

C. E. FOWLER.

SCOW.

APPLICATION FILED SEPT. 21, 1909.

962,706.

Patented June 28, 1910.

2 SHEETS—SHEET 1.

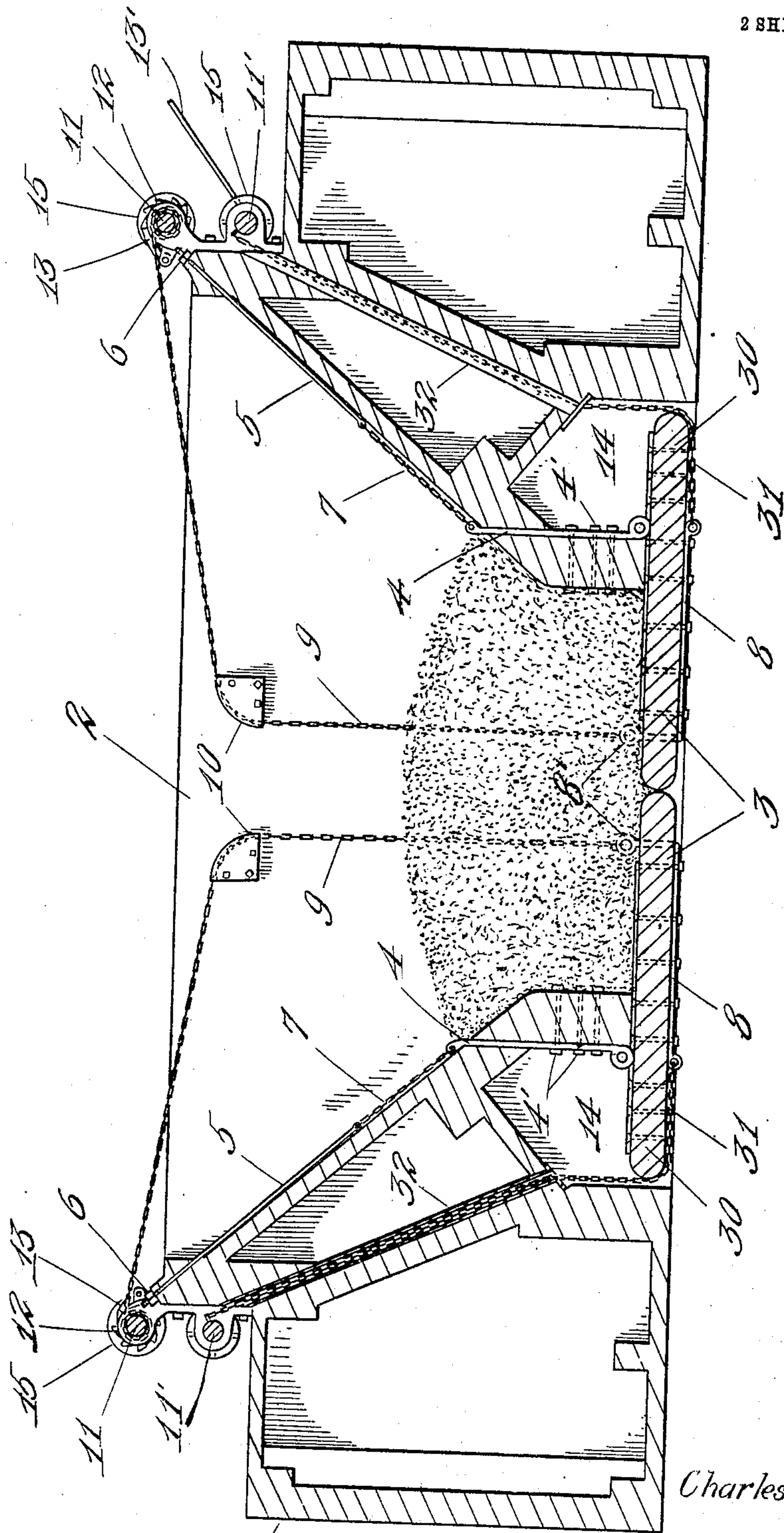


Fig. 1

Witnesses

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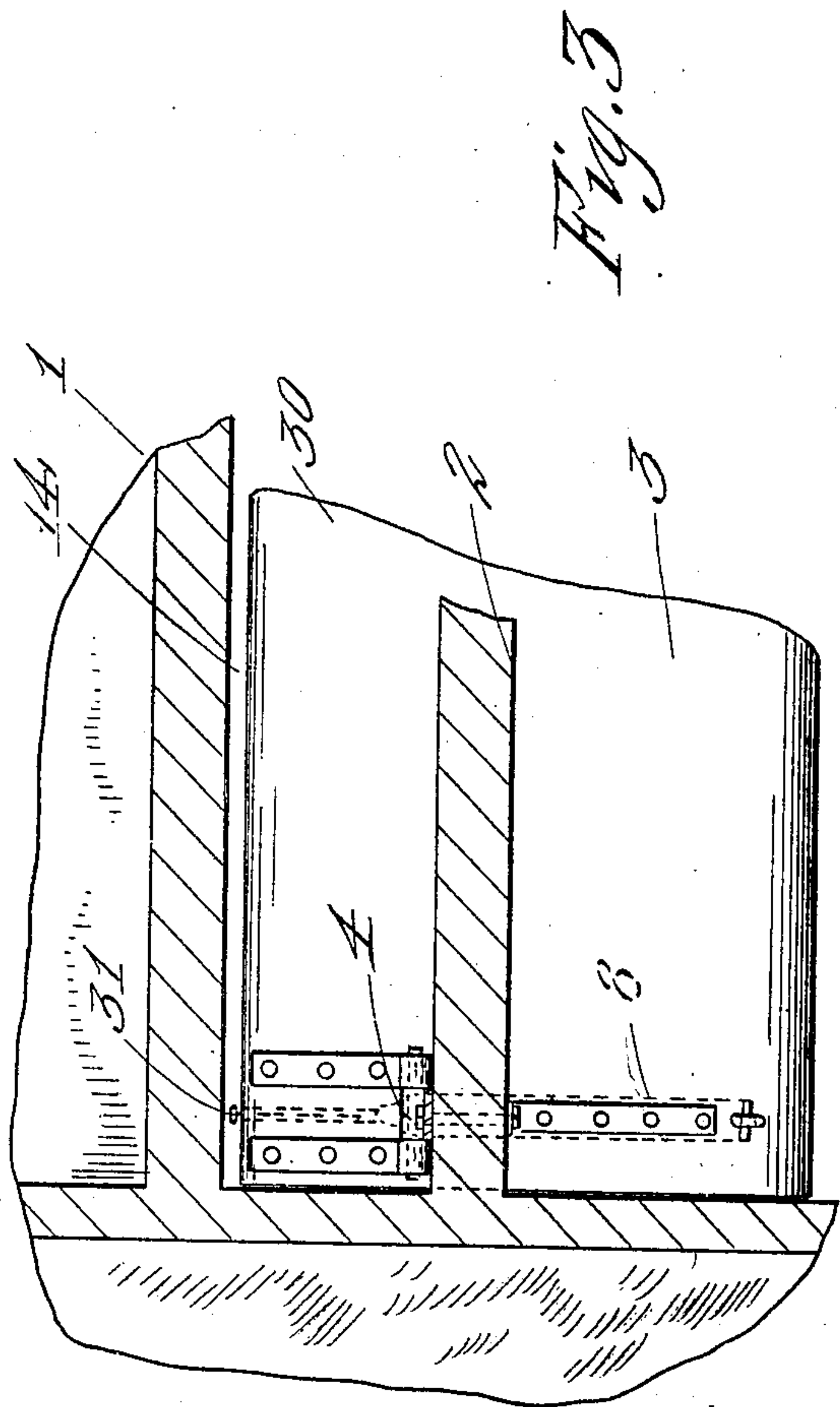
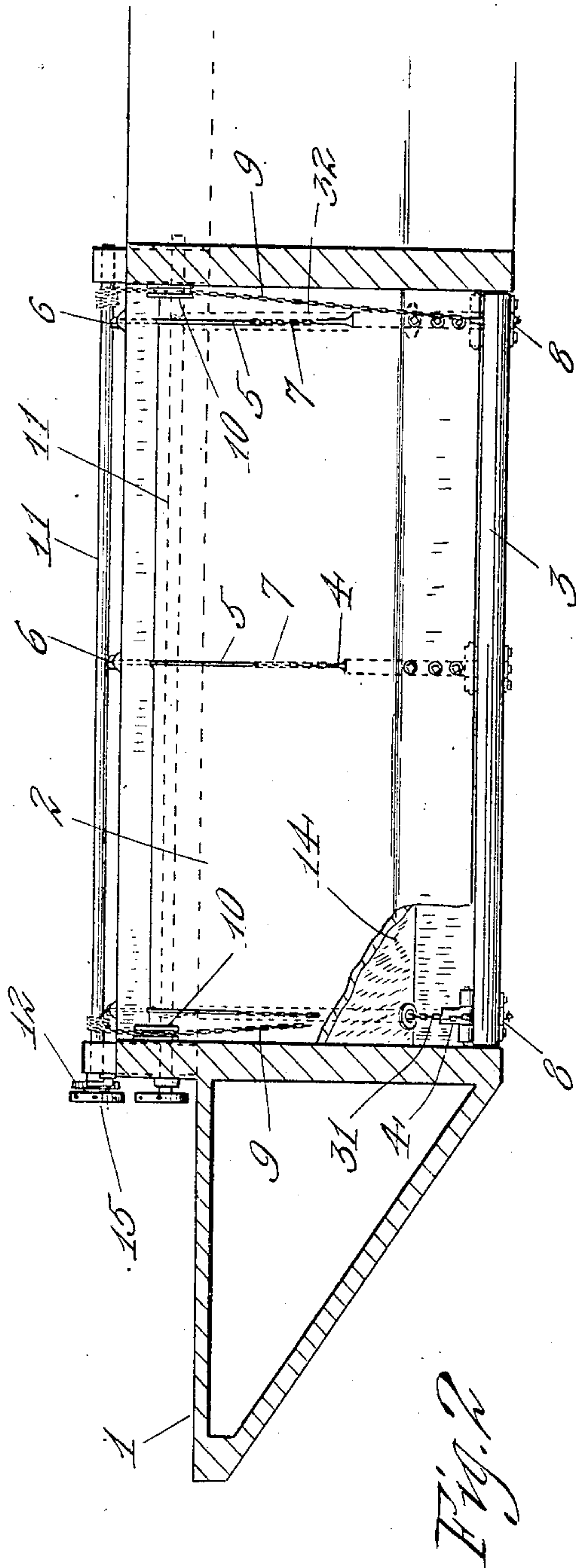
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UNITED STATES PATENT OFFICE.

CHARLES E. FOWLER, OF SEATTLE, WASHINGTON.

SCOW.

962,706.

Specification of Letters Patent. Patented June 28, 1910.

Application filed September 21, 1909. Serial No. 518,867.

To all whom it may concern:

Be it known that I, CHARLES E. FOWLER, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Scows, of which the following is a specification.

My invention has particular reference to improvements in dumping scows provided with swinging doors for retaining the cargo.

The primary object of the invention is to facilitate the opening movement of the retaining doors.

Further objects and advantages will be set forth as the description progresses and those features on which I desire protection succinctly defined in the appended claims.

With reference to the accompanying drawings, wherein like reference numerals designate corresponding parts throughout: Figure 1 is a transverse section of a scow embodying the features of my invention in such form as now preferred by me. Fig. 2 is a longitudinal section of one end portion of the same with a portion of the wall of the hopper broken away, and Fig. 3 is a fragmentary horizontal section on large scale.

I have illustrated my invention embodied with a hull 1 having a cargo compartment in the form of a hopper 2 provided at the discharge opening with opposite doors 3 swingingly connected with hangers 4 engaged by bolts 4' passing through the side walls of said opening. For each hanger 4 I have provided an adjustable support comprising a screw threaded draw rod 5 engaged with a nut 6 seated on the upper edge of hopper 2, and a chain section 7 connected with the rod and upper end portion of the hanger, these supports acting conjointly with bolts 4' and being adjustable with a view to enable doors 3 being drawn back to and held in their close fitting relation to the walls of hopper 2, thereby overcoming sagging of said doors, due to wear and strain on the supporting means thereof.

Reference numeral 8 designates transversely disposed straps secured to the outer faces of doors 3 and having inturned end portions 8' connected with chain sections 9 which extend over bearing members 10 and are engaged with respective winding shafts 11 journaled at the sides of hopper 2. Secured to these shafts are ratchet wheels 12

engaged by relatively fixed pawls 13 which hold the shafts from backward movement.

In connection with the doors 3 I have provided extensions as 30, which as shown, constitute continuations of the door structures projecting into recesses 14 of hull 1 for application of power to effect outward movement of the doors should they be held by water pressure against weight of the cargo or load.

Reference numeral 31 designates flexible draft members conveniently in the form of chain sections connected with the outer end of straps 8 and extending about the outer edges of respective extensions 30. These members lead upwardly through pipe sections 32 seated in hull 1 and are connected at their upper ends with respective winding shafts 11' journaled adjacent to the shafts 11, as clearly shown. While other provisions may be made for operating shafts 11 and 11' I have shown socket heads 15 secured thereto for the application of a bar or bars, as 13' to rotate the shafts as may be desired.

If mud, silt or similar fine material forms any considerable part of the cargo it will pack about the edges of the doors 3 and cut off communication between the cargo compartment and body of water in which the scow floats with a resultant pressure of the water against the outer faces of the doors which will hold them closed against weight of the cargo. In this event shafts 11' are operated to draw upwardly on extensions 30 through the medium of members 31 after first disengaging pawls 13 from the ratchet wheels 12.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is:

1. A float having a cargo compartment, a door for said compartment arranged to swing outwardly beneath the water, and means secured to said door and projecting on the opposite side of the point of swing thereof for applying force to move the door outwardly.

2. A float having a cargo compartment, a load retaining door for said compartment arranged to swing outwardly beneath the water, a flexible draft member connected with said door, and means projecting from the door on the opposite side of the point of

swing thereof for engagement with said member to move the door outwardly.

3. A float having a cargo compartment, a load retaining door for said compartment
5 arranged to swing outwardly beneath the water, a draft member, and means secured to said door and extending on the opposite side of the point of swing thereof for engagement with said member to move the
10 door outwardly.

4. A float having a cargo compartment, a load retaining door for said compartment arranged to swing outwardly beneath the water, an operating means mounted on said
15 float, a flexible draft member engaged with said operating means and connected with the door, and means projecting from the base of said door on the opposite side of the point of swing thereof for engagement with
20 said member to move the door outwardly.

5. A float provided with a cargo compartment having projecting discharge walls, doors mounted on said walls to swing out-

wardly, and extensions projecting from said doors on the opposite side of the points of
25 swing thereof and beyond said walls for applying force to swing said doors outwardly.

6. A float having a cargo compartment and provided on one side of said compartment with a recess, said compartment having
30 a discharge opening in its lower portion, a load retaining door for the discharge opening of said compartment having an extension projecting into said recess of the float, a hanger in said recess of said float having
35 pivotal connection with said door, and adjusting means disposed within the compartment of said float and connected with said hanger.

Signed at Seattle, Washington, this 3rd
40 day of September 1909.

CHARLES E. FOWLER.

Witnesses:

STEPHEN A. BROOKS,
ARLITA ADAMS.