(No Model.)

A. W. CASH.

NIPPLE CHUCK.

No. 452,768. Patented May 26, 1891.

Fig. 1.

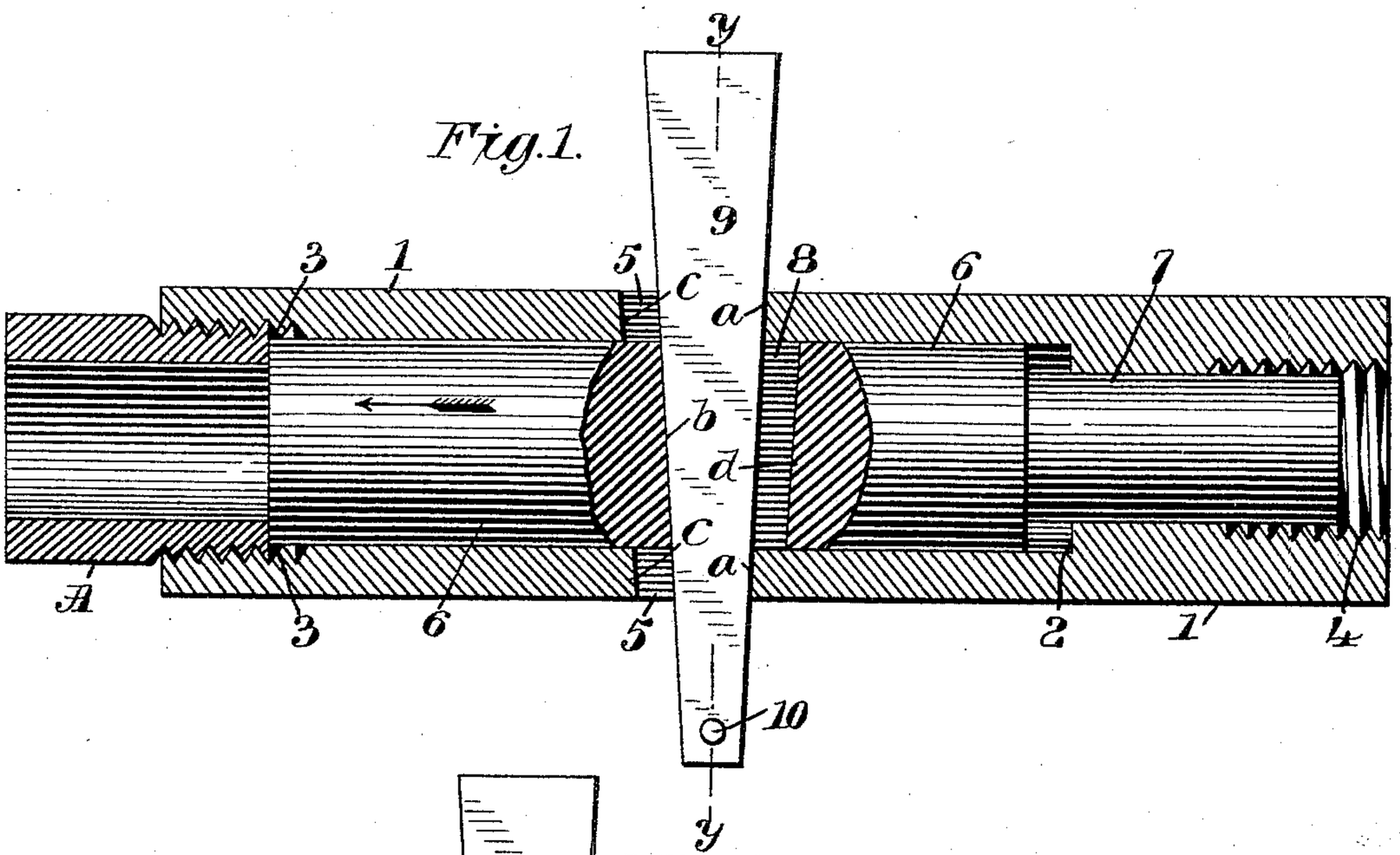


Fig. 2.

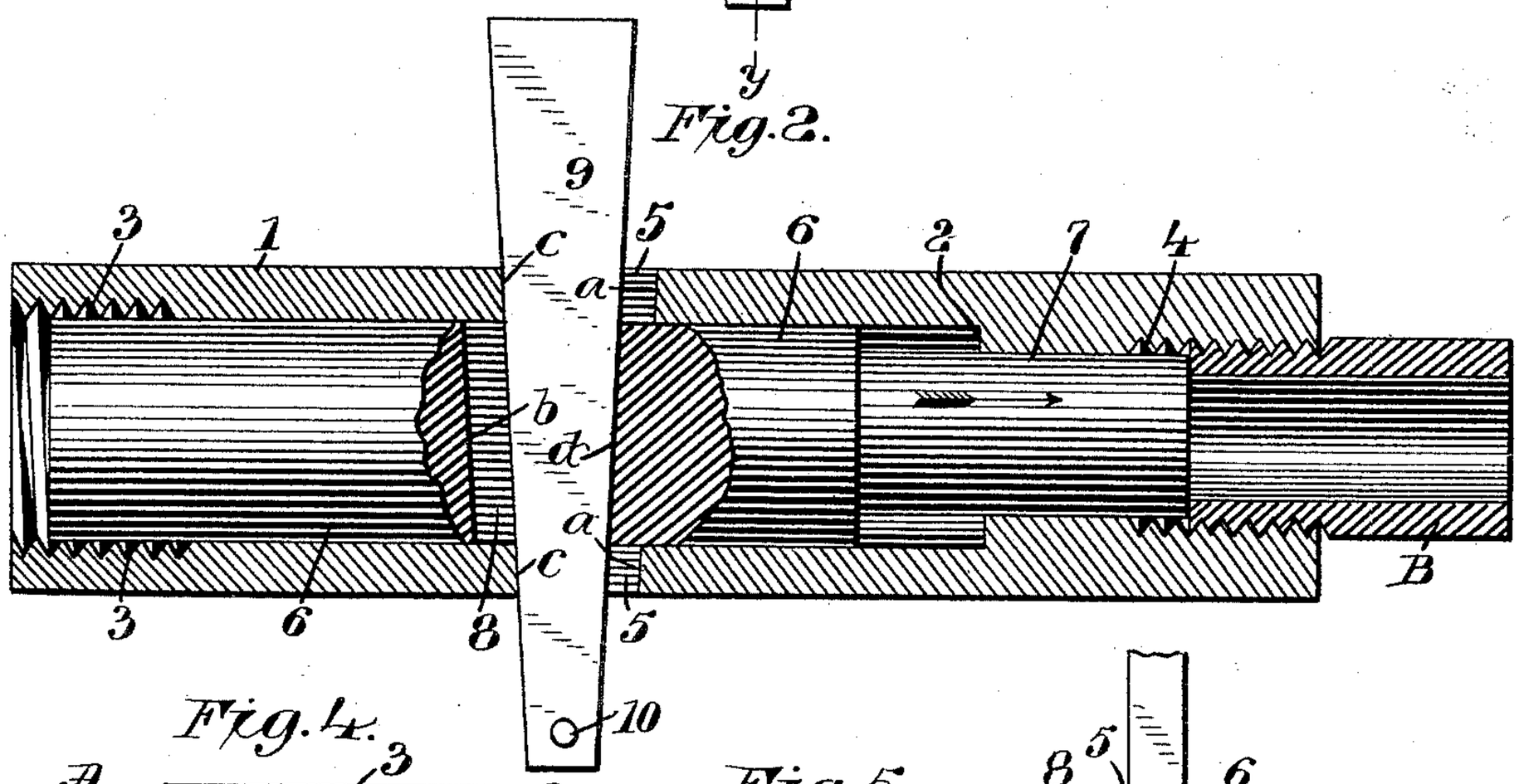


Fig. 4.

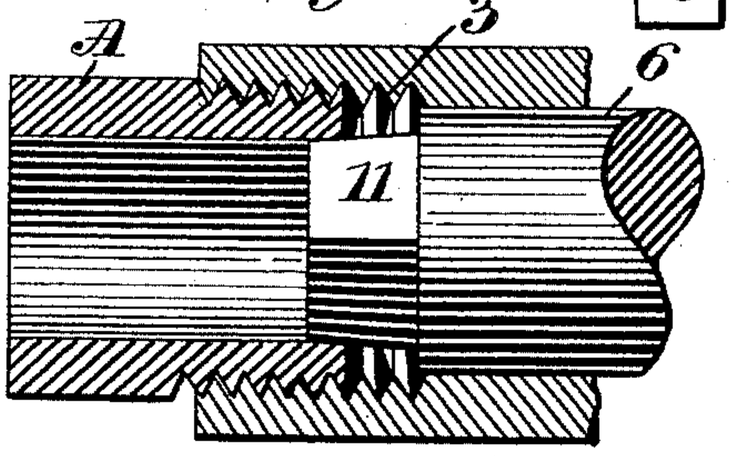


Fig. 5

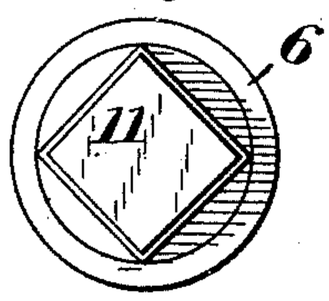
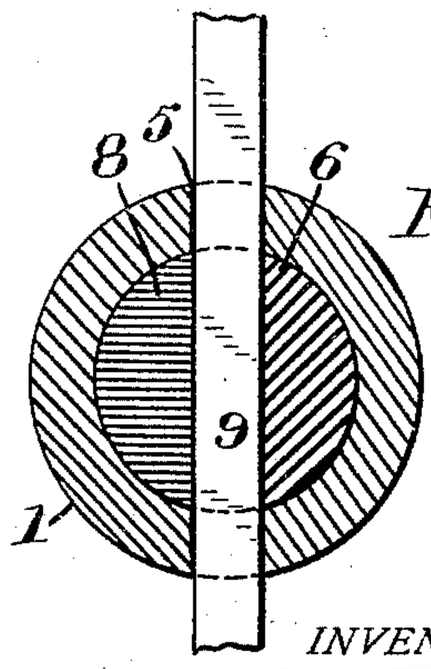


Fig. 3.



WITNESSES;

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ARTHUR WISE CASH, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE ARMSTRONG MANUFACTURING COMPANY, OF SAME PLACE.

NIPPLE-CHUCK.

SPECIFICATION forming part of Letters Patent No. 452,768, dated May 26, 1891.

Application filed February 6, 1891. Serial No. 380,412. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR WISE CASH, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Nipple-Chucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain novel and useful improvements in nipple-chucks, such as are used by steam and gas fitters for making unions or nipples either from blanks especially made for that purpose or from short lengths of pipe.

It is the object of my invention to provide a chuck which may be used in connection with any ordinary vise, and in which the plunger by the use of a single wedge may be operated in either direction, whereby a single chuck may be arranged to hold nipples of two different sizes; and with these ends in view my invention consists in the construction and combinations of elements hereinafter fully explained, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction and its methods of operation, I will describe the same in detail, reference being had to the accompanying drawings and the numerals and letters marked thereon, which form a part of this specification.

Figure 1 is a central longitudinal section showing my device in operative connection with a nipple of a size suited to its larger extremity; Fig. 2, a similar view showing its method of operation as to its smaller end; Fig. 3, a vertical section upon the line *y y* of Fig. 1; Figs. 4 and 5, modifications.

The body of my improved chuck consists of an iron sleeve or tube 1, which is shouldered near one end, as seen at 2. At one end it is provided with internal screw-threads 3 and at the other end with screw-threads 4, the diameters of the two screw-threaded portions preferably differing for the purpose of making the single chuck answer for two sizes of work without the use of bushings or similar appliances. The chuck-body 1 has a rectangular slot 5 cut through it from top to bottom. The shape of this slot may be seen by comparison of Fig. 3 with either of the foregoing figures. Arranged within the chuck-body is a loosely-fitting plunger 6, having one extremity shouldered and reduced, as seen at 7, so as to fit the reduced interior bore of the chuck-body. This plunger is somewhat shorter than the chuck-body, substantially as shown. At its center the plunger is provided with a tapered mortise 8, and through this mortise and also through the slots in the chuck-body passes a wedge 9, which in longitudinal section is quite loosely adapted to the openings through which it passes. At its smaller end this wedge is provided with a stop, such as a transverse pin 10, to prevent its complete withdrawal out of engagement with the other parts. By means of this wedge the plunger may be driven in either direction for the purpose of securing a nipple in either end of the chuck, as follows: Referring now to Fig. 1, the blank A, one end of which has been threaded, is screwed into the threaded extremity 3 of the chuck-body nearly to the bottom of the threads. Then the wedge is driven in, thereby forcing the plunger longitudinally in the direction of the arrow until it abuts firmly against the inner end of the nipple and binds the latter in the threads. When this end of the chuck is used, it will be observed that one edge of the wedge abuts against the end walls of the slots 5, which are denoted by *a*, and the other edge of the wedge bears against the wall of that mortise in the plunger which is lettered *b*. In Fig. 2 this bearing of the wedge is reversed, one edge engaging with the end walls *c* of the slots and the other with the end wall *d* of the plunger-mortise, whereby a reverse movement to that of Fig. 1 is produced and the plunger driven tightly against the end of the nipple B.

When held in the chuck as above described, the blank end of the nipple may be suitably threaded by any ordinary or convenient tool, the chuck meanwhile being secured firmly, as in a vise. When the threading operation is

finished, the wedge is driven out, whereby the thrust of the plunger against the nipple is released and the latter may be freely unscrewed.

If it be desired to hold the nipple with especial firmness—as, for instance, to cut thereon a thread of opposite incline to that in the chuck—the end of the plunger may be squared or serrated, as seen at 11, Figs. 4 and 5. The edges or corners of this portion will then be crowded slightly into the metal of the nipple by the action of the wedge, thereby affording an exceedingly tight grasp on the work.

I claim—

1. In a nipple-chuck, the combination, with the tubular body having threaded extremities, of the internally-seated movable plunger, and a wedge passing through said plunger and the chuck-body and adapted to move the former in either direction, substantially as described.

2. The combination, with the tubular body screw-threaded at its extremities and vertically slotted, of the internally-seated movable plunger provided with a mortise, and a wedge passing through the slots and mortise, said wedge being as to its central bearing portion narrower than either opening through which it passes.

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

ARTHUR WISE CASH.

Witnesses:
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