W. I. TRETHEWEY.

STRAP PIPE VISE.

APPLICATION FILED NOV. 15, 1909.

975,001.

Patented Nov. 8, 1910.

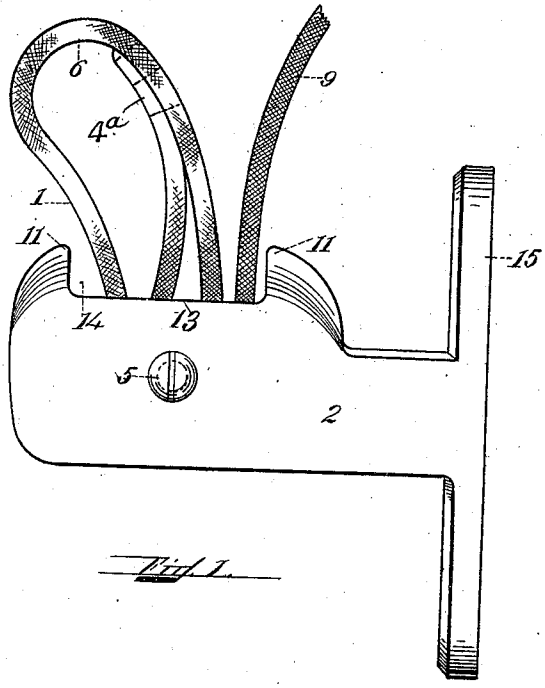

Fig. 1.

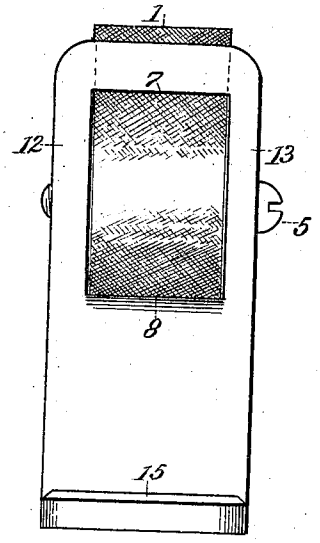

Fig. 3.

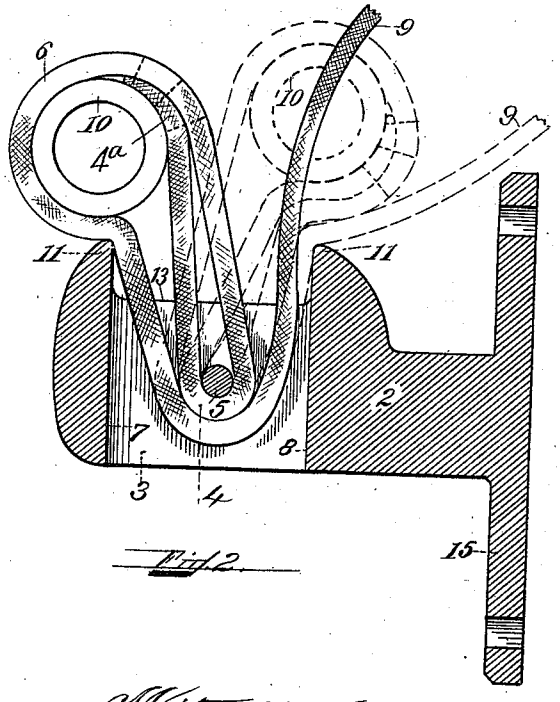

Fig. 2.

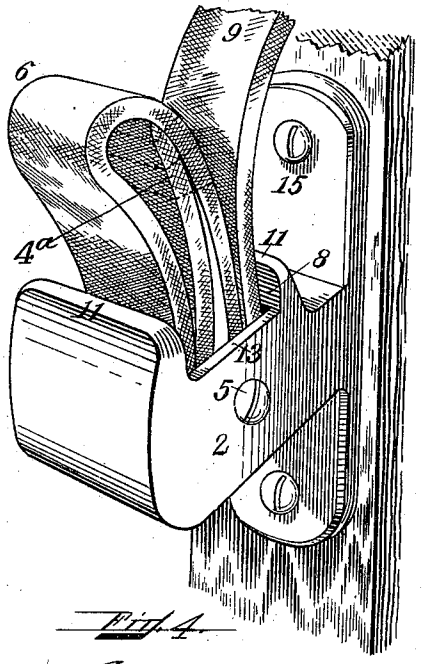

Fig. 4.

Witnesses:
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By Francis J. K. Dakin
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UNITED STATES PATENT OFFICE.

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STRAP PIPE-VISE.

975,001. Specification of Letters Patent. Patented Nov. 8, 1910.

Application filed November 15, 1909. Serial No. 527,986.

To all whom it may concern:

Be it known that I, WILBERT I. TRETHEWEY, a citizen of the United States, residing at Roslindale, Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Strap Pipe-Vises, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to vises for holding pipes or round rods, and particularly to vises for use in connection with smooth finished work which must be held without marring the surface of the work.

The general object of the invention is to produce a vise of the character referred to which shall be simple in construction and convenient and reliable in operation.

A more particular object of the invention is to produce a vise which will hold the work against rotation in either direction, and which, when once adjusted to the work, will so operate without readjustment.

My invention consists in the pipe vise hereinafter described, as defined in the succeeding claims.

In the accompanying drawings, which illustrate the preferred embodiment of the invention, Figure 1 is a side elevation of the pipe vise; Fig. 2 is a vertical section looking in the same direction as Fig. 1 and showing the vise in operation; Fig. 3 is a bottom view, and Fig. 4 is a perspective view of the vise.

The illustrated embodiment of the invention is provided with a strap 1, preferably of heavy webbing, by which the work is gripped, as is common in devices of this kind. The strap operates in conjunction with a relatively fixed member 2 which is provided with a recess 3, as shown in Fig. 2. One end, 4, of the strap is doubled upon itself skived and fastened by stitching or otherwise at 4^a and is traversed by a screw 5 which is fixed in the sides of the fixed member 2, and the end 4 of the strap is thus secured within the recess. From the screw 5 the strap passes first outwardly in the form of a loop 6, then inwardly between one side, 7, of the recess and the end 4 of the strap, and then outwardly again between the end of the strap and the other side 8 of the recess, finally terminating in the free portion 9 of any convenient length.

When the vise is in use the work, such as the pipe 10 illustrated in section in Fig. 2, is inserted in the loop 6. Where the work is short this may be done conveniently by passing the end of the work through the loop. Where the work is long or of awkward shape it may sometimes be more conveniently inserted by laying the work upon the vise and then passing the free end of the strap about the work and through the recess. After inserting the work the free portion 9 of the strap is pulled to draw the loop 6 closely around the work, and the vise is then ready to prevent rotation of the work in either direction.

The operation of the vise is illustrated in Fig. 2. As shown in full lines in the drawing, if the pipe 10 tends to rotate to the left it draws the loop to the left in such a manner as to pinch the side of the loop between the pipe and the upper extremity of the side 7 of the recess. By this pinching action the strap is prevented from slipping through the recess, and the pipe is prevented from further rotation by the friction between the pipe and the strap. If the pipe tends to rotate in the opposite direction, that is, to the right, the loop is pinched against the pipe and the opposite side 8 of the recess. In this case the strap is prevented from pulling through the recess by reason of the fact that its free portion 9 is interposed between the loop and the side of the recess, so that the portion 9 is pinched and held frictionally at this point, as shown in the dotted lines in Fig. 2. To increase the pinching action upon the strap the walls 7 and 8 of the recess 3 are formed to terminate in angular shoulders 11, which are rounded at their edges only enough to prevent injury to the strap.

The end walls 12 and 13 of the recess are cut away between the walls 7 and 8 so as to form depressions 14 in which the work may be conveniently rested while adjusting the strap. These depressions also contribute to the proper adjustment of the strap, since they permit it to be shortened about the work sufficiently to allow for the stretching which occurs in the strap when the work tends strongly to rotate. The fixed member 2 is provided with a base 15 which may conveniently be secured to a wall or a workbench or other fixed support.

The vise hereinbefore described is convenient for use in operations where the work tends to turn first in one direction and then in the other, as where a pipe is threaded by

means of a die. In such a case it is possible both to thread the pipe and to back-off and remove the die without readjusting the vise, whereas in using an ordinary pipe wrench to hold a pipe for such a purpose it is necessary to reverse the position of the wrench on the pipe whenever the direction of operation on the pipe is reversed. For this reason my vise enables one workman to perform operations usually requiring two workmen, and also saves the time usually required for changing the position of a wrench as above described.

It will be noted that my vise is very compact and light, owing to the absence of complicated mechanism, and that the only part subject to wear is the strap, which may be readily removed and replaced upon removing the screw 5 by which it is secured.

My invention is not limited to the embodiment hereinbefore described and illustrated in the accompanying drawings, but may be embodied in various forms within the nature of the invention and the scope of the following claims.

I claim:

1. A pipe vise comprising a relatively fixed member having two shoulders and an intermediate slot extending through the head, a retaining means within said slot and a flexible strap connected thereto extending outwardly and thence reversely about said retaining means between it and said shoulders as set forth.

2. A pipe vise comprising a relatively fixed member having two shoulders, a depressed portion intermediate the same, and an intermediate slot extending through the head, a retaining means within said slot and a flexible strap connected thereto extending outwardly and thence reversely about said retaining means between it and said shoulders, as set forth.

3. A pipe vise comprising a relatively fixed member provided with two shoulders having a depressed portion intermediate the same and with means for securing a strap between the shoulders, and a strap secured at one end by said means and arranged to extend thence outwardly in the form of a loop, then inwardly between one shoulder and said end of the strap, and then reversely between the loop and the other shoulder.

In testimony whereof, I hereunto set my hand, in the presence of two subscribing witnesses, this the fourth day of November, 1909.

WILBERT I. TRETHEWEY.

Witnesses:

CHARLES F. RICHARDSON,

E. F. UNIAC.