J. P. LEIMBACH.

WORK HOLDING CLAMP.

APPLICATION FILED DEC. 11, 1918.

1,306,433. **Patented June 10, 1919.**

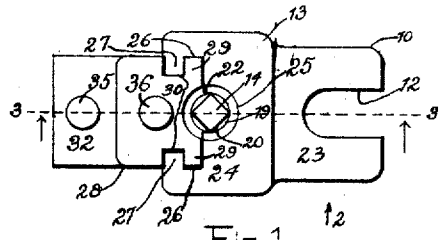


Fig. 1.

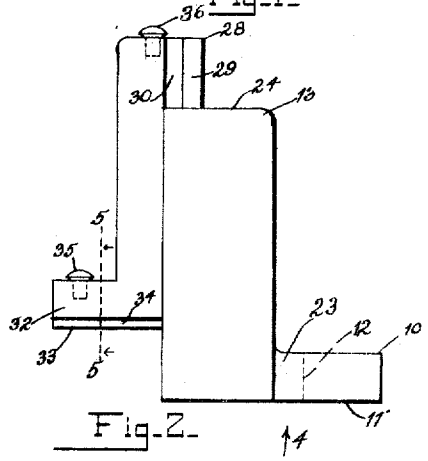


Fig. 2.

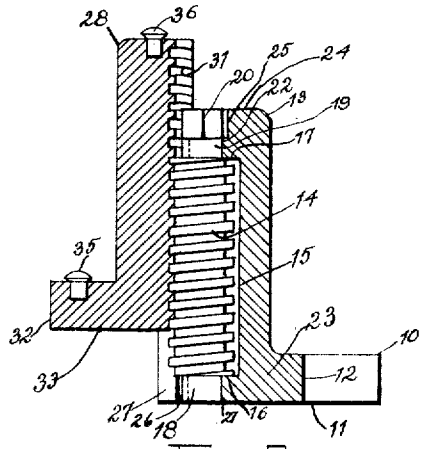


Fig. 3.

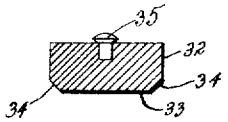


Fig. 5.

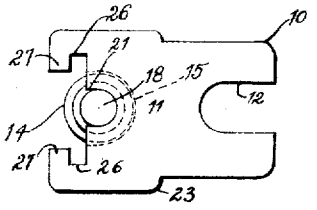


Fig. 4.

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WORK-HOLDING CLAMP.

1,306,433. Specification of Letters Patent. Patented June 10, 1919.

Application filed December 11, 1918. Serial No. 266,220.

To all whom it may concern:

Be it known that I, JOHN P. LEIMBACH, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Work-Holding Clamps; 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.

My invention relates to work holding clamps.

One object of my invention is to provide a work holding clamp which can be readily placed in position and brought into engagement with the work to be held.

Another object of my invention is to provide a work holding clamp which may also be used as a jack.

Another object of my invention is to provide a simple, cheap, strong and effective work holding clamp.

In the drawings:—

Figure 1 is a plan view of my improved work holding clamp.

Fig. 2 is a view of the clamp shown in Fig. 1 looking in the direction of the arrow 2 in said figure.

Fig. 3 is a section along the line 3—3 in Fig. 1 looking in the direction of the arrows.

Fig. 4 is a view of the body and screw of my improved clamp when viewed in the direction of the arrow 4 in Fig. 2.

Fig. 5 is a section along the line 5—5 in Fig. 2 looking in the direction of the arrows.

In the drawings:—

10 represents the body of my improved clamp, which is provided with a flat surface forming the base at 11 to rest upon the platen of a drill press, the slide of a milling machine, or upon any part of a tool to which it is desirable to affix my improved clamp.

For the purpose of securing the body 10 to any part of a tool with which it is to be used, the slot 12 is provided in the body 10 for the reception by the body of a bolt (not shown.)

13 is the housing for the set screw 14, said housing and the other parts of the body 10 being preferably cast integrally.

The housing 13 is provided with a recess 15 for the reception of the body of the screw 14. The recess 15 is terminated at the ends by the shoulders 16 and 17, the abutting surfaces of which form shoulder bearings for the ends of the body of the screw 14.

The body of the screw 14 is provided at its lower end with a pintle 18 and at its upper end with a pintle 19, the latter terminating in a squared portion 20 which is provided for the application of a socket wrench thereon. The pintles 18 and 19 are mounted respectively in the slots 21 and 22, formed respectively in the foot 23 and the top 24 of the body 10. The slots 21 and 22, as shown respectively in Figs. 4 and 1, are provided with two parallel sides joining a circular portion and said parallel sides and circular portion of said slots respectively form bearings respectively for the pintles 18 and 19.

The top 24 is provided with the recess 25 for the insertion of the socket of a wrench therein when the set screw 14 is to be turned.

The housing 13 is provided with slots 26—26 and with gibs 27—27.

The slide 28 is provided with gibs 29—29 which slide in the slots 26—26 of the housing 13, and said slide is furthermore provided with slots 30—30 for the reception of the gibs 27—27 of the housing 13.

The slide 28 is provided with a threaded portion 31 which is threaded upon the set screw 14.

The slide 28 comprises the toe 32 projecting laterally therefrom and provided with a flat bottom 33 and with the chamfered portions 34—34.

The parts hereinbefore described are suitable for use as a work holding clamp, and in order to make my clamp also adaptable for use as a jack, I insert the oval headed pins 35 and 36 in suitable holes provided in the toe 32 and in the top of the slide 28 respectively.

The manner of use of my improved work holding clamp is as follows:—

The base 11 is applied to any suitable portion of the tool with which my improved clamp is to be used and the nut on the end of the bolt, the body of which passes through the slide 12, is set up in order to clamp the body 10 upon the tool. The socket wrench is then to be applied to the squared portion 20 of the set screw 14 and said screw is to be turned until the bottom 33 of the toe 32 clamps upon the work which is to be held.

When my improved clamp is to be used as a jack, the body 10 is to be fastened to the

tool, as before explained, and the screw 14 turned in order to bring either the pin 35 or 36 up in contact with the work which is to be supported.

Thus it will be seen that I provide a simple, cheap, strong and effective work holding clamp which may also be used as a jack and in which many changes might be made without departing from the spirit of my invention.

I claim:—

1. A work holding clamp comprising a body, a slide slidably secured in said body, a set screw revolubly secured in said body and engaging said slide, and shoulder bearings for said screw formed on said body.

2. A work holding clamp comprising a body, a slide slidably secured in said body, a toe formed on said slide, and a set screw revolubly secured in said body and engaging said slide, and shoulder bearings for said screw formed on said body.

3. A work holding clamp comprising a body, a slide slidably secured in said body, a toe formed on said slide, a set screw revolubly secured in said body engaging said slide and pins secured in the top of said toe and slide.

4. A work holding clamp comprising a foot and a housing formed integrally, a slot in said foot for the reception of a bolt, a set screw comprising a threaded portion, pintles and a squared portion on one pintle, a recess in said housing for the reception of said threaded portion, bearings in said housing for said pintles, and a slide slidably mounted in said housing and engaging said threaded portion.

5. A work holding clamp comprising a foot and a housing formed integrally, a slot in said foot for the reception of a bolt, slots and gibs formed in said housing, a slide comprising gibs for sliding in said slots and slots for the reception of the gibs on said housing, a work holding toe on said slide, pins mounted in said toe and in the top of said slide, and means for moving said slide along said housing.

In testimony whereof, I affix my signature.

JOHN P. LEIMBACH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."