(No Model.)

J. B. ROMANS.

BALING PRESS.

No. 346,827. Patented Aug. 3, 1886.

Fig. 1.

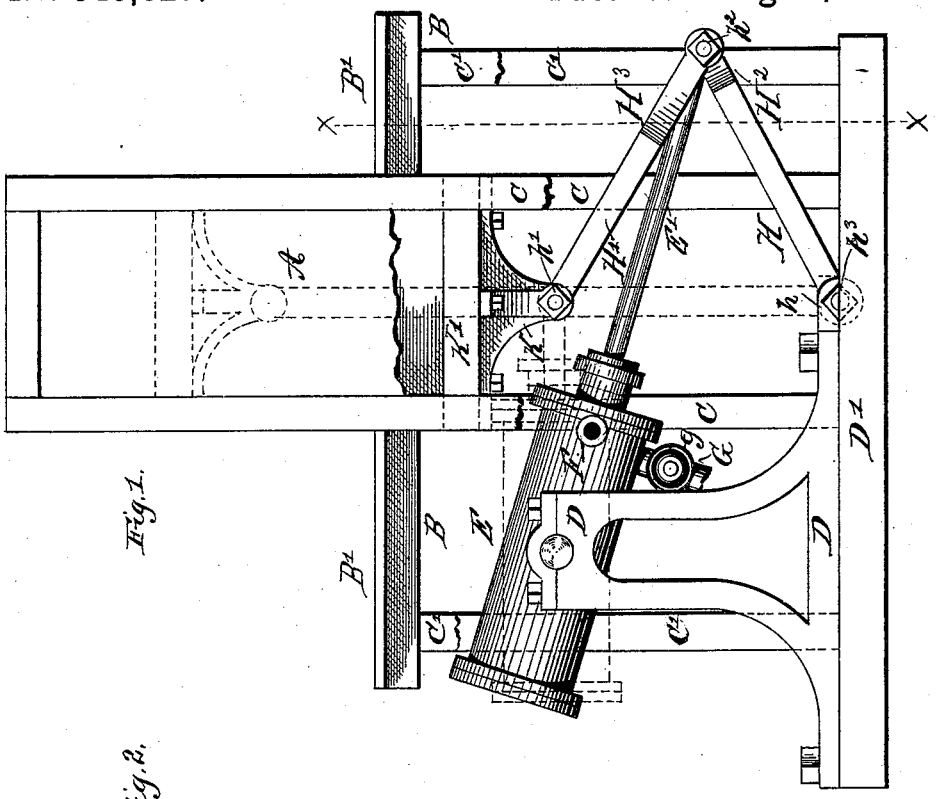
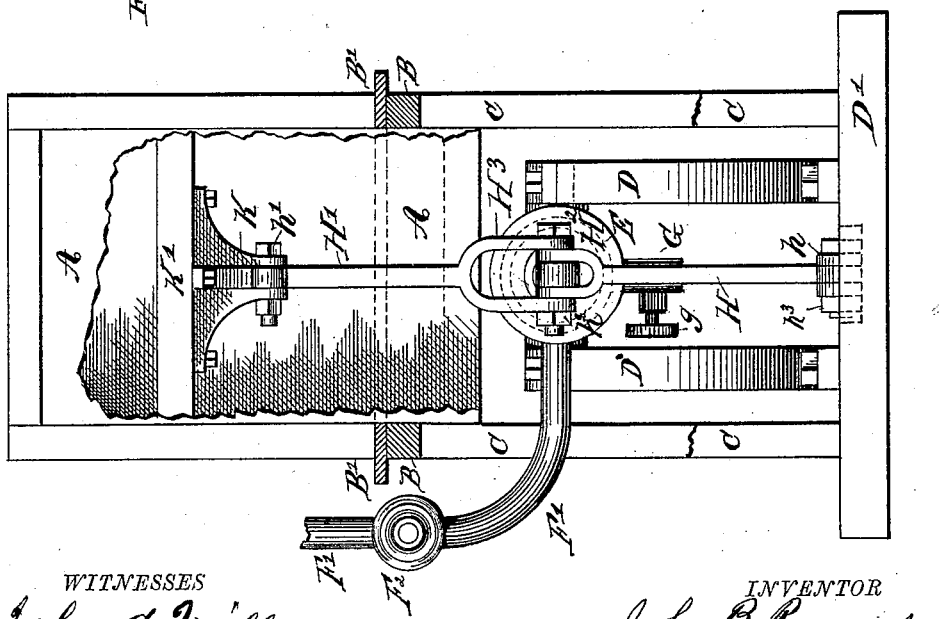


Fig. 2.



WITNESSES

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JOHN B. ROMANS, OF HELENA, ARKANSAS, ASSIGNOR OF ONE-HALF TO CHARLES R. COOLIDGE, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 346,827, dated August 3, 1886.

Application filed March 10, 1886. Serial No. 194,701. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. ROMANS, a citizen of the United States, residing at Helena, in the county of Phillips and State of Arkansas, have invented certain new and useful Improvements in Baling-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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of this improvement is a baling-press of simple construction and rapid operation, not liable to get out of order. These results are attained by the mechanism illustrated in the drawings herewith filed as part hereof, in which the same letters of reference denote the same parts in the different views.

Figure 1 is a side elevation, partly in section, representing a baling-press embodying the features of my improvement. Fig. 2 is a sectional front elevation showing the working parts in different positions, and more fully showing the construction and relation of the different features of the mechanism.

A represents a baling-box, of any suitable construction, supported by perpendicular extensions C C, which are secured at their lower ends to a base-plate, D'. The baling-box A and its supports C C may be made, in whole or in part, of wood or metal, or both.

C' C' are upright beams or bars secured to the base D' and to horizontal beams B, having their inner ends fixed to the baling-box A.

B' B' are platforms supported by the framework C' C' B B.

D D are pillow-blocks or standards bolted to the base D' as supports for an oscillating cylinder, E, provided at its front end with a steam-inlet, F, and with an exhaust-pipe, G, having a check-valve, *g*.

E' is a piston-rod, provided inside of the cylinder with an ordinary piston, and at its outer end with an eye.

H H' are toggle-bars, having bifurcated transversely-perforated ends H^2 H^3, by means of which and a bolt, h^2, they are connected with the piston-rod E'. The base D' is provided centrally with transversely-perforated lugs *h* and suitable recesses for the reception of the lower end of the toggle-bar H H^2, and a bolt, h^3, by means of which said toggle-bar is suitably secured thereto. The toggle-bar H' H^3 is connected by means of a bolt, *h'*, to a rectangular casting, K, which is bolted to a press-block or follower, K'.

F' represents a base steam-conduit suitably secured to the steam-inlet F of the cylinder E, and connected thence with a steam-generator.

F^2 is a throttle-valve appropriately connected with the steam-conduit F', for controlling the flow of steam through the same. The admission of steam into the cylinder will cause the piston to draw the outer ends of the toggle-bars toward the cylinder, and thereby force the follower K' against any matter in baling-box A. As the toggles gradually take a perpendicular position the cylinder will gradually take a horizontal position. The more nearly the toggles approach a perpendicular position the higher the follower K' will go and the greater will be the pressure on the matter in the baling-box. The nearer the toggles approach a perpendicular position the nearer the cylinder will approach a horizontal position, and for that reason will apply the force of the steam in a more and more direct manner as the necessity of force increases by the travel of the follower, and will apply the steam in the most direct and positive manner at the point where force is most needed—that is, when the toggles assume a perpendicular position, in which they may be held by the piston force until the bale is bound and removed from the baling-box. By closing the throttle-valve F^2 and opening the valve *g* in the pipe G, the steam will be exhausted from the cylinder, when the gravity of the working parts will cause them to take the positions shown in Fig. 1. The object of the platforms B' B' is to facilitate the filling of the box A with matter to be pressed and the removal of the bales when completed.

Having explained the features of my improvement, what I claim as new, and desire to secure by Letters Patent, is—

In a baling-press, the combination of the press-follower, the toggle-bars, and an oscillating engine provided with a steam-inlet and an exhaust-opening at one and the same end for forcing the piston one way only, and connected with the toggle-bars in a manner adapted to gradually take a horizontal position as the toggles approach a perpendicular position, and thereby apply its force and the force derived from the toggles in the most direct manner as the bale is reduced in size and power is most needed, substantially as shown and specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN B. ROMANS.

Witnesses:
C. HORNOR,
JNO. I. MOORE.