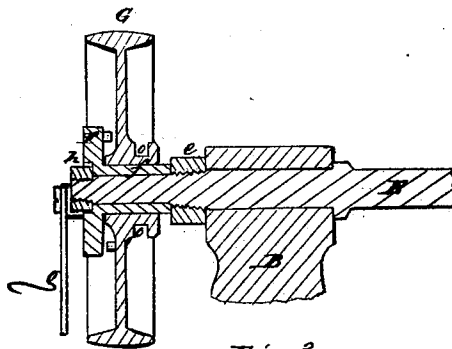
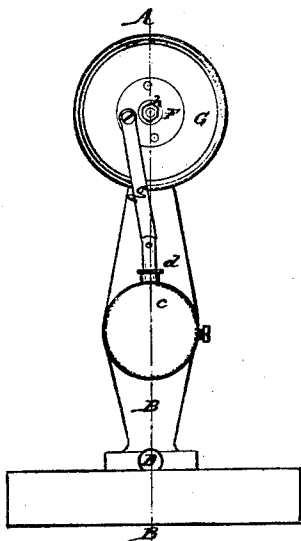
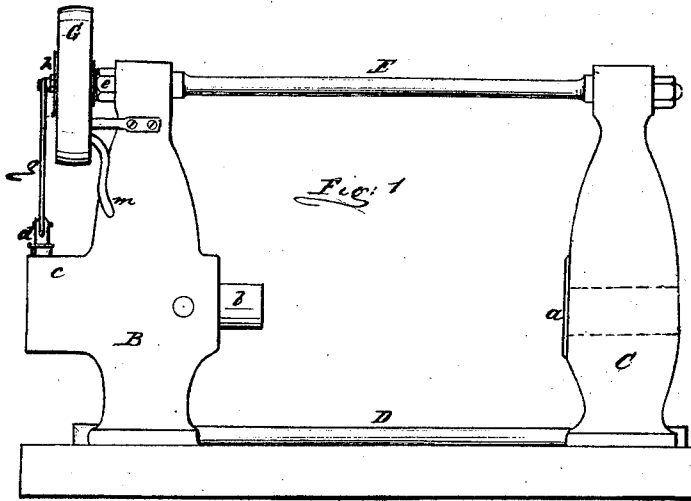


A. B. Church,

Hydraulic Press.

No. 94,717.

Patented Sept. 14. 1869.



Witness:
W. W. Griffin
A. B. Church

A. B. Church
by his atty
Stouck

United States Patent Office.

ALFRED B. COUCH, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 94,717, dated September 14, 1869.

IMPROVEMENT IN CLUTCHES FOR HYDRAULIC WHEEL-PRESSES.

The Schedule referred to in these Letters Patent and making part of the same.

Know all men by these presents:

That I, ALFRED B. COUCH, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Hydraulic Wheel-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a side view of so much of an hydraulic wheel-press as is necessary to illustrate my present improvements;

Figure 2 represents a front view of the same; and

Figure 3 represents a section on line A B, fig. 2.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will proceed to describe it more in detail.

The nature of my invention relates to an improved mode of supporting the driving and clutch-pulleys, and the mechanism by which the pump is worked, as will be hereafter explained.

In the drawings—

A is the base of the press, to which are secured the upright end parts B and C. The latter has a hole through it, shown in dotted lines, and is also provided with a face, *a*, against which the hub of the wheel rests, when the axle is being pressed into it.

A chamber is formed in the piece B, for the piston *b* to work in, while in the projection *c*, a chamber is formed for the reception of the water forced in by the pump *d*.

The lower ends of the parts B and C are connected by a rod, D, and their upper ends by a rod, E.

One end of the rod E extends beyond the top of the upright piece B far enough to receive the nut *e*, together with the tubular bearing part *f*, of the clutch-wheel F, to which the piston of the pump is connected, by means of the connecting-rod *g*.

Clutch-wheel F is held in place by a nut, *h*.

The driving-pulley G is fitted to turn upon the tubular part *f*, and upon which it can be moved back and forth, to throw it into and out of gear with the clutch-wheel F.

Lever *m* is hinged to an arm, *n*, fastened to the part B, as indicated in the drawings.

The upper end of lever *m* is forked to fit in the groove *o*, formed in the hub of wheel G.

From the foregoing description, it will be seen that

the pump can be started and stopped very quickly, by means of lever *m*.

As hydraulic wheel-presses have been made heretofore, the driving-mechanism of the pump has been fastened to the side of the upright piece B, thereby involving considerable expense, besides taking up a large space at the side of the press.

By my improvements, the said driving-mechanism is supported in a very safe and secure manner, and that, too, at a trifling expense, while at the same time, economizing space, and rendering the machine more convenient, and better adapted to setting wheels upon their journals.

The operation of pressing on the wheel is the same as in common use. The wheel is arranged so as to rest against the shoulder or face *a*, and one end of the axle is passed into the bore of the wheel, the other end of the axle abuts against the end of the piston *b*, and, as the piston is forced out, the axle or journal is forced into the wheel.

In that class of presses in which the connection *g* of the pump is fastened to the pulley, upon which the belt runs, when the pump is in operation, there is a constant liability of pressing the axle in too far, since it is impossible to slip the belt to the loose pulley quick enough to prevent two or three revolutions of the driving-pulley, after the operation commences.

By my improvements, only a single revolution of the pulley is possible, under any circumstances, after the handle *m* is operated, before the pump stops.

Hence, more accurate and uniform work can be done by my press than by those in common use, which adds another advantage to it, in addition to those above enumerated.

Having described my improved hydraulic wheel-press—

What I claim therein as new, and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the projecting end of the top rod E, of the wheels G and F, substantially as and for the purposes stated.

2. The combination, with pulley or wheel G, of the clutch-wheel F and tubular bearing-part *f*, substantially as and for the purposes set forth.

Witnesses:

ALFRED B. COUCH.

THOS. H. DODGE,

ALBERT E. PEIRCE.