

No. 713,189.

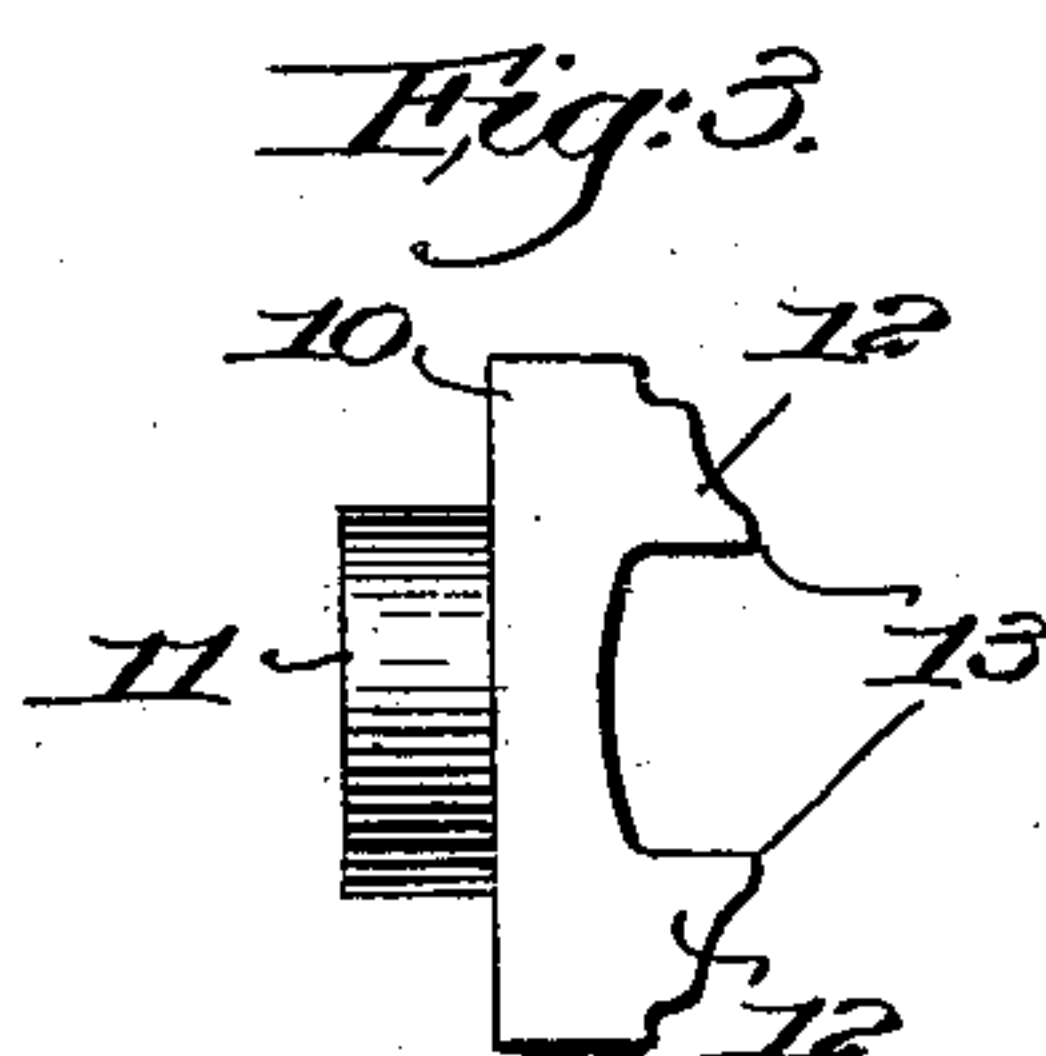
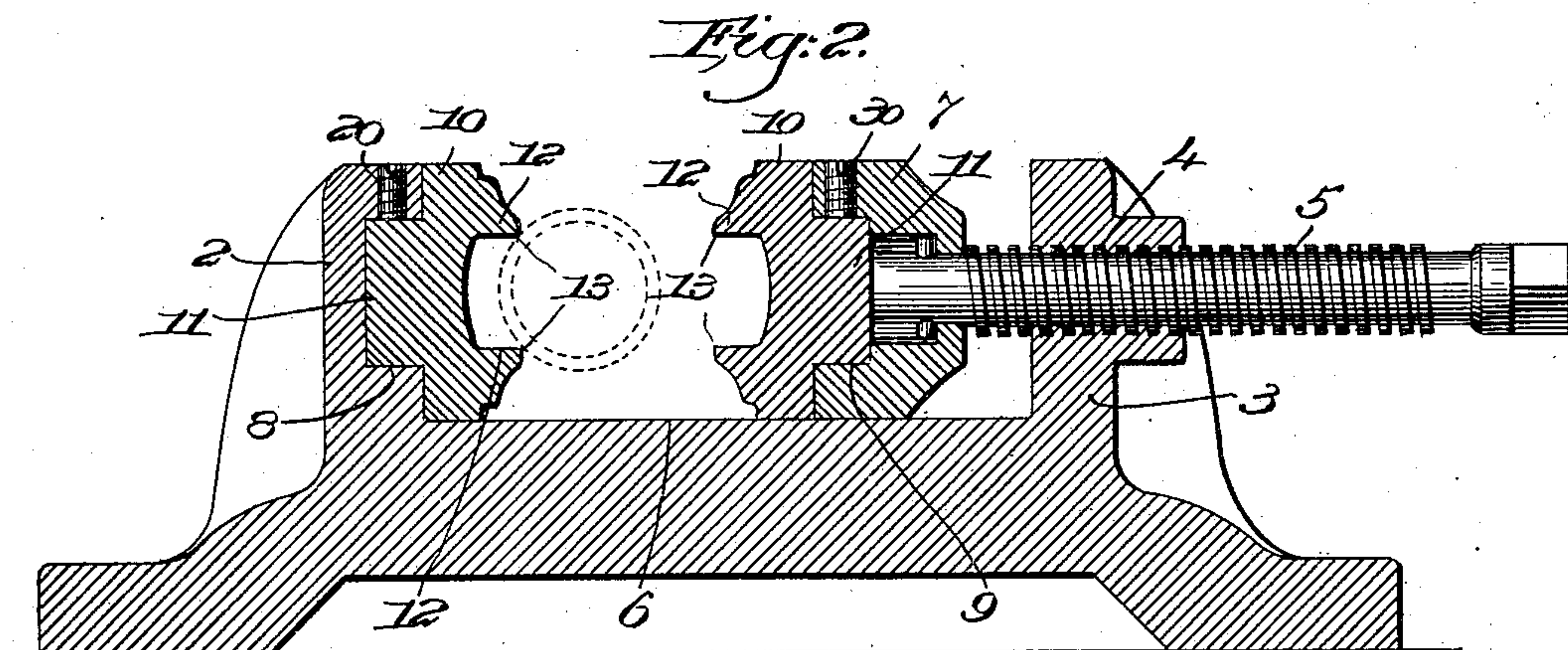
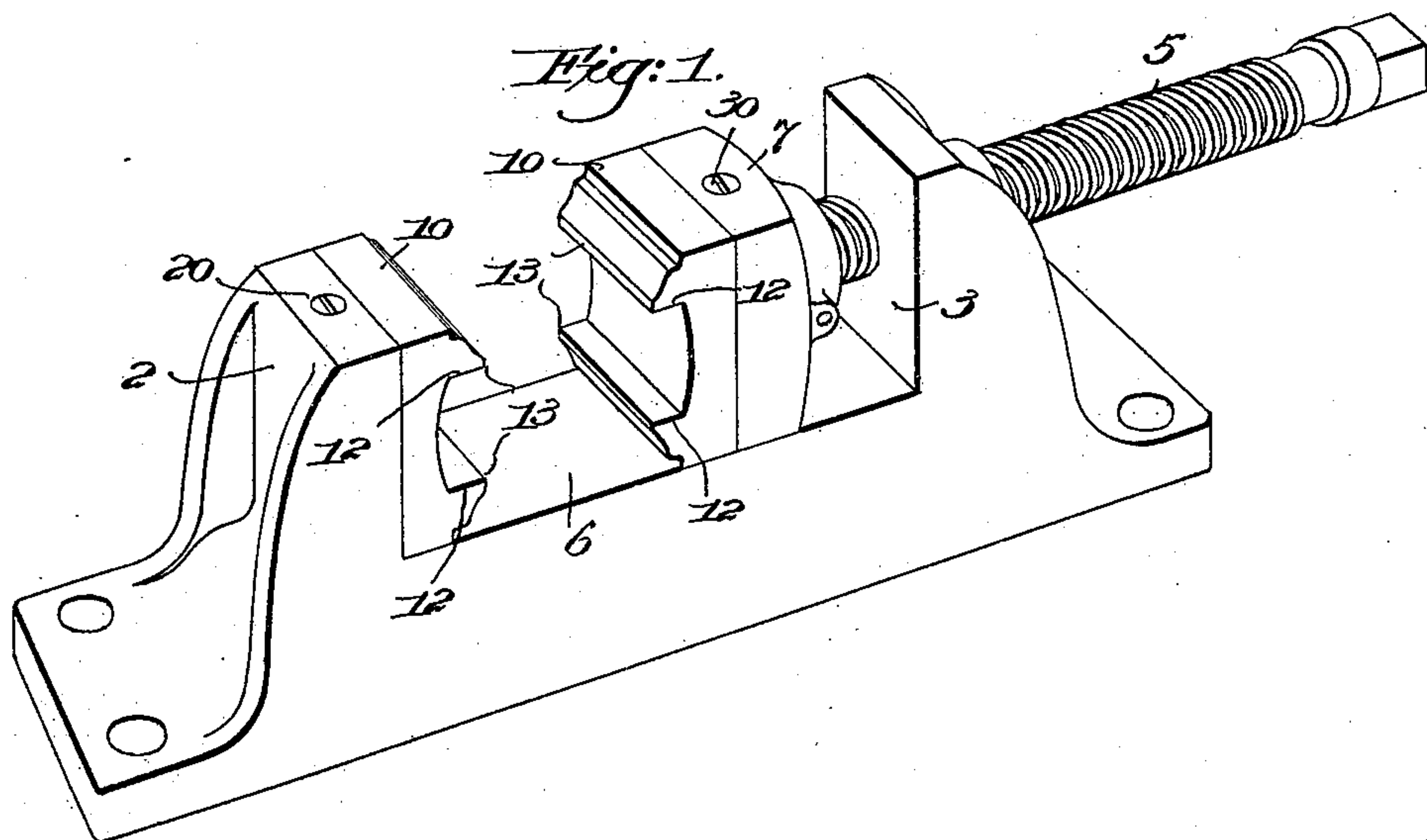
Patented Nov. 11, 1902.

T. J. YATES.

PIPE VISE.

(Application filed Apr. 16, 1902.)

(No Model.)



Witnesses,
Edward H. Allen.
Herman J. Sartoris.

Invented by
Thomas J. Yates
by Masby Gregory
attys

UNITED STATES PATENT OFFICE.

THOMAS J. YATES, OF SALEM, MASSACHUSETTS.

PIPE-VISE.

SPECIFICATION forming part of Letters Patent No. 713,189, dated November 11, 1902.

Application filed April 16, 1902. Serial No. 103,162. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. YATES, a citizen of the United States, and a resident of Salem, county of Essex, State of Massachusetts, have invented an Improvement in Pipe-Vises, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

10 This invention has for its object the production of a strong and efficient pipe-vise which will have a wide range of work, so that the use of a set of two or more vises is obviated.

15 It is now common to make pipe-vises in sets, each vise of a set being adapted to operate within a rather narrow or limited range of sizes of pipe, so that the workman must be provided with a complete set in order to be
20 able to attend properly to the work which may present itself. The vises are heavy and expensive, a complete set requiring quite an outlay in the first instance, and on account of their weight they are very burdensome to
25 transport from one job to another.

By my present invention I am enabled to use a single vise, and by means of any desired number of sets of interchangeable and detachable jaw-faces a large range of work can be
30 performed.

Figure 1 is a perspective view of a pipe-vise embodying my invention. Fig. 2 is a longitudinal sectional view thereof, and Fig. 3 is an end elevation of one of the detachable jaw-faces.
35

Referring to Figs. 1 and 2, the vise comprises a strong heavy base 1, having cast integral therewith at or near its opposite ends two abutments 2 and 3, the former constituting
40 the fixed jaw and the latter having a screw-threaded hole 4 therein for the reception of a screw 5. The top 6 of the base is made flat and true and at right angles to the inner vertical faces of the abutments 2 and 3 for a purpose to be described. The movable jaw 7 is
45 connected loosely in any suitable manner with the inner end of the screw 5, said jaw sliding on the plane face 6 of the base and being guided thereby as the jaw is moved in or out
50 by rotation of the screw 5. In the upright face of the fixed jaw 2 I form a recess 8, Fig. 2, preferably circular in cross-section and in

axial alinement with the longitudinal center of the screw 5, a similar recess 9 being made in the opposite face of the movable jaw 7, 55 and, as shown best in Fig. 2, the two jaws are respectively provided with set-screws 20 and 30, which enter vertical threaded holes in the tops of the jaws and intersect the recesses 8 and 9. I provide a series of pairs of
60 detachable jaw-faces for use in connection with the jaws, and as the construction is the same I will only describe one jaw-face in detail, it consisting of a substantially rectangular block 10, having projecting from the cen- 65 ter of its back a circular boss 11 to fit snugly in one of the recesses or seats 8 or 9 in the jaws. The front of the jaw-face is transversely grooved to present two parallel transverse ribs 12, which are shaped to present
70 sharp holding or clamping edges 13, two for each jaw.

For adapting my vise for use with pipe from one-eighth inch in diameter up to two inches I provide in practice three pairs or sets of jaw- 75 faces, the holding edges 13 of one pair being spaced apart to cooperate with pipe from one-eighth to one-half of an inch in diameter. The next set will be spaced to hold pipe from three-eighths of an inch up to one inch in diame- 80 ter, and the third set will hold pipe from one and one-quarter inches in diameter up to two inches, and other sets may be provided, if necessary. A pair of the jaw-faces are set in the jaws, as shown in Figs. 1 and 2, and the 85 set-screws 20 and 30 are set up tight enough to engage the bosses and hold the jaw-faces in place without danger of falling out. The flat face 6 of the base 1 guides and positions
90 the bottoms of the jaw-faces, that one attached to the movable jaw sliding thereover according to the direction of rotation of the screw and maintaining the holding edges 13 of the opposed jaw-faces in parallelism.

The manner of holding and clamping a pipe 95 will be obvious from the drawings, the four holding edges 13 of the jaw-faces engaging and tightly clamping the pipe when the movable jaw is tightly set up and without marring
100 or marking the pipe.

It will be manifest that to adjust the rise from one range of pipe sizes to another it is only necessary to remove one pair of jaw-faces and insert another pair of the desired

size, and, if desired, one or more pairs of jaw-faces can be reserved for particular work—as, for instance, on brass pipe—while another set will be used on iron pipe.

- 5 The bosses of the jaw-faces are in axial alinement with the operating-screw 5, and the holding or clamping edges 13 of each jaw-face are arranged equidistant above and below a line passed through the longitudinal center of
10 the screw, so that the power exerted thereby when set up is distributed equally upon the pipe to be clamped.

Having fully described my invention, what I claim as new, and desire to secure by Letters
15 Patent, is—

1. A pipe-vise comprising a base having a fixed jaw and a movable jaw, each having a seat in its inner face, a screw connected with and to move the movable jaw, the longitudinal axis of the screw being in axial alinement
20 with the seats, and detachable jaw-faces each having on its back a boss to enter the seat in the jaw, and a pair of parallel, transverse holding-ribs on its front side.

- 25 2. A pipe-vise comprising a base having a fixed jaw and a movable jaw, each having a seat in its inner face, a screw connected with and to move the movable jaw, the longitudinal axis of the screw being in axial alinement
30 with the seats, a set-screw in each jaw, in-

tersecting the seat, and detachable jaw-faces each having on its back a boss to enter the seat and on its front side pipe-holding ribs, the set-screws engaging the bosses and holding the jaw-faces in place.

3. A pipe-vise comprising a base having two integral, upright abutments thereon, the top of the base therebetween being flat and at right angles to the inner, upright faces of said abutments, a seat in one abutment, the latter
40 constituting a fixed jaw, an operating-screw mounted in the other abutment, a movable jaw adapted to slide on the top of the base and loosely connected with the inner end of the screw, said jaw having a seat in its inner
45 face, and a pair of detachable jaw-faces each comprising a rectangular body having a boss on the back to enter the seat in the jaw, and a pair of parallel, transverse holding-ribs on
50 its front side, the top of the base positioning the opposed jaw-faces and maintaining their holding-ribs in parallelism.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS J. YATES.

Witnesses:

JOHN C. EDWARDS.

N. H. COTTLE.