W. GOLDING.

COTTON-PRESS.

No. 188,513. Patented March 20, 1877.

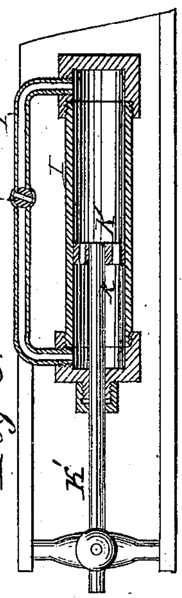

Fig 3.

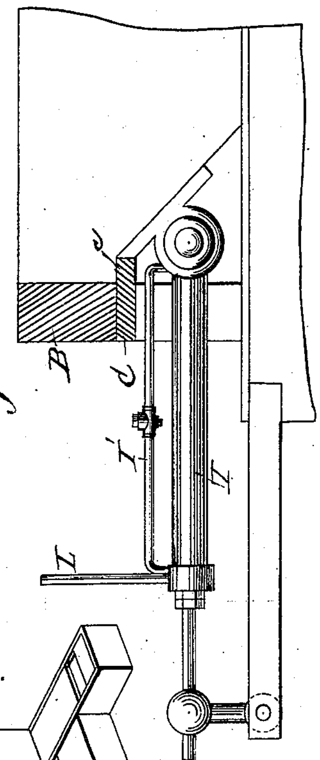

Fig 2.

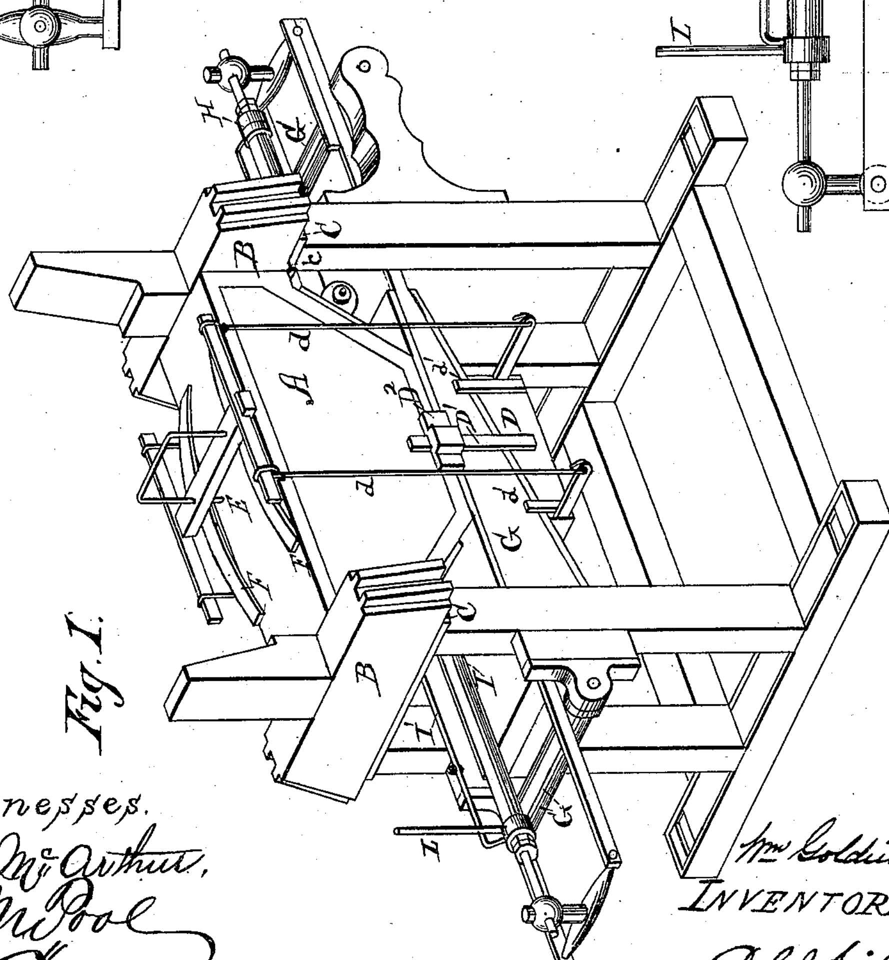

Fig. I.

Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM GOLDING, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **188,513**, dated March 20, 1877; application filed November 4, 1876.

To all whom it may concern:

Be it known that I, WILLIAM GOLDING, of New Orleans, in the parish of Orleans, and State of Louisiana, have invented a certain Improvement in Cotton-Presses, of which the following is a specification:

This invention relates to what are known as "Tyler cotton-presses." It is designed to provide for the use of a steam-engine for operating the running wedge instead of a hydraulic engine, such as described in my United States Letters Patent No. 182,110.

It is important to drive the running wedge in or out with a steady motion, which it would be difficult to accomplish by using steam in the engine described in my said Letters Patent without great nicety in the manipulation of the induction and eduction valves or cocks. To overcome this difficulty, I combine with the running wedge a hydraulic governor, operating substantially in the manner hereinafter more fully explained.

In the annexed drawings, Figure 1 is a perspective view of a cotton-press with my hydraulic governor applied. Fig. 2 is a detail side elevation of my hydraulic governor. Fig. 3 is a longitudinal section of the same.

The same letters of reference are used in all the figures to designate identical parts.

In addition to the bolts by which the ends of the abutment-beam A are usually secured to the cross-beams B of the frame-work, I provide strong iron plates C, upon the overhanging portions *c* of which the ends of said abutment-beam are solidly supported. These plates C are placed upon the uprights of the frame-work, under the cross-beams B, as clearly shown in Figs. 1 and 2. The upper adjustable platen D is shown as suspended by rods *d* from a frame, E, supported on stiff springs F seated on the top of the abutment-beam. The platen has on each side a vertical standard, D^1, which is embraced by a fixed guide-block, D^2, on the abutment-beam, whereby a steady vertical motion of the platen is insured under the action of the running wedge G. The latter in turn is guided between said standards and the fixed bars or lugs *d'* on the platen. The running wedge, supported on rollers G', is moved in and out to adjust the platen by the engine H, which may be constructed and applied in the manner fully set forth in my above-mentioned Letters Patent; but as it is proposed to use steam as the motive agent it becomes necessary to control the speed to obtain the requisite slow and uniform movement of the running wedge. To this end a hydraulic governor is provided, consisting of a cylinder, I, the ends of which are connected by an outside pipe, I', and in which a piston, K, works. The piston has small holes *k* through it, and the pipe I' contains a cock, *i*. The cylinder is to be filled with water or other liquid on both sides of the piston. The piston-rod K' is connected and moves with the running wedge.

It will be seen that the speed of the running wedge will depend upon the rapidity with which the liquid in cylinder I can pass from one side of the piston to the other. This can be regulated by opening the cock *i* more or less.

Whatever the speed this hydraulic governor will always insure a steady movement of the running wedge. In the example illustrated the cylinder of the governor is hinged to one end of the abutment-beam, like the cylinder of the engine, as shown in Fig. 2, and its piston-rod is directly connected to a standard on the yoke at one end of the running wedge. This particular arrangement makes it impracticable to use a piston-rod projecting from both sides of the piston through the opposite ends of the cylinder, in which case no change would occur in the capacity of the cylinder, by reason of the movement of the piston and rod. Now, in this instance the piston-rod projects from one side of the piston only, and its movement necessarily changes the capacity of the cylinder for water. To compensate for this I provide that end of the cylinder from which the piston-rod projects with a stand-pipe, L, of ample capacity, to be closed at its upper end by a cock. The water for filling the cylinder and pipes may be introduced through this stand-pipe.

I prefer the relative arrangement of the running wedge, the engine, and the governor shown and described; but it is obvious that the engine and the governor may be differently disposed with respect to the running wedge without departing from the principle of my invention touching these features.

So far as the use of a hydraulic governor, broadly considered, is concerned it should be understood that it will perform all that is required, whether the perforated piston and the outside connecting-pipe are used together or separately; but it will be seen that in using the one in connection with the other the machine is always ready for operation, even in the event of a careless closing of the stop-cock and failure to open it again.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, substantially as specified, of the running wedge, the engine for moving it, and the hydraulic governor for controlling the movements.

2. The combination, substantially as specified, of the cylinder of the hydraulic governor, the perforated piston thereof, the pipe for connecting the ends of the cylinder, and the cock or valve in said pipe.

3. The combination, substantially as specified, of the cylinder of the hydraulic governor, the perforated piston thereof, the piston-rod on one side of the piston, and the compensating stand-pipe.

In testimony whereof I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

WM. GOLDING.

Witnesses:

CONRAD GREEN,

E. L. STREAM.