

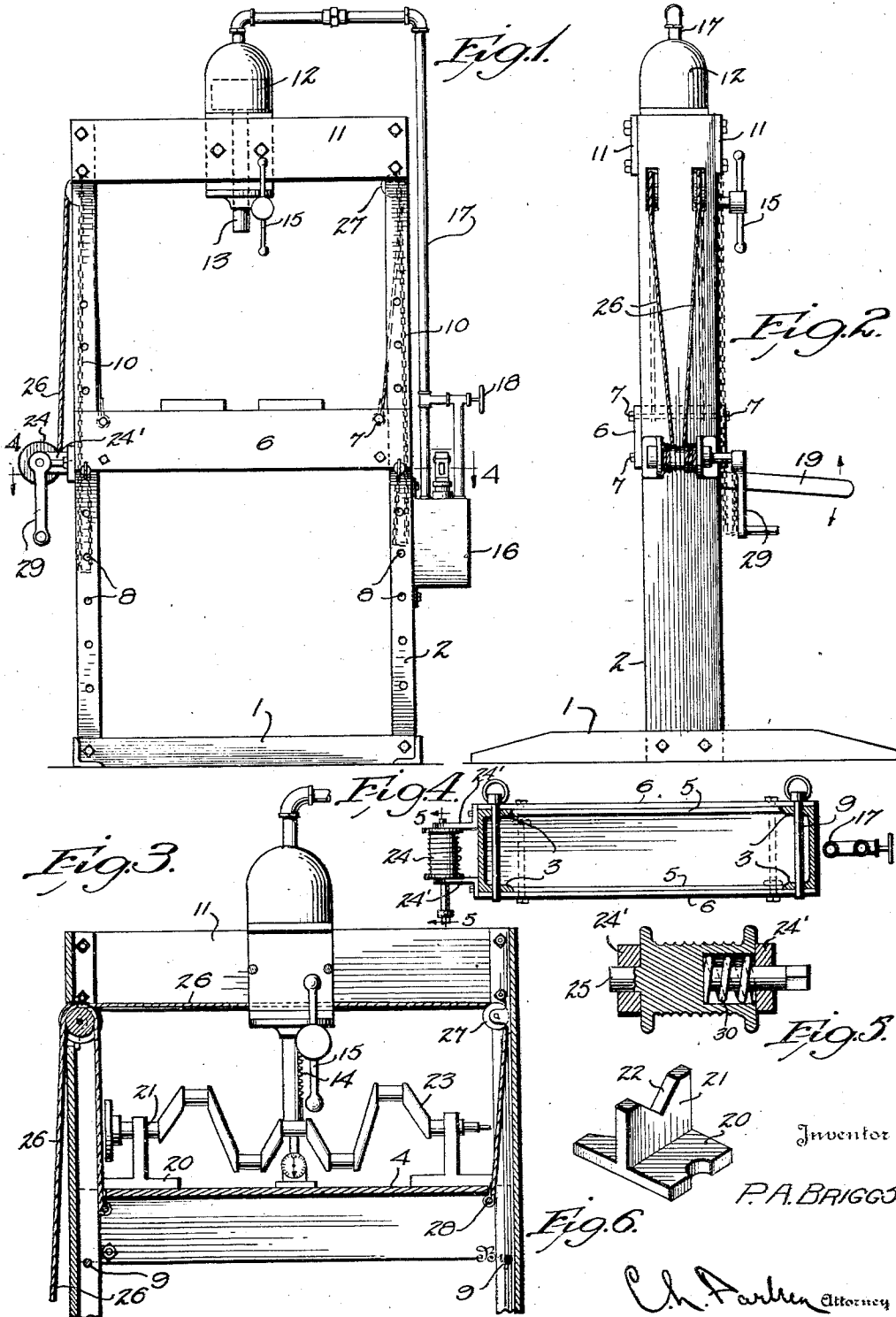
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UNITED STATES PATENT OFFICE.

PETER A. BRIGGS, OF SPOKANE, WASHINGTON.

PRESS.

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To all whom it may concern:

Be it known that I, PETER A. BRIGGS, a subject of the King of Denmark, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Presses, of which the following is a specification.

This invention relates to presses, and more particularly to hydraulic presses.

An object of the invention is to provide a press having a movable plunger and an adjustable table or platform arranged below the plunger to permit the press to be adjusted for work of different sizes.

A further object is to provide means for quickly adjusting the table of the press.

A further object is the provision of means for retaining the table in adjusted position.

In the accompanying drawings, I have shown one embodiment of the invention. In this showing:

Figure 1 is a front elevation,

Figure 2 is a side elevation,

Figure 3 is a central vertical sectional view of the upper portion of the frame,

Figure 4 is a horizontal view on line 4—4 of Figure 1,

Figure 5 is a detail sectional view on line 5—5 of Figure 4, and,

Figure 6 is a perspective view of a supporting plate used in supporting crank shafts on the table.

Referring to the drawings, the reference numeral 1 designates a base or support having a pair of spaced vertical posts or standards secured thereto. As shown, the posts are formed of angle iron having flanges 3. A table is adjustably mounted between the posts. As shown, the table consists of a channel iron plate having a base 4 and flanges 5. The base forms the horizontal portion of the table with the flanges arranged at the front and rear in vertical planes. The length of the table is substantially equal to the distance between the posts, as shown in Figure 3 of the drawings. A plate 6 is secured to each of the flanges at the front and rear of the table by means of bolts 7 or other suitable fastening elements. These plates are of greater length than the angle iron portion of the table and extend over the flanges 3 of the vertical posts, as shown in Figure 1 of the drawings, forming guides and permitting the table to slide vertically on the posts. The flanges of the posts are provided with

a plurality of spaced openings 8, adapted to receive pins 9 whereby the table may be supported at any desired height. The pins may be secured to chains 10, which are in turn connected to the posts to prevent the pins from becoming lost or misplaced. The upper ends of the posts are connected by means of plates 11. These plates are adapted to receive and support a cylinder 12, having a plunger (not shown) therein. The plunger is provided with a plunger rod 13 projecting from the bottom of the cylinder. This plunger rod is provided with suitable rack teeth 14 which mesh with a pinion (not shown) controlled by a handle 15. The piston or plunger in the cylinder is adapted to be operated by hydraulic pressure and the cylinder is connected to a pump 16 arranged on one of the vertical posts by a pipe 17. A suitable control valve 18 is arranged in the pipe. The pump may be operated by any type of power and for the purpose of illustration, I have shown a hand pump having an operating handle 19.

In Figure 3 of the drawings, I have illustrated one way in which the press may be used. Suitable supporting members consisting of base plates 20 and upright members 21 are arranged on the table. These upright members are provided with V-shaped notches 22, adapted to receive portions of a crank shaft 23. The plunger is lowered in the cylinder by turning the handle 15 until the crank shaft engages the bottom of the plunger. An ordinary dial gage is then placed beneath the crank shaft to gage it. If the shaft needs straightening, liquid is admitted to the cylinder through the pipe 17, lowering the plunger rod and thus straightening the crank shaft.

It is, of course, understood that the apparatus may be employed for any purpose and in fact, may be employed for any purpose for which a press is used.

Suitable means are provided for adjusting the height of the table 4. As shown, a drum 24 is mounted in a pair of brackets 24' carried by one of the posts. The drum is provided with reduced ends 25, journaled in the brackets. This drum receives a cable 26 which passes over pulleys 27, carried by the posts and extends downwardly between the flanges 3 of the vertical posts. The ends of the cable are secured to pins or rods 28 secured to the table. A suitable handle 29 is arranged on one of the reduced ends 25

of the drum to permit it to be revolved. When the drum is revolved in one direction, the cable or rope is wound on the drum 24 and the table raised. To lower the table, the drum is revolved in the opposite direction. When the table has been arranged at the desired elevation, the pins 9 are inserted in the openings 8 to support it. The drum is provided with a recess adapted to receive a spring 30 which frictionally engages one of the brackets 24' to retain the drum and table in an adjusted position while the pins 9 are being inserted.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A hydraulic press comprising a pair of standards, a table slidably mounted between said standards, a cylinder arranged above said table, a plunger mounted in said cylinder, a plunger rod connected thereto and extending below said cylinder, a drum rotatably mounted on one of said standards, a cable coiled around said drum and having its ends extending upwardly, means for securing the ends of said cable to said table,

and a spring mounted on said drum to normally prevent rotation thereof.

2. A hydraulic press comprising a pair of standards, a table slidably mounted between said standards, a cylinder arranged above said table, a plunger mounted in said cylinder, a plunger rod connected thereto and extending below said cylinder, a pair of stationary bearing arms, a drum provided with a shaft journaled in said bearing arms, said drum being provided with an axial opening, a spring arranged in said opening and frictionally contacting with one of said bearing arms, and a cable coiled around said drum and having its ends connected to said cable to move it upon rotation of said drum in one direction.

3. A hydraulic press comprising a pair of standards, a table slidably mounted between said standards, each of said standards being provided with a plurality of spaced openings, a pair of pins slidably mounted in said openings and adapted to support said table against downward movement, a winch mounted on one of said standards, cables connecting said winch to opposite ends of said table, a cylinder arranged above said table, a plunger mounted in said cylinder, and a plunger rod connected to said plunger and extending downwardly below said cylinder.

In testimony whereof I affix my signature.
PETER A. BRIGGS.