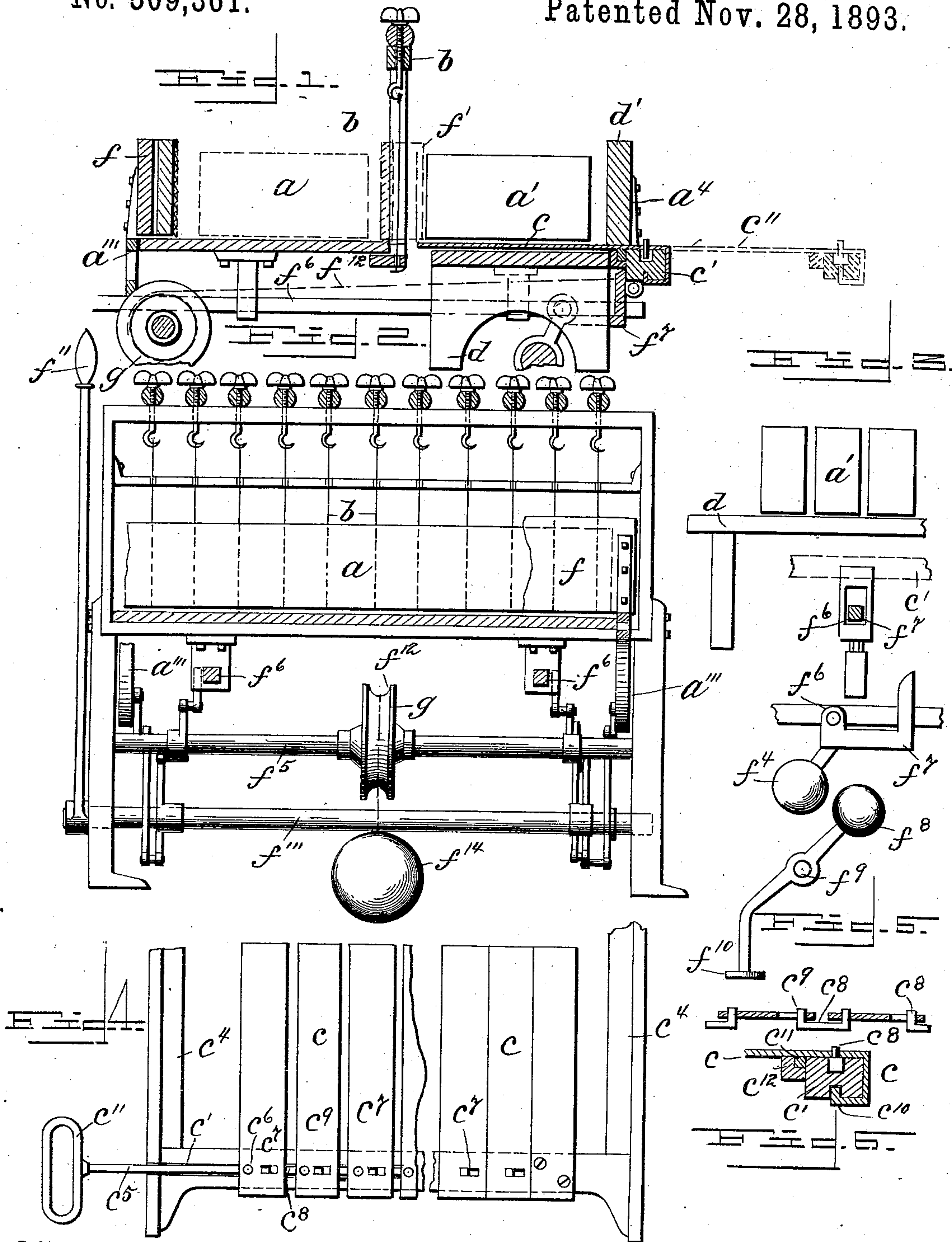


(No Model.)

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SEPARATOR FOR BRICK MACHINES.

No. 509,361.

Patented Nov. 28, 1893.



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SEPARATOR FOR BRICK-MACHINES.

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To all whom it may concern:

Be it known that I, THOMAS BLAKE CAMPBELL, a citizen of the United States of America, and a resident of Ithaca, Tompkins county, New York, have invented an Improved Separator for Just-Molded Bricks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to the separation of bricks of machines, that by wires cut the square mass of clay emerging out of mixing and compressing mills, into bricks, that they may be readily dried; and consists of a series of plates, separable sidewise one from the other, with the bricks on them; the said plates being, immediately after their separation, withdrawn from beneath the bricks, leaving them on the usual pallets or stools ready for the drying kiln or yard. These plates, and separating mechanism, are perfect by themselves, but require adaptations to be made to fit them to various machines; but are shown attached to the Bucyrus (Ohio) machine.

Figure 1, is an end elevation of a wire cutting brick machine that receives its squared continuous mass from the compressing machine, with my separator attached to it. Fig. 2, is an elevation of the cutting wire frame, with mechanism beneath it by which I move my separating plates; Fig. 3, a view of my bricks separated on a pallet; Fig. 4, the details, seen from above, of my separating plates, and their mechanism. Figs. 5, are views of my catch pawl, and its foot trip lever, and Fig. 6, of the mode of securing the plates to the head bar of my machine.

In the figures, the dotted lines *a* represent the squared mass of clay, that has come out of the compressing machine, lying on the table of the cutting machine; and *b* are the wires, in their frame; and *f* is the push board, movable to the position *f'*, thus pressing a portion of the mass *a* through the cutting wires, into bricks *a'*, until stopped, with the bricks against the stop board *d'*, and upon the plates *c*, over the pallet *d*.

In Figs. 1, 2, and 5 will be noticed the slide rods *f⁶*, which move the plates *c* to the right, at the same time that corresponding parts of the Bucyrus machine move to the left. These parts or reciprocating rods, differ in various machines, and hence need not be further de-

scribed; the essential thing being, that by any suitable mechanism, at the instant when the push board *f* is moved to the left to its original position, in Fig. 1, the plates are moved, as indicated by the dotted lines representing the plates at the right hand of that figure, out from under the bricks *a'* letting them down on the pallet *d*. The plates *c* just before this letting down on the pallet, are separated by the mechanism seen in Figs. 4 and 6. In Fig. 6, the plates are seen bent about the right hand side of the square slide head bar *c'*, and underneath said bar, and into a slot *c¹⁰*. Also a series of transverse guide pieces, the length of the width of the plates *c*, are fast to the plates, in close contact with the head bar *c'*, on the left hand under side of the plates. Thus I make a very firm joint of each plate, to the said head bar, which maintains a true sidewise motion of the plates at right angles to the said head bar. The sidewise motion is made thus: a hand handle *c''* (it may be a lever) is on the rod *c⁵*, which rod is in a slot in the head bar *c'*, and its right hand end is bent upward, and is rounded to a stud, that fits closely in an aperture in the left hand edge of the first plate *c*. In the right hand edge of the first plate, is a short slot some five-sixteenths of an inch long, (it may be longer if desirable.) Into this slot is placed the square stud, upward projecting end, of the coupling link *c⁸*, and its other end is made into a round stud like that on the right hand end, (all these in Fig. 4.) stud of the rod *c⁵*, and is in the round left hand aperture of the second plate *c*; and so on of the whole number, which are indicated in the figures to be ten, the series of plates *c*; the last or tenth one being fast to the head bar, by a rivet. And it is apparent that when the hand handle is drawn to the left, the plates, each one, separate, the length of the slots, until the last immovable one is reached; and when the hand handle is pushed to the right, the series of plates are closed together, ready to receive another set of bricks.

In Figs. 5, the mechanism I use to trip the pawl *f⁷*, is represented. The pawl *f⁷* is on and about the slide rod *f⁶*, and pivoted to it, which rod is indicated in Figs. 1 and 2, in its immediate connections. This pawl is kept in its position to engage with the head bar *c'*, by

the weight f^4 . A foot lever with foot space f^{10} , is indicated with its pivot f^9 , and a weight f^8 , at its top; and when the foot space is pressed on the weight f^8 touches the weight f^4 , and trips the pawl f^7 ; and its being so tripped, allows the weight f^{14} by the chain f^{12} to draw back the head bar c' and its attached plates c to their place for receiving the bricks to be separated. The chain is indicated by a dotted line, to be attached to the head bar, and to extend over the pulley g to the weight f^{14} . When the pawl f^7 pushes the head bar c' to the right, the weight f^{14} is drawn upward. The foot lever is attached to any convenient part of the frame work of the machine. The adjustment of the head bar and plates, is at a level a little below the table on which lies the mass a , so that when that mass is cut into bricks, they slide unmarred on the plates. A stop c^{12} checks the extent of the motion of the head bar and plates to the left hand of Figs. 1 and 5. A stop checks the extent of the motion of the head-bar, and plates, to the left hand. The upper detail links of Fig. 6 are designed to show, that in tile making, with wide plates c , screw adjustments are desirable, to span the width of the tile plates.

All else is believed to be apparent.

What I claim in the above-described mechanism is—

1. In the described brick separator, the separating mechanism, consisting of the plates c on which the bricks are received, and which plates are movable on the head bar c' , by a close fitting attachment; and the said bar being slotted to receive and retain the bar links c^8 ; the said links having one of their ends bent upward, and rounded, for hinge like joints, when inserted into corresponding apertures in the plates; and the other ends of the said links being squared, and bent upward, and fitted to, and placed in slots, in the adjoining plates, and the last plate fixed fast to the head bar; and the draft rod c^5 , when drawn upon, making the movement a part of the series of plates, and the bricks on them, substantially as set forth.

2. In the described brick separator, the links c^8 , constructed with one of their bent upward ends, placed in a slot in the sides of the plates; and the other bent upward ends rounded, and placed into round apertures in the sides of the adjoining plates; the length of the slots, controlling the distance apart to which the bricks are separated, as set forth.

3. In the described brick separator, the joint attachment of the plates c , to the head bar c' , constructed of the right angled bendings of one end of the plates about the head bar, to and into the slot c^{10} , as set forth.

4. In the described brick separator the slide bars f^6 , with their pawls f^7 pivoted to them, which act on the head bar c' , to withdraw the plates from beneath the bricks after their separation, letting them down on the pallets d , in combination with the stop board d' as set forth.

5. In the described brick separator the transverse guide pieces, whose length is the width of the plates, one being fixed to each plate, in close contact with the inner side of the head bar, as set forth.

6. In the described brick separator, the pawls f^7 on the slide bars f^6 , in combination with a suitable operative foot trip lever, to release the said pawls; thereby enabling the weight f^{14} connected to the head bar, and its plates, to return the head bar, and its brick receiving plates, to their brick receiving places, as set forth.

7. In the described brick separator, the stop board d' , and the head bar c' , and its plates fast thereunto, provided with suitable operative moving mechanism, for the head bar, and its plates; the said board holding the bricks, while the plates are withdrawn from beneath them, as set forth.

8. In the described brick separator, the combination of the machine frame, the separator $c c'$, and the pallet d supported on said frame, beneath the plates c , as set forth.

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