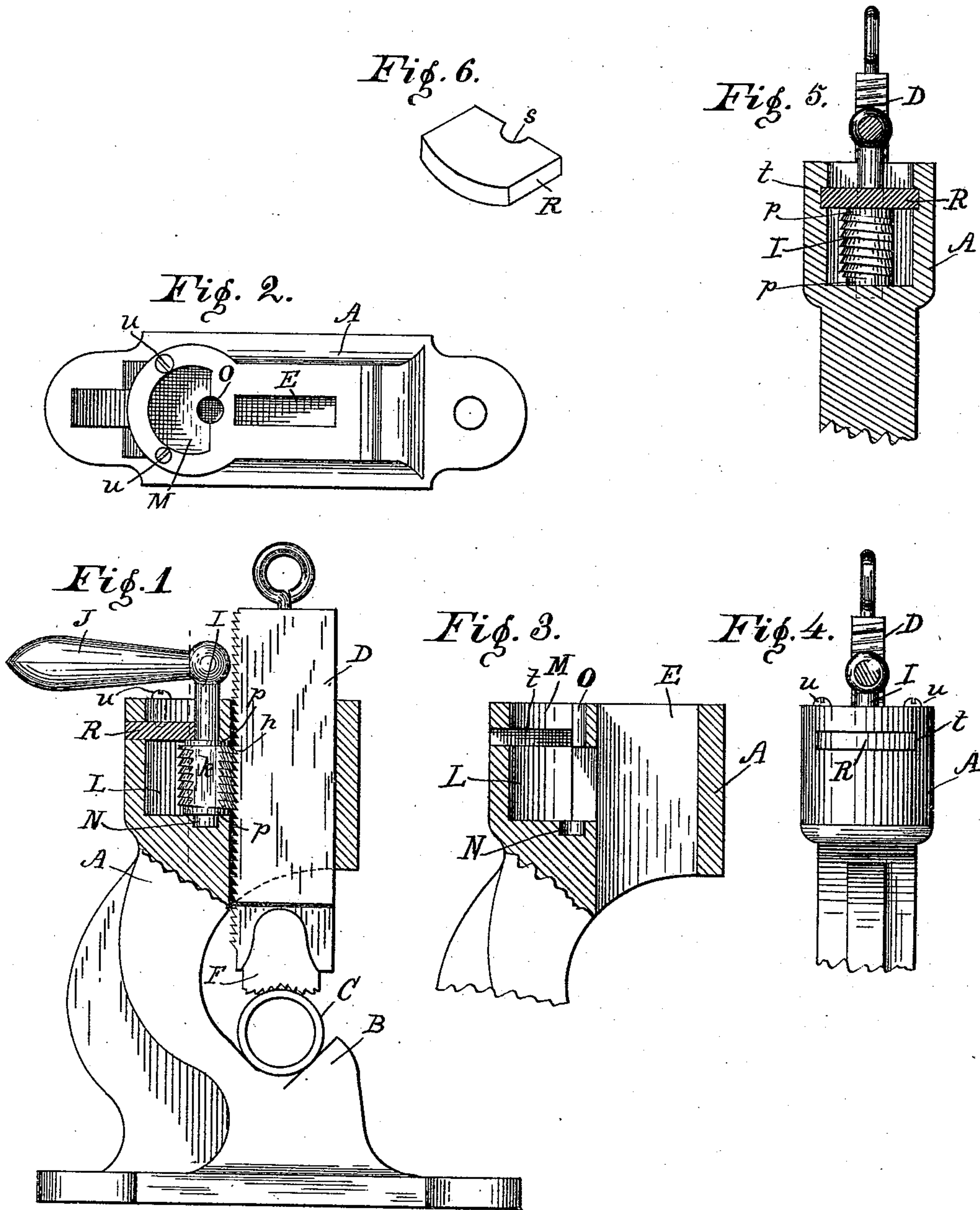


(No Model.)

R. R. ROUSE.
PIPE VISE.

No. 446,078.

Patented Feb. 10, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

ROSWELL R. ROUSE, OF INDIANAPOLIS, INDIANA.

PIPE-VISE.

SPECIFICATION forming part of Letters Patent No. 446,078, dated February 10, 1891.

Application filed October 4, 1890. Serial No. 367,131. (No model.)

To all whom it may concern:

Be it known that I, ROSWELL R. ROUSE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Pipe-Vises, of which the following is a specification.

My invention relates to an improvement in that class of vises in which one edge of the bar which carries the movable jaw forms a segment of a nut and is engaged by a mutilated screw.

The object of my improvement is to provide an improved construction of the bearing in which the screw is mounted, whereby the screw is firmly supported when in action, and may also be readily removed or replaced.

The accompanying drawings illustrate my invention.

Figure 1 represents a side elevation partly in section; Fig. 2, a plan of the body of the vise; Fig. 3, a partial vertical section of the upper part of the vise, having the screw removed; Fig. 4, a rear elevation; and Fig. 5, a section at *a*, Fig. 1. Fig. 6 is a view in perspective of the bearing-plate forming a portion of the screw-shaft bearing.

A is the body of the vise, having a recessed fixed jaw B, of well-known form, adapted to support the pipe C.

D is a bar arranged to slide in a mortise E in the body of the vise opposite the fixed jaw B, and carrying the serrated jaw F. One edge of bar D is provided with teeth *h*, which form segments of internal screw-threads adapted to fit the threads of a short mutilated screw-shaft I, having a lever J secured thereto. The threads are cut away on one side of the screw, as at *k*, so that when that side of the screw is presented to the toothed edge of bar D the bar will slide freely in the body A without engaging the screw. Screw-shaft I is mounted in the body A in suitable bearings, so as to stand parallel with bar D and engage the teeth of the bar with its screw-threads.

For the purpose of conveniently mounting the screw in its bearings, so that it shall be firmly supported against the thrust of the movable jaw and its bar and at the same time be easily removed for repair and replaced, the bearings are constructed in the following manner: The upper part of the cast-

ing A, forming the body of the vise, is cored out to form a chamber L, which communicates on one side with the mortise E, and has an opening M in the top, through which the screw-shaft may easily pass. In the bottom of said chamber a cylindrical bearing or step N is formed, adapted to receive the lower end of the screw-shaft, and in the top, at one side of the opening M, a half-bearing O is formed adapted to receive the upper part of the shaft. Shoulders *p p* are formed at each end of the screw, and the screw-shaft, having been passed into chamber L through the opening M, is placed in the bearings N and O, and the shoulders *p p* rest, respectively, against the top and bottom of the chamber. The screw-shaft is held in place in its bearings by a plate R, which has in one edge a half-bearing *s*. Plate R fits nicely into a slot *t*, cut in casting A at the top of chamber L, in such a position that the bottom of the plate, when in position in the slot, is flush with the interior top of the chamber and rests against the upper shoulder of the screw, the bearing *s* resting against and inclosing the shaft and the plate closing the opening M. Plate R is kept from sliding outward by screws *u u*. By this construction the end-thrust of the screw is entirely sustained by the casting A.

In operation, the screw-shaft being turned so as to present its plain or unthreaded side to the bar D, the bar slides downward until its jaw F comes in contact with the pipe. The screw-shaft is then turned from left to right, and the threads thereon are brought into engagement with the teeth *h* on the bar, as with a nut, and the bar and its jaw are thereby forced down against the pipe.

I claim as my invention—

In a vise, the combination of the casting A, forming the body and fixed jaw of the vise and having chamber L, bearings N and O, and slot *t* formed therein, the toothed bar arranged to slide longitudinally in said body, the mutilated screw mounted in said bearings and arranged to engage said bar, and the plate R, having the bearing *s*, all arranged to co-operate as shown and described.

ROSWELL R. ROUSE.

Witnesses:

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