

F. E. WHITNEY.
HANDLE ATTACHMENT.
APPLICATION FILED SEPT. 12, 1908.

911,791.

Patented Feb. 9, 1909.

Fig. 1.

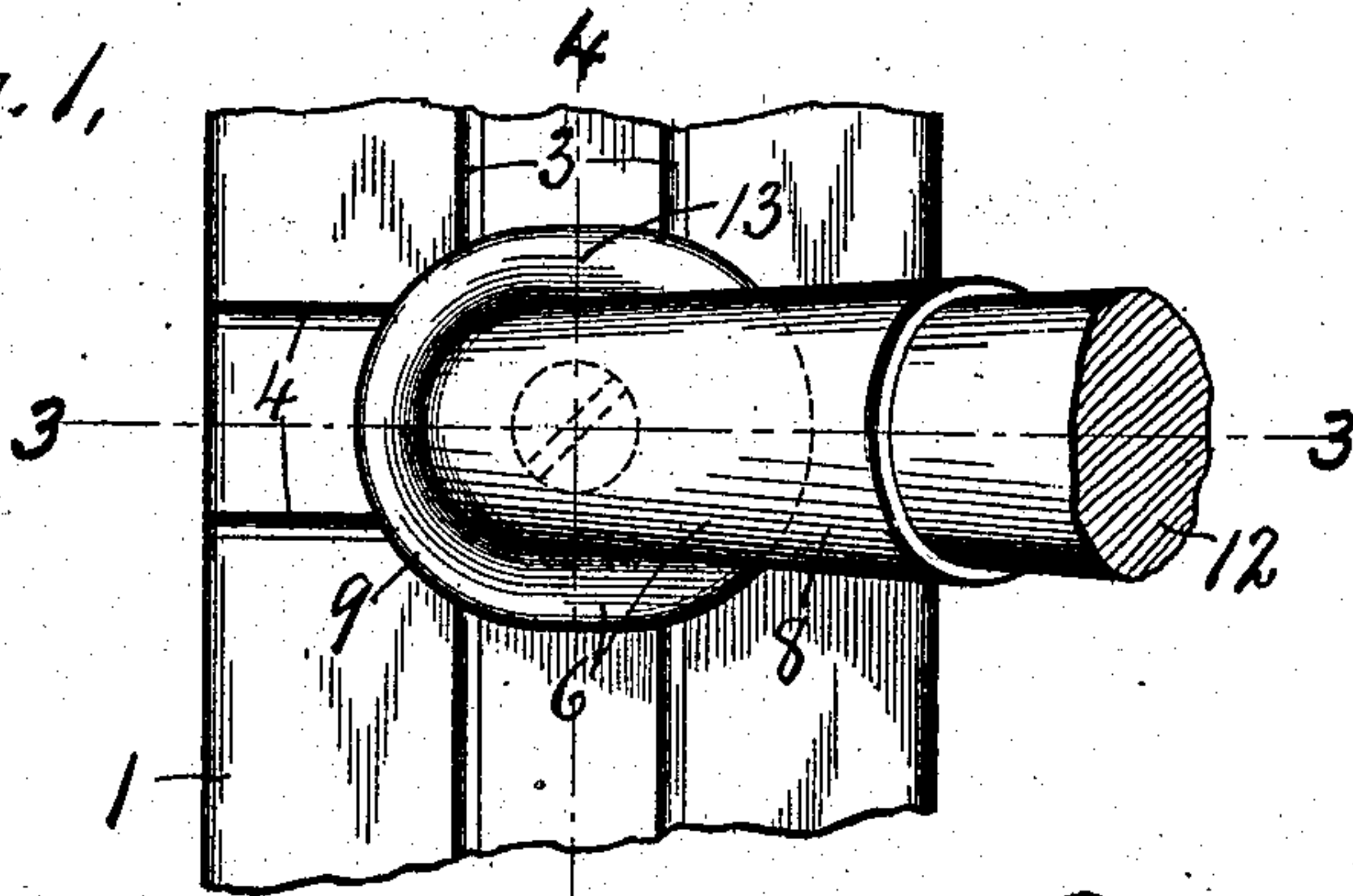


Fig. 2.

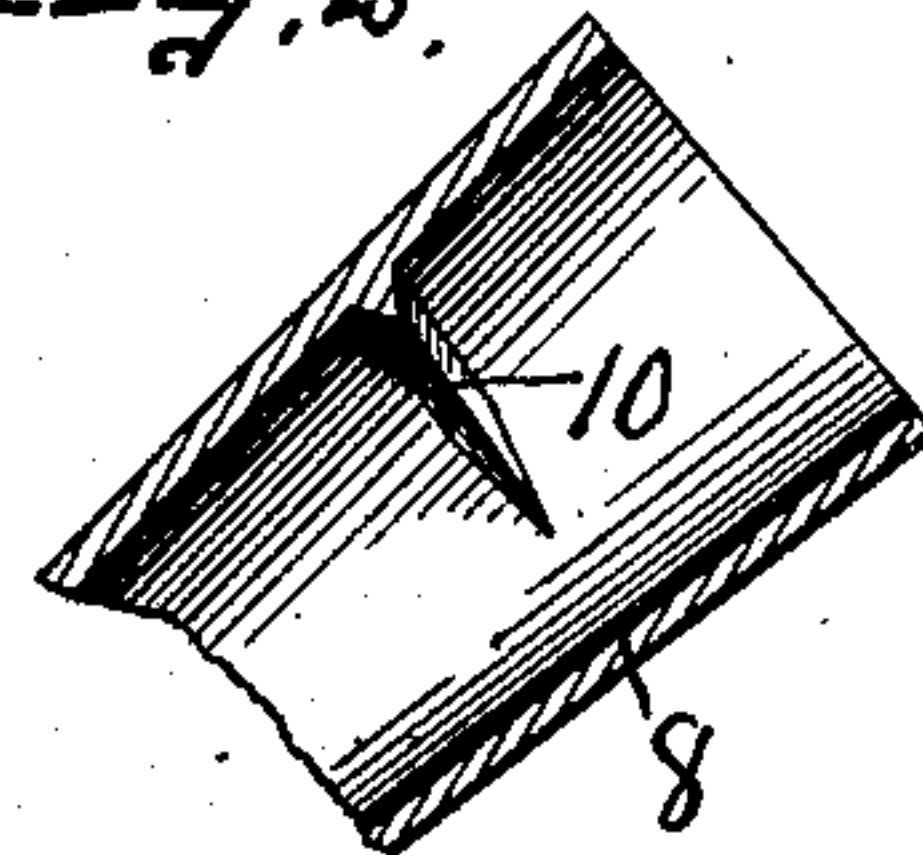


Fig. 3.

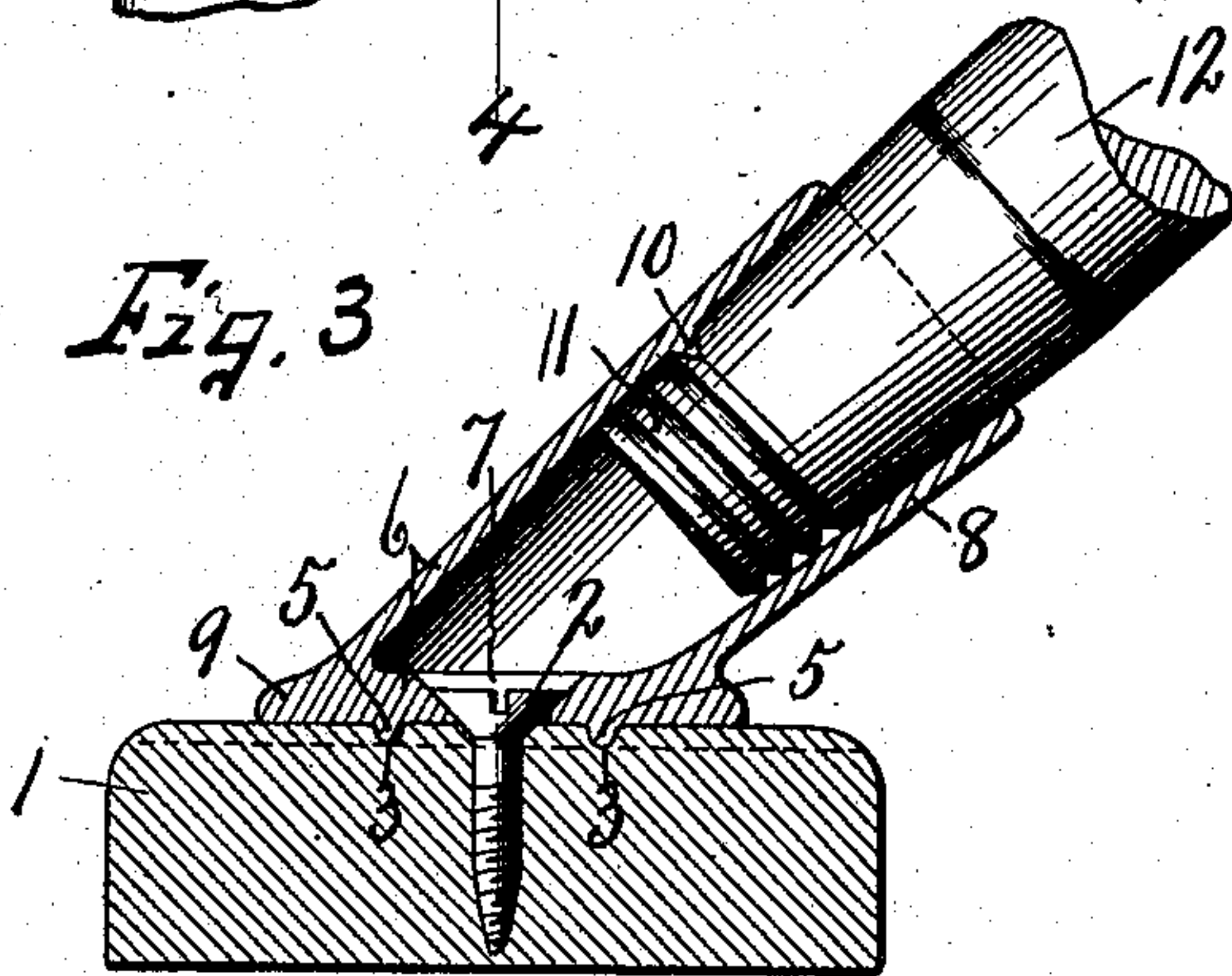


Fig. 4.

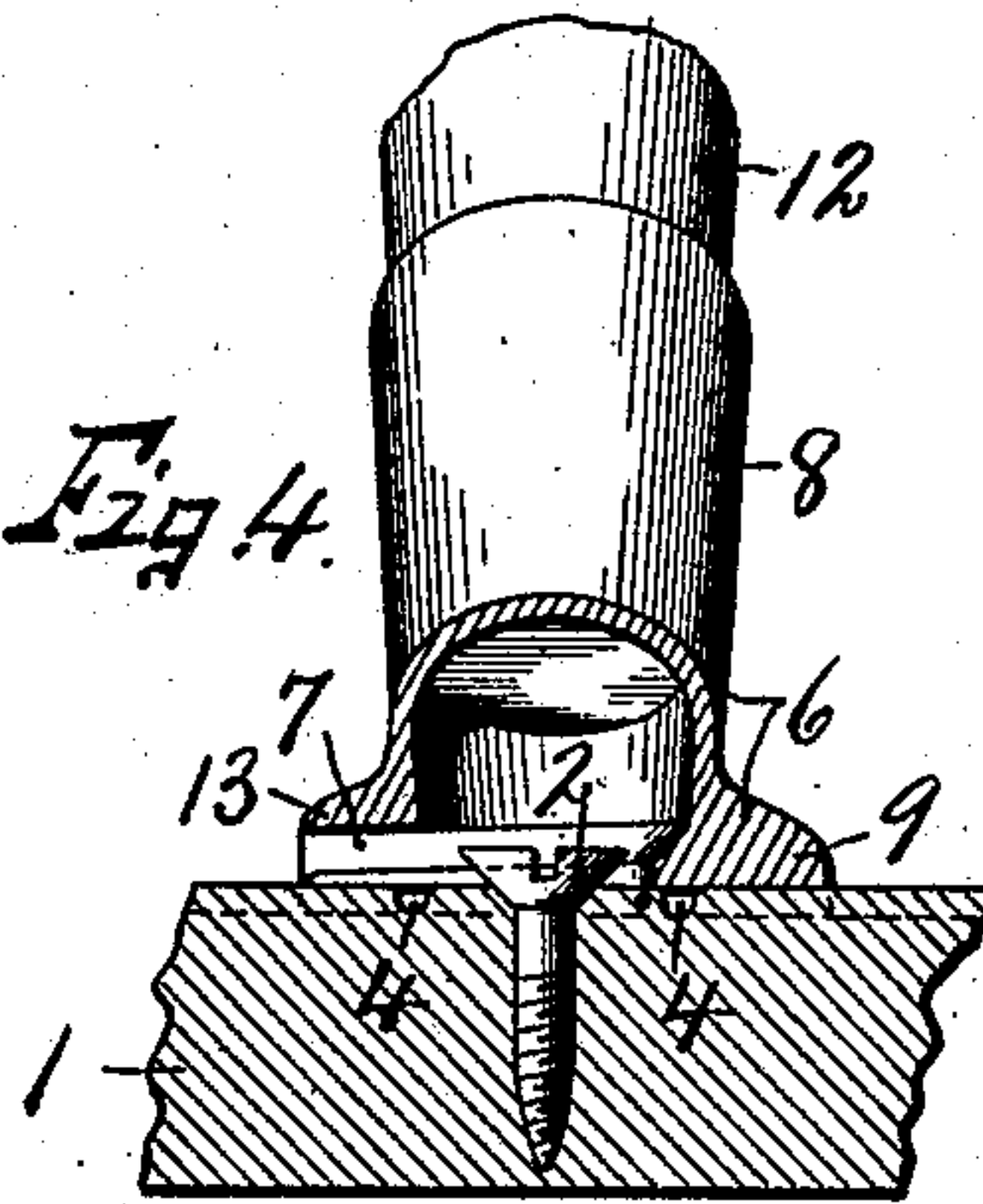


Fig. 5.

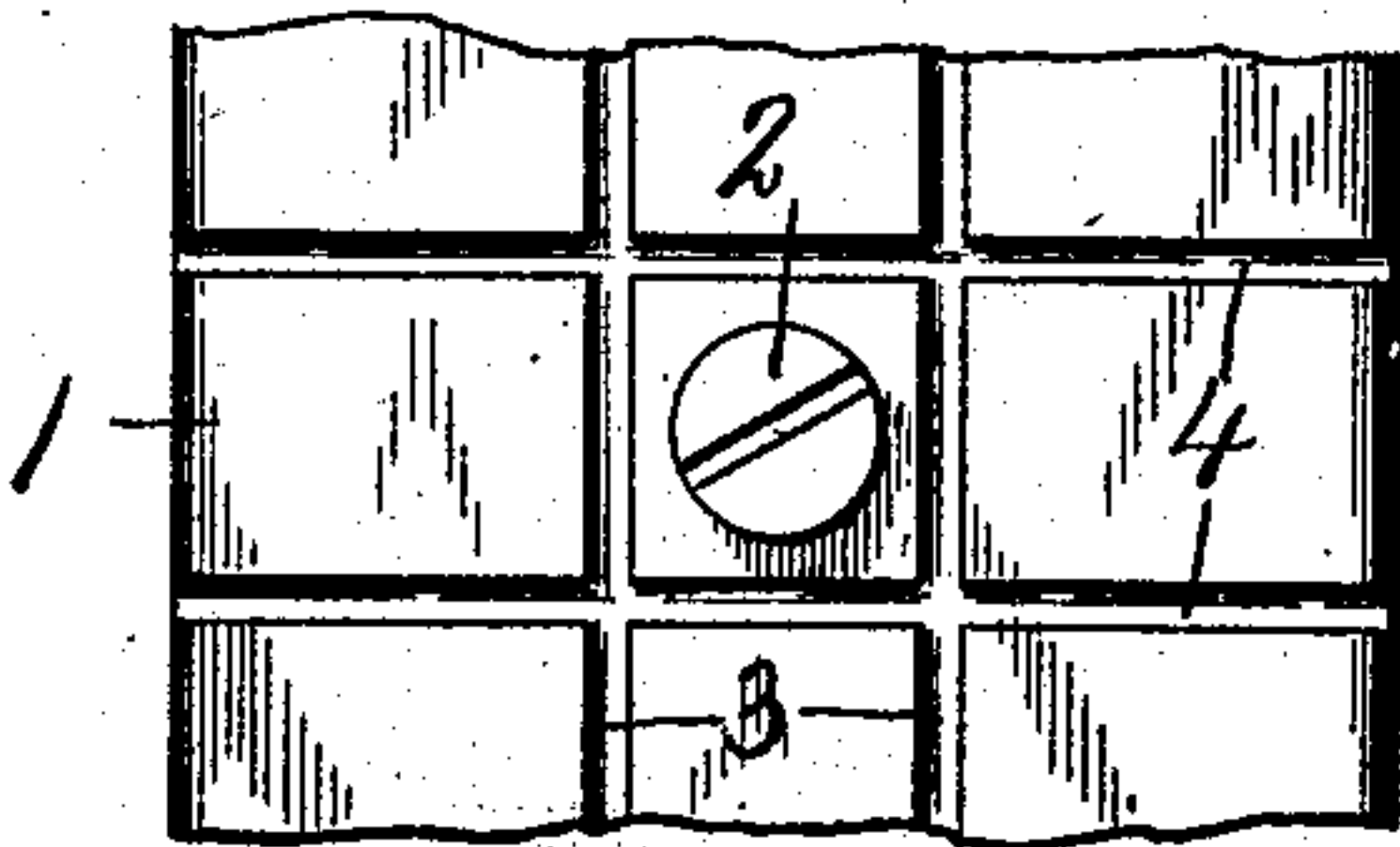


Fig. 6.

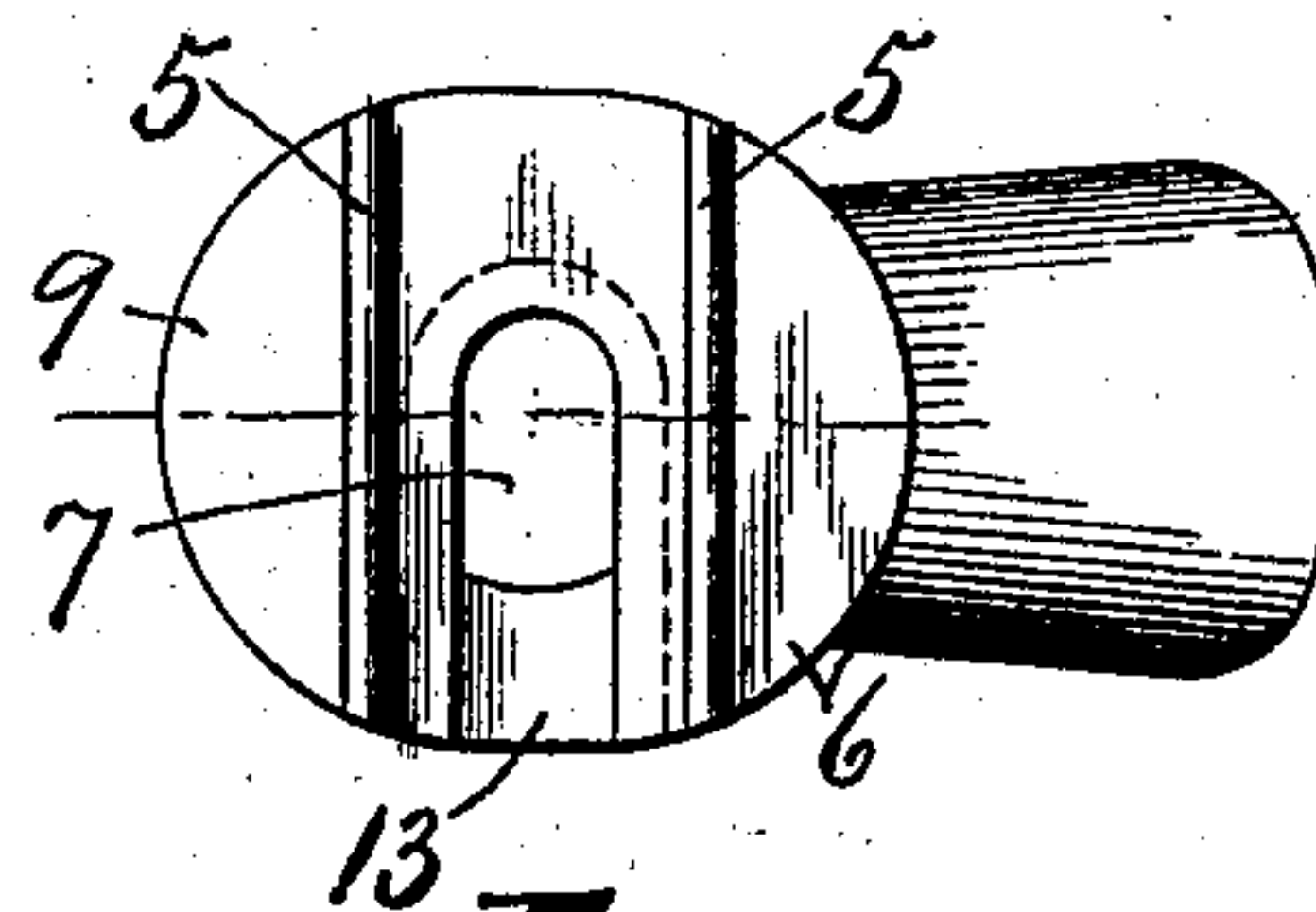


Fig. 7.

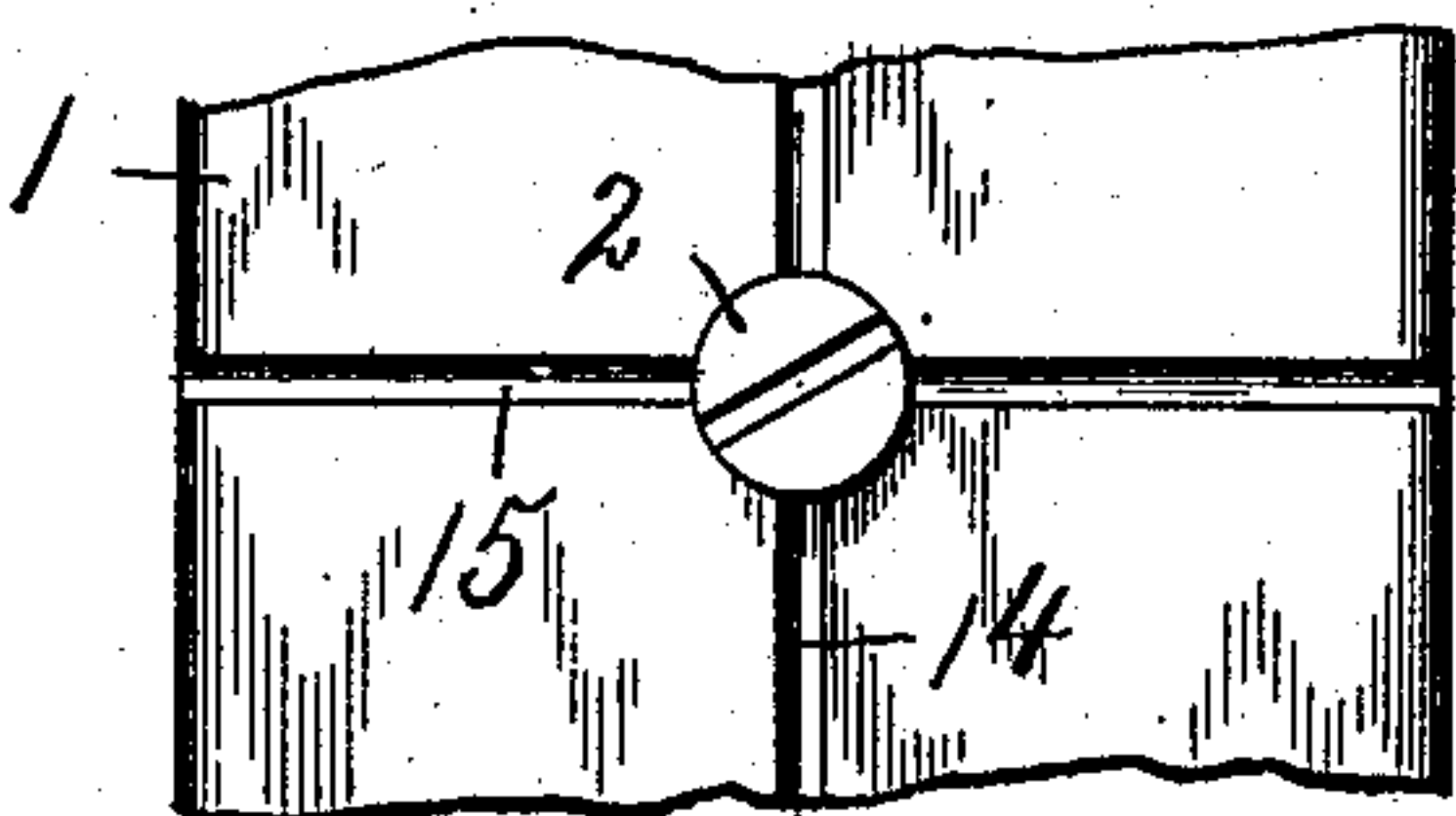
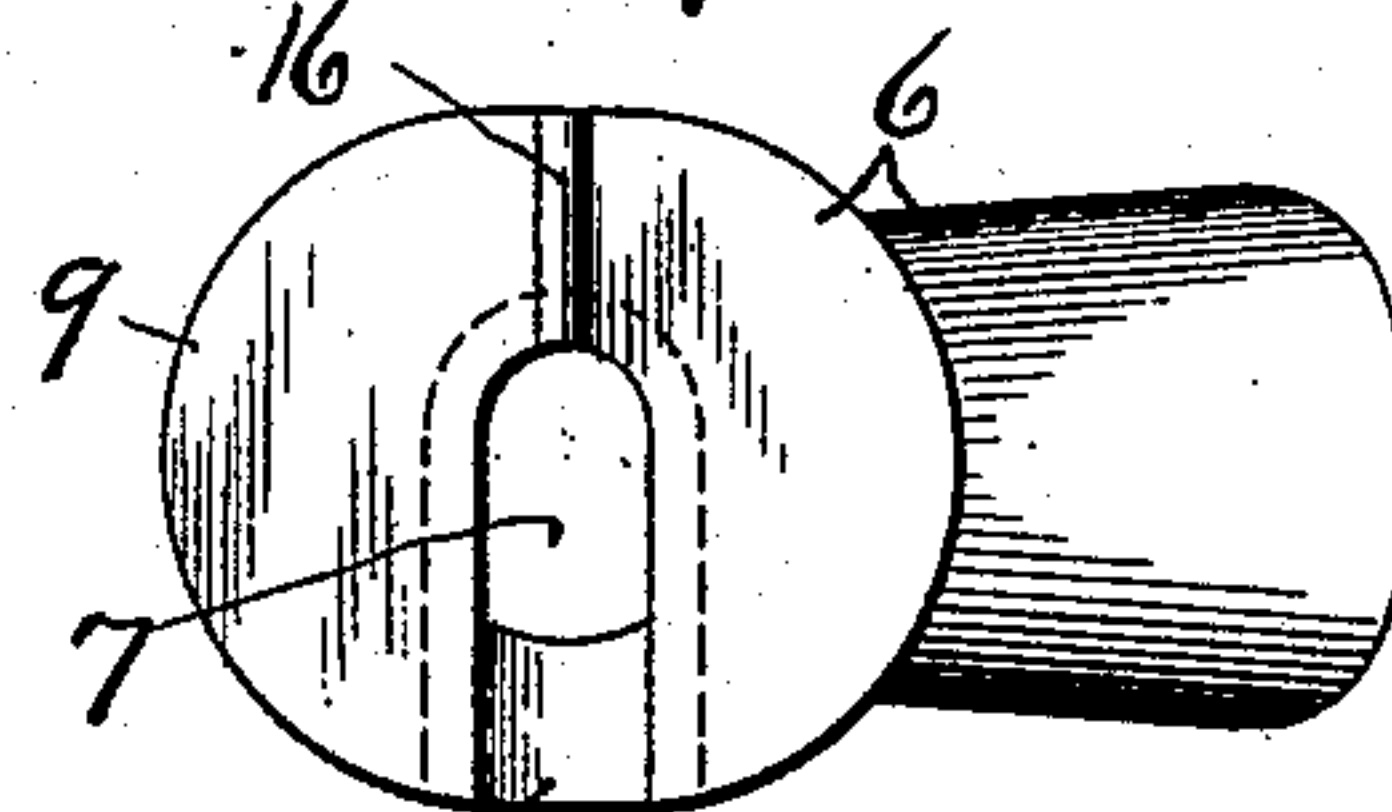


Fig. 8.



Witnesses.

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HANDLE ATTACHMENT.

No. 911,791.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed September 12, 1908. Serial No. 452,703.

To all whom it may concern:

Be it known that I, FRANKLIN E. WHITNEY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Handle Attachments, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in handle attachments for scrub brushes and the like in which the main object is to provide means whereby a suitable handle may be quickly attached to or detached from a brush for cleaning floors, windows and similar uses requiring a more or less extended handle. In other words, I have sought to provide a one-piece metal coupling adapted to be quickly and easily attached to or detached from the back of a cleaning brush and having a suitable socket and means therein for receiving and retaining a handle.

Another object is to provide this coupling and back of the brush with means for relieving the strain upon the screw connection between the back of the brush and coupling.

A further object is to enable the brush to be attached to the coupling in different positions, that is either longitudinally or transversely of the handle.

A still further object is to provide the under side of the coupling with a transverse dove-tailed slot opening from one side and adapted to slidably interlock with a suitable head on the back of the brush so that the strains due to the operation of the brush are transversely instead of longitudinally of the slot thereby preventing accidental withdrawing of the coupling from the brush when in operation.

Other objects and uses will be brought out in the following description.

In the drawings—Figure 1 is a top plan of a brush and my improved handle attachment connected thereto. Fig. 2 is a sectional view of the handle receiving portion of the coupling showing the V-thread or rib which is adapted to cut its way into the wood handle as the latter is screwed into place. Figs. 3 and 4 are sectional views taken respectively on lines 3—3, and 4—4, Fig. 1. Figs. 5 and 6 are respectively a top plan of a portion of the brush and an inverted plan view of the coupling shown in Figs. 1, 3 and 4. Figs. 7 and 8 are views similar to Figs.

5 and 6 showing modified arrangements of the groove in the back of the brush and corresponding rib in the foot of the coupling.

This device is adapted to be used in connection with the back —1— of any suitable brush, said back being provided with a flaring attaching element —2— consisting in this instance of the head of a screw which is screwed into the back of the brush allowing its head —2— to protrude a short distance through and beyond the upper surface of the back. This upper surface of the back —1— is provided with longitudinal grooves —3— and transverse grooves —4— intersecting the longitudinal grooves —3— at right angles and preferably equi-distant from and at opposite sides of the head —2— shown in Figs. 1, 3, 4 and 5 for receiving a corresponding pair of ribs —5— on the under side of a coupling or foot —6—. The under side of this coupling aside from the ribs —5— is substantially flat and formed with a transverse slot —7— extending only part way therethrough from one side and having beveled longitudinal sides for receiving the flaring head —2— on the back —1— of the brush, the width of the slot being substantially equal to the diameter of the head —2— so that the head fits snugly in the slot. The sides of the slot are also slightly inclined longitudinally from the open end thereof as best seen in Fig. 4 to cause the coupling to interlock with the head —2— and back of the brush with a wedging fit.

This coupling —6— is provided with a tubular portion —8— which is disposed at an acute angle with the foot —9— and is provided with an internal segmental V-shaped thread —10— for cutting its own thread —11— in the end of the handle —12— which is screwed into the tubular portion —8— as clearly shown in Fig. 3.

The slot —7— is disposed at substantially right angles to the longitudinal axis of the coupling —6— and handle —12— and its open end is closed at the top by a bridge bar —13— which serves to tie the open ends of the slot together to resist lateral strains and spreading of this portion of the foot —9— when the latter is interlocked with the head —2— and at the same time serves to conceal the underlying portion of the slot while the remaining portions of said slot are concealed by the superposed portion of the coupling or tubular extension —8— thereby giving a smooth and un-

broken finish to the upper surface of the foot as best seen in Fig. 1.

In Figs. 1, 3 and 5 I have shown the back of the brush as provided with intersecting 5 pairs of grooves —3— and —4—, those of each pair intersecting each other at right angles and located at opposite sides of and equi-distant from the head or attaching element —2—. I have also shown in Figs. 3, 10 4 and 6, on the under side of the foot of the coupling —6— a pair of parallel ribs —5— located at opposite sides of and equi-distant from the longitudinal center of the slot —7— and parallel therewith, the distance between 15 the ribs 5 and 6 corresponding to the distance between each pair of grooves —3— and —4— with which they are adapted to interlock.

It is now clear that the ribs —5— and 20 slot —7— are disposed at substantially right angles to the longitudinal axis of the tubular extension —8— and handle —12— and, therefore, the strains incidental to the movement of the brush back and forth by 25 the handle in the act of cleaning are transversely of the ribs —5— and slot —7— and are therefore borne by the edges of the slot and ribs and prevents accidental displacement of the coupling from the brush when 30 in operation and at the same time the ribs —5— interlocking with the corresponding grooves —3— or —4— relieves the strain upon the attaching element or head —2—. The object of the intersecting ribs —3— and 35 —4— is to permit the brush to be attached to the coupling either at right angles to or parallel with the axis of the handle. It is evident, however, that the same result may be accomplished by providing the back of 40 the brush with two intersecting grooves —14— and —15— in which case the under side of the foot of the coupling is provided with a single rib —16— extending transversely of said foot and in line with the 45 longitudinal center of the slot —7— and at one side thereof, the grooves —14— and —15— being disposed in lines intersecting each other at substantially right angles and coincident with the axis of the attaching 50 head —2—.

In attaching the coupling —6— to the back of the brush, the foot of said coupling is placed flatwise against the back of the brush at one side of the attaching element 55 —2— with the open side of the slot —7— facing the screw and the rib or ribs on the under side of said foot entering the groove or grooves in the upper face of the back —1— whereupon the coupling and brush 60 are moved relatively to each other to cause the head —2— to enter the slot —7— until

the two parts are firmly coupled together, the head —2— wedging against the beveled sides of the slot to draw the adjacent faces of the coupling and back of the brush closer 65 together. The handle is inserted into the open end of the tubular extension —8— and rotated thereby causing the threaded rib section —10— to cut a thread in the adjacent end of the handle to hold the latter 70 against accidental displacement from the coupling.

If it is desired to use the brush longitudinally of the handle instead of transversely, as shown in the drawings, the two 75 parts may be readily disconnected by a reverse operation and recoupled together in the manner previously described.

What I claim is:

1. In a handle attachment for brushes, 80 the combination with the back of a brush having intersecting grooves, a flaring head projecting from the upper surface of the back of the brush at the intersection of said grooves, a coupling having a foot provided 85 with a rib on its under side entering one of said grooves and also provided with a transverse slot open at one side for receiving said head.

2. In combination with the back of a 90 brush having a protruding attaching element, a tubular coupling having a substantially flat foot provided with a transverse slot opening from one side thereof at substantially right angles to the direction of 95 extension of the tubular portion for receiving said head.

3. In combination with the back of a brush having intersecting grooves, a coupling having a rib slidably interlocked with 100 one of said grooves, said coupling having a tubular extension and a transverse slot opening from one side, a screw in the back of the brush and a head on the screw entering said slot and interlocked with the sides 105 thereof.

4. In combination with the back of a brush having a flaring head protruding from its upper face and provided with a groove, a coupling having a flat foot and a tubular 110 extension disposed at an angle, other than a right angle, with the foot, said foot being provided on its under side with a rib and a transverse slot opening from one side, said foot having sliding interlocking engagement 115 with the head on the brush.

In witness whereof I have hereunto set my hand this 5th day of September, 1908.

FRANKLIN E. WHITNEY.

Witnesses:

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