

No. 104,705.

PATENTED JUNE 28, 1870.

C. CHAMBERS, JR.
OFF BEARING APPARATUS FOR BRICK MACHINES.

Fig. 1

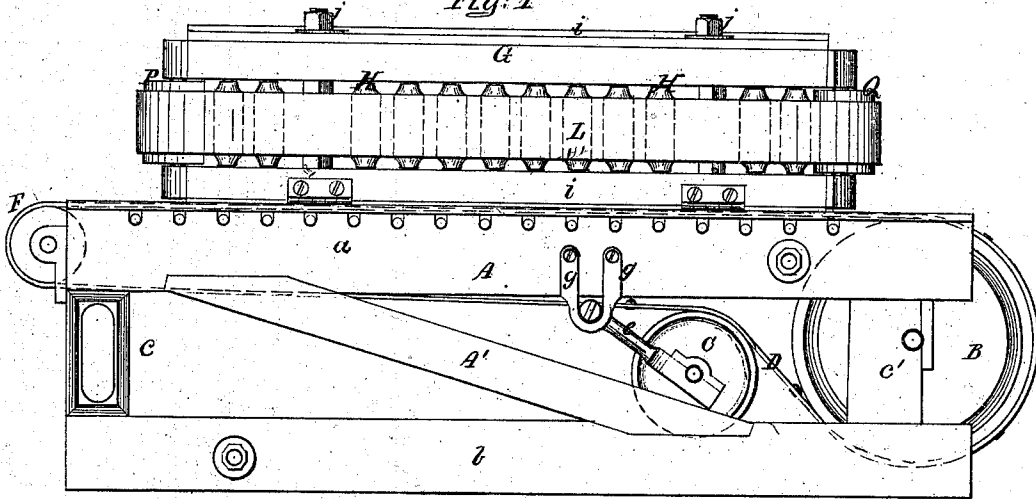
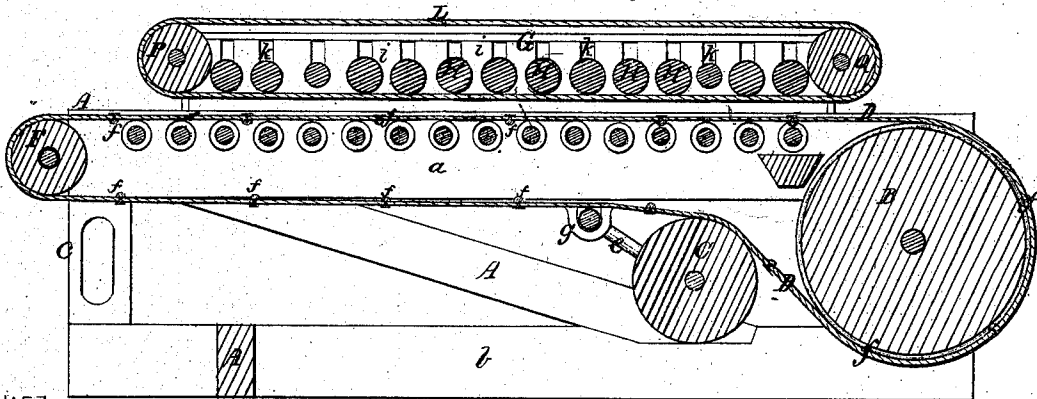


Fig. 2



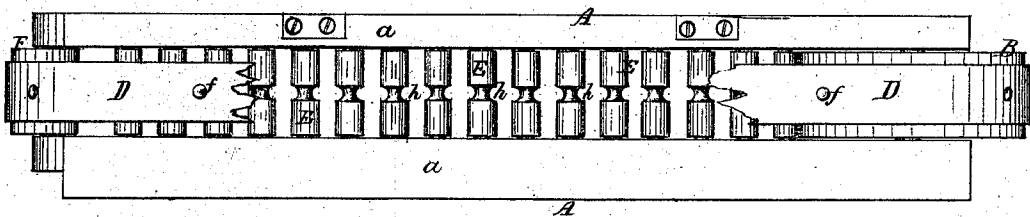
Witnesses

Geo. C. Lambright
a. Bradley

Inventor

Cyrus Chambers Jr.
By his Attorney
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Fig. 3



UNITED STATES PATENT OFFICE.

CYRUS CHAMBERS, JR., OF PHILADELPHIA, PENNSYLVANIA.

OFF-BEARING APPARATUS FOR BRICK-MACHINES.

Specification forming part of Letters Patent No. 104,705, dated June 23, 1870.

To all whom it may concern:

Be it known that I, CYRUS CHAMBERS, JR., of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Brick-Making Machines; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a belt embodying my improvements, the upper hinged clamping-frame thereof being thrown up in a vertical position. Fig. 2 is a vertical longitudinal central section of the same, with the said hinged clamping-frame resting in its proper position on the lower main frame. Fig. 3 is a plan of the main frame, the upper clamping-frame being removed, and a portion of the apron passing over the rollers in the lower frame broken away, so as to exhibit the grooves in said rollers.

This invention relates to certain improvements in brick-making machines patented by me on the 6th day of October, 1863, its object being that the bar of clay issuing from the forming-die of a machine operating on the principles of my said patent shall travel in a straight line and with an equable motion to the severing-knife, thus causing it to be always cut into uniform lengths and perfectly square and true, and preventing it from being moved laterally or slipping back and forth longitudinally while passing from the die to the knife; and to this end my invention consists in the employment, in the construction of the regulating apparatus, of two frames hinged to each other, each being provided with a series of rollers, around which passes an apron or belt, the series in the lower main frame having grooves, into which enter projections attached to the inside of the apron passing around them, for the purpose of guiding said apron thereon in a straight line, and the series in the upper frame made to rotate and slide vertically in slots cut in the sides of said frame, and acting as weights to press the lower side of their apron or belt down against the bar of clay, passing between said apron and the apron in the lower frame upon which the bar of clay is supported.

Corresponding parts in the several figures are represented by similar letters.

A marks the lower main frame, constructed of the upper and lower rails, *a a* and *b b*, and upright pieces or legs *c' c'*, which are rigidly

secured together by means of diagonal braces, cross-piece, and screw-bolts.

B indicates a large pulley, in the center of the face of which is cut a groove for the reception of projecting buttons, secured to the inner side of the apron D for the purpose of retaining said apron in the middle of said pulley while in motion thereon. The pulley B is fastened to an axle rotating in journal-boxes secured to the outer sides of the legs *c' c'* of frame A.

C designates a tension-pulley fixed upon an axle revolving in journal-boxes fastened to the lower extremities of the pendants *e e*, and is designed to give the required tension to the apron D, against which it presses, it being situated a short distance from the pulley B, and directly under the lower portion of the said apron, as shown in Fig. 2. The pendants *e e* are secured at their upper extremities to a cross-bar, having its ends projecting through loops *g*, screwed to the outer sides of the rails *a a* of frame A, and projecting downward at acute angles with the said upper rails of the frame A.

D designates the endless apron, passing around large pulley B, over tension-pulleys C, around grooved rollers E and end roller F, revolving upon an axle having its bearings in journal-boxes secured at the end of frame A, opposite that to which pulley B is attached. This apron is supplied on its inner side with a series of projecting buttons, *f f*, placed at suitable distances apart, and entering the grooves *h* in rollers E for the purpose of keeping the said apron in a perfectly straight line on said rollers and roller F, thereby carrying the bar of clay in a straight line from the die to the severing-knife. These projecting buttons *f f* may be placed at equal distances apart, and, instead of running in a continuous groove in the end roller, may gear into distinct recesses made to receive them in the periphery of the wheel, which is geared to the severing-wheel of the brick-machine, thus communicating a positive motion from the lower belt to said severing-wheel.

E E indicate a series of rollers, having the grooves *h* in the middle of their length, and rotating in apertures in the sides of the rails *a* of the frame A, the ends of said rollers being reduced so as to enter the said apertures, and keep them in position in said frame.

G designates the upper frame, which is hinged to one side of the frame A, and consists of the side pieces, *i i*, which are rigidly braced together a suitable distance apart by the screw-bolts and nuts *j j*, and supplied with the slots *k k*, as shown in Fig. 2.

H is another series of rollers, similarly constructed to the rollers of the series marked E, but without the grooves *h*. Their ends enter the slots *k* and slide vertically therein. These rollers are made heavy, in order to press the apron or belt L, upon which they rest, down upon the bar of clay, passing between it and the apron D, thus assisting the said apron D in carrying the clay perfectly straight to the severing-knife, and preventing its slipping back and forth longitudinally on said apron.

By reason of their insertion in the slots *k* in the sides of the frame G, the weighted rollers H readily accommodate themselves to variations in the thickness of the bar of clay passing beneath them.

L is a belt passing around the pulleys P Q, hung to the ends of the frame G and under the sliding weighted rollers H, its office being to distribute the pressure over the surface of the bar of clay and prevent the clay adhering to the rollers.

The rollers or pulleys at the ends of frame G are situated a little above the lower surface of the weights or rollers H, in order to permit the bar of clay to have free access to the entrance of and exit from the said frames A and G, and to prevent it from adhering thereto.

From the foregoing description the operation of my invention will be readily understood.

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

1. The off-bearing or regulating belt or apron of a brick-machine, provided with the projections or buttons *f f* on its inner side, and working over rollers having grooves or depressions in their surfaces for the passage or reception of said buttons, as and for the purpose described.

2. The combination and arrangement of the hinged frames A and G with their respective belts D and L and self-adjusting rollers H, constructed and operating as stated.

The above specification of my said invention signed and witnessed at Philadelphia this 26th day of January, A. D. 1870.

CYRUS CHAMBERS, JR.

Witnesses:

W. PRICE DAVIS,

THORWALD CHR. DAMBORG.