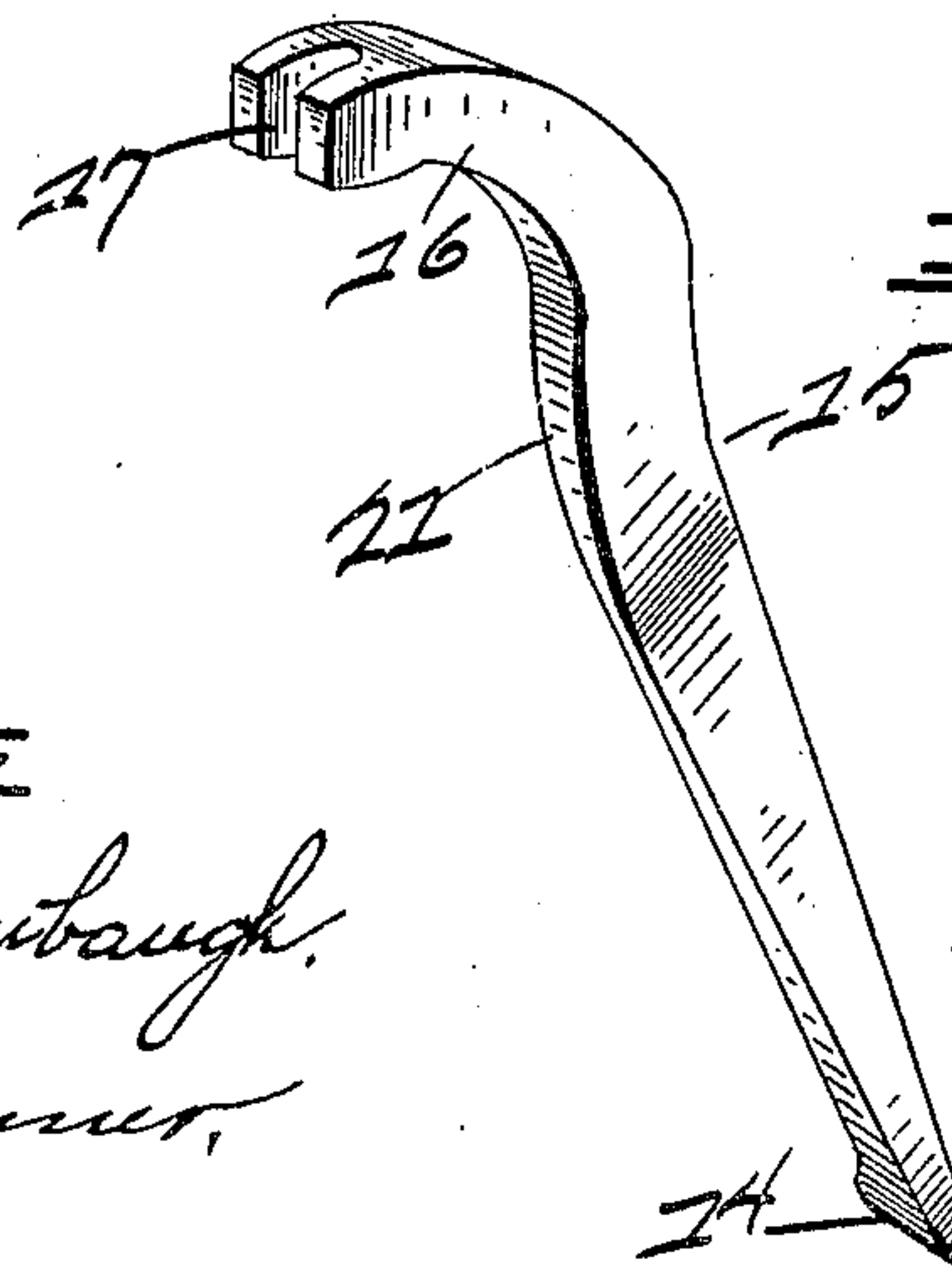
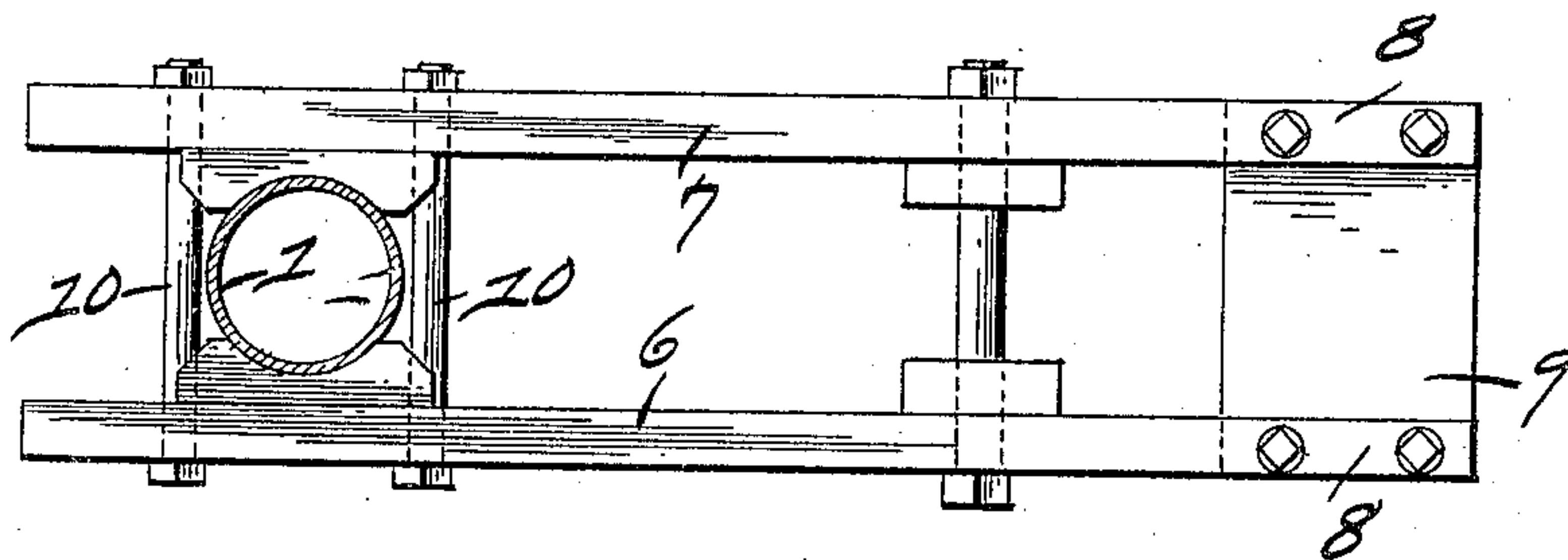
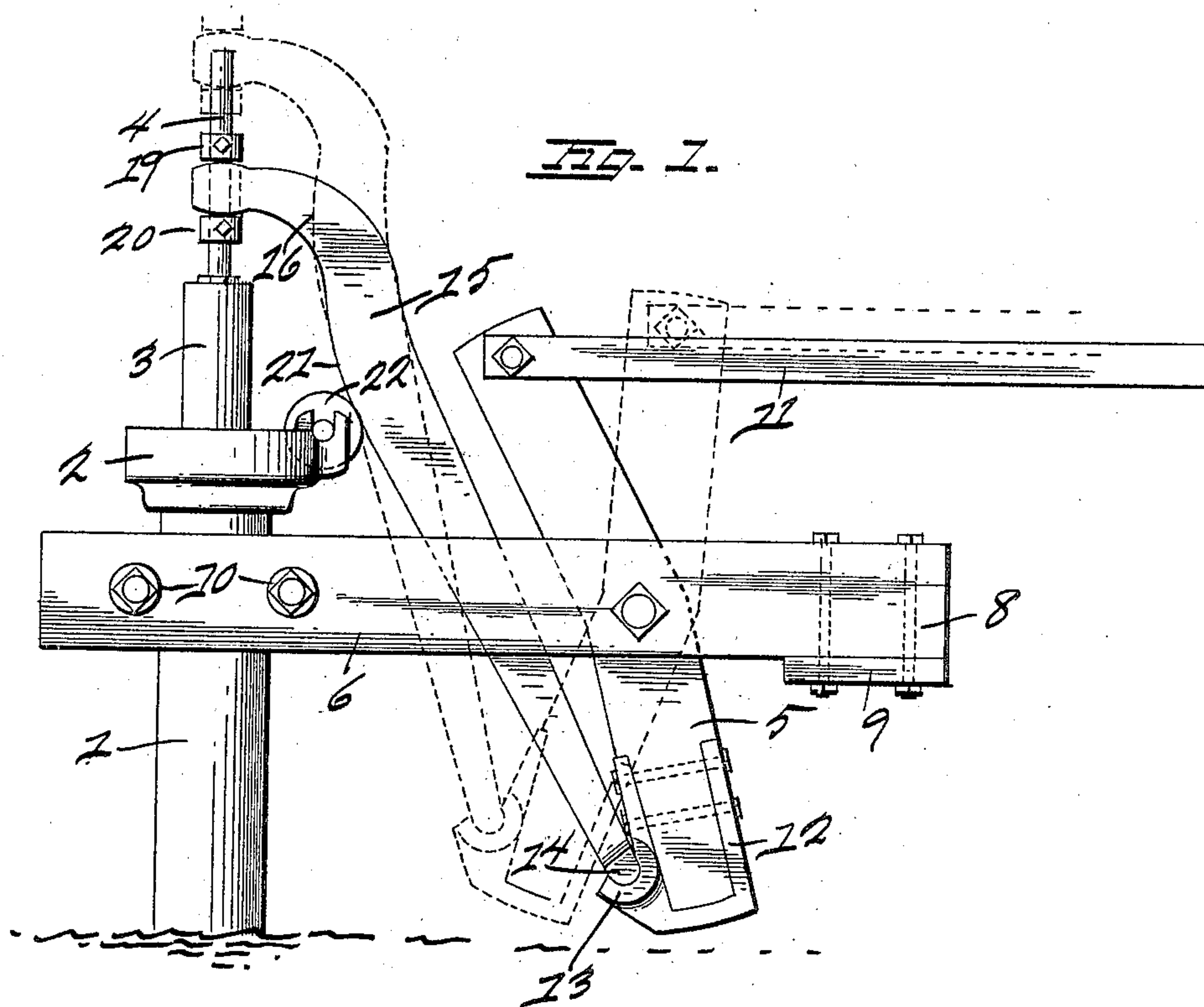


No. 822,392.

PATENTED JUNE 5, 1906.

G. B. SESSIONS.
OIL WELL JACK.
APPLICATION FILED OCT. 4, 1905.



WITNESSES
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UNITED STATES PATENT OFFICE.

GEORGE B. SESSIONS, OF FINDLAY, OHIO, ASSIGNOR OF ONE-THIRD TO DAYTON L. SEALY AND ONE-THIRD TO WILLIAM L. DAVID, OF FINDLAY, OHIO.

OIL-WELL JACK.

No. 822,392.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed October 4, 1905. Serial No. 281,215.

To all whom it may concern:

Be it known that I, GEORGE B. SESSIONS, of Findlay, county of Hancock, and State of Ohio, have invented certain new and useful Improvements in Oil-Well Jacks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention has reference to oil-well jacks; and it has for its object to provide a simple, inexpensive, and efficient device for pumping oil-wells which shall insure a true vertical reciprocation of the polish-rod without exerting a lateral strain thereon.

A further object is to provide a device for pumping oil-wells which shall be free from the tendency to get out of adjustment, this being due to the manner in which the working parts of the invention are directly supported upon the casing and casing-head without intervening braces or auxiliary supports.

In carrying out my invention I employ the novel combination and details of construction hereinafter shown, described, and claimed.

In the accompanying drawings, Figure 1 is an elevation of my improved jack, the operation of the same being shown by the dotted lines. Fig. 2 is a plan view, the well-casing being in section; and Fig. 3 is a perspective view of the operating-arm detached.

Referring to the details, 1 indicates the well-casing; 2, the casing-head; 3, the tubing, and 4 the polish-rod.

5 is a lever centrally pivoted and supported between parallel pieces 6 and 7. The outer ends 8 of said pieces are firmly secured to a cross-piece 9, and the inner ends are arranged on opposite sides of the casing 1 and are clamped thereto by means of transverse bolts 10, the latter being also disposed on opposite sides of the casing. In this manner the lever 5 is firmly supported upon a structure which is capable of adjustment in a vertical direction upon the casing. To the upper end of the lever 5 is attached the usual surface-rod 11, connecting with a suitable power. At the lower end of the lever 5 is a casting 12, having a bearing-socket 13 open-

ing upwardly to receive the rounded lower end 14 of the operating-arm 15, the latter being capable of instant detachment after being disengaged from the polish-rod. Operating-arm 15 is bent at its upper portion at 16 and provided with a bifurcation 17 to receive the polish-rod 18, the latter having collars 19 and 20 secured against movement thereon by means of suitable set-screws. Adjacent to its upper end the operating-arm is provided with a cam bearing-face 21, operating in movable contact upon a roller 22, mounted upon casing-head 2, the curvature of the cam bearing-face being such that when the parts are properly adjusted the movement of the lever 5 will cause the bifurcated end of the operating-arm to travel in a straight vertical direction.

In order that the operating-arm after once being adjusted shall be maintained in adjusted position, it is essential that the support for the roller 22, which guides the arm in its movement, shall be extremely firm, since even a slight alteration in the position of the roller would result in throwing the bifurcated end of the operating-arm out of line with the polish-rod. This is accomplished by mounting the roller directly upon the casing-head, thereby eliminating any possibility of displacement. The initial adjustment of the operating-arm to cause the bifurcated end thereof to travel in a straight vertical direction is effected by raising or lowering the support for the lever 5 and then clamping the same to the casing.

Among the advantages to be noted in the construction of my improved jack are the practical elimination of framework, the parts being directly supported by the casing and the casing-head, the effective means for adjusting the operating-arm and for maintaining the same in adjusted position, and the disposition of the parts whereby the pull exerted by the surface rod is directly outward from the casing.

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

1. In an oil-well jack, the combination with the casing, the casing-head, and the polish-rod of a well, of a pivoted lever, a support for the pivot of said lever, adjustable upon the casing, an operating-arm pivotally connected at one end to said lever and engaging

the polish-rod at its other end, and means carried by the casing-head for guiding said operating-arm in its movement, substantially as described.

5 2. In an oil-well jack, the combination with the casing, the casing-head, and the polish-rod of a well, of a support adjustable in a vertical direction upon the casing, a lever
10 pivotally mounted upon said support, a surface rod connected with the upper end of said lever, an operating-arm pivoted to the lower end of said lever, said arm engaging the
15 polish-rod at its free end and having a cam-shaped bearing-surface adjacent to said free end, and a roller mounted for rotation upon the casing-head adapted to contact with said
bearing-surface to guide the operating-arm in its movement, substantially as described.

20 3. In an oil-well jack, the combination with the casing, the casing-head, and the polish-rod of a well, of a support comprising a pair of members secured together at one end and having their other ends disposed on op-

posite sides of the casing, means extending transversely of said pieces for clamping them 25 in adjusted position upon the casing, a lever pivoted between its ends upon said support, a surface rod connecting with the upper end of said lever, a socket at the lower end of said lever, an operating-arm detachably mounted 30 at one end upon said socket and engaging the polish-rod at its free end, said operating-arm having a cam-shaped bearing-surface adjacent to its free end, and a roller mounted for rotation upon the casing-head in movable 35 contact with said cam-shaped bearing-surface and adapted to guide the operating-arm in its movement, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of 40 two witnesses.

GEORGE B. SESSIONS.

Witnesses:

CARL H. KELLER,

CHAS. C. DEFENBAUGH.