

No. 639,705.

Patented Dec. 26, 1899.

C. C. BOWERS.
DUMPING SCOW.

(Application filed Jan. 17, 1899.)

(No Model.)

2 Sheets—Sheet 1.

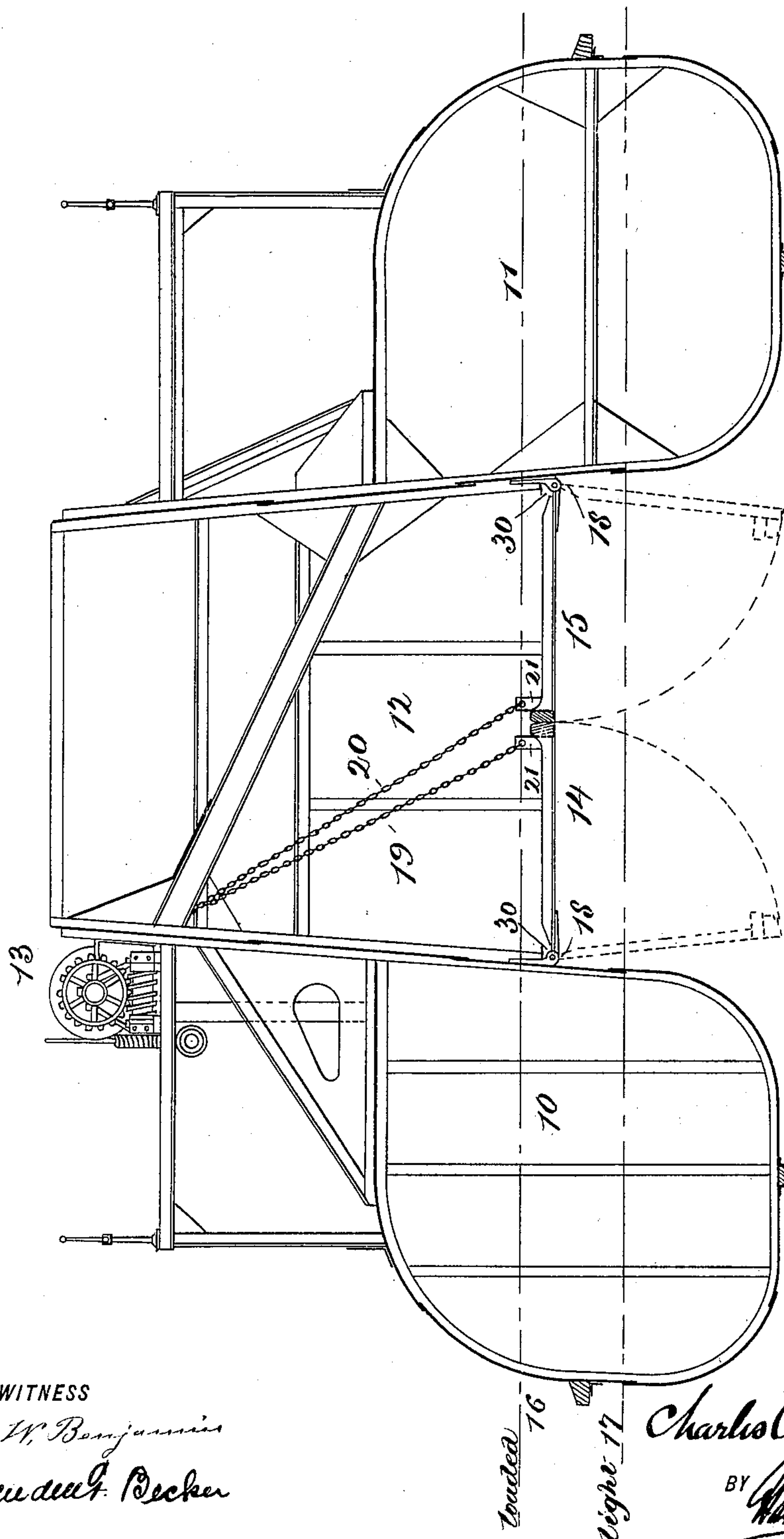


Fig. 1.

WITNESS

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INVENTOR

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BY

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ATTORNEY

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Fig. 2.

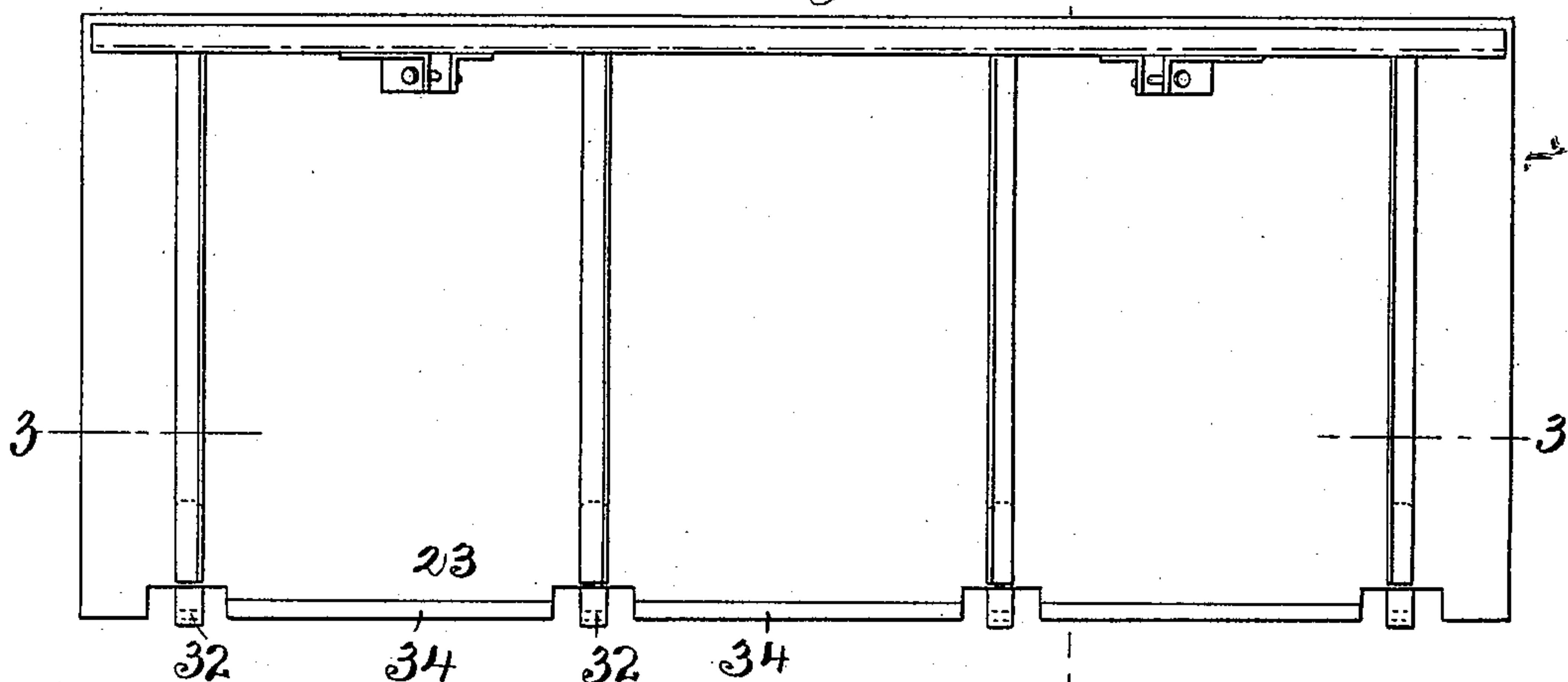


Fig. 3.

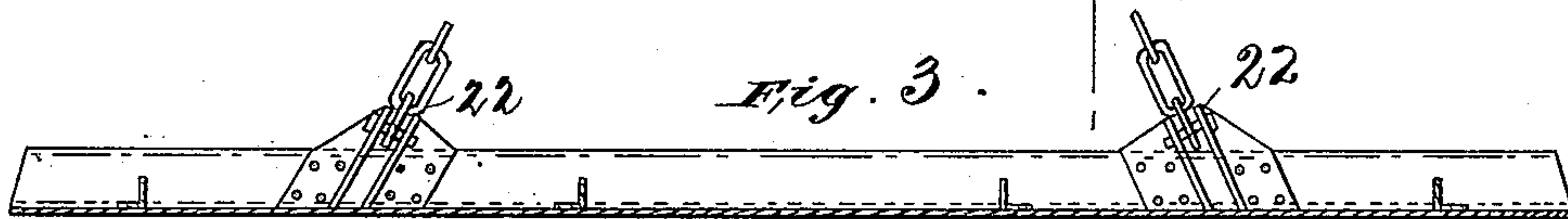


Fig. 4.

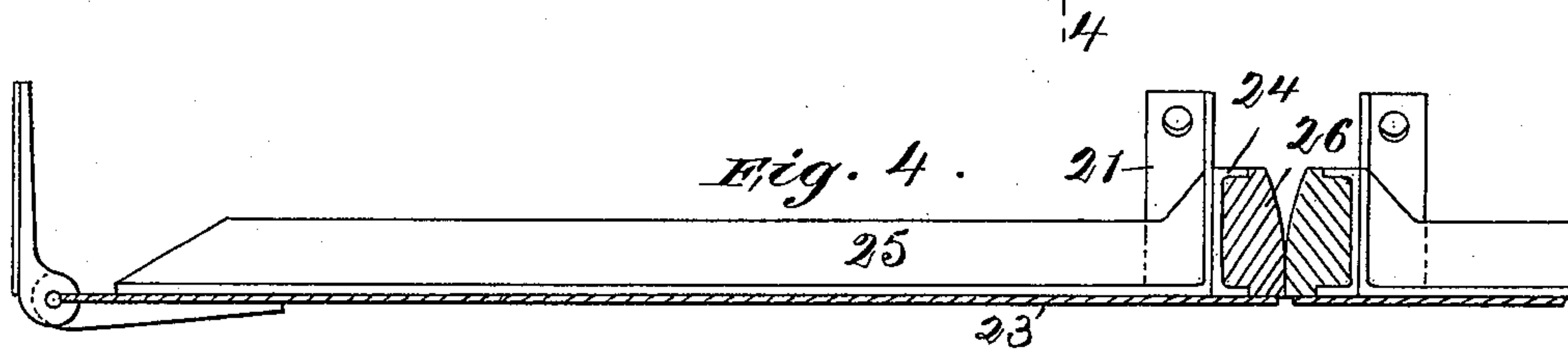


Fig. 5.

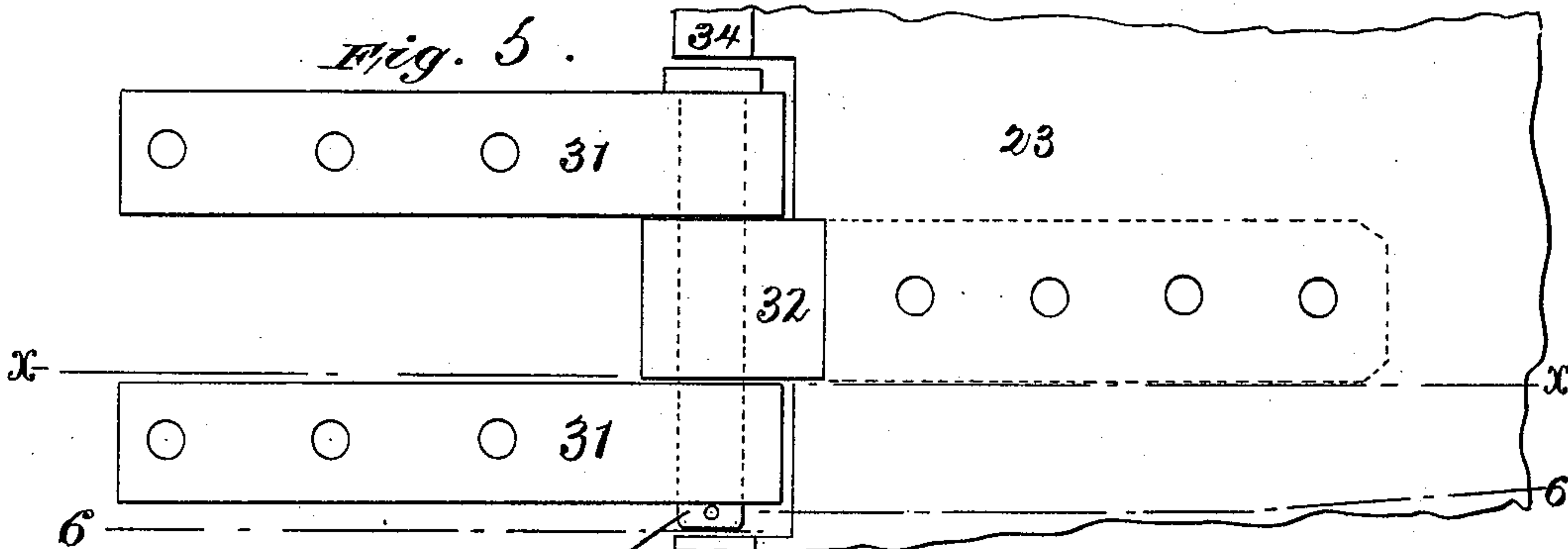
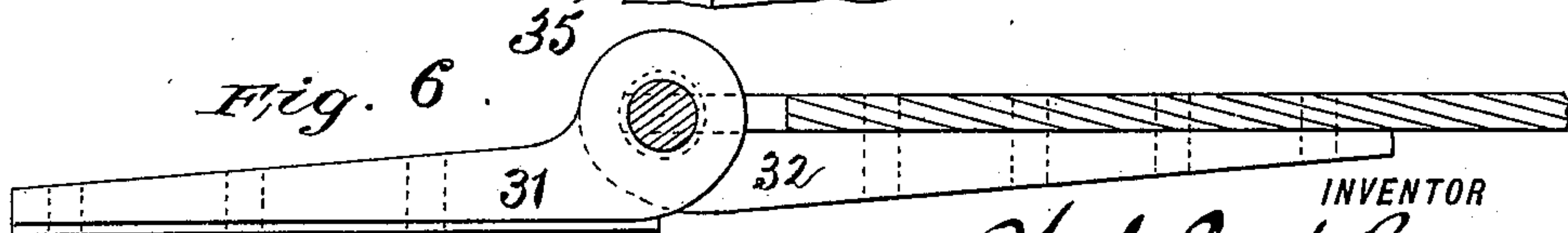


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES CRAMP BOWERS, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO
FRANCIS B. DELEHANTY, OF NEW YORK, N. Y.

DUMPING-SCOW.

SPECIFICATION forming part of Letters Patent No. 639,705, dated December 26, 1899.

Application filed January 17, 1899. Serial No. 702,489. (No model.)

To all whom it may concern:

Be it known that I, CHARLES CRAMP BOWERS, of Elizabeth, New Jersey, have invented certain new and useful Improvements in and
5 Relating to Dumping-Scows, of which the following is a description, referring to the accompanying drawings, which form part of this specification.

The invention relates to the class of dumping-scows such as exemplified in the patent
10 to Daniel Delehanty, No. 542,408, of July 9, 1895, and in my application filed herewith, Serial No. 702,488. Assuming that this class of scows is familiar, the explanation of the present
15 invention will be much facilitated.

Where several dumping-pockets are arranged in a row on the scow, it is usual to dump the pockets by opening the doors or bottoms thereof either severally or all together.

20 It is the object of the present invention to construct the doors or movable bottoms and to support and operate them in a highly mechanical, efficient, and reliable manner.

The nature of the invention will be clearly
25 understood from a description of the accompanying drawings, and the novel elements and features are pointed out in the claims.

In the drawings, Figure 1 is a transverse cross-section of the dumping-scow. Fig. 2 is
30 a plan view of one of the doors or movable parts of the bottom of a pocket. Fig. 3 is a section of Fig. 2 on the plane 3 3. Fig. 4 is a section on the plane 4 4 looking to the left of Figs. 2 and 3, part of the cooperating door
35 being also shown. Figs. 5 and 6 are a plan view and a side view of the hinge and its connection with one of the doors, showing a portion of the door in section on the plane 6 6.

Throughout the drawings like letters of reference indicate like parts.

40 In Fig. 1, 10 and 11 are the two pontoons or floats of the scow.

12 indicates one of the pockets, 13 the hoisting mechanism for the doors, and 14 and 15
45 the doors themselves.

16 and 17 indicate the "loaded" water-line and the light water-line of the scow, and by these it will be seen that the hinge 18 of each door is located above the light water-line,
50 but that the door itself when open, as indicated by the dotted line, extends down into

the water. The chains 19 and 20 run in two pairs to the edges of each of the doors and are secured to the brackets 21, which consist of inclined angle-irons bolted securely to the
55 frame of the door and provided with a bolt 22 for the chain. In order to support the strain upon the doors and to provide for the hard usage to which they are necessarily put in handling garbage, ashes, and other refuse,
60 sometimes including such inconvenient articles as rocking-chairs, mattresses, and the like, the doors are formed of sheet-iron plates 23, provided with channel-bars or angle-irons 24, which stiffen the edges of the doors.
65 Transverse ribs 25, extending from the angle-irons 24, cross the door, and heavy wooden strips are placed in the irons 24. The surfaces 26 are curved and fitted to each other, so as to roll upon each other when the doors are
70 lowered or raised. The wooden strips are provided in order that if any hard substance, such as a bar of iron, comes between the doors it will crush into the foot instead of deforming the doors or springing the sides
75 of the pockets in which the garbage or refuse is carried. Any relatively soft or weak material may be used instead of wood; but wood is apparently the most satisfactory substance
80 to employ. In order that the refuse material may not work around the hinges and cause trouble, an angle-line or protecting-flange 30 extends along just above each of the hinges and rear edges of the door. Each of the hinges
85 is separate from the others. One part or parts 31 of the hinge is secured to the side of the pocket and the other member 32 bolted or riveted to the plate 23 of the door, so as to be readily replaced if broken. The rear edge
90 of each door is stiffened by strip or bar 34, which is interrupted, leaving an interval at each hinge, as clearly seen in Fig. 2. The plate 23 is also cut away at the hinge, so as to receive the ends of the members 31. The hinge-bolt 35 extends in line with the strips
95 34, forming virtually a separated and removable continuation thereof in the intervals formed where the plate 23 is cut away. The strip 34 lies close against the side of the pocket beneath the overhanging flange 30, so
100 that it is almost impossible for any of the refuse matter to work its way under the flange

30 and in between the rear of the door and the pontoon or side of the pocket.

It will now be seen that by supporting each door by hinges of the type described and by
5 two chains when the respective ends of each pair close to the meeting edges of the doors and by providing the meeting edges with the wooden surfaces 26 great strength is combined with snugness of fit and at the same
10 time danger of breakage is to a very great extent avoided and facility for repair provided for. The four chains 19 20 for coöperating pairs of doors run to a single-chain hoisting mechanism 13, as shown in Fig. 1,
15 so that the proper coöperation of the meeting surfaces 26 of each pair of doors is assured.

Having now particularly described and pointed out the nature of my invention, what I claim, and desire to secure by these Letters
20 Patent, are the following features:

1. In combination in a dumping-scow the doors or movable bottoms of the pockets provided with meeting surfaces 26 of relatively
25 softer or weaker material than the doors or movable bottoms, the said doors or bottoms being hinged at points remote from the meeting edges and being provided with means for co-operatively opening and closing them, and

the said surfaces 26 being convex or cut away to substantially roll upon each other in closing, substantially as set forth. 30

2. In combination in the pocket of a dumping-scow, the door thereof including a stiffened plate 23 cut away in the vicinity of the hinges thereof, the rear stiffening strip or bar
35 34 interrupted at the cut-away portion and the hinge and hinge-pin 35 placed with the hinge-pin approximately in line with the strip or bar 34, substantially as set forth.

3. In combination in the pocket of a dumping-scow, the door thereof, including a stiffened plate 23 cut away in the vicinity of the hinges thereof, the rear stiffening strip or bar
40 34 interrupted at the cut-away portion and the hinge and hinge-pin 35 placed with the hinge-pin approximately in line with the strip or bar 34 and an overhanging flange or protector 30 lying over said strip or bar 34 and hinge-pin 35, substantially as set forth. 45

In witness whereof I have hereunto set my
50 hand this 28th day of February, 1898.

CHARLES CRAMP BOWERS.

Witnesses:

H. A. SWANTON,
CHAS. H. BARTLETT.