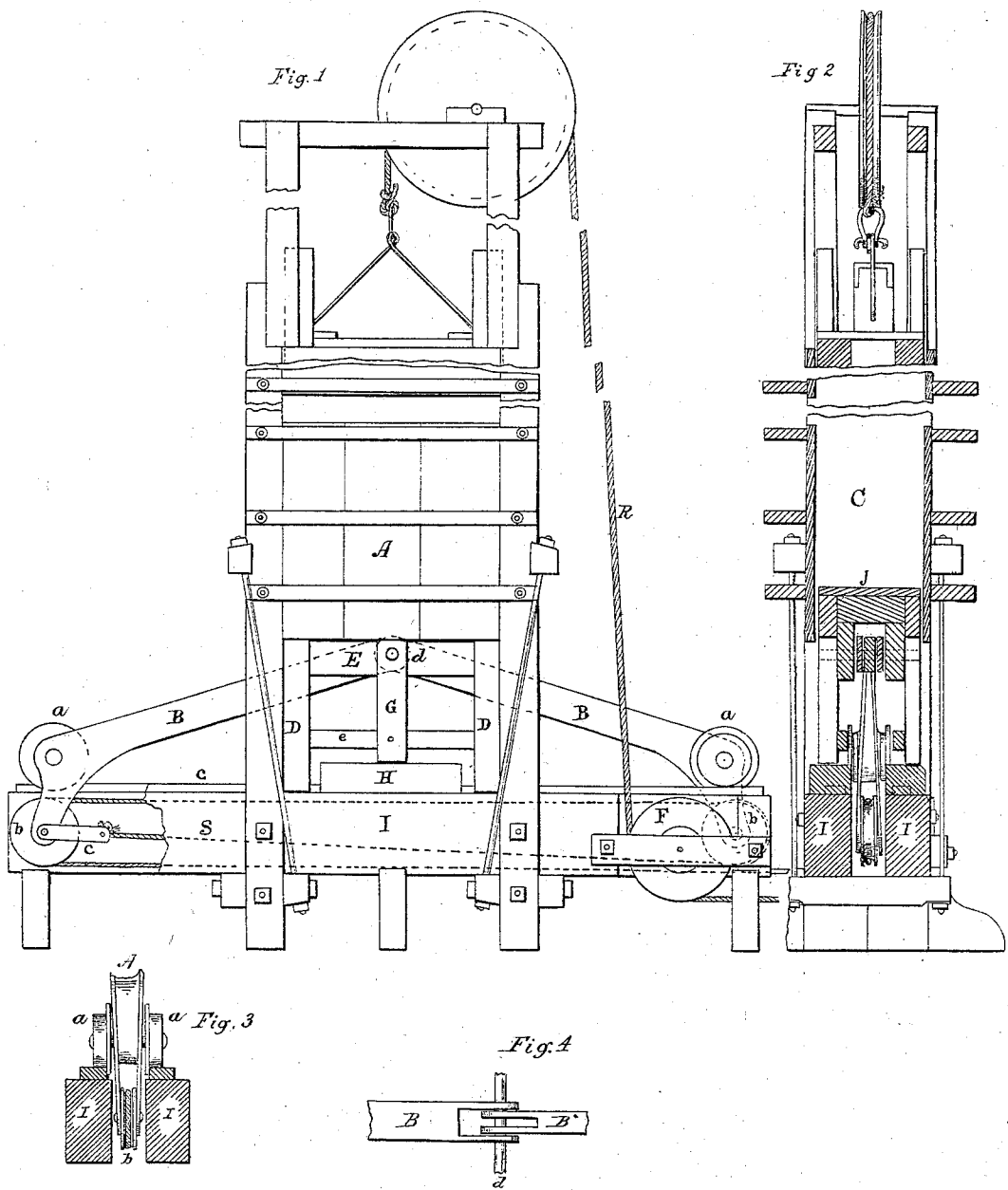


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Beater-Presses.

No. 135,780.

Patented Feb. 11, 1873.



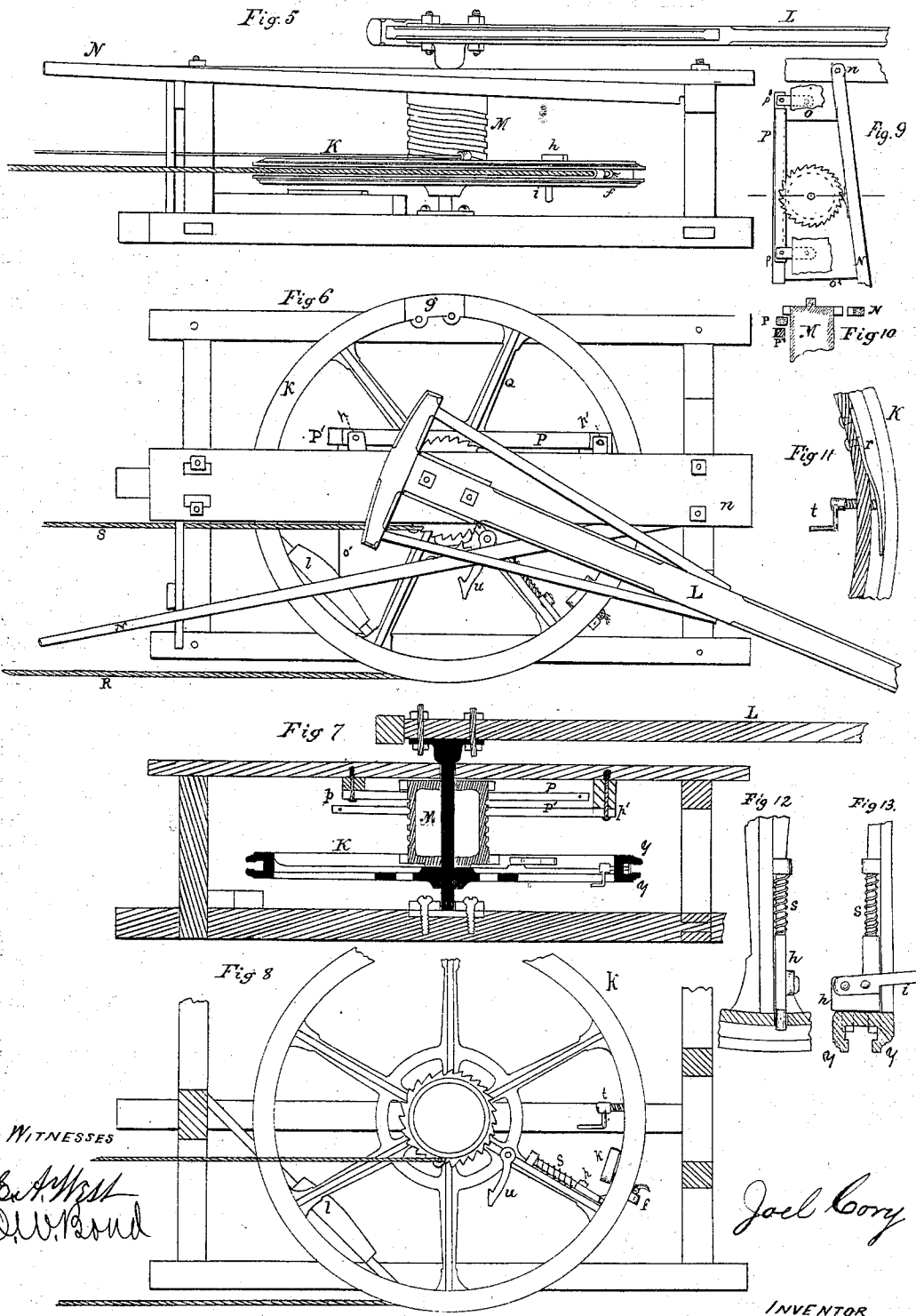
WITNESSES
E. A. West
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Joel Cory
INVENTOR

J. CORY.
Beater-Presses.

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Patented Feb. 11, 1873.



UNITED STATES PATENT OFFICE.

JOEL CORY, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN BEATER-PRESSES.

Specification forming part of Letters Patent No. 135,780, dated February 11, 1873.

To all whom it may concern:

Be it known that I, JOEL CORY, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Beater-Presses, of which the following is a full description, reference being had to the accompanying drawing, consisting of two sheets, the figures on Sheet 1 representing the press, and those on Sheet 2 the operating devices or horse-power, in which—

Figure 1 is a side elevation, a portion of one end being shown in section; Fig. 2, a vertical cross-section; Fig. 3, a detail, showing the pulleys at the lower end of one of the levers; Fig. 4, a detail, showing the upper ends of the levers; Fig. 5, a side elevation of the horse-power; Fig. 6, a plan view of the same; Fig. 7, a vertical section of the same; Fig. 8, a horizontal section of the same; and Figs. 9, 10, 11, 12, and 13, details.

My invention consists in providing a frame upon which the platen is connected; in connecting the rope which operates the levers to one of the pulley-blocks, as shown; in a new device for tripping the slide; in providing the trip-wheel with a spring to break the recoil of the slide when the beater falls; in providing the drum with a brake, as described; and in the other devices and combinations hereinafter claimed. The principal parts of the press are constructed substantially as usual, and need not be described.

In the drawing, A represents the press-box; B B, levers for raising the bale, which levers are provided at their lower ends with wheels *a a*, which run upon a track, C, as usual. The levers are also provided with pulley *b b*, as usual. It has been customary to connect one end of the rope S, by means of which the levers B are operated, to the main frame of the machine; but I attach this rope to a stirrup, *c*, which is connected with the pulley-block *b*. By this arrangement all the power applied to operate the levers is utilized, except that which is lost by friction, while in the ordinary mode a portion of this power is expended upon the fixed point of attachment. The upper ends of the levers are constructed as shown in Fig. 4, and connected by means of a single pin to the platen, or the frame upon which the platen rests. This frame is composed of uprights D and suitable cross-pieces E *e*; and for addi-

tional strength I use two side pieces, G. The lower ends of the posts D of the frame, when down, come in contact with main timber I, and the pieces G, as shown, come in contact with blocks H which are placed upon the timbers I. These blocks H might be dispensed with, but I prefer to use them for additional strength. The platen J is connected with or placed upon the frame just described, which serves a useful purpose while the pressure is being applied to the bale, and also furnishes a strong support to the platen while the beater is in operation. By connecting the upper ends of the levers to a single pin the pressure is equally applied, and the bale is less likely to bind in the press-box than when the levers are connected in the usual manner. The master-wheel K, Sheet 2, is placed upon a shaft in a suitable frame, as usual. The wheel is provided with a flange, *y*, both at the top and bottom, which flanges are recessed, as represented in Figs. 7 and 13, to receive the slide *f*, which can be inserted into its place by removing from the rim of the wheel the piece *g*, Fig. 6, which may be secured in its place in any suitable manner. To one of the arms Q of this wheel K I connect a spring-bolt, *h*, which projects into the recess provided in the periphery of the wheel for the slide *f*, to which slide the end of the rope which operates the beater is connected in the usual manner. This bolt *h*, when in the position shown in Fig. 13, prevents the slide from passing, holding it in place while the beater is being raised. To the bolt is connected a pin, *i*, projecting below the wheel, and this pin, as the wheel K revolves, coming in contact with the plate *l*, which is connected to a small bar which is attached to the frame, withdraws the bolt, allowing the slide *f* to pass and the beater to fall.

The descent of the beater is very rapid, and the slide *f* is frequently broken by the recoil, to prevent which I place in the recess in which the slide moves, at a point just back of the bolt *b*, a spring, *r*, which receives the slide *f* and breaks the force of the recoil, so that the slide cannot come forcibly in contact with the bolt *h*. This spring can be adjusted by means of a screw, *t*, or in some other suitable manner, as may be necessary. (See Fig. 11.)

s, Figs. 8, 12, and 13, represents the spring which throws the bolt *h* out. *k* is a catch or

stop pivoted to the inside of the rim of the wheel K, and so arranged that it can be turned forward so as to engage with the bolt and hold it back while the beater is not in use, and while the pressure is being applied through the levers B. M is a loose drum, having a ratchet-wheel upon both ends thereof, and *u* is a pawl secured to one of the arms Q, and so arranged as to engage with the ratchet-wheel of the lower end of the drum while the levers are being operated, and being disengaged therefrom while the beater is being operated, as usual. N is a lever, one end of which is pivoted to the frame at *n*, and is provided with a catch, *k*, to engage with the ratchet upon the upper end of the drum, for the purpose of holding the drum while the bale is being removed. On the opposite side of the drum are two brake-bars, P P'. The former, P, is pivoted at one end, *p*, to a cross-bar of the frame, and the other end is connected with the lever N by the rod *o*. The other brake-bar, P', is pivoted at *p'* to the same cross-bar at one end, and the other end is connected to the lever N by the rod *o'*. (See Figs. 6, 7, 9, and 10.) These brake-bars are located one above the other. The purpose of these two brakes is to check and regulate the movement of the drum M while the platen J is descending after the bale has been removed.

What I claim as new is as follows:

1. The combination of the levers B B, wheels *a a*, track C, pulleys *b b*, and rope S attached to one of the pulleys *b*, substantially as and for the purpose specified.

2. The frame D E, in combination with the platen J, levers B B, substantially as and for the purpose specified.

3. The wheel K, when provided with a flange, *y*, both upon its upper and lower side, the flanges being recessed, and one flange being provided with a removable piece, *g*, substantially as and for the purposes specified.

4. The wheel K, when provided with recessed flanges *y* and spring *r*, substantially as and for the purposes specified.

5. The combination of the wheel K, having recessed flanges *y*, with the spring-bolt *h*, pin *i*, and plate *l*, substantially as and for the purposes specified.

6. The combination of the wheel K, spring-bolt *h*, and stop or catch *k*, substantially as and for the purpose specified.

7. The combination of the drum M, lever N, brake-bars P P', constructed and operating substantially as and for the purpose specified.

JOEL CORY.

Witnesses:

E. A. WEST,
O. W. BOND.