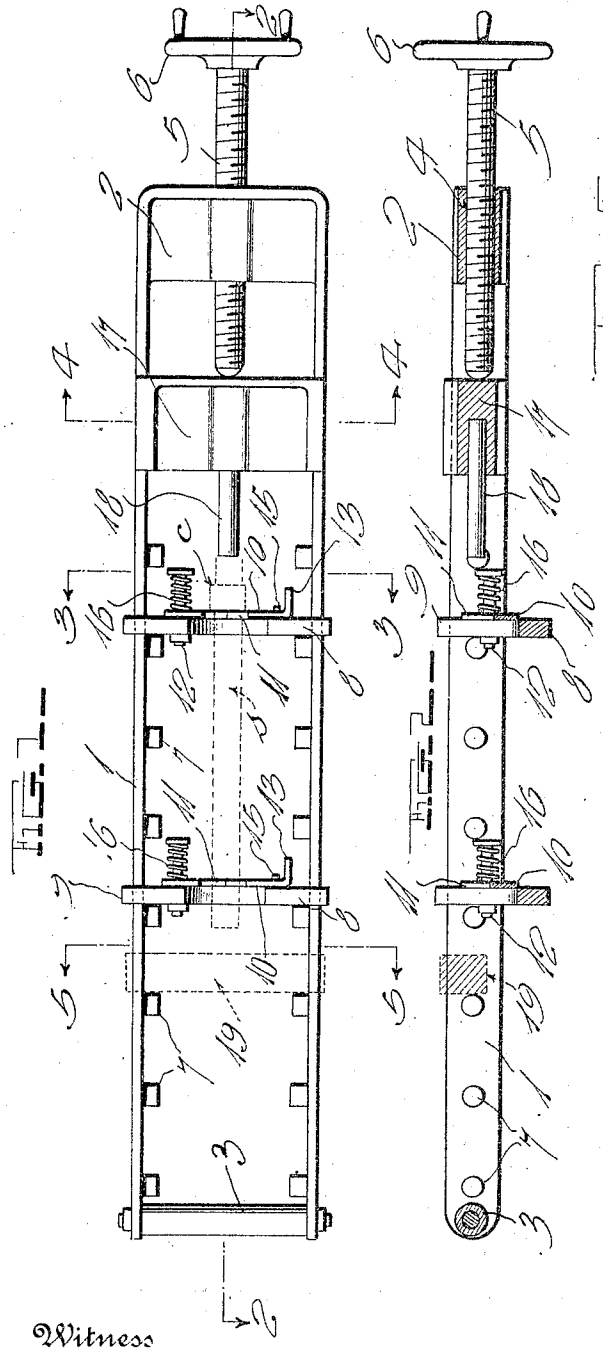
T. ERICKSON.

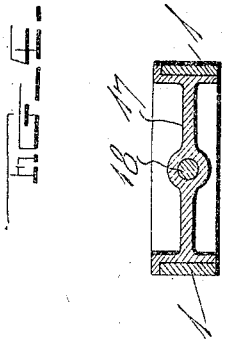
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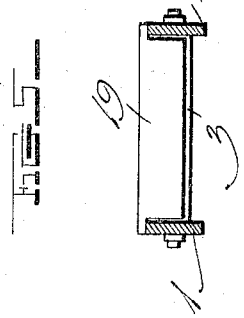
APPLICATION FILED APR. 5, 1920.

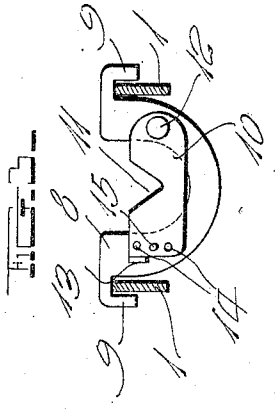
1,377,469.

Patented May 10, 1921.









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UNITED STATES PATENT OFFICE.

THEODORE ERICKSON, OF CHARLEVOIX, MICHIGAN.

PRESS.

1,377,469. Specification of Letters Patent. Patented May 10, 1921.

Application filed April 5, 1920. Serial No. 371,317.

To all whom it may concern:

Be it known that I, THEODORE ERICKSON, a citizen of the United States, residing at Charlevoix, in the county of Charlevoix and State of Michigan, have invented certain new and useful Improvements in Presses; and I do 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 presses used for removing gears, collars and the like from shafts, and for pressing them thereon.

One object of the invention is to provide a press of this character which is adjustable so as to be used in removing gears, collars or the like from shafts of various sizes or types, or applying gears, collars or the like to various sizes or types of shafts.

Another object of the invention is to provide a device of this class which is extremely simple, strong, durable and inexpensive in construction, one which will be efficient and reliable in operation, and well adapted to the purpose for which it is designed.

With these and other objects in view, the invention consists of the novel features of construction, and the combination and arrangement of parts as will be hereinafter fully described and claimed.

In the accompanying drawings in which similar reference characters designate like parts throughout the several views:

Figure 1 is a top plan view of a press constructed in accordance with this invention.

Fig. 2 is a longitudinal sectional view taken on the plane indicated by the line 2—2 of Fig. 1.

Figs. 3, 4 and 5 are transverse sectional views taken respectively on the lines 3—3, 4—4, and 5—5 of Fig. 1.

The press consists of an open rectangular frame including a pair of spaced side bars 1, connected together at one of their ends by a cross head 2 which is preferably formed integral with said bars, and connected together at their other ends by means of a bar 3. The bar 3 is made separate from the bars 1 and is fastened to one of the ends of the latter by means of a threaded rod and nuts. The cross head 2 is provided intermediate of the side bars 1 with a screw-threaded opening 4 which extends longitudinally with respect to the side bars 1. Threaded in this opening 4 is a screw 5, the outer end of which carries an operating wheel or handle 6. The side bars 1 are provided on their inner sides with longitudinally spaced lugs 7.

In addition to the parts just described the invention contemplates using two or more work supporting bars 8 which are preferably U-shaped in configuration and have hooks 9 at their ends adapted to hook over the upper edges of the side bars 1 to support them upon the latter. The bars 8 carry plates 10 having V-shaped notches 11 therein and adapted to receive and support the work. These plates 10 are pivoted at one of their ends upon bolts 12 carried by one of the sides of the U-shaped bars 8 and have their other ends provided with laterally extending lugs 13 and sets of apertures 14 adapted to be engaged by pins 15 extending rearwardly from the other sides of the U-shaped bars 8. Disposed between the heads of the bolts 12 and the outer sides of the plates 10 so as to hold the latter flat against the bars 8 are coiled springs 16. This means of mounting the plates upon the bars 8 permits said plates to be adjusted with respect to said bars. This adjustment may be done by moving the plates 10 away from the bars 8 under the tension of the springs 16 until the pins 15 are disengaged and then swinging said plates upon the bolts 12 as pivots until the proper adjustment has been obtained.

Slidably mounted upon the side bars 1 is a block 17 carrying a projecting pushing tool 18. This block 17 is positioned so as to be engaged and moved longitudinally of the frame by the screw 5. The tool 18 is consequently disposed on the side of the block which is remote from the screw 5.

The apparatus just described is particularly adapted for use in removing collars, gears and the like from shafts, and in doing so the bars 8 are disposed upon the frame so as to support a particular shaft. The bars 8 rest or bear against the proper lugs 7 which act in the capacity of stops. The plates 10 are adjusted so that when the shaft S is placed in the V-shaped notches 11 it will be disposed in alinement with the tool 18 carried by the block 17. The collar or gear C is placed so as to contact with the side of the plate 10 adjacent the block 17. When supported in this manner and the screw 5 is turned by means of the wheel 6 so as to force the block 17 longitudinally

of the frame, the tool 18 pressing against the end of the shaft S will force the latter out of the collar or gear C.

In pressing collars or gears upon shafts the shaft must be supported in the V-shaped notches 11 and the collar or gear is to be placed flat against a block 19 supported by the side bars 1 and resting against certain of the stops 7.

By reason of the fact that the bars 8 may be supported at various positions along the length of the frame and that the plates 11 are adjustable with respect to the bars 8, the device is capable of accommodating various sizes and types of shafts.

Various changes in form, proportion and in the minor details of construction may be resorted to without departing from the invention as defined in the claims.

I claim as my invention:

1. A device of the class described comprising an open frame including a pair of side bars and a cross head, sets of stops fixed to said side bars, work supporting bars removably supported upon said side bars, said supporting bars being adjustable longitudinally on said side bars and when in adjusted positions resting against certain of said stops, a block slidably mounted upon said side bars and carrying a work engaging pushing tool, and a screw threaded to said cross head and engaging said block for moving the latter longitudinally on said side bars.

2. A device of the class described comprising a frame, U-shaped work supporting bars supported upon said frame, plates adjustably mounted upon said bars and having V-shaped work supporting notches therein, sets of stops carried by said frame and against which said bars rest, a slidable block upon said frame and carrying a work engaging pushing tool, and a screw threaded to said frame and engaging said block for moving the latter longitudinally of said frame.

3. A device of the class described comprising a frame, U-shaped work supporting bars supported upon said frame, plates pivotally and yieldably connected at one of their ends to one of the sides of said bars, adjustable interlocking means at the other ends of said plates and the other sides of said bars for supporting said plates upon said bars at their adjusted positions, said plates being provided with V-shaped work receiving notches, a slidable block upon said frame and carrying a work engaging pushing tool, and a screw threaded to said frame and engaging said block for moving the latter longitudinally of said frame.

In testimony whereof I have hereunto set my hand.

THEODORE ERICKSON.