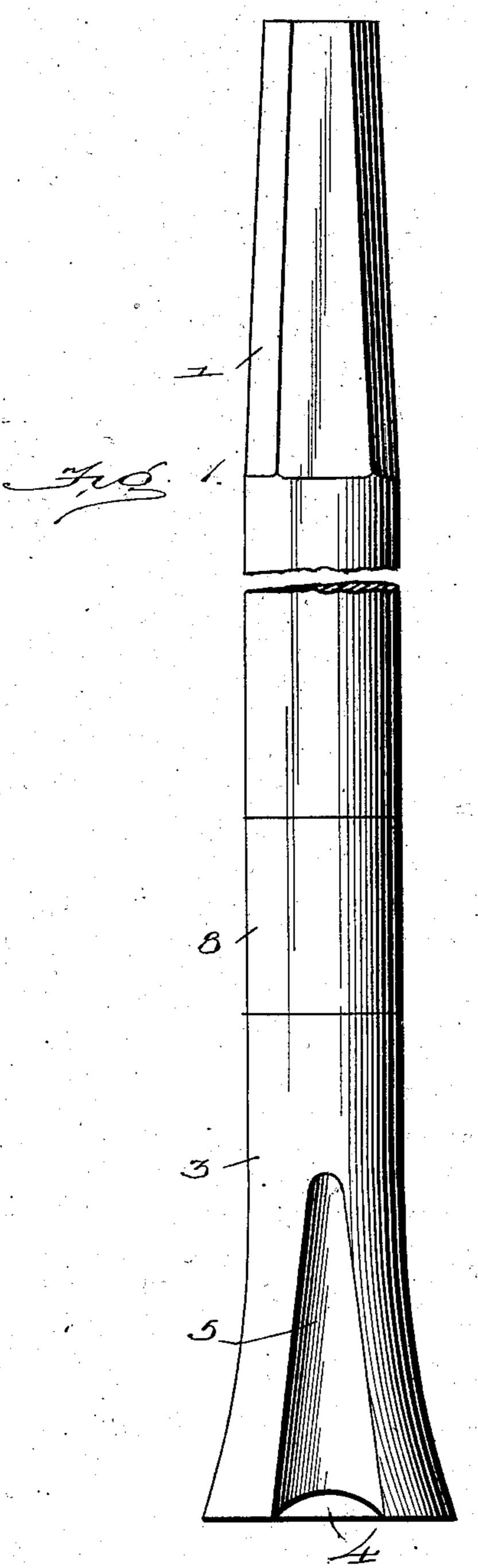
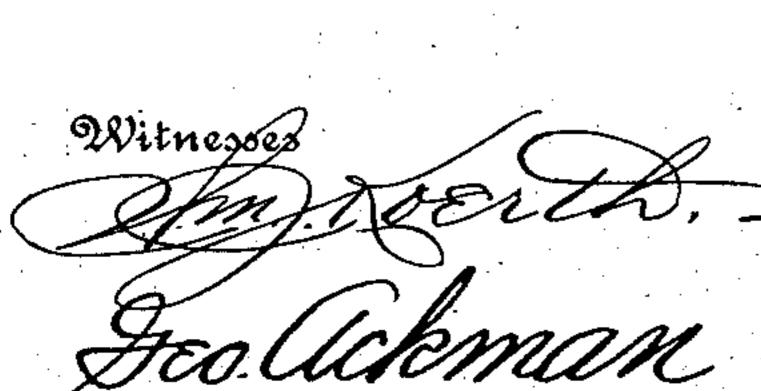
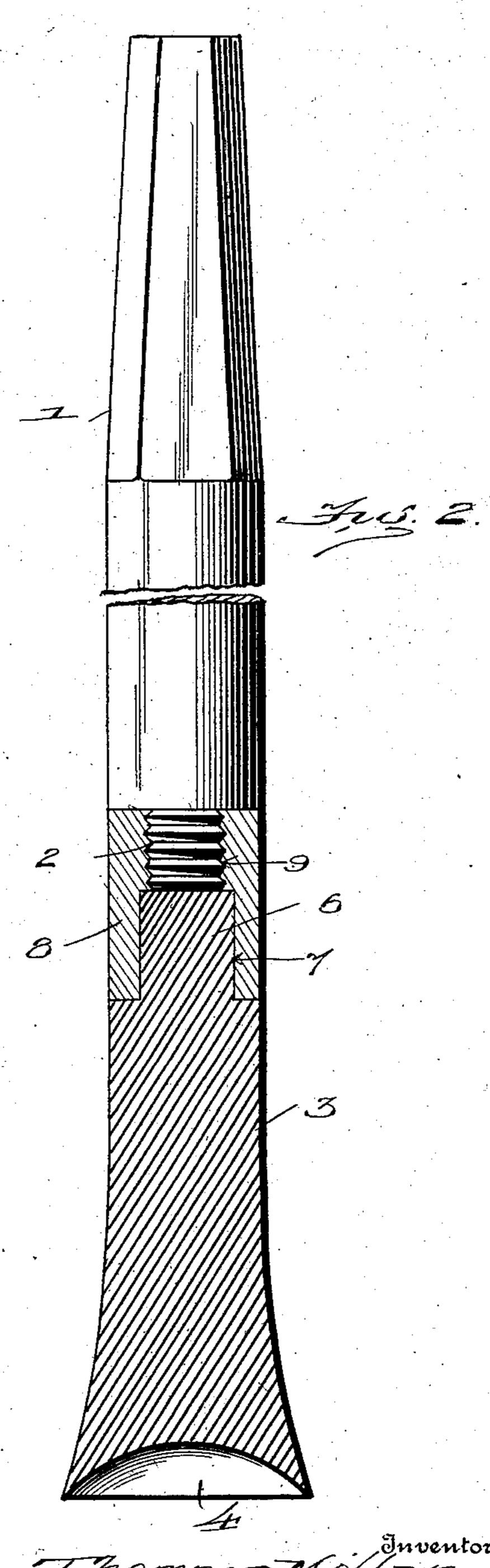
## T. MILLAN. TAMPING BAR.

(Application filed Aug. 24, 1901.)

(No Model.)







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## TAMPING-BAR.

SPECIFICATION forming part of Letters Patent No. 703,288, dated June 24, 1902.

Application filed August 24, 1901. Serial No. 73,166. (No model.)

To all whom it may concern:

Be it known that I, Thomas Millan, a citizen of the United States, residing at 204 North Sterling street, Streator, in the county of La-5 salle and State of Illinois, have invented new and useful Improvements in Tamping-Bars, of which the following is a specification.

This invention relates to miners' tools, but more particularly to an improved means for 10 securing the butt of a tamping-bar to the handle. As is well known, the handle is preferably constructed of steel or iron, and on one end thereof is usually attached a drill or chisel of like material. The butt is usually 15 constructed of copper or brass, and in actual practice much difficulty has been experienced in providing a suitable union for the two metals.

It is the purpose of this invention to pro-20 vide a simple and efficient union whereby the without the liability of its working loose except when manually removed.

A further object is to provide an improved 25 butt by shaping the same to conform to the

requirements of the trade.

The novel construction as well as the manner of assembling the parts will be specifically described hereinafter and illustrated in 30 the drawings, in which—

Figure 1 is a side elevation of a tampingbar constructed in accordance with my invention; and Fig. 2 is a similar view of the handle, the butt and union being in section.

The reference-numeral 1 designates the handle, which is preferably polygonal in crosssection or truncated frusto-conical shape at its outer end and is provided at one end with a reduced threaded extension 2.

3 designates the butt, the free end of which is formed with a concave recess 4, while the side of said butt is provided with a groove 5, the walls of which diverge toward the concave recess 4. This is so constructed in or-45 der to better provide for the fuse, &c., during the process of tamping. The opposite

end of the butt 3 is provided with a reduced plain end 6, which fits into the central bore 7 of the union 8, which is sleeved over said reduced plain end and then riveted thereto 50 in any suitable manner. This reduced plain end 6 only extends about one-half the distance within the union, the remaining portion of the bore 7 being threaded, as at 9, to engage the threads on the extension 2 of the 55 handle 1. It will thus be seen that the butt is composed almost entirely of the softer metal, while the union to which it is attached rigidly is of hard metal. Hence the liability of the parts becoming detached will be ob- 60 viated.

I claim—

1. A tamping - bar comprising a handle formed with a reduced threaded extension at its inner end, a butt having a concave recess, 65 a longitudinal groove having its walls divergbutt may be readily secured to the handle | ing toward and merging into the concave recess, and a reduced plain end, and a union having a bore threaded at one end in which the reduced threaded extension of the han- 70 dle is inserted, and plain at the other end in which the reduced end of the butt is inserted and rigidly secured.

2. A tamping-bar comprising a handle of truncated frusto-conical shape at its outer 75 end, and formed with a reduced threaded extension at its inner end, a butt having a concave recess, a longitudinal groove having its walls diverging toward and merging into the concave recess, and a reduced plain end, and 80 a union having a bore threaded at one end in which the reduced threaded extension of the handle is inserted, and plain at its other end in which the reduced end of the butt is inserted and rigidly secured.

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

THOMAS MILLAN.

Witnesses: JAMES W. KNOX,

GEO. H. DAVIS.