

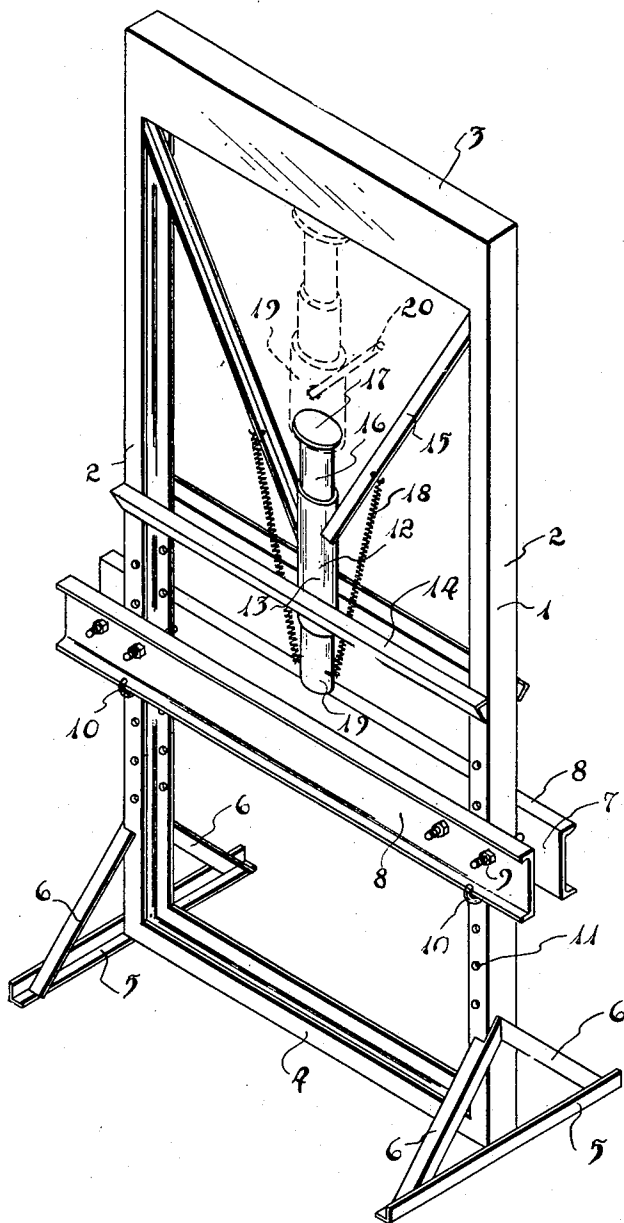
April 24, 1956

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2,742,853

HYDRAULIC PRESSES

Filed Feb. 4, 1953



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## HYDRAULIC PRESSES

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Application February 4, 1953, Serial No. 335,128

1 Claim. (Cl. 100—214)

My invention relates to new and useful improvements in hydraulic presses, more particularly to improvements in hydraulic presses adapted for use in relatively small workshops and the like, an object of my invention being to provide a device of the character herewithin described which is capable of being adapted for use with any conventional hydraulic jack.

Another object of my invention is to provide a device of the character herewithin described in which the press bed is adjustable in height with relation to the pressing unit.

Still another object of my invention is to provide a device of the character herewithin described which is extremely simple in construction, economical in manufacture and otherwise well suited for the purpose for which it is designed.

With the foregoing objects in view and such other objects and advantages as will become apparent to those skilled in the art to which this invention relates, my invention consists essentially in the arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying drawing which shows my device in perspective.

In the drawings like characters of reference indicate corresponding parts in the different figures.

The conventional hydraulic press normally comprises a source of hydraulic power built integrally with the press and which is not changeable at will. From this it will be realized that if a press of a certain size is in use, then it is impossible to increase the capacity of this press without purchasing a complete new unit which is relatively expensive.

By contrast, the press hereinafter to be described comprises basically the framework with what I define as a pressing unit and it is intended that the source of hydraulic pressure be obtained from a conventional hydraulic jack. From this it will be appreciated that the capacity of the press can be varied at will merely by inserting an hydraulic jack of a different size and capacity.

Proceeding now to describe my invention in detail, it will be seen upon reference to the accompanying drawings that it comprises a substantially rectangular, vertical framework collectively designated 1, said framework including a pair of vertical side members 2 spanned by a head member 3 of considerable cross-section at the upper ends of said side members, and by a base member 4 at the lower ends thereof. Horizontal supporting surface engaging components 5 are secured to the lower corners of the framework as by welding or the like and are braced by diagonals 6 as clearly shown, thus giving support to the device.

A press bed 7 consisting of a pair of channel members 8 is situated across the vertical side members 2, it being seen that the two channels are placed one upon each side of the side members and secured together by means of

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bolts 9 so that the press bed can be moved vertically up or down the side members as desired. Pins 10 extending through selected apertures 11 in the side members support the press bed in the desired position as clearly seen by the drawings.

A pressing unit collectively designated 12 is situated within the framework and comprises a relatively short, open-ended cylinder 13 secured as by welding to a pair of transverse horizontal braces 14 which in turn are secured as by welding to the side members 2.

Further diagonal braces 15 are also secured as by welding to the cylinder 13 and extend upwardly to be secured adjacent the top corners of the framework 1, thus locating the cylinder firmly in position. A piston 16 is capable of reciprocation within the cylinder and it will be seen that this piston extends beyond both ends of the cylinder and that the upper end of the piston is supplied with a pad 17. This piston is maintained normally in its uppermost position within the cylinder by means of a pair of springs 18 extending between the lower end 19 of the piston and the diagonal braces 15.

A source of hydraulic pressure is provided and takes the form of a conventional hydraulic jack 19 actuated by handle 20, said jack extending between the pad 17 and the underside of the aforementioned head member 3.

From the foregoing, it will be appreciated that normally the springs 18 maintain the piston in its uppermost position, but that actuation of the jack 19 will cause the piston to descend through the cylinder 13 and exert pressure upon work which may be supported across the press bed 7.

In conclusion it will be realized that if the capacity of the jack 19 is not sufficient, this can readily be replaced by a heavier jack without any further alteration of the remaining components.

What I claim as my invention is:

An hydraulic press comprising in combination a substantially rectangular, vertical, framework, said framework including vertical, apertured, side members and a horizontal head member spanning the upper ends of said side members, a press bed spanning said side members below said head member, means to vary the distance between said press bed and said head member, a pressing unit supported within said framework and above said press bed, a source of pressure between said head member and said pressing unit, said pressing unit including a vertical, open-ended cylinder, a piston reciprocal therein and extending beyond said open ends, a pad on the upper end of said piston, horizontal braces spanning said side members, said cylinder being secured to said braces, diagonal braces also secured between said side members and said cylinder, and spring means extending between said diagonal braces and the lower end of said piston, adapted to maintain said piston normally in the upper position thereof, said press bed including a pair of members situated one upon each side of said side members in spaced and parallel relationship and being securable together to permit vertical movement of said press bed upon said side frame members, said first mentioned means including pins capable of engaging said apertured side members said press bed resting upon the extremities of said pins.

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