

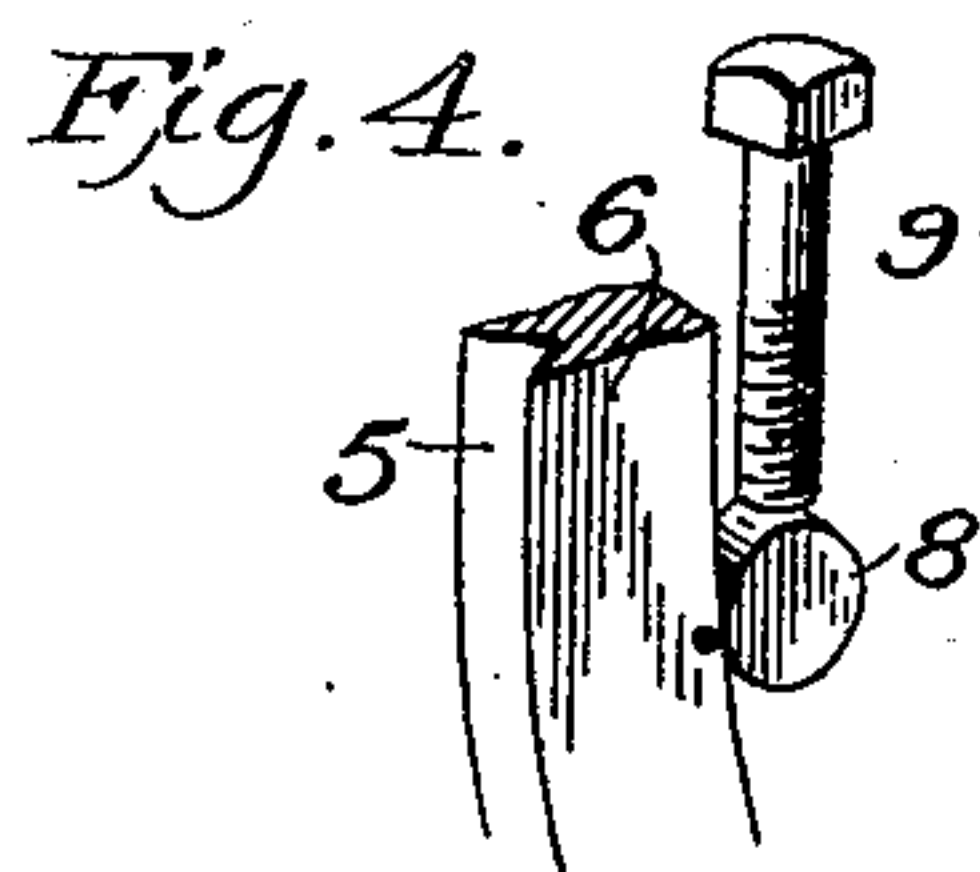
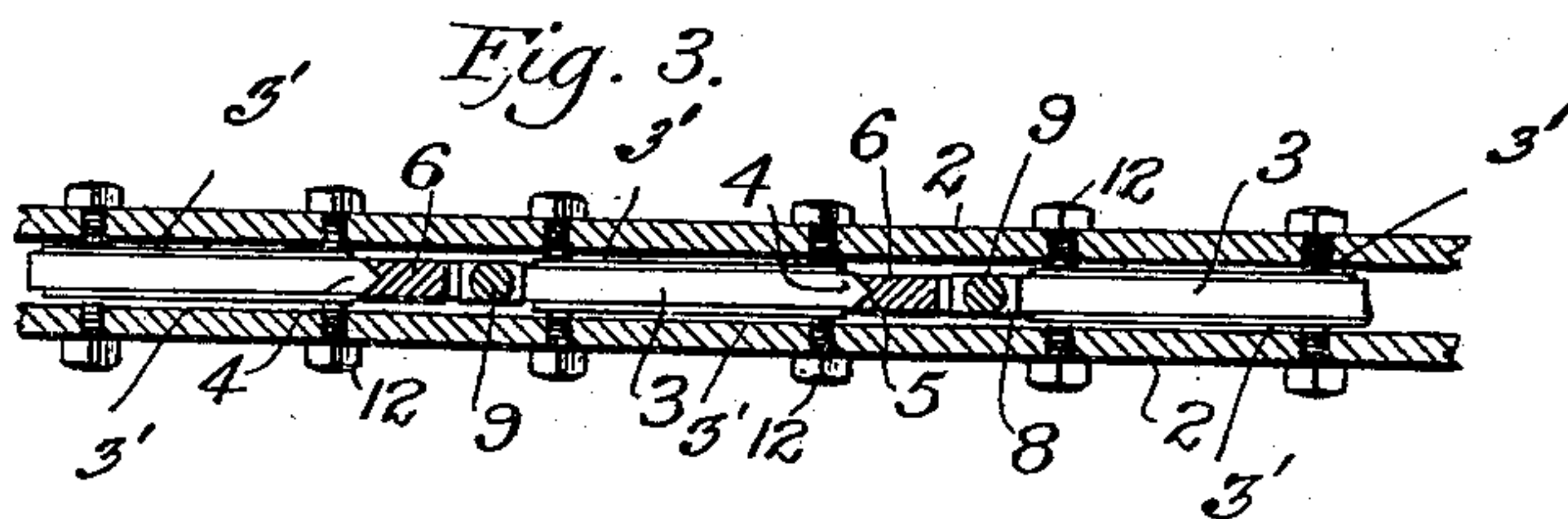
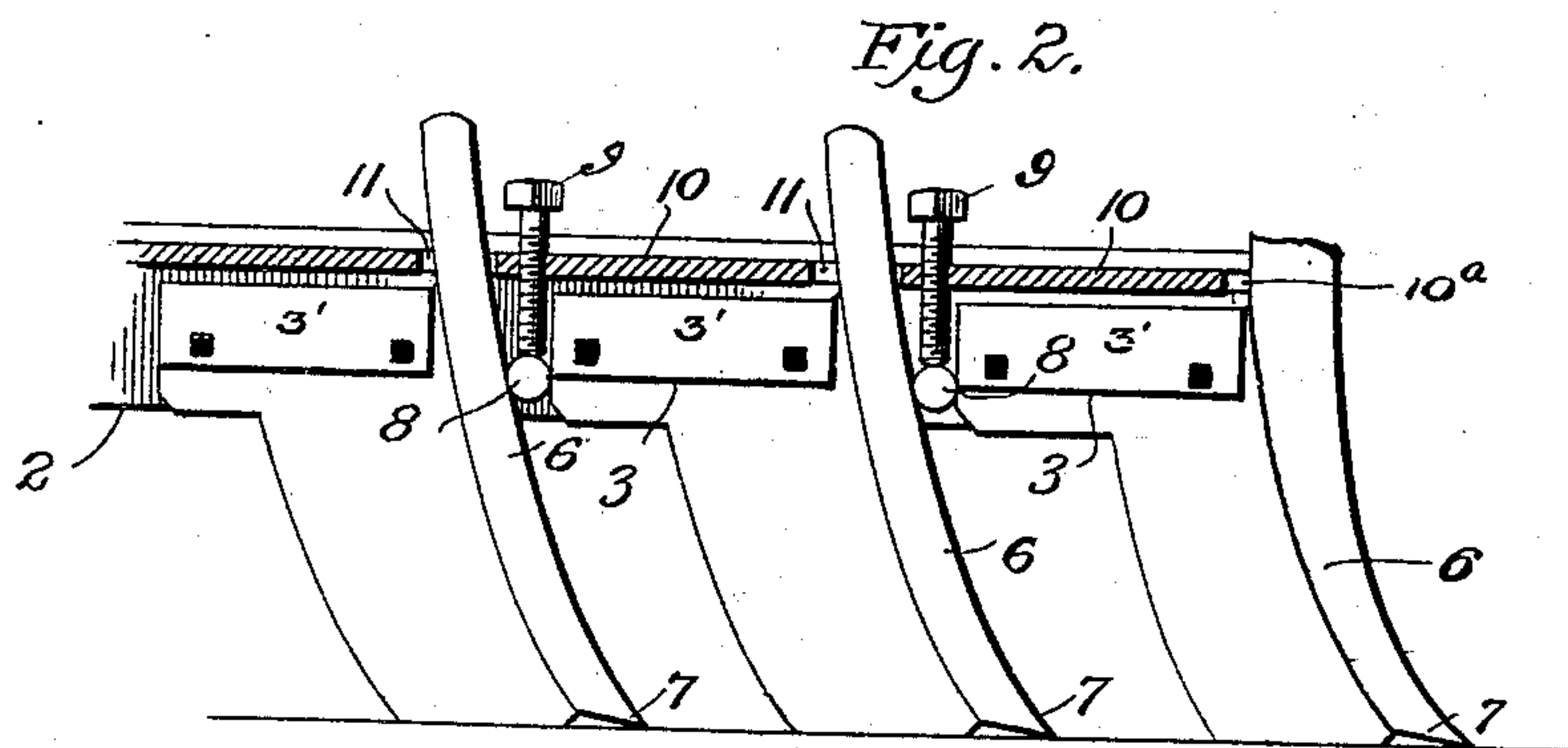
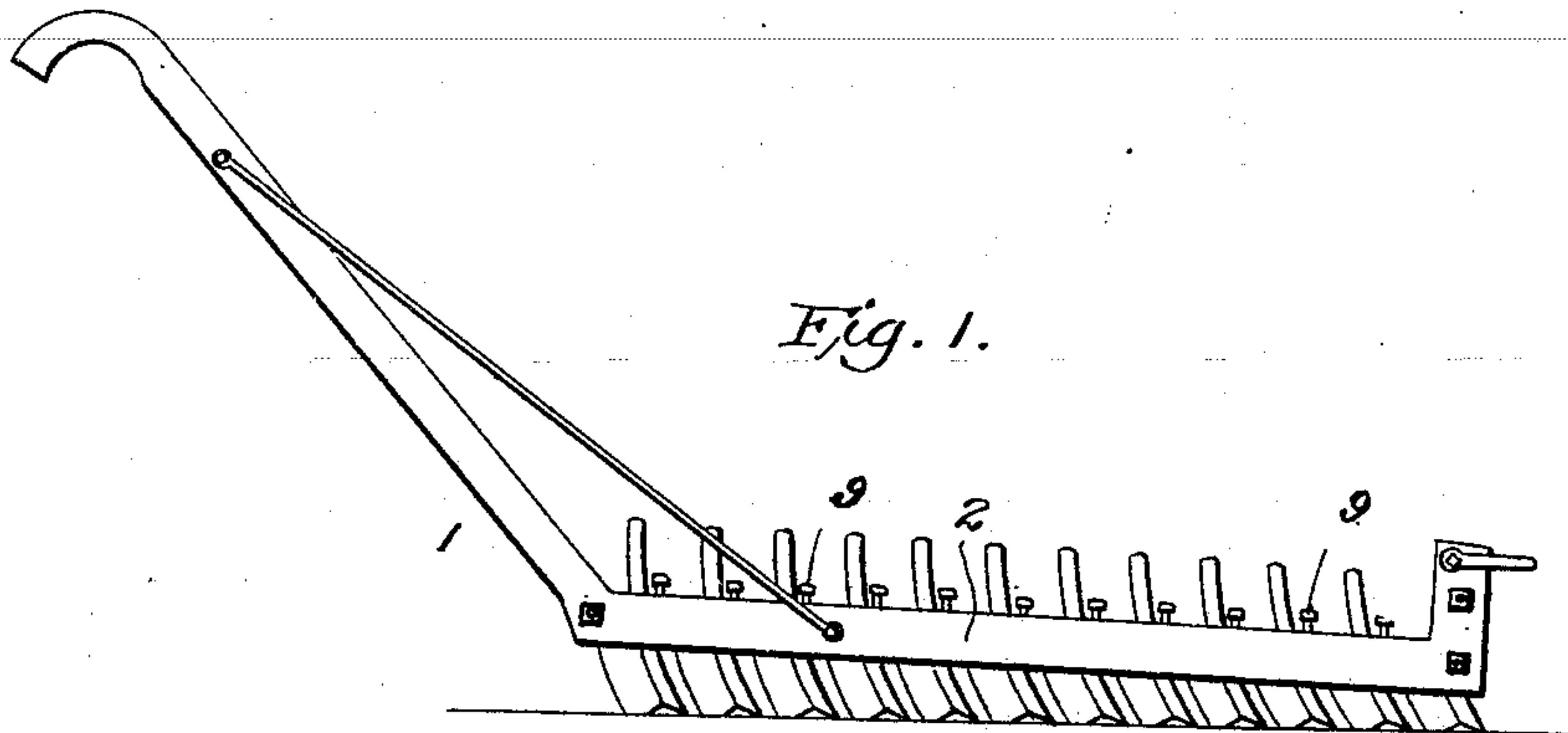
No. 624,162.

H. BODENSTEIN.
ICE MARKER.

Patented May 2, 1899.

(Application filed Jan. 28, 1898.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY BODENSTEIN, OF STAATSBURG, NEW YORK.

ICE-MARKER.

SPECIFICATION forming part of Letters Patent No. 624,162, dated May 2, 1899.

Application filed January 28, 1898. Serial No. 668,286. (No model.)

To all whom it may concern:

Be it known that I, HENRY BODENSTEIN, a citizen of the United States, residing at Staatsburg, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Ice-Markers; 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.

My invention relates to improvements in ice-markers, and has special reference to an improved insertible tooth and means for adjustably securing the same in any desired position.

The main object of my invention is the provision of means for securing an insertible tooth in the frame of an ice-marker at the desired height or depth to regulate the cut in the ice, and with my improved fastening the teeth can be kept in line without filing all the other teeth.

Another object of my invention is the provision of an insertible tooth and securing means therefor which may be adjusted in a short time with any ordinary wrench to cut deep or shallow to accommodate the amount of draft or the state of the ice; also, that each of the teeth will cut the same depth with less draft; also, if a tooth should be broken while at work another can be put in its place in a very short time, and in case the teeth should become out of line the set-screws below bearing-roller can be so adjusted as to put the same in proper adjustment, and thus it will be seen that I provide a useful and practical device which is extremely simple, durable, and inexpensive.

To attain the desired objects, my invention consists of an ice-marker embodying novel features of construction and combination of parts, substantially as disclosed herein.

Figure 1 represents a side elevation of an ice-marker embodying my invention. Fig. 2 represents a section taken through the frame. Fig. 3 represents a sectional view looking downward on the frame, and Fig. 4 represents an enlarged detail view of my inserted tooth and securing means therefor.

In the drawings the numeral 1 designates the frame, having the handle and draft-securing

means connected thereto. Said frame consists of the metal side pieces 2, which are held together by means of bolts passing through the forward and rear ends of the frame. Adapted to fit in between these side pieces in the space are the heel-plates 3, having bolted thereto the side plates or bushings 3', which form an abutment for the inner ends of the set-screws 12, which pass through the side pieces to hold the heel-plates in alignment, and in case the plates should move to one side of the frame the set-screws on one side are then loosened, while the ones upon the other side are tightened, thus forcing the heels in their proper alignment. Fitting in the grooves 10^a, formed near the top of the side pieces upon their inner sides, are the stop-plates 10, which are so placed in the frame as to leave a space or opening 11 for the inserton of the cutting-tooth 6, whose groove or channel 5, formed in its rear face, fits over the tapered forward edge 4 of the heel-plates. To hold these teeth in their proper place and adjust their points 7 so that they will only cut a certain depth, I form a screw-threaded opening in the stop-plates 10, in which is inserted the set-screw 9, whose lower end is adapted to contact the bearing-roller 8, resting in the space or socket formed between the front edge of the teeth and the rear edge of the top of the heel-plates. Thus it will be seen that by means of the set-screws which pass through the side plates and abut against the bushing the teeth are kept in perfect alignment, while the set-screws and bearing-rollers allow the teeth to be adjusted to cut any depth in the ice and hold the teeth in a very rigid position.

I would state that balls may be used in the place of the rollers 8 and answer the same purpose.

From this description, taken in connection with the drawings, it will be seen that I provide a very simple and durable securing means, yet a very efficient, useful, and practical one; also, that it may be operated readily and easily, making it a very desirable improvement.

I claim—

1. An ice-marker, consisting of the frame, heel-plates carrying bushings attached thereto and adjustably fitting in said frame, stop-

plates adapted to fit in grooves between the frame above the heel-plates, insertible teeth adapted to pass through spaces between the stop-plates in front of the heel-plates, means 5 for holding the heel-plates in their proper adjustment, and means for adjusting the teeth.

2. In combination with an ice-marker having heel-plates adjustably secured in the frame thereof, of an insertible tooth adapted 10 to be inserted in said frame in front of one of the heel-plates, and an adjusting means for said tooth consisting of the bearing-roller fitting in the space between the front of the tooth and the rear of the preceding heel-plate, 15 and a set-screw adapted to contact the bearing-roller to press the same downward into engagement with the said tooth and heel-plate to hold the tooth in place.

3. In combination with an ice-marker having heel-plates with bushings secured to their sides, and means for alining said heel-plates consisting of the set-screws passing through the sides of the frame and contacting the bushings of the heel-plates to hold the plates in 20 place in the frame and to aline the same, of insertible teeth movably attached to said heel-plates to the forward parts thereof provided with a means for adjusting the cutting-points of the teeth and to hold the same in 25 place.

4. In combination with an ice-marker, of heel-plates and insertible teeth arranged in a space between the frame thereof, in such a manner as to leave a space or socket between 35 the rear of a heel-plate and the front of a tooth, a bearing-roller adapted to rest in said socket, and means for rendering the bearing-

roller rigid to sustain the tooth in its desired adjustment.

5. In combination with an ice-marker, of heel-plates and insertible teeth arranged in a space between the frame thereof, in such a manner as to leave a space or socket between the rear of a heel-plate and the front of a tooth, a roller or movable bearing adapted to 45 rest in said socket, and a set-screw adapted to be turned so as to press downward upon said roller or bearing and hold the tooth tightly in place.

6. In combination with an ice-marker having heel-plates with bushings secured to their sides and set-screws entering the frame of the marker and adapted to abut against said bushings to aline the plates, of stop-plates adapted to fit in grooves between the 55 frames above the heel-plates, insertible teeth adapted to pass through spaces between the top plates in front of the heel-plates, a V-shaped socket formed between the front of the teeth and rear of the plates, a roller or loose bearing resting in said sockets and a set-screw passing downward through each of the said stop-plates directly above said sockets and adapted to be turned and forced downward upon said roller or bearing to cause the 65 same to contact the front of the tooth and the rear of one of the heel-plates to hold the tooth firmly in place.

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

HENRY BODENSTEIN.

Witnesses:

JOHN A. KELLY,
H. C. BARKER.