

No. 714,435.

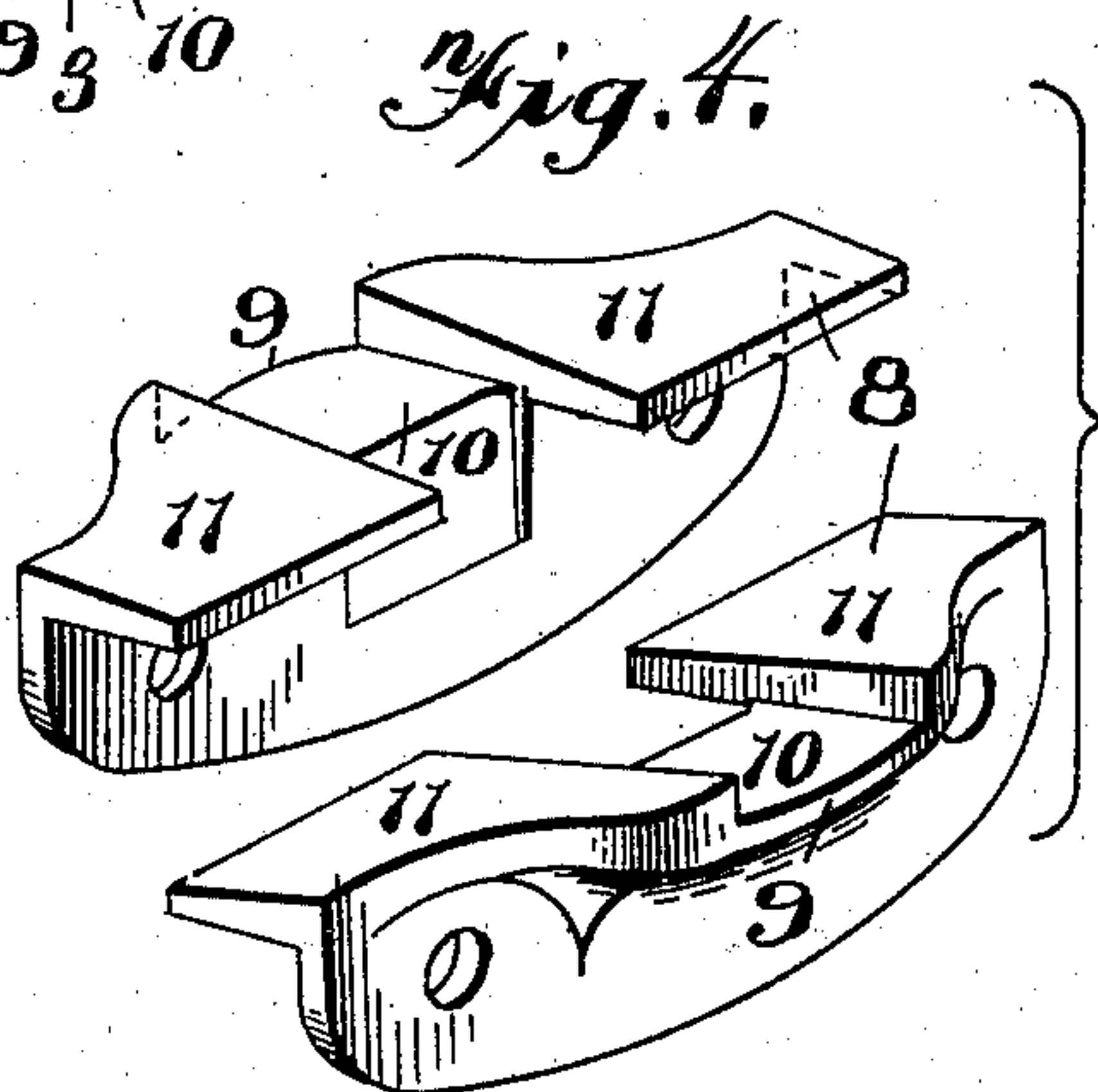
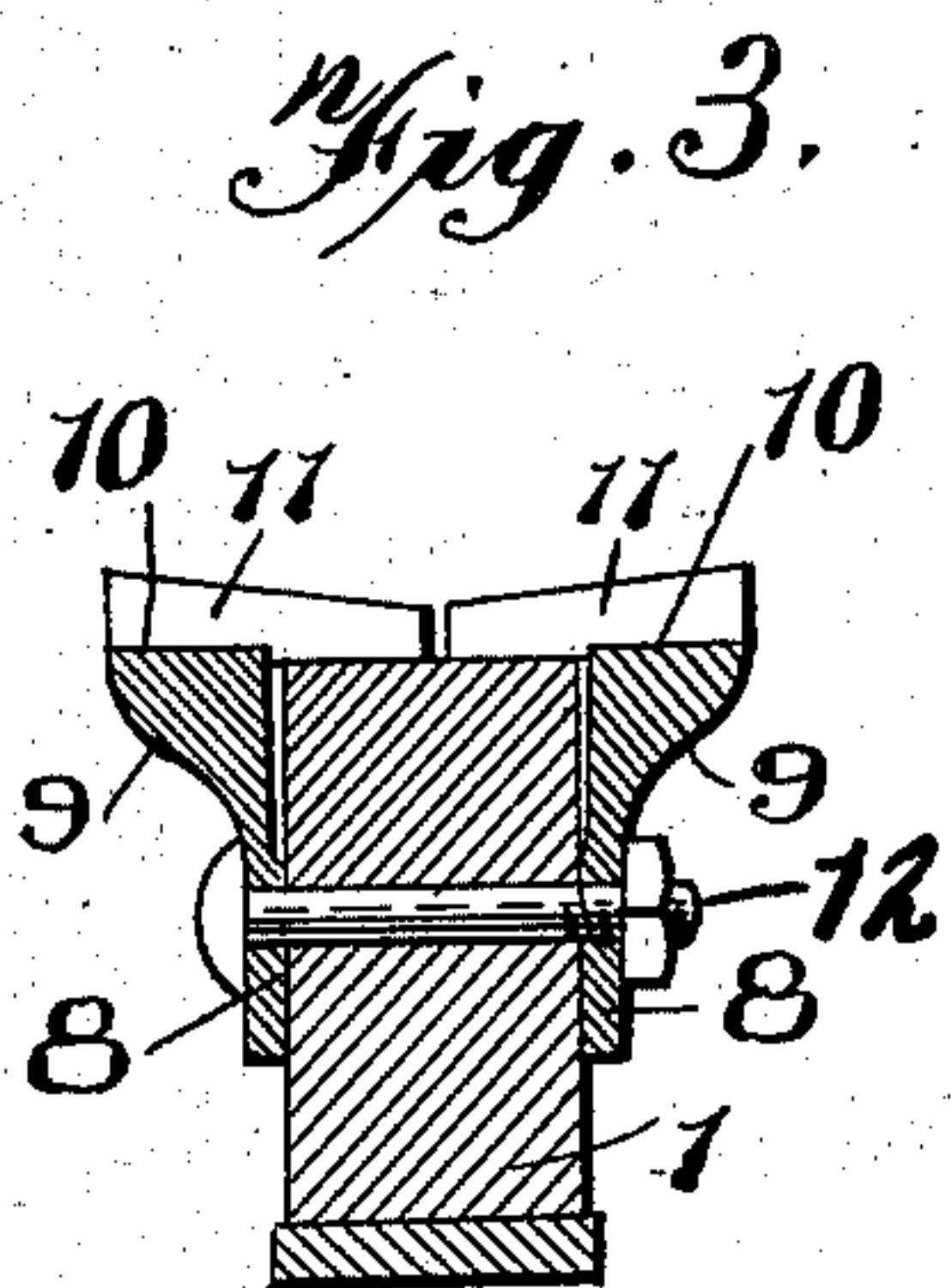
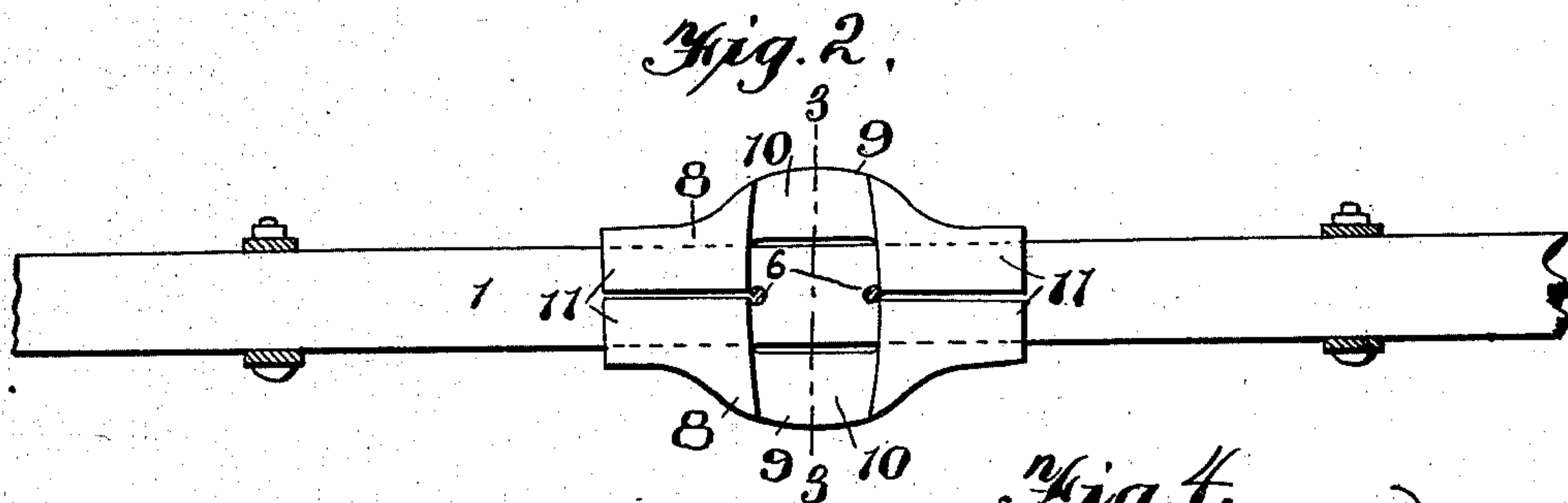
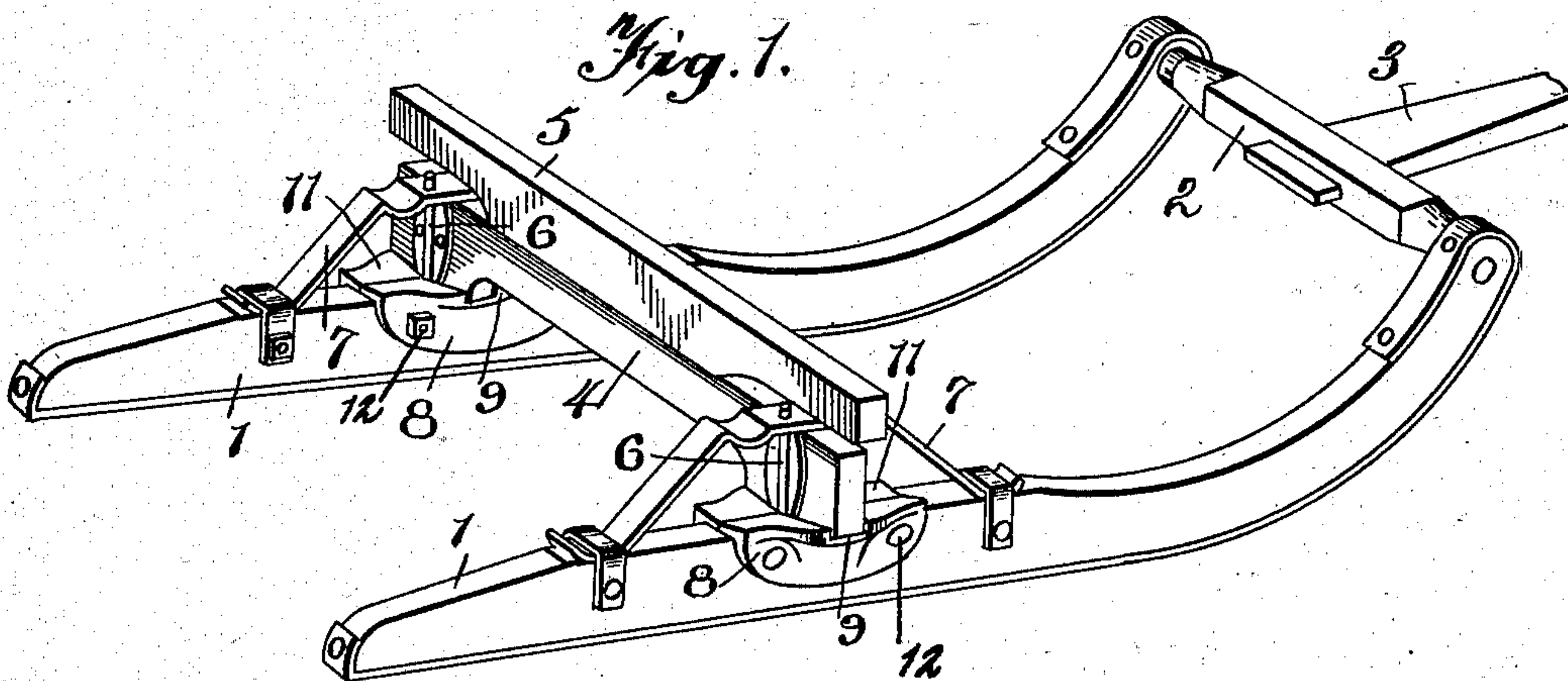
Patented Nov. 25, 1902.

J. H. ANDERSON.

BOB SLED.

(Application filed July 1, 1902.)

(No Model.)



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

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BOB-SLED.

SPECIFICATION forming part of Letters Patent No. 714,435, dated November 25, 1902.

Application filed July 1, 1902. Serial No. 113,993. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. ANDERSON, a citizen of the United States, residing at Littlefalls, Morrison county, Minnesota, have invented certain new and useful Improvements in Bob-Sleds; 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.

This invention relates to certain improvements in bob-sleds, or what are commonly termed "Mainite" bob-sleds.

An object of my invention is to provide improved means simple, economical, and durable in construction for strengthening bob-sled runners and the joints or couplings between the runners and beams, and thereby increase the life, usefulness, and carrying capacity of such sleds at a minimum expense.

My invention consists in certain novel features in construction and in combinations and in arrangements of parts, as more fully and particularly explained and set forth in detail hereinafter.

Referring to an example of a form of my invention shown in the accompanying drawings, Figure 1 is a perspective view of the rear section of a bob-sled, the reach being shown broken away. Fig. 2 is a detail top plan view of the central portion of a runner with the bearing-plates attached, the bolster, beam, and rave-iron being removed. Fig. 3 is a cross-sectional view taken in the plane of the line 3 3, Fig. 2. Fig. 4 is a detail detached perspective view of the two bearing-plates.

In the drawings, 1 1 are the two elongated runners of the sled-section, having the roller 2 connected to their front ends and provided with the reach 3 for attachment to the beam of the front and usually similar sled-section, which I have not considered necessary to show in the drawings.

4 is any usual cross-beam between the runners and on which the bolster 5 is mounted.

6 6 are the vertical start-pins of each runner driven down into the central portion of the runner, as usual, and extending up on opposite sides of the end of and between which the beam is located.

The rave-iron 7 of each runner is arched

up over the beam end, as usual, with its front and rear ends secured down on the top edge of the runner. The start-pins pass up through the rave-iron, as usual.

In the ordinary construction of bob-sleds the weakest points are at the central portions of the runners, where the start-pins are driven into the runners; and an object of my invention is to provide simple and yet effective means for strengthening these weak points and rendering the runners stronger at their central portions than elsewhere and at the joints between the same and the beams, which are points subject to great strain and wear. When sleds of this character are in use, there is great strain on the runner and start-pins when the sled slips or slides sideways or when it makes a sudden or sharp turn, and this strain tends to bend the start-pins and split the runner. To overcome these objections, I have provided means consisting of bearing plates, irons, or castings 8, applied longitudinally to the central portions of the runners, or the portions of the runners to which the beams are applied. I apply a pair of the plates to each runner, locating the plates on opposite sides of the central portion of the runner. The plates 8 are similar in construction and each is usually formed in one piece of metal by casting, drop-forging, or otherwise. The plate is elongated and formed with a flat inner face to fit against and extend longitudinally of a side face of the runner. The plate at the upper portion of its outer face is arched longitudinally from one end to the other, or, in other words, the central portion of the plate along its upper edge is extended or bulged outwardly or formed with the overhanging portion 9 to form the extended central top bearing-surface 10 for the beam end. At the opposite ends of said bearing-surface 10 the plate is formed with the horizontal flanges 11 11, fitting over the top edge of the runner on opposite sides of the beam to distribute the load along the runner the length of each plate. Two similar plates are fitted on opposite sides of each runner with their bearings 10 10 in juxtaposition or alined and the inner edges of their flanges 11 meeting longitudinally along the top edge of the runner. The two plates are rigidly clamped to the runner by bolts 12 passed transversely through the

runner and through the plates under the overhangs 9 9 thereof.

The flanges 11 of a plate extend about half-way across the runner, so that the flanges of the two plates will approximately meet. The plates do not have flanges at the beam-bearings 10, so that a transverse socket is, in effect, formed across the top of the runner to receive the beam end. Also the start-pins extend through at the inner end edges of said flanges and through the blank space between the inner ends of the flanges. The beams extend transversely across said blank spaces and rest on the bearings 10 10 of each pair of plates, which form wide laterally-extended bearings for the beam, reducing strain on the runner and start-pins to a minimum. The pressure between the runner and beam is taken up by the said plates and distributed a considerable distance along the runners and onto the top edges thereof by reason of the flanges 11. These plates greatly strengthen the runners and prevent splitting thereof where the start-pins are driven in and distribute the load along the top edges of the runner and relieve the excessive strain on the runner which occurs where the beam merely rests along a narrow line transversely across the runner. Each beam in my construction rests on the four wide bearing-surfaces 10 of the plates, which have the eight flanges with extensive bearing-surfaces along the top edges of the runners. These plates can be easily secured to old sleds and can also be applied after the sleds are manufactured without changing the construction and formation of the parts thereof.

It is evident that various changes might be made in the forms, constructions, and arrangements of the parts described without departing from the spirit and scope of my invention. Hence as at present advised I do not wish to limit myself to the exact construction shown.

What I claim is—

1. A bob-sled runner, and a beam, in combination with a pair of bearing-irons secured longitudinally along the opposite vertical faces of the runner, each iron having separated horizontal top flanges fitting down on the top edge of the runner and a depressed

top edge bearing-surface between the flanges, the top edge of the runner between said flanges and said bearing-surfaces being exposed so that the beam rests on said surfaces and transversely across the top edge of the runner, substantially as described.

2. In a bob-sled in combination, a runner, a rave-iron, the pair of bearing-plates secured to the opposite vertical faces of the runner, each plate having separated horizontal flanges fitting on the top edge of the runner and formed with an overhang forming the wide depressed top edge bearing-surface between the flanges and opposite the exposed portion of the top edge of the runner, the beam resting on said surfaces and extending transversely across the runner, and the start-pins extending upwardly from the runner and between said flanges, substantially as described.

3. The pair of similar bob-sled bearing-irons, each consisting of the plate adapted to be secured to the vertical side faces of the runner and having an intermediate portion of its top edge forming a transverse top bearing-surface for a sled-beam and the two separated horizontal top flanges at opposite ends of said bearing-surface to rest on the top edge of the runner and leave the top edge of the runner exposed between the bearing-surfaces of the two plates, substantially as described.

4. In combination, in a bob-sled, a runner, a beam, the two similar bearing-plates secured longitudinally along opposite side faces of the runner, each plate formed with the two separated horizontal flanges resting on the top edge of the runner, the beam resting on the top edges of the plates and transversely of the portion of the runner exposed between the inner end edges of said flanges, start-pins extending up from the runner and between said flanges, and a rave-iron passing up over the beam and receiving the start-pins, substantially as described.

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

JOHN H. ANDERSON.

Witnesses:

T. C. GORDON,
W. W. HIGGINS.