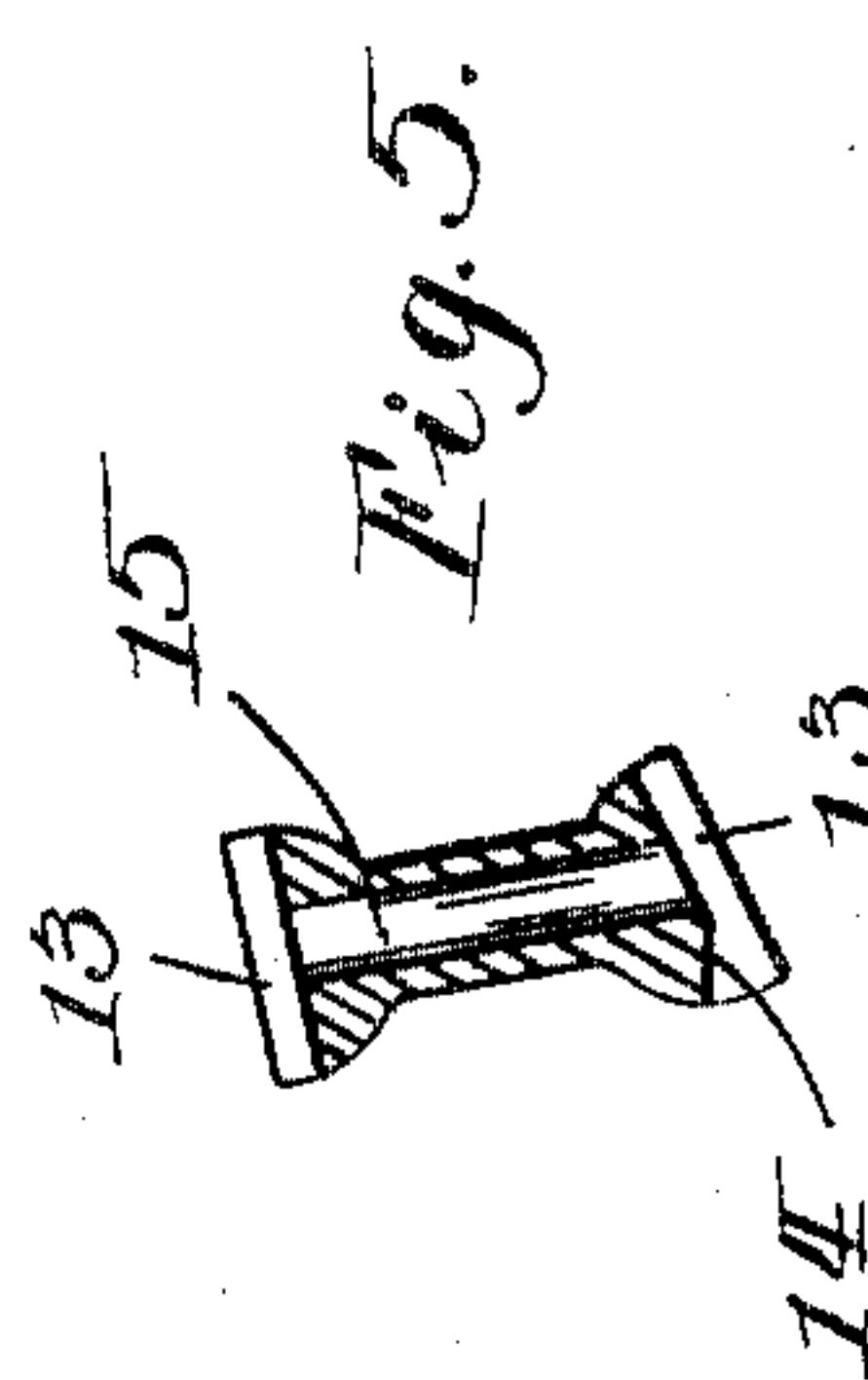
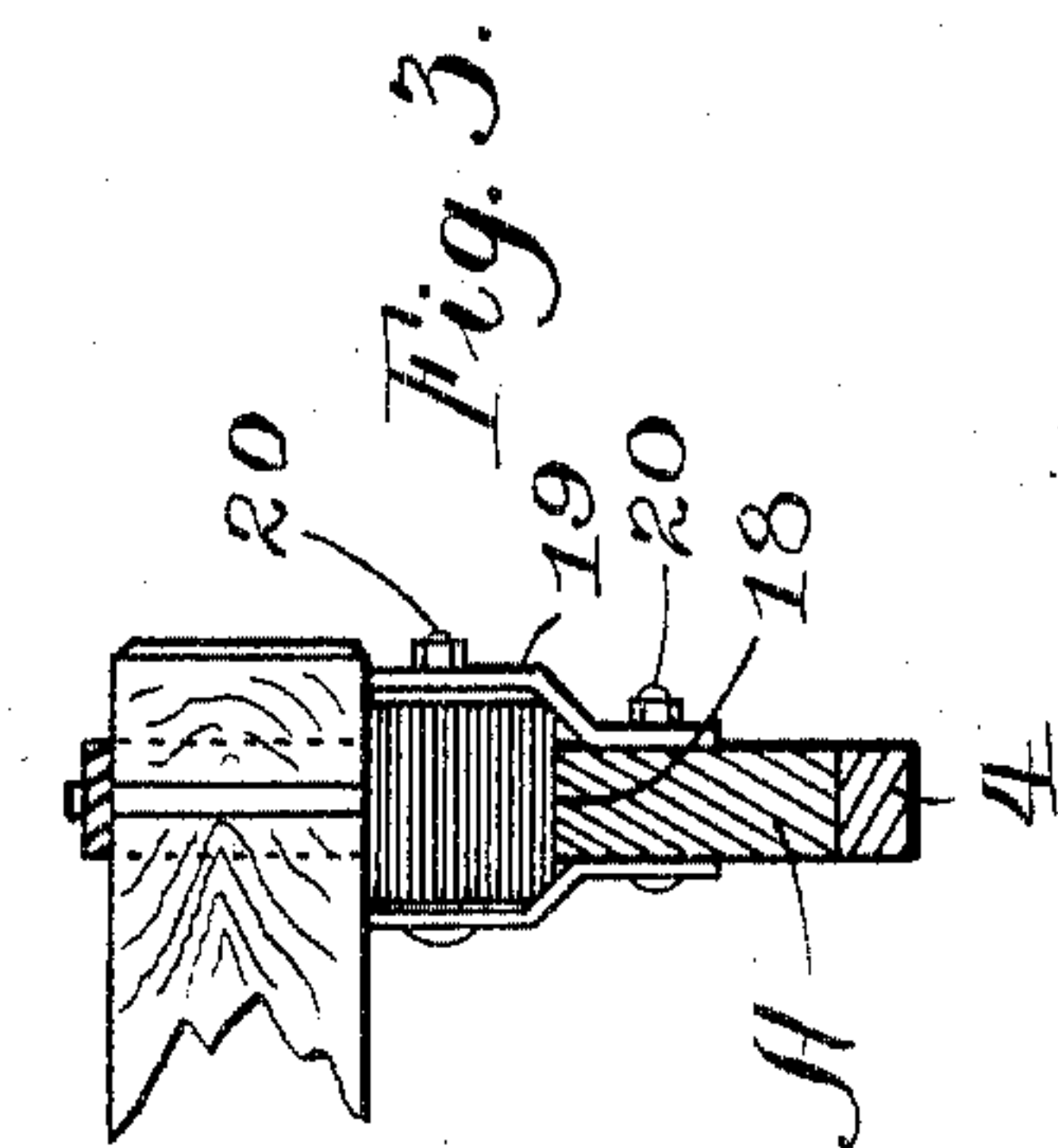
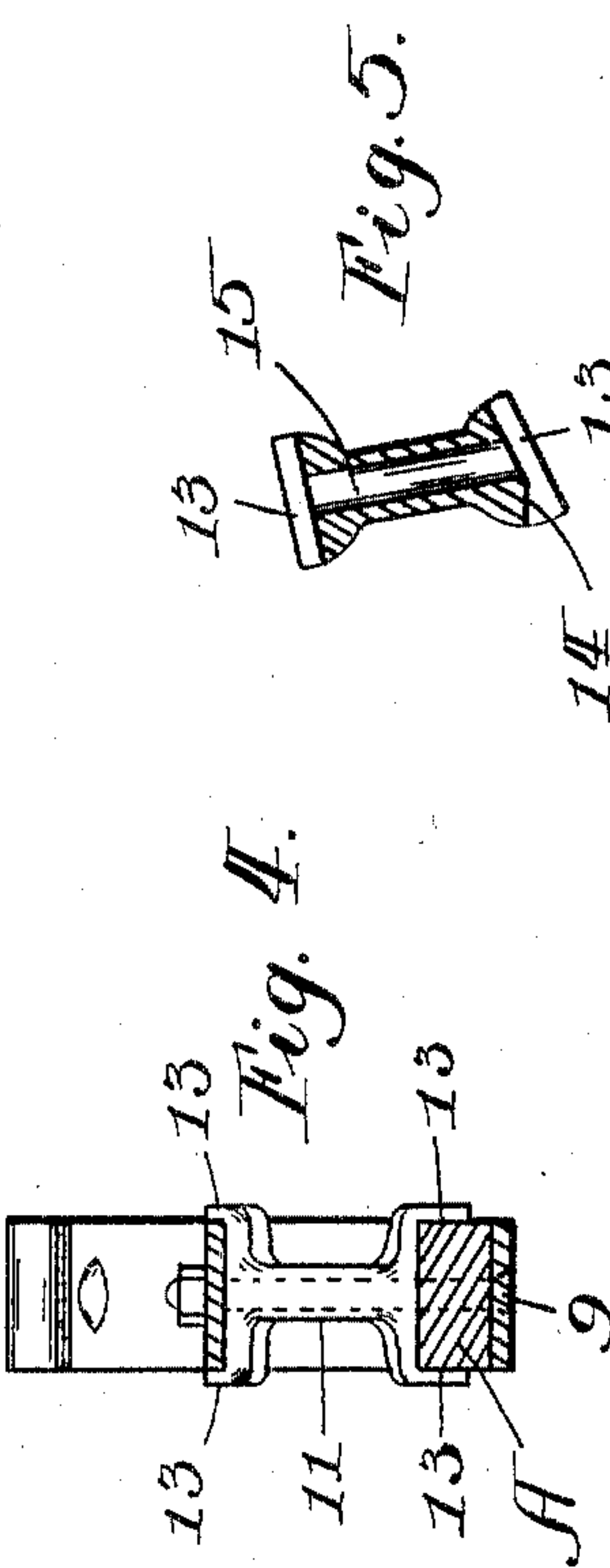
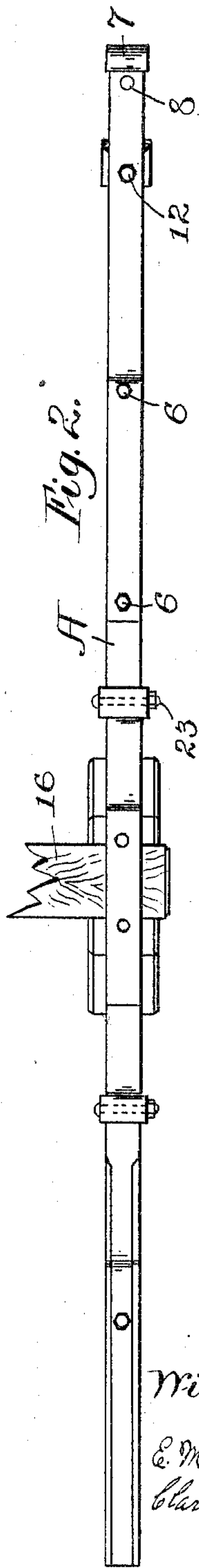
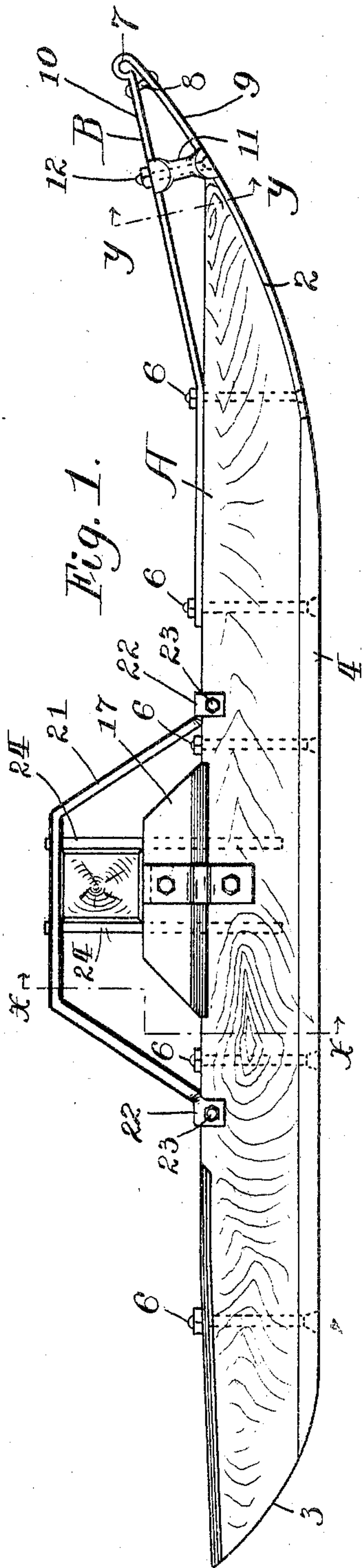


No. 780,149.

PATENTED JAN. 17, 1905.

J. H. ANDERSON.
BOB SLED RUNNER.
APPLICATION FILED DEC. 23, 1903.



Witnesses: Inventor:
E. M. Boesch. John H. Anderson,
Clara H. Pich. by: *Styker & Pich*
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UNITED STATES PATENT OFFICE.

JOHN H. ANDERSON, OF LITTLEFALLS, MINNESOTA.

BOB-SLED RUNNER.

SPECIFICATION forming part of Letters Patent No. 780,149, dated January 17, 1905.

Application filed December 23, 1903. Serial No. 186,338.

To all whom it may concern:

Be it known that I, JOHN H. ANDERSON, a citizen of the United States of America, and a resident of Littlefalls, in the county of Morrison and State of Minnesota, have invented certain new and useful Improvements in Bob-Sled Runners, of which the following is a specification.

My invention relates to improvements in bob-sled runners, and has for its object simplicity of construction and effectiveness in use.

A further object is a bob-sled runner which is constructed out of a single straight piece of wood, said runner having a suitable upcurved frame at the forward end thereof, which forms a continuation of the shoe on its lower face.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view of my improved bob-sled runner. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a sectional view taken on the line X X of Fig. 1. Fig. 4 is a sectional view taken on the line Y Y, and Fig. 5 is a sectional view of the brace at the forward end of the runner.

In the drawings, let A represent the runner, which is preferably constructed out of a single straight piece of wood or other suitable material. This runner has the lower face of its forward and rear ends curved up, respectively, at 2 and 3. The purpose of these curved ends is to make the runner slide forward or backward easily. A shoe 4, preferably made of metal on its lower face, and the frame B, which forms an extension of the shoe on its forward end, are fastened to the runner by means of the bolts 6. The frame B is curved above the face 2 and bent to form an eye 7 for connecting with the reach or shaft. (Not shown.) A rivet 8 is preferably fastened through the lower and upper sides 9 and 10 of the frame B, and a brace 11 for strengthening the frame is fastened between its sides by means of the bolt 12. This brace is formed with clips 13, which straddle the sides of the frame, and is cut away at 14 so as to engage the upper side of the runner. The bolt 12 passes through the hole 15 in the brace. The object of the construction above described is to provide means whereby the runner may be constructed out of a single

piece of wood straight with its grain, as distinguished from a runner which is bent up at its front end.

By making the runner out of a piece of wood straight with its grain, as shown, it is stronger, more durable, and less expensive to construct than runners having bent ends. The beam 16, of any suitable construction, may be fastened to the runner by any suitable means. As shown, a block 17, which is recessed at 18, is fastened to the upper face of the runner by the plates 19 and bolts 20. A frame 21, of iron or other suitable material, is fastened by the clips 22 and bolts 23 to the runner and extends above the beam, which rests between its lower face and the block 17. A pair of vertical pins 24, which pass through the frame 21, block 17, and into the runner, assist in holding the block in position. The block 17 presents a broad surface for the beam to rest upon and reduces wear of the parts between the beam and runner. The block and means by which the beam is fastened to the runner produces a strong lateral and longitudinal connection between the runner and beam. The construction of the block also relieves the strain from the pins.

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

1. A device of the class set forth, consisting of a runner made out of a single piece of wood, straight with its grain throughout its length and having a straight upper face and an upcurved lower face on its forward end, a strip of metal projecting above said face on its forward end and bent back to meet said upper face, means for bracing the upper side of said strip against said runner, and means for fastening said strip to said runner.

2. A device of the class set forth, consisting of a runner having an upcurved lower face on its forward end, a shoe fastened to the lower face of said runner extending above its forward end and bent back to meet the upper face of said runner, a brace between the upper side of said shoe and the forward end of said runner, and means for fastening said shoe to said runner.

3. A device of the class set forth, consist-

ing of a runner made out of a single piece of material having its grain straight throughout its length and formed with a straight upper face and an upcurved lower face on its forward and rear ends, a shoe formed by a strip of metal curved up near its forward end and bent back to meet said upper face and form an eye, a brace between the upper side of the shoe and the forward end of said runner, and means for fastening said shoe to said runner.

4. A device of the class set forth, consisting of a runner having a straight upper face and an upcurved lower face on its forward and rear ends, a shoe fastened to the lower face of said runner, a skeleton frame having its lower side fastened to the curved face on its forward end and projecting above said runner, the upper side of said frame being fastened to the straight upper face of the runner, and a brace fastened between the sides of said frame and engaging the forward end of the runner.

5. A device of the class set forth, consisting of a runner formed by a single, straight piece of material having its upper face straight and its lower face curved up at its forward end, a shoe fastened to the lower face of said runner, a skeleton frame projecting above the forward end of the runner and having its lower side fastened to said curved face and its upper side fastened to the upper face of said runner, and a brace between the sides of said frame and engaging the forward end of the runner.

6. A device of the class set forth, consisting of a runner formed by a single, straight piece of material, having its upper face straight and the lower face of its forward end curved up, a shoe fastened to the lower face of said runner, a skeleton frame having its lower

side fastened to said curved face and its upper side fastened to the upper face of said runner, a loop formed on the upwardly-projecting end of said frame, a bracket between the sides of said frame and engaging the forward end of said runner, a beam, and means for engaging said beam with said runner.

7. A device of the class set forth, consisting of a runner, a transverse beam above said runner, a block having a groove in which the top of the runner fits and of greater length than the width of said beam and of greater width than the width of said runner, a frame above said beam fastened to said runner, vertical pins passing along the sides of said beam through said frame and block and into said runner, plates conforming to the sides of said block and runner, and means for fastening said plates to said block and runner.

8. A device of the class set forth, consisting of a runner A, a transverse beam 16 above said runner, a block 17, between said beam and runner, having a groove to receive the upper surface of said runner and of dimensions greater in length than the width of said beam and greater in width than the width of said runner, a frame 21 passing over said beam and having its ends fastened to the upper surface of said runner, a pair of vertical pins which pass through said frame along the sides of said beam, through said block and into said runner, and plates for fastening said block to said runner.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. ANDERSON.

Witnesses:

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