

No. 776,735.

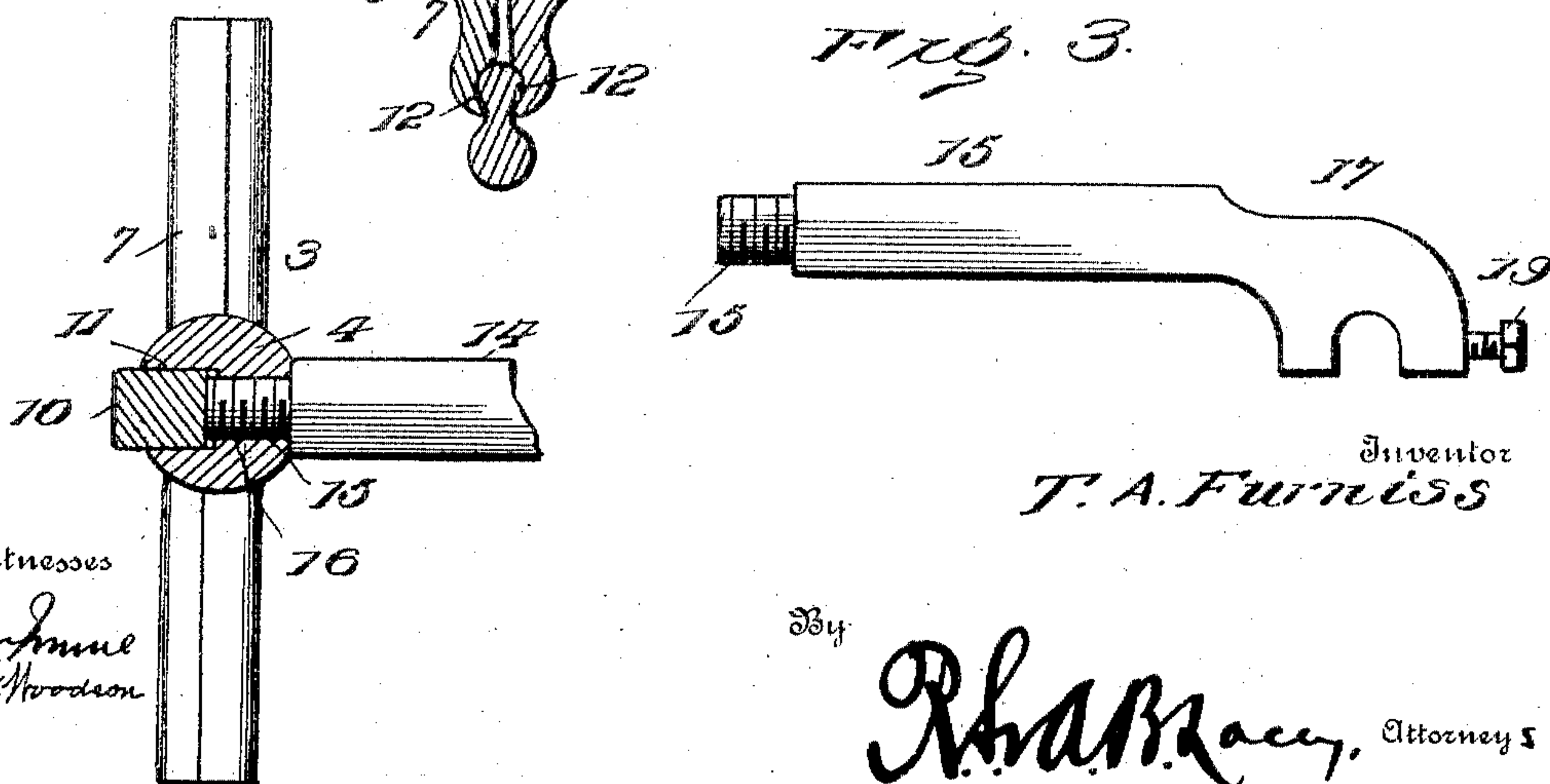
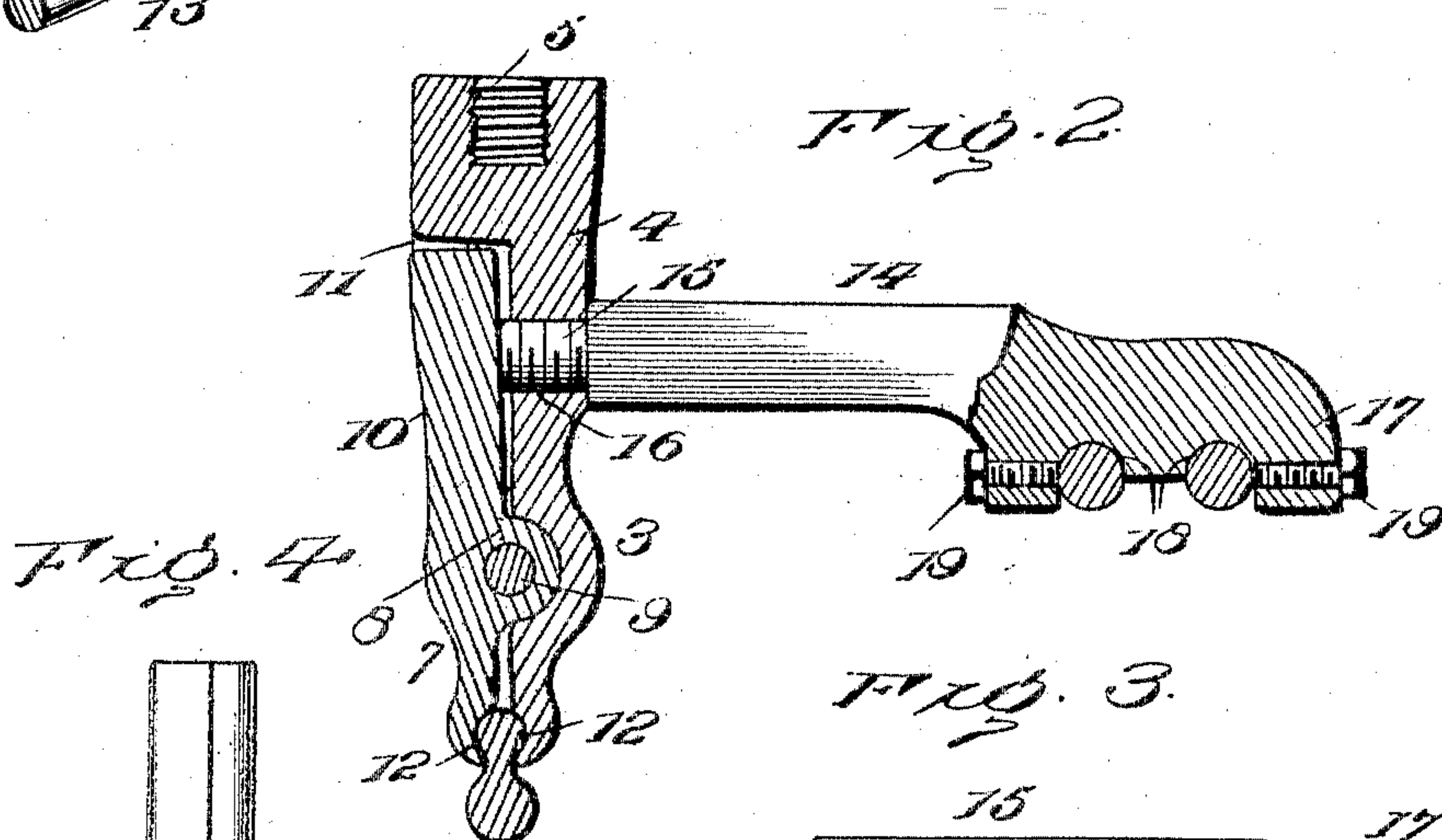
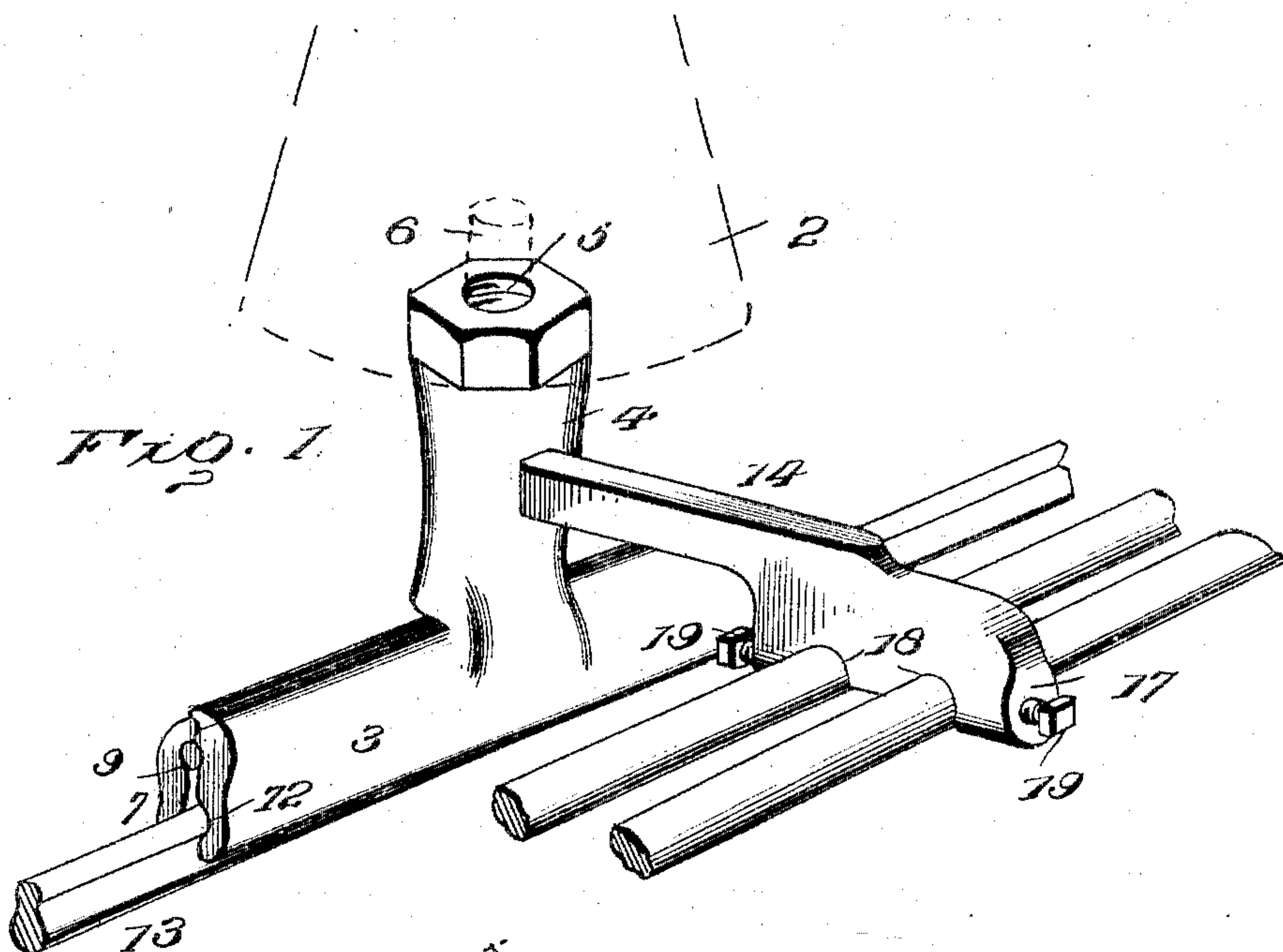
PATENTED DEC. 6, 1904.

T. A. FURNISS.

TROLLEY WIRE CLAMP AND FEED WIRE SUPPORT.

APPLICATION FILED SEPT. 7, 1904.

NO MODEL.



Witnesses

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THOMAS A. FURNISS, OF CANONSBURG, PENNSYLVANIA.

TROLLEY-WIRE CLAMP AND FEED-WIRE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 776,735, dated December 6, 1904.

Application filed September 7, 1904. Serial No. 223,643. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. FURNISS, a citizen of the United States, residing at Canonsburg, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Trolley-Wire Clamps and Feed-Wire Supports, of which the following is a specification.

This invention provides an improved support for trolley-wires, embodying a clamp for a main trolley-wire and a support carried by the clamp for a feed-wire.

As is well known, in mines shortly after the trolley-wire which supplies the motors used for hauling the mining material has been placed in position in the entry or gangway the supply of current through the wire will be greatly decreased, due to grounding or like causes, making it necessary to hang feed-wires at intervals to secure the necessary power by which all the motors may be run. The necessity for the use of the feed-wires involves great expense under ordinary conditions, due to the present methods of placing the said wires in position, and it is therefore the essential part of my invention to provide a simple clamp device having a support adapted to receive and carry the feed-wires as soon as it becomes necessary to place the latter in position.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the supporting device embodying my invention. Fig. 2 is a vertical sectional view of my invention, bringing out more clearly the manner of securing the adjacent parts thereof. Fig. 3 is a detail view of the modified form of feed-wire-supporting arm, said arm being provided with a single groove for the wire instead of a plurality of grooves, as shown in

Figs. 1 and 2. Fig. 4 is a horizontal sectional view, parts broken away.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

It will be understood that the clamp and feed-wire support which constitutes the invention is designed to be mounted upon a suitable hanger, and in mining this last device usually consists of a short pipe secured to the walls of the entry or gangway of the mine. Said pipe carries an insulator designated 2 in the drawings, the part 2 having the trolley-wire clamp directly attached thereto. Specifically describing the invention, the clamp consists of a rigid jaw 3, having an extension 4 projected therefrom, which extension is provided with an internally-threaded socket 5, adapted to receive the threaded portion 6 of the insulator 2 to admit of attachment of the clamp and feed-wire support to the said insulator. A movable jaw 7 is pivoted to the jaw 3, the jaws 3 and 7 being provided upon their inner sides with a plurality of apertured lugs 8, through which passes a pivot or lock pin 9. The movable jaw 7 is also provided with an integral extension 10, and the latter is received in a recess 11, provided longitudinally of the extension 4 of the rigid jaw 3. The extension 10 is adapted for movement in the recess 11, so as to impart a pivotal movement to the movable jaw in order to effect a clamping or unclamping action of the latter relative to the jaw 3. Both of the jaws 3 and 7 are provided longitudinally thereof with a groove 12 to receive the trolley-wire 13.

The feed-wire support comprises an arm 14 or like supporting member projecting from the rigid jaw 3, and this arm is peculiarly mounted upon the clamp of the trolley-wire, so as to cooperate with the movable jaw 7 to properly position the latter as regards the jaw 3, and for the above purposes one end of the arm 14 is threaded, as shown at 15, and this end is received by a transverse threaded opening 16 in the extension 4 of the jaw 3, said opening 16 intersecting the recess 11 of the extension 4 adjacent the end of the extension 10 of the jaw 7. The threaded ex-

tremity 15 of the arm 14 is adapted to engage the extension 10, so that by screwing or unscrewing the part 14 upon the extension 4 said part will effect a pivotal movement of the jaw 7 in a manner clearly apparent. The end of the arm 14 opposite that which is threaded at 15 is enlarged to form a head 17, the latter being provided with a plurality of grooves 18 on one side thereof, which are designed to receive the feed-wires. The head 17 is provided with two grooves, as illustrated, though it will be understood that one or more may be formed therein within the contemplation of the invention. To fasten the feed-wires in the supporting member 14, set-screws 19 are used, and these screws are mounted in the head 17, so that their inner ends may be engaged with the feed-wires after the latter have been received in the grooves 18, and it will be understood that the securing means for the feed-wires is such as to admit of displacement of the said wires from the supporting member 14 should the material composing the walls of the entry slip and fall upon the wires.

In view of the use of the means for securing the feed-wires in position, as above described, the said wires are not liable to be broken, and this is an important advantage, since the operation of splicing the wires gives rise to great expense involving much labor and inconvenience.

The supporting device, as hereinbefore set forth, comprises a minimum number of parts, and since the feed-wire support which forms a part thereof is conveniently located and mounted upon the trolley-clamp the expense and labor incident to the provision of separate hangers and supporting means for the feed-wires is obviated with resultant advantages apparent to those versed in the art to which the invention relates.

Having thus described the invention, what is claimed as new is—

1. In a trolley-wire clamp and feed-wire support, the combination of a clamp comprising jaws, a supporting member carried by one of the jaws and cooperating with the other jaw, and means for attaching a wire to the supporting member aforesaid.

2. In a trolley-wire clamp and a feed-wire support, the combination of a clamp comprising a relatively rigid jaw and a movable jaw pivoted thereto, a wire-supporting member

mounted upon the relatively rigid jaw and engaging the movable jaw for actuation thereof, and means for attaching a wire to said supporting member.

3. In a trolley-wire clamp and feed-wire support, the combination of a rigid jaw provided with a threaded opening, a movable jaw pivoted to the rigid jaw, a supporting-arm projecting from the rigid jaw and having one end threaded and screwed into the threaded opening of the rigid jaw, the threaded end of the arm being adapted to engage the movable jaw, and means for attaching a wire to the said supporting-arm.

4. In a trolley-wire clamp and a feed-wire support, the combination of a clamp composed of a rigid jaw having an extension provided with a threaded socket for attachment to a hanger or the like, said extension being provided lengthwise thereof with a recess and having a transverse threaded opening intersecting the recess aforesaid, a movable jaw pivoted to the rigid jaw and having an extension projected therefrom and received by the recess in the extension of the rigid jaw, a supporting-arm having one end threaded and screwed into the threaded opening of the rigid jaw so as to engage the extension of the movable jaw, a head provided at the opposite end of the supporting-arm and having a plurality of grooves to receive feed-wires, and screws threaded into the head for attachment of the feed-wires in the grooves aforesaid.

5. In a trolley-wire clamp and feed-wire support, the combination of a clamp composed of a rigid jaw having an extension provided with a threaded socket for attachment to a hanger or the like, said extension being provided lengthwise thereof with a recess and having a transverse threaded opening intersecting the recess aforesaid, a movable jaw pivoted to the rigid jaw and having an extension projecting therefrom and received by the recess in the extension of the rigid jaw, and a member screwed into the threaded opening of the extension of the rigid jaw and engaging the extension of the movable jaw.

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

THOMAS A. FURNISS. [L. s.]

Witnesses:

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