(No Model.)

# S. P. CRAFTS.

## MACHINE FOR PRESSING BRICKS.

No. 315,601. Patented Apr. 14, 1885.

*Fig. 1*

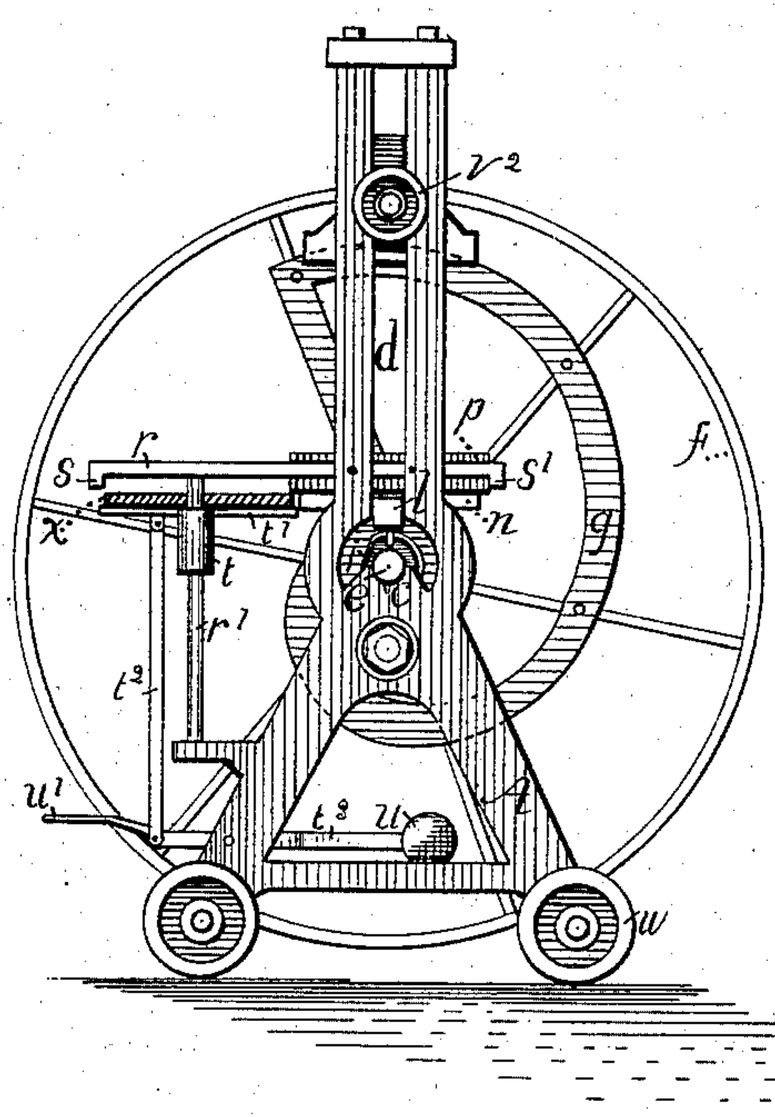



*Fig. 2*

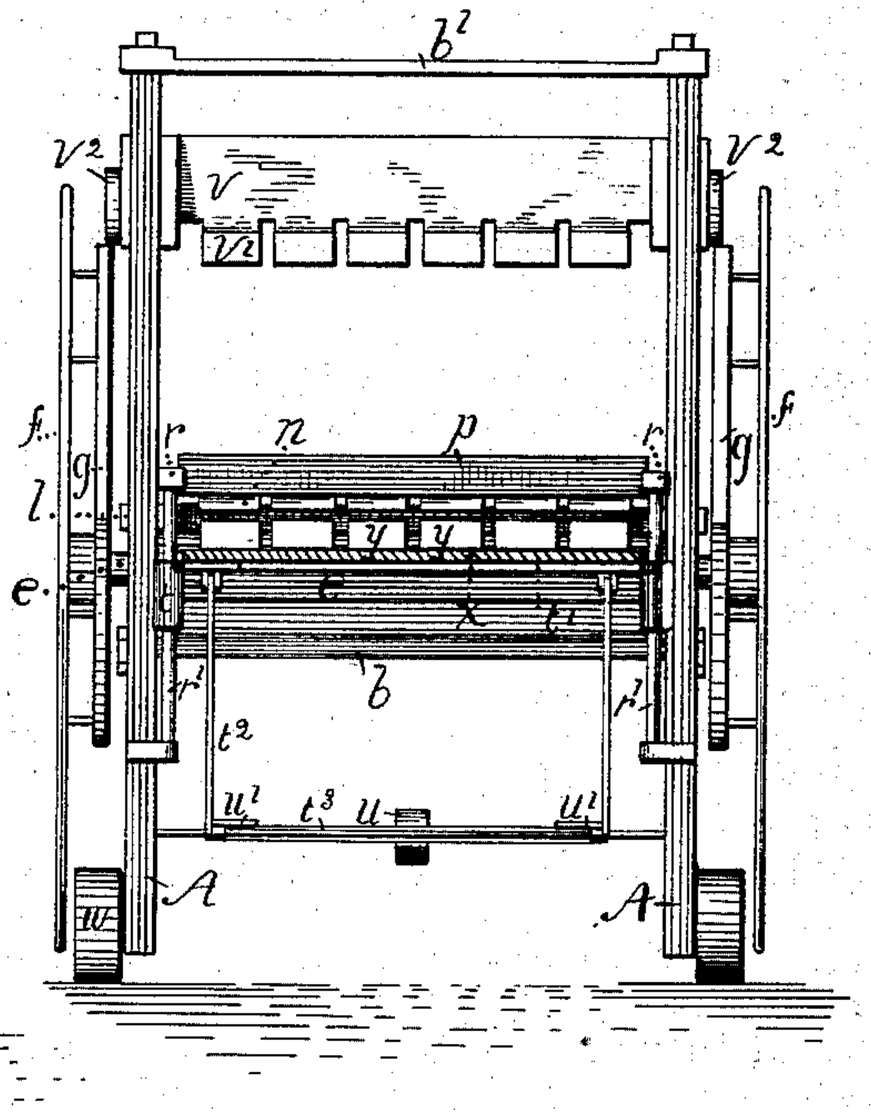



*Fig. 3*

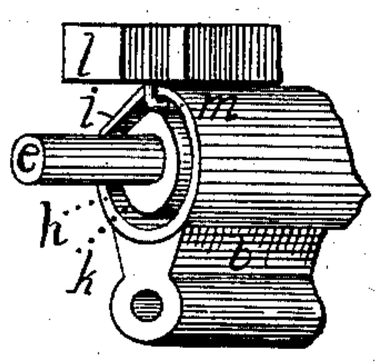
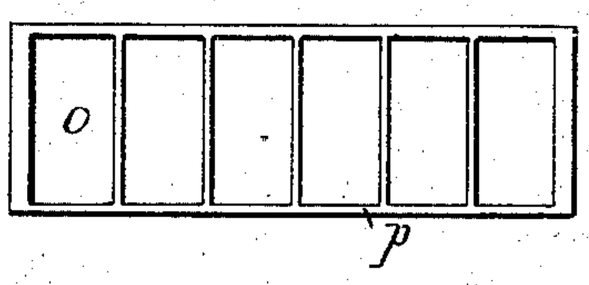



*Fig. 4*




WITNESSES:

George L. Barnes.

H. C. Littleton.

INVENTOR

Samuel P. Crafts

BY

Julius Twiss

ATTORNEY

# UNITED STATES PATENT OFFICE.

SAMUEL P. CRAFTS, OF HAMDEN, CONNECTICUT.

## MACHINE FOR PRESSING BRICKS.

SPECIFICATION forming part of Letters Patent No. 315,601, dated April 14, 1885.

Application filed October 22, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL P. CRAFTS, a citizen of the United States, residing at Hamden, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Machines for Pressing Bricks, of which the following is a specification.

My invention relates to a brick-press, and has for its object the pressing of brick by blows from a falling drop, whereby all the bricks are subjected to a like pressure.

The invention is particularly adapted for pallet-molded bricks; and it consists in novel combinations of mechanism, as hereinafter more fully described, and pointed out in the claims.

In the drawings, Figure 1 is a side view of my press with one of the driving-wheels removed. Fig. 2 is a front view of the press. Fig. 3 shows an end of the shaft, cross-bar, and anvil-block; and Fig. 4 is a plan of the pressing-case *p*.

The frame of the press is composed of vertical side pieces, A, connected by transverse pieces *b b'*. In each side piece is a shaft-bearing, *c*, and guideway *d*, extending vertically from the bearing to the top of the frame. The bearings support a shaft, *e*, to the projecting ends of which the hand-wheels *f* and lifting-cams *g* are secured. The shaft is enlarged between the bearings, forming a shoulder, *h*, at each end, in which a groove, *k*, is countersunk, and a flat surface, *i*, is formed along the enlarged part of the shaft *e* parallel to its axis. Directly over the shaft is a cross-bar, *l*, with its end received in the guides *d*. Its lower surface rests upon the shaft, and is held thereon by bent pins *m*, fixed in the cross-bar, with their ends received in the groove *k*. Upon the upper side of the cross-bar plungers *n* are arranged, fitting a corresponding series of rectangular compartments, *o*, in a case, *p*. The case is supported upon and traverses horizontal guide-bars *r*, bolted at one end to the frame and mounted at their outer ends on vertical rods *r'*, screwed into the frame. The ends of the bars *r* are bent over and form shoulders *s s'*, which limit the backward and forward movement of the case. The rods *r* pass through bearings *t* in a movable platform, *t'*, and form guides upon which the platform slides. The platform is supported by rods $t^2$, connected to a forked beam, $t^3$, upon which is fixed a counter-weight, *u*, sufficiently heavy to balance the platform and a mold of brick. The platform is depressed by means of pedals *u'*, attached to the beam $t^3$ at the points where the rods $t^2$ are connected.

Arranged over the case *p*, with its ends received in the guideways *d*, is a drop, *v*, which carries on its lower side a series of plungers, *v'*, fitting the compartments *o* in the case. On the ends of the drop, outside of the frames A, rollers $v^2$ are arranged, turning on studs, and adapted to bear on the periphery of the lifting-cams *g*. Wheels *w* are attached to the bottom of the frame-work A, so that the machine is rendered easily portable.

Constructed as above described and shown, the operation of my drop-press is as follows: In brick-making by pallet-molding, the bricks come finished from the molding-machine in groups arranged upon pallets, where they remain until dry. The upper surface of the bricks is sanded and smoothed in the molding-machine, and this surface should be underneath when the bricks are placed in the press. Accordingly a mold is placed over a group of partially-dried bricks as they lie upon a pallet, and a metal pallet, *x*, is laid on the mold and located accurately by means of dowels in the mold, which fit corresponding holes in the pallet. The mold and pallets are then inverted and laid upon the platform *t'*, where also the metal pallet is accurately located by dowels. (Not shown.) The other pallet, together with the mold, is next removed, leaving the metal pallet *x* and bricks *y* on the platform *t'*, which is then depressed by the pedals *u'*, as shown in Fig. 2. The case *p* is then pulled forward until it strikes the stop *s*, when it will be exactly over the bricks *y*. The platform is then allowed to ascend by the gravity of the weight *u*, and the bricks enter the compartments *o* in the case. When the shaft *e* is in such a position that its flat surface *i* is turned upward, the upper surfaces of the plungers *n* are in the same horizontal plane with the upper surface of the metal pallet *x*, and the case can be pushed back against the rear stops, *s'*, thereby sliding the bricks from off the pallet onto the plungers *n*, the plungers *v'* being sufficiently raised by the cams *g* to admit the case under them. Continued motion of the shaft

*e* throws the plungers *n* upward, slightly entering the case, and raises the drop *v* to the highest point of the cam *g*, when the drop falls and the plungers *v'* enter the case *p*, and press the bricks therein by a blow. The shaft is revolved further until the plungers are withdrawn from the case. The case is then pulled forward and the bricks are removed from the machine.

This operation is repeated with each revolution of the shaft.

I claim—

1. In a brick-pressing machine, in combination with a bottom plunger and a drop-plunger above the same, a reciprocating pressing-case adapted to receive a molded brick and to be moved in between the plungers, and means, substantially as described, adapted to cause the plungers to enter the pressing-case and compress the brick therein, all substantially as and for the purpose set forth.

2. In a brick-pressing machine, in combination with the series of bottom plungers and the series of drop-plungers situated over the bottom plungers and falling toward the same, the reciprocating pressing-case adapted to be slid out to receive a series of molded bricks and then moved inward between the two series of plungers, and means, substantially as described, adapted to cause the opposing plungers to enter the divisions of the case to compress the bricks therein, all substantially as and for the purpose set forth.

3. In a brick-pressing machine, in combination with the sliding pressing-case, the movable pallet to which the bricks are transferred from the drying-pallets, and means for raising such movable pallet to cause the bricks placed thereon to enter the divisions of the pressing-case, substantially as and for the purpose described.

4. In a brick-pressing machine, in combination with the series of pressing-plungers, the sliding pressing-case adapted to be slid inward between two series of plungers and outward again, the vertically-movable pallet situated below the pressing-case when the latter is drawn out, adapted to receive a series of brick from the drying-pallets, and means for raising and lowering the movable pallet, all substantially as and for the purpose described.

5. In a brick-press, the combination, with the sliding pressing-case, of the vertically-moving platform adapted to receive and support a transfer-pallet carrying bricks placed thereon from drying-pallets, and means, substantially as described, adapted to raise the platform so as to bring the bricks on the movable pallet up into the divisions of the pressing-case, all substantially as and for the purpose set forth.

6. In a brick-pressing machine, the shaft *e*, having a longitudinal flat surface, *i*, and shoulders *m*, with grooves *k*, for receiving bent pins in the cross-bar, as and for the purpose specified.

7. The combination, with the shaft *e*, of the cross-bar *l*, with its plungers *n*, and the anvil-block *b*, located under and forming a bearing for the shaft, as and for the purpose set forth.

8. The combination, with the shaft *e*, of the lifting-cams *g* and plunger-drop *v*, as and for the purpose described.

9. In a brick-press, the combination of shaft *e*, lifting-cams *g*, drop *v* and plungers *v'*, cross-bar *l*, plungers *n*, pressing-case *p*, and platform *t'*, substantially in the manner and for the purpose described.

SAMUEL P. CRAFTS.

Witnesses:

EDWIN C. DOW,

L. W. CLEAVELAND.