No. 664,543. Patented Dec. 25, 1900.

J. H. D. GERKEN.

BOAT PROPELLING MECHANISM.

(Application filed Aug. 3, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

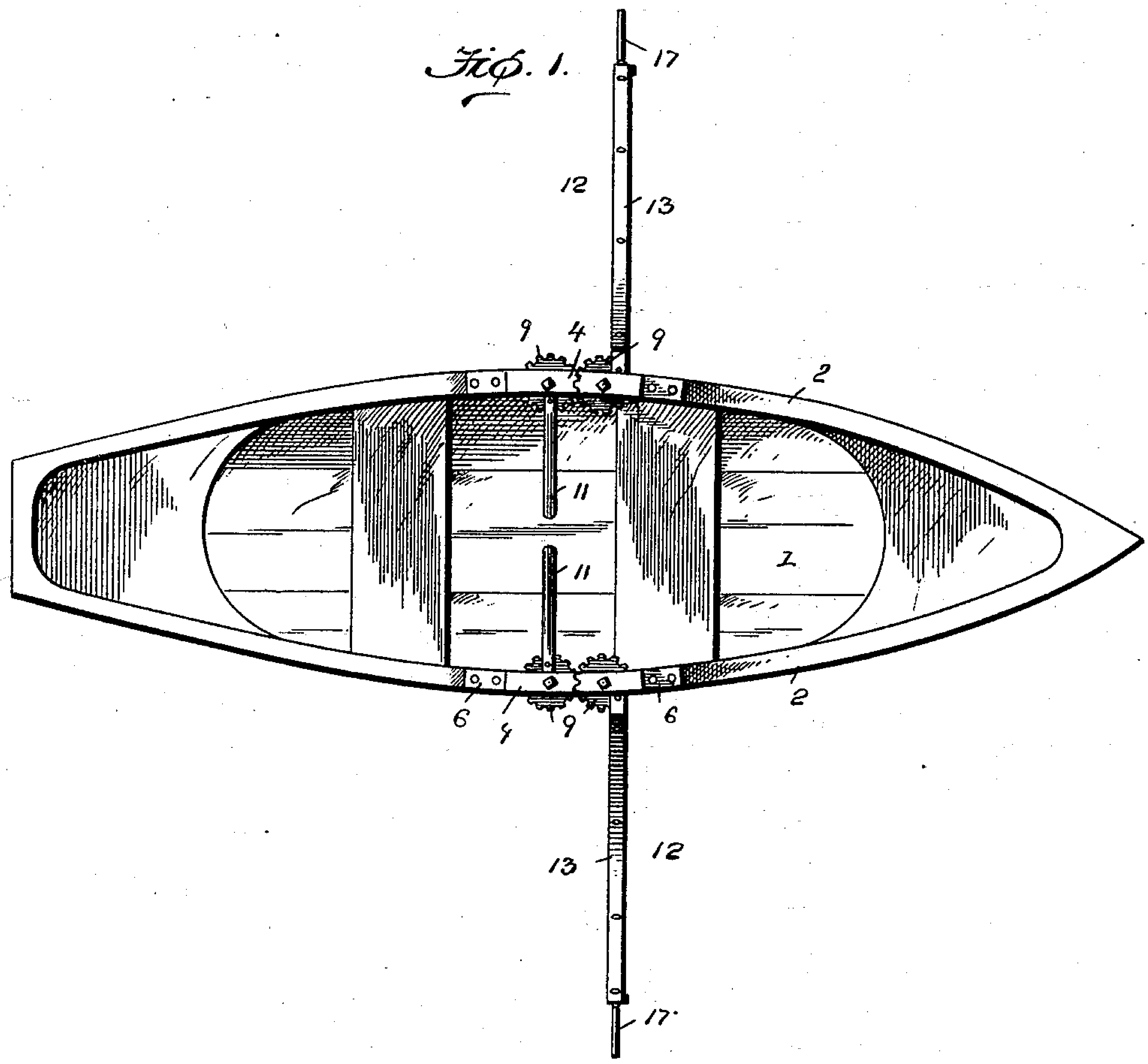
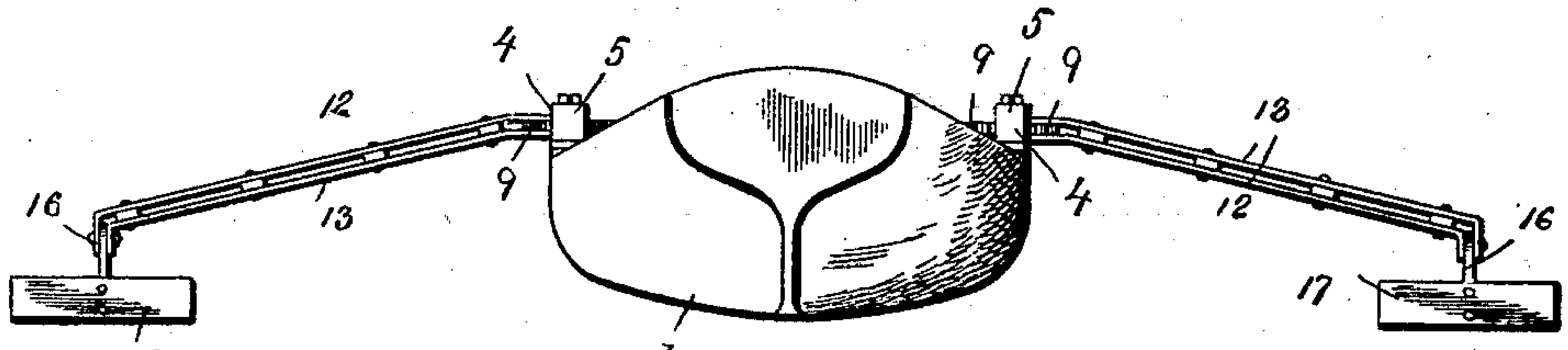


Fig. 2.



Witnesses

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Fig. 3.

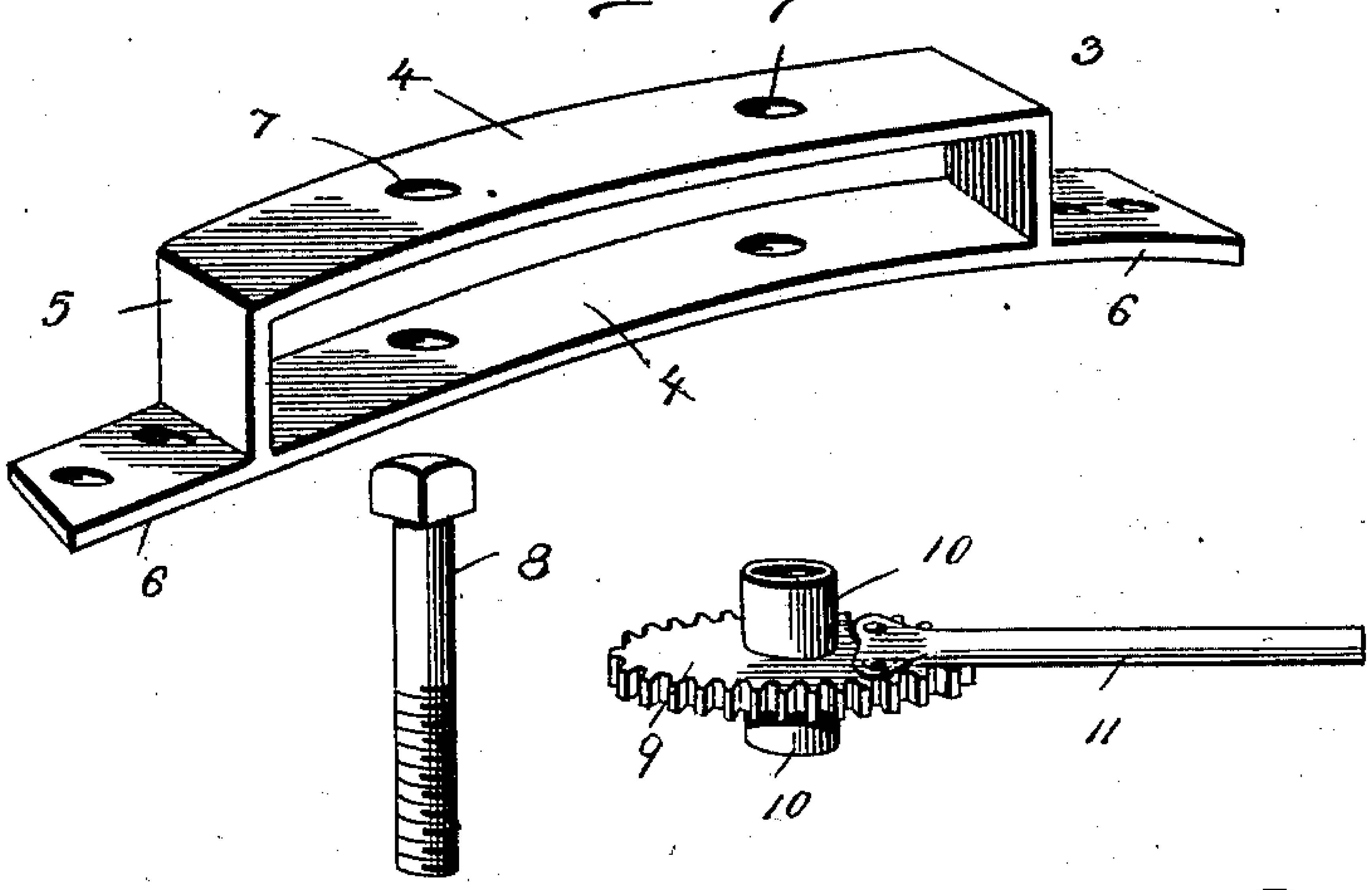


Fig. 4.

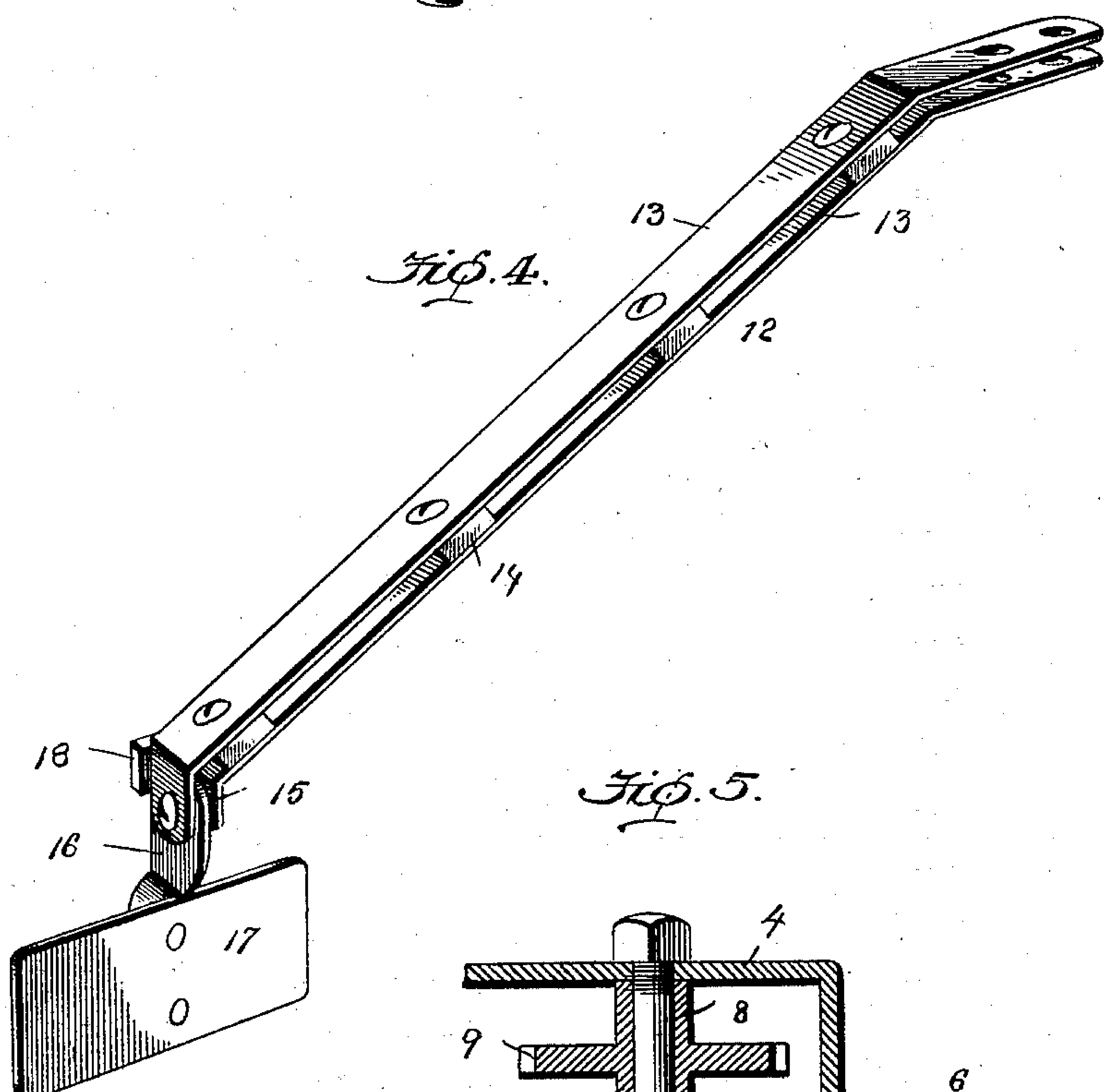
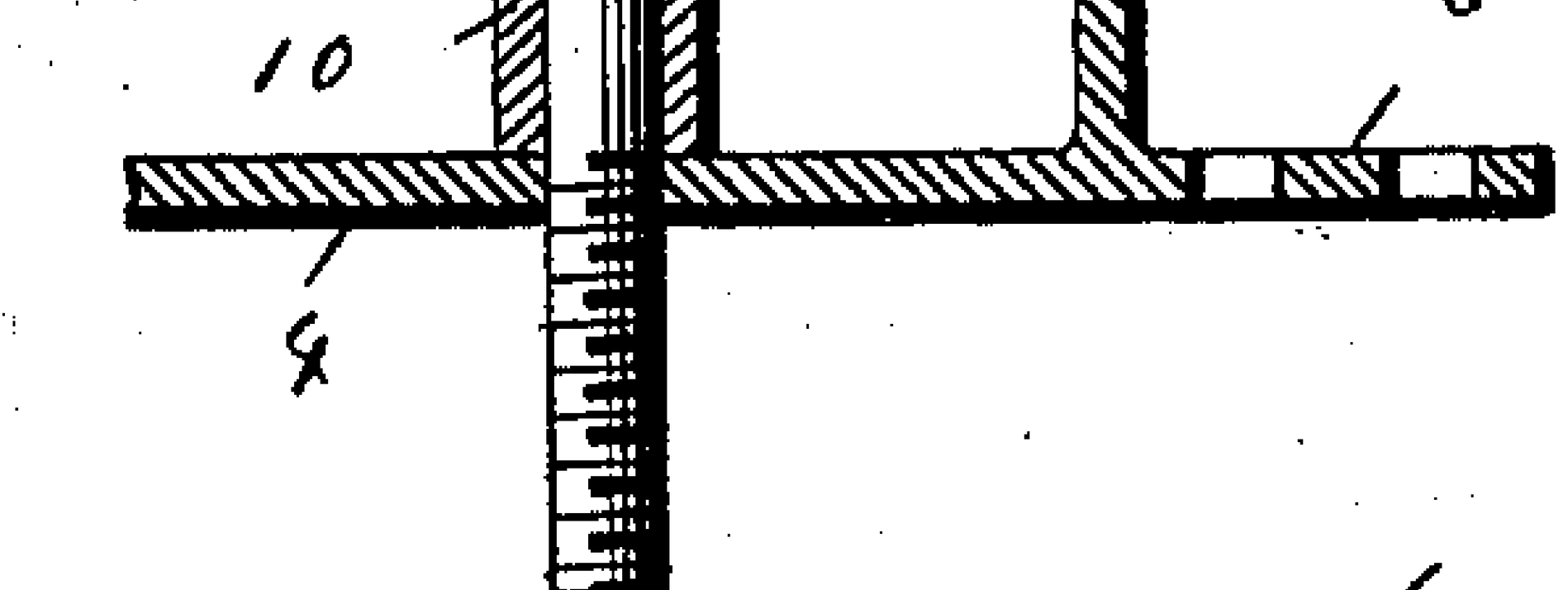


Fig. 5.



Witnesses

[illegible]

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UNITED STATES PATENT OFFICE.

JOHANN HENRY D. GERKEN, OF NEW YORK, N. Y.

BOAT-PROPELLING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 664,543, dated December 25, 1900.

Application filed August 3, 1900. Serial No. 25,834. (No model.)

To all whom it may concern:

Be it known that I, JOHANN HENRY DEADERICH GERKEN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Boat-Propelling Mechanism, of which the following is a specification.

This invention relates to new and useful improvements in row-boats; and its primary object is to provide a device of this character having means whereby the same may be readily propelled manually by the operator while facing the bow of the boat.

A further object is to provide a device of simple construction which may be readily attached to row-boats of various forms.

To these ends the invention consists in providing a bracket between the horizontal members of which are journaled horizontal gears which mesh with each other and to one of which is secured a lever adapted to be grasped by the operator. To the remaining gear is secured an outwardly-extending arm, to the outer end of which is pivoted a blade which is adapted to feather when drawn toward the bow of the boat, but which will remain in an upright position when the motion thereof is reversed. The bracket, together with the parts secured to it, is secured to the gunwale of the boat.

The invention also consists in the further novel construction and combination of parts hereinafter more fully described, and illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view. Fig. 2 is an end elevation. Fig. 3 is a detail view of a bracket, a gear, and a bolt detached. Fig. 4 is a detail view of a blade and its arm, and Fig. 5 is a section through a portion of a bracket and a gear mounted thereon.

Referring to said figures by numerals of reference, 1 is a boat, to the gunwales 2 of which are secured brackets 3 of peculiar construction. Each of these brackets is formed of two parallel members 4, connected at their ends, as at 5. Feet 6 extend from the ends of one of the portions 4 and are perforated to receive suitable securing means. Each of the portions 4 is provided with two perforations 7, which are adapted to receive bolts 8. These bolts extend therethrough into engagement with the side of the boat, and each serves as a bearing for a gear 9, which is mounted between the portions 4. These gears each have sleeves 10 extending from the faces thereof, which prevent longitudinal movement upon the bolts 8. The gears within each bracket mesh with each other at all times, and a lever 11 is secured to one of them and extends for a suitable distance into the boat. Extending outward from the second gear, within the bracket, is an arm 12. This arm is preferably formed of two similar strips of metal 13, held apart and braced by blocks 14 and which are bent downward at a suitable inclination from the gear to which they are secured. This gear is preferably secured between the ends of the strips 13 by means of bolts or in any desired manner. The outer end of each arm is bent downward, as at 15, and mounted within said ends is an ear 16, which extends upward from and is secured to a blade 17. A tongue 18 is formed with the end 15 of one of the strips 13 and extends in front of the ear 16, so as to prevent forward movement thereof upon its pivot.

It will be seen that when the levers 11 are drawn toward the stern of the boat the arms 12 will be swung in the same direction. As the blades 17 cannot swing forward upon their pivots, it is obvious that the boat will be forced forward by the backward movement thereof. When the levers 11 are pushed forward, the arms 12 will also swing toward the bow and cause the blades 17 to swing upon their pivots and feather in the water.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes and alterations as may fairly fall within the scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a boat; of a bracket secured thereto and comprising parallel portions, bolts passing through said por-

tions and adapted to secure the bracket in position, meshing gears upon the bolts, sleeves to the gears adapted to prevent the vertical movement thereof, a lever secured to one of the gears, an arm secured to the remaining gear and comprising parallel strips, blocks secured therebetween, a blade, an ear thereto pivoted between the strips, and means upon one of the strips for limiting the movement of the ears.

2. A propelling mechanism for boats comprising a bracket, feet extending therefrom, bolts passing through the bracket, meshing gears upon the bolts, sleeves upon the gears adapted to prevent vertical movement thereof, a lever secured to one of the gears upon the bolts, parallel strips secured to the remaining gear, blocks between the strips, a blade, an ear thereto pivoted between the strips, and a tongue upon one of the strips for limiting the movement of the ear.

In testimony whereof I affix my signature in presence of two witnesses.

J. HENRY D. GERKEN.

Witnesses:
HUGH J. DOWNING,
FRED. F. HUBER, Jr.