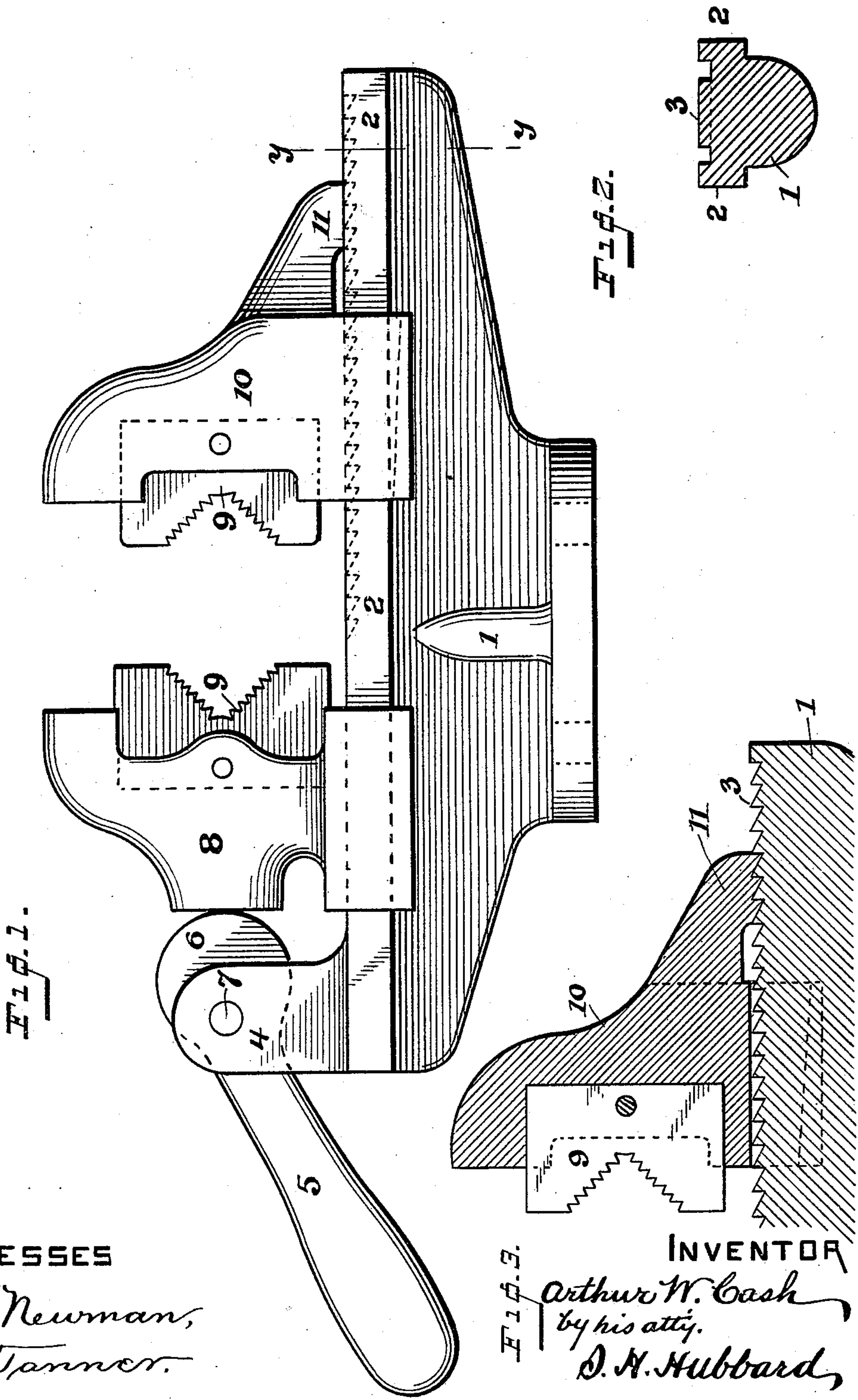


(No Model.)

A. W. CASH.
PIPE VISE.

No. 472,010.

Patented Mar. 29, 1892.



WITNESSES

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Fig. 3.

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PIPE-VISE.

SPECIFICATION forming part of Letters Patent No. 472,010, dated March 29, 1892.

Application filed June 29, 1891. Serial No. 397,777. (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 Pipe-Vises; 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 vises, but more particularly to such vises as are used by steam and gas fitters for holding pipes, rods, and the like.

It is the object of my invention to simplify and improve upon the vise shown and described in Letters Patent of the United States No. 383,165 and to furnish a vise which shall be cheap and simple in its construction, which shall possess the required holding power, and which may be readily adjusted for different sizes of work.

With these ends in view my invention consists in the construction and combination 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 method of operation, I will describe the same in detail, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is side elevation of a vise constructed in accordance with my invention; Fig. 2, a transverse section at the line *y y* of Fig. 1; Fig. 3, a detail longitudinal section.

Like numerals denote the same parts in all the figures.

The base 1 is formed of a single casting and is preferably provided with means for securing it to a bench or upon a swivel. The cross-section of the top of this base is as shown at Fig. 2, and it is provided with square projections 2, which serve as ways on which the jaws may slide, and with a series of serrations 3 extending for a considerable distance along its upper surface.

4 is a lug, in which a handle 5, provided with a cam-surface 6, is journaled by means of a pin or bolt 7.

8 is a jaw mounted upon and fitted closely

to the ways 2, so as to slide thereon. It is provided with a jaw-block 9, having a holding-surface of any desired configuration.

10 is a complementary jaw also mounted upon the ways 2 and fitting them closely from side to side; but the grooves in said jaw which fit over the ways are tapered from front to rear, as shown by the dotted line *a* in Fig. 1, so that the jaw may be rocked forward slightly, for the purpose presently explained. This jaw is also provided with a jaw-block and at its rear side is furnished with a projection or dog 11, the lower face of which is formed with several teeth or serrations adapted to mesh with the teeth or serrations 3, heretofore mentioned as formed upon the flat upper surface of the base. I prefer to use the projection 11; but the teeth may be formed on the rear lower surface of the jaw itself if such a construction should be found more convenient for any reason.

In the operation of my invention the cam 6 is first turned by means of its handle, so that its lowest point is in contact with the rear side of the jaw 8. The pipe to be operated upon is then inserted between the jaw-blocks and the jaw 10 pushed up against it. This is permitted by the tapered form of the grooves which engage the ways which admit of the upward and forward tilting of the jaw 10, so that the teeth upon the projection 11 may be raised clear of the teeth 3. When the jaw 10 has been moved up, as just described, the jaw 8 may be operated by the cam to bind the work firmly. To release the work, the cam is first turned so as to free the jaw 8, and then, if required, the jaw 10 may be rocked forward and then drawn backward upon its ways. When the parts are in engaged position, pressure applied by the cam will force the two co-operating sets of teeth into firm engagement and there retains them.

I claim—

1. The combination, with the base provided with ways and with a longitudinal row of teeth, of a freely-sliding jaw mounted upon the ways and provided with means for moving and holding it, and a complementary jaw provided with teeth adapted to engage the serrations on the base, substantially as described.

2. The combination, with the base having ways and a series of serrations, of the freely-

sliding jaw, the cam provided with a handle
and adapted to move and to hold said jaw, and
the complementary jaw 10, having the ser-
rated projection 11, said jaw having its ways
5 freed, whereby it may be rocked forward for
the disengagement of the dog.

3. The base 1, having the ways 2 and teeth
3 of the jaw 8, the cam 6, having a suitable
handle, and the jaw 10, provided with the ser-
10 rated dog or projection 11 and having its

grooves for engagement with the ways tapered
to permit of a forward rocking movement,
the whole being arranged and adapted to op-
erate substantially as described.

In testimony whereof I affix my signature in 15
presence of two witnesses.

ARTHUR W. CASH.

Witnesses:

S. H. HUBBARD,

M. C. HINCHCLIFFE.