

(No Model.)

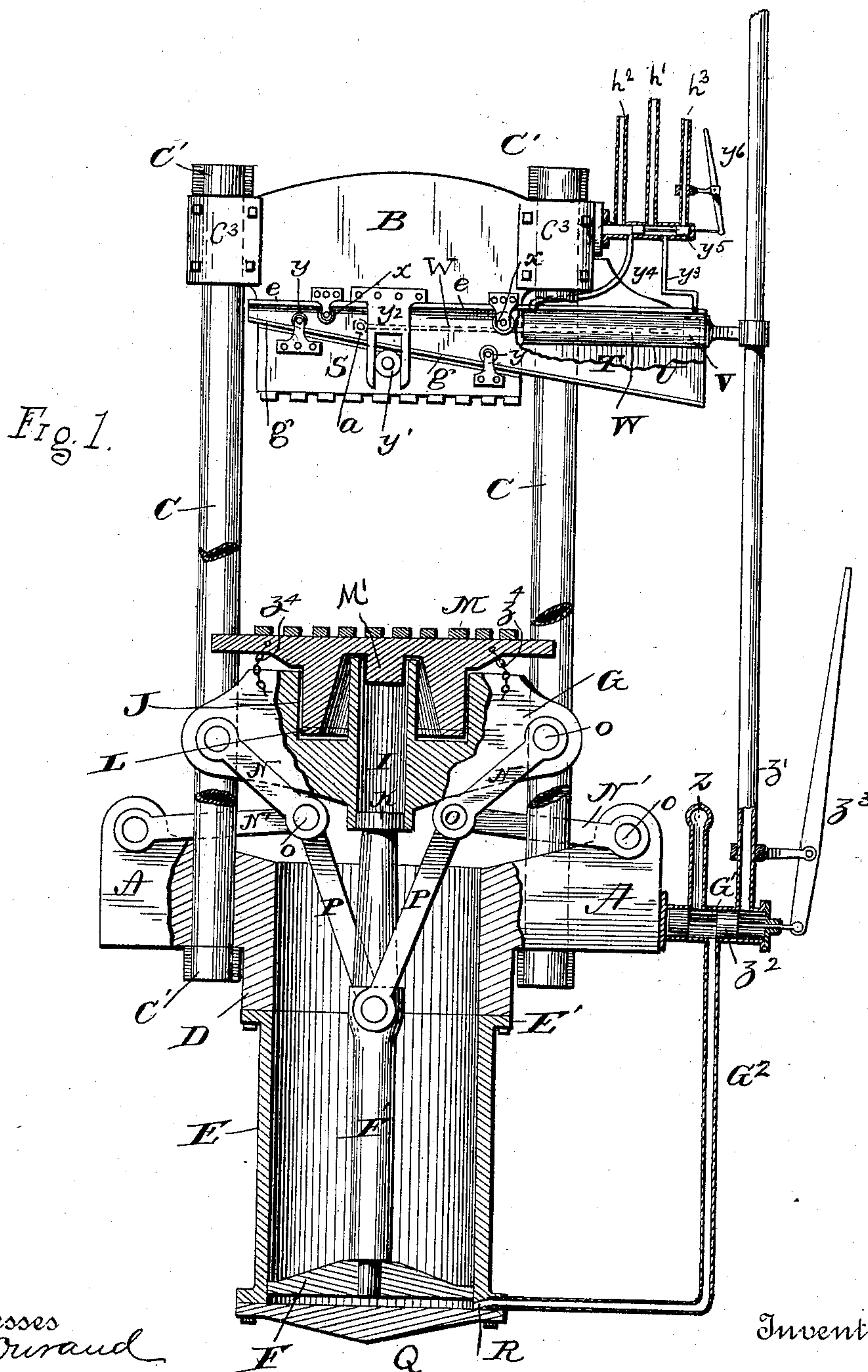
2 Sheets—Sheet 1.

S. J. WEBB.

BALING PRESS.

No. 370,509.

Patented Sept. 27, 1887.



Witnesses
F. L. Ouraud

Frank Coleman

Inventor

By his Attorney S. J. Webb
Frank A. Forts

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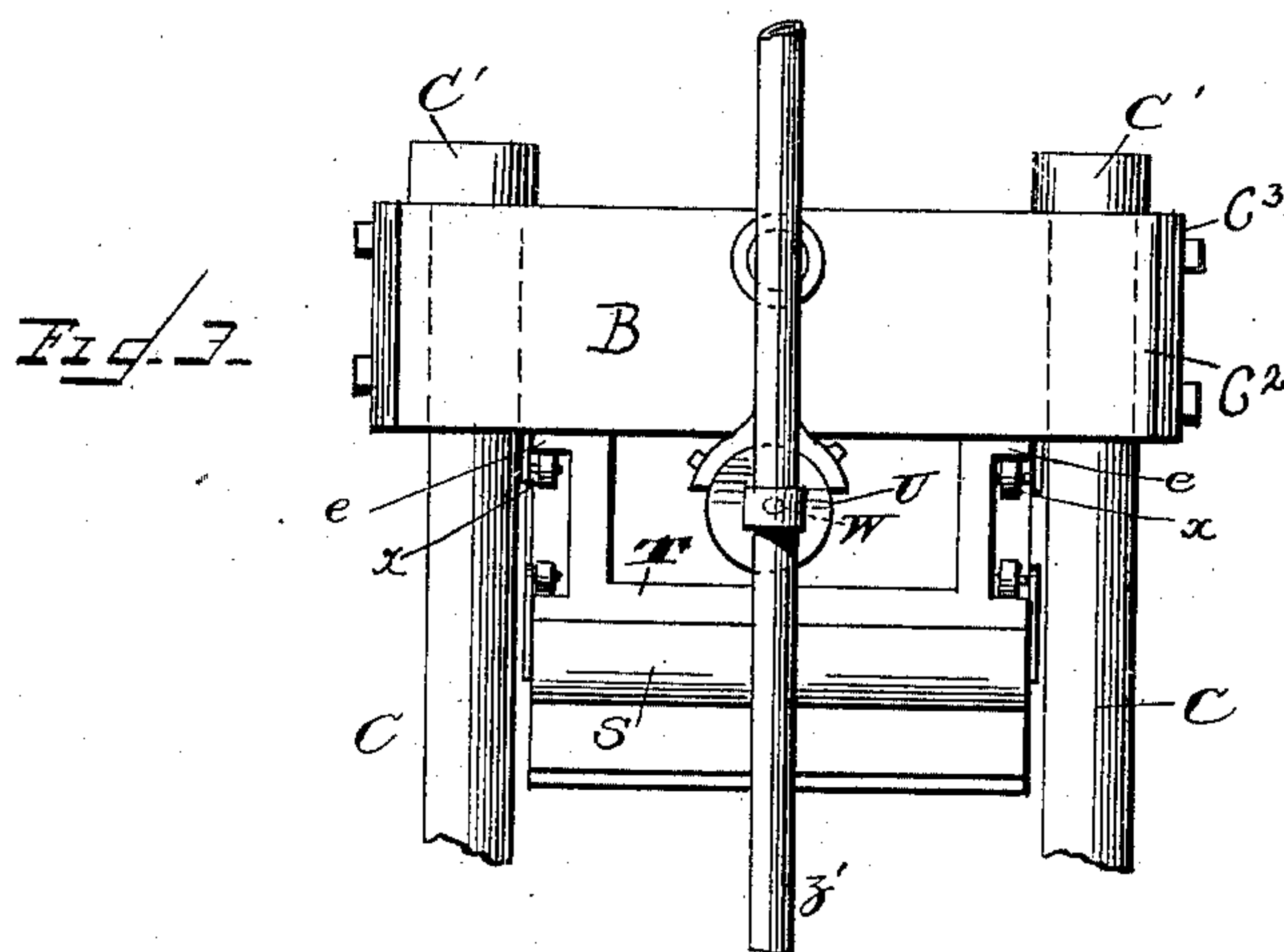
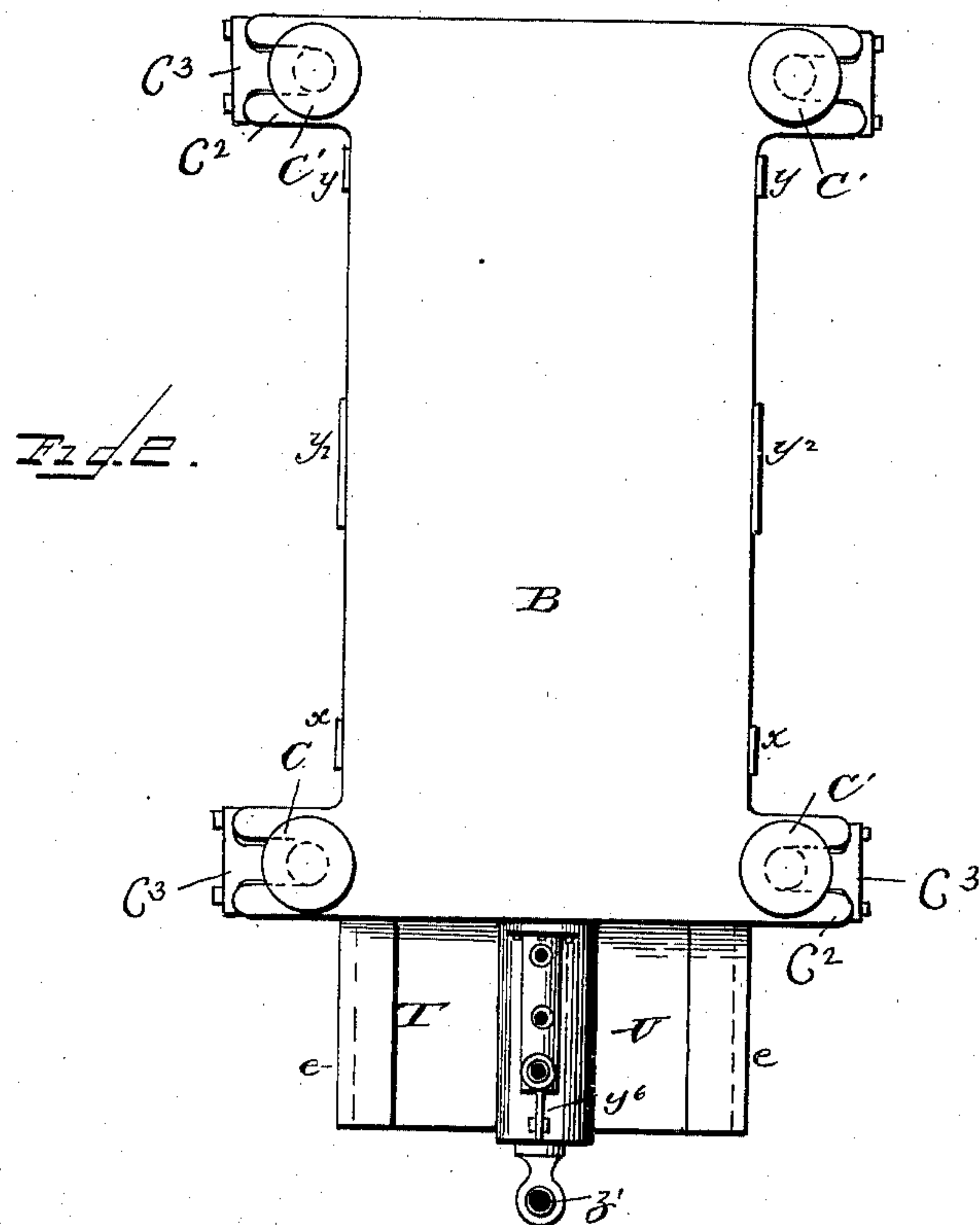
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UNITED STATES PATENT OFFICE.

SAMUEL J. WEBB, OF MINDEN, ASSIGNOR OF ONE-HALF TO REUBEN N. McKELLAR, OF SHREVEPORT, LOUISIANA.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 370,509, dated September 27, 1887.

Application filed April 11, 1887. Serial No. 234,423. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. WEBB, a citizen of the United States, residing at Minden, in the parish of Webster and State of Louisiana, have invented certain new and useful Improvements in Cotton and Hay 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.

My invention is a cotton and hay press; and it consists in the parts which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side view of the invention. In this view two of the posts are broken away so as to better illustrate the toggle-arms, and the lower movable block and certain parts are in section. Fig. 2 represents a top plan view of the upper plate, cylinder, wedge, and posts. Fig. 3 indicates an end view of the upper part of the press.

The letter A represents the bed-plate of the press, and B the upper or top plate. Said plates are connected by corner-posts C. The ends of each post are provided with heads C'. These heads are made integral with the posts. The plate B is provided with recessed projections C'', so that the heads of the posts may be secured thereto without removing said heads. (See Fig. 2.) After the posts are placed in position they are secured by bolted keeper-blocks C''. The bed-plate A is provided with a ring, D, on its under side.

E represents the steam-cylinder provided with a laterally-extending circumferential flange, E'. Said flange is bolted to the under side of the ring D. The bed-plate A, ring D, and cylinder E are bored out the same size. It will be observed that the cylinder is open at its top and closed at its bottom.

F represents the piston, and F' the piston-rod.

G is a movable block, in which there are two cylinders, I and J. Cylinder I is provided with a piston, K, which is secured to the upper

end of the rod F'. Cylinder J is provided with an annular piston, L, which is secured to the under side of the bottom plunger, M. The under side of the plunger M is provided with a projection, M', which normally extends down into the upper end of the cylinder I. This projection is of less diameter than the inner diameter of the cylinder I, so as to permit the water to pass freely out of the upper end of said cylinder. The object of the projection M' is to limit the upward movement of the piston K. Block G and plunger M are guided by the four corner-posts C. Block G is moved upward by means of toggle-arms N and N'. The outer ends of the arms N are pivoted to block G, and the outer ends of the arms N' are pivoted to the plate A by means of pins O, or by any other suitable arrangement. The inner ends of said arms are united and jointed to the outer ends of two toggle-arms P. The toggles N N' are straightened by means of the toggles P. The inner ends of the toggle-arms P are jointed to the piston-rod F'.

The letter Q is the cylinder-head, and R is the steam-inlet. When the steam is turned into the cylinder E and the piston F driven to the top of its stroke, the toggles are straightened, which drives the block G to the top of its stroke. When said block has reached the end of its stroke, the piston K travels to the top of cylinder I, which is filled with water or other liquid. By this means the liquid is driven out of cylinder I into cylinder J, thus forcing the annular piston L and plunger M farther upward. By means of these hydraulic cylinders the power is greatly multiplied. The object of these cylinders is to put the same pressure upon the bale irrespective of the thickness of said bale. By these means and an equal steam-pressure every bale is brought to the same density.

Z' represents short chains, having their respective ends secured to the plunger M and block G, whereby said platen will be drawn down with the block, so that the piston L will not be drawn out of the cylinder J.

S is the top platen, and is raised or lowered by means of a wedge, T. Said wedge is operated by means of a small steam or water cylinder, U, which is bolted onto the end of plate

B, and is provided with a piston, V, and rod W. The wedge is hollowed out on its outer end, so that it will slide in and out without touching the cylinder. The outer end of piston-rod W is secured to the wedge at *a*, so that when the piston is driven forward the wedge is driven in. The wedge is held up by rollers X, secured to plate B and rolling under flanges *e* on the sides of the wedge. Platen S is held up by rollers Y, secured to it and rolling on top of flanges *g* on the lower sides of the wedge. The platen S is kept from moving sidewise or endwise by a roller, Y', secured to said platen and working in a slotted or yoke-shaped piece, Y², which is secured to plate B.

Y³ and Y⁴ are the inlet and outlet pipes to the cylinder U.

The wedge can be operated by either gas or water; but water is preferred, for the reason that after the inlet-pipe is closed the wedge cannot be driven back as long as the water remains in the cylinder. The inlet-pipe *h*¹ and outlet-pipes *h*² *h*³ are closed and opened by valves Y⁵ and lever Y⁶.

Cylinder E, through the medium of a pipe, G², is provided with supply and exhaust pipes Z and Z'. Steam is admitted to and exhausted from the cylinder through the pipe G² by means of two valves, Z², and lever Z³.

When the parts are in the position shown in Fig. 1, steam is admitted through the supply-pipe Z, through the valve-compartment G', and thence through the pipe G² into the lower side of the cylinder under the piston F, whereby said piston and its rod, the toggle-arms, block G, and plunger M are actuated in the manner hereinbefore specified. By reversing the position of the valves the pipe Z is closed and the exhaust-pipe Z' opened to communicate with pipe G².

Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States—

1. The combination of the cylinder E, piston-rod F', provided on its respective ends with pistons F K, toggle-arms N N' P, bed-plate A, block G, provided with cylinders I J,

plunger M, provided on its under side with piston L, and the posts C, substantially as described.

2. The combination of the cylinder E, piston-rod F', provided on its respective ends with pistons F K, toggle-arms N N' P, bed-plate A, block G, provided with cylinders I J, plunger M, provided on its under side with piston L and projection M', and the posts C, substantially as described.

3. The combination of the cylinder E, piston-rod F', provided on its respective ends with pistons F K, toggle-arms N N' P, bed-plate A, block G, provided with cylinders I J, plunger M, provided on its under side with piston L and projection M', and the posts C and chains Z⁴, connecting said platen and block, substantially as described, and for the purposes set forth.

4. The combination of the upper plate and platen and an interposed wedge, said wedge being provided with laterally-extending flanges, the respective adjacent sides of the plate and platen aforesaid being provided with rollers in engagement, respectively, with the upper and lower flanges on the wedge, substantially as described.

5. The combination of the posts C, plate B, wedge T, platen S, the cylinder U, provided with piston-rod and piston, the outer end of the piston-rod being engaged to the wedge, said wedge being recessed or hollowed out to admit the cylinder, substantially as described, and for the purposes set forth.

6. The combination, with the piston K and a rod for actuating the same, of a block G, provided with cylinders I J, a plunger, M, provided on its under side with piston L, a bed-plate, guide-posts for the block and plunger aforesaid, and means for actuating said block and plunger, substantially as specified.

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

SAMUEL J. WEBB.

Witnesses:

JULIUS SOLGER,
R. N. McKELLAR.