part of the supports 22 23, while the keel of the boat at the same time is clamped between the said supports or parts projecting therefrom and the flange 25 of the eccentric 19. With the eccentric 19 is connected a ratchet-wheel 26, (see Fig. 1,) with which engages a pawl, so as to arrest the eccentric 19 in any desired position.

In launching the boat is unfastened from the supports by simply revolving the eccentric 19 so as to bring it into a low position. The lugs 27, arranged on the eccentric, will then act against the keel of the boat, so that the boat will be swung out from the supports 22 23 and remain hanging in the davit-arms 1 2. Owing to the blocks 9 resting in the crutches formed between the forks 17 and the davit-arms, the davit-arms 1 2 as the lowering commences will be caused to turn into their outward position, (shown in Fig. 2,) and thus carry the boat out over the side of the ship. Any further movement of the davit-arms is prevented by the davit-standards. In the continued lowering operation the pulleys 9 will run out of the crutches of the davit-arms and the boat will be lowered vertically until it reaches the water. The chains connected with the pulleys 9 are thereupon unfastened from the boat for releasing it.

I claim—

1. In a device for rapidly launching life-boats, the combination with davit-arms 1, 2, adapted to oscillate in vertical planes, and provided at their outer ends with hoisting-ropes 7, 8 secured thereto, each passing around a block 9 which is secured to and can be readily detached from the life-boat, and then around blocks at the outer ends of the davit-arms 1, 2, of forks 17 projecting from the outer ends of the davit-arms 1, 2 and forming with the said davit-arms crutches, for the purpose specified.

2. In a device for rapidly launching life-boats, the combination with davit-arms 1, 2, adapted to oscillate in vertical planes, and provided at their outer ends with hoisting-ropes 7, 8 secured thereto, each passing around a block 9 which is secured to and can be readily detached from the life-boat, and then around blocks at the outer ends of the davit-arms 1, 2, of forks 17 projecting from the outer ends of the davit-arms 1, 2 and forming with the said davit-arms crutches, and of a sector-shaped or curved piece, 3 or 4, united with each davit-arm and adapted to roll on a support or in a guiding-groove, and tension-ropes 20, 21 secured by one end to the davit-supports, one at each end of the guide-groove, while the other ends of said ropes 20, 21 are attached to the sector-shaped piece, 3 or 4, each on the opposite side to where the former end is fastened, for the purpose specified.

3. In a device for rapidly launching life-boats, the combination with davit-arms 1, 2, adapted to oscillate in vertical planes, and provided at their outer ends with hoisting-ropes 7, 8 secured thereto, each passing around a block 9 which is secured to and can be readily detached from the life-boat, and then around blocks at the outer ends of the davit-arms 1, 2, of forks 17 projecting from the outer ends of the davit-arms 1, 2 and forming with the said davit-arms crutches, and of posts 10, 11, provided at their tops with pulleys, and two drums 12, 13 arranged on a rotatable shaft 14, in common to both, for the purpose specified.

4. In a device for rapidly launching life-boats, the combination with davit-arms 1, 2, adapted to oscillate in vertical planes, and provided at their outer ends with hoisting-ropes 7, 8 secured thereto, each passing around a block 9 which is secured to and can be readily detached from the life-boat, and then around blocks at the outer ends of the davit-arms 1, 2, of forks 17 projecting from the outer ends of the davit-arms 1, 2 and forming with the said davit-arms crutches, and of notches 24 in brackets secured at the top of supports 22, 23, and a rotatable eccentric 19 provided with a flange 25 and with a ratchet 26 engaging with a pawl, for the purpose specified.

5. In a device for rapidly launching life-boats, the combination with davit-arms 1, 2, adapted to oscillate in vertical planes, and provided at their outer ends with hoisting-ropes 7, 8 secured thereto, each passing around a block 9 which is secured to and can be readily detached from the life-boat, and then around blocks at the outer ends of the davit-arms 1, 2, of forks 17 projecting from the outer ends of the davit-arms 1, 2 and forming with the said davit-arms crutches, and of a sector-shaped or curved piece 3, or 4, united with each davit-arm and adapted to roll on a support or in a guiding-groove, and tension-ropes

20, 21 secured by one end to the davit-supports, one at each end of the guide-groove, while the outer ends of said ropes 20, 21 are attached to the sector-shaped piece, 3 or 4, each on the opposite side to where the former end is fastened, and of posts 10, 11, provided at the top with pulleys, and two drums 12, 13, mounted on a rotatable shaft 14 in common to both, for the purpose specified.

6. In a device for rapidly launching life-boats, the combination with davit-arms 1, 2, adapted to oscillate in vertical planes, and provided at their outer ends with hoisting-ropes 7, 8 secured thereto, each passing around a block 9 which is secured to and can be readily detached from the life-boat, and then around blocks at the outer ends of the davit-arms 1, 2, of forks 17 projecting from the outer ends of the davit-arms 1, 2 and forming with the said davit-arms crutches, and of a sector-shaped or curved piece 3 or 4, united with each davit-arm and adapted to roll on a support or in a guiding-groove, and tension-ropes 20, 21 secured by one end to the davit-supports, one at each end of the guide-groove, while the other ends of said ropes 20, 21 are attached to the sector-shaped piece, 3 or 4, each on the opposite side to where the former end is fastened, and of notches 24 in brackets secured at the top of supports 22, 23, and a rotatable eccentric 19 provided with a flange 25 and with a ratchet 26 engaging with a pawl, for the purpose specified.

7. In a device for rapidly launching life-

boats, the combination with davit-arms 1, 2, adapted to oscillate in vertical planes, and provided at their outer ends with hoisting-ropes 7, 8 secured thereto, each passing around a block 9 which is secured to and can be readily detached from the life-boat, and then around blocks at the outer ends of the davit-arms 1, 2, of forks 17 projecting from the outer ends of the davit-arms 1, 2 and forming with the said davit-arms crutches, and of a sector-shaped or curved piece 3 or 4, united with each davit-arm and adapted to roll on a support or in a guiding-groove, and tension-ropes 20, 21 secured by one end to the davit-supports, one at each end of the guide-groove, while the other ends of said ropes 20, 21 are attached to the sector-shaped piece, 3 or 4, each on the opposite side to where the former is fastened, and of posts 10, 11, provided at the top with pulleys, and two drums 12, 13, mounted on a rotatable shaft 14 in common to both, and of notches 24 in brackets secured at the top of supports 22, 23, and a rotatable eccentric 19 provided with a flange 25 and with a ratchet 26 engaging with a pawl, for the purpose specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witness.

GEORGE CHRISTIAN SCHMIDT.

Witnesses:

CARL O. SAHLBERG,
HARRY KARLSON.