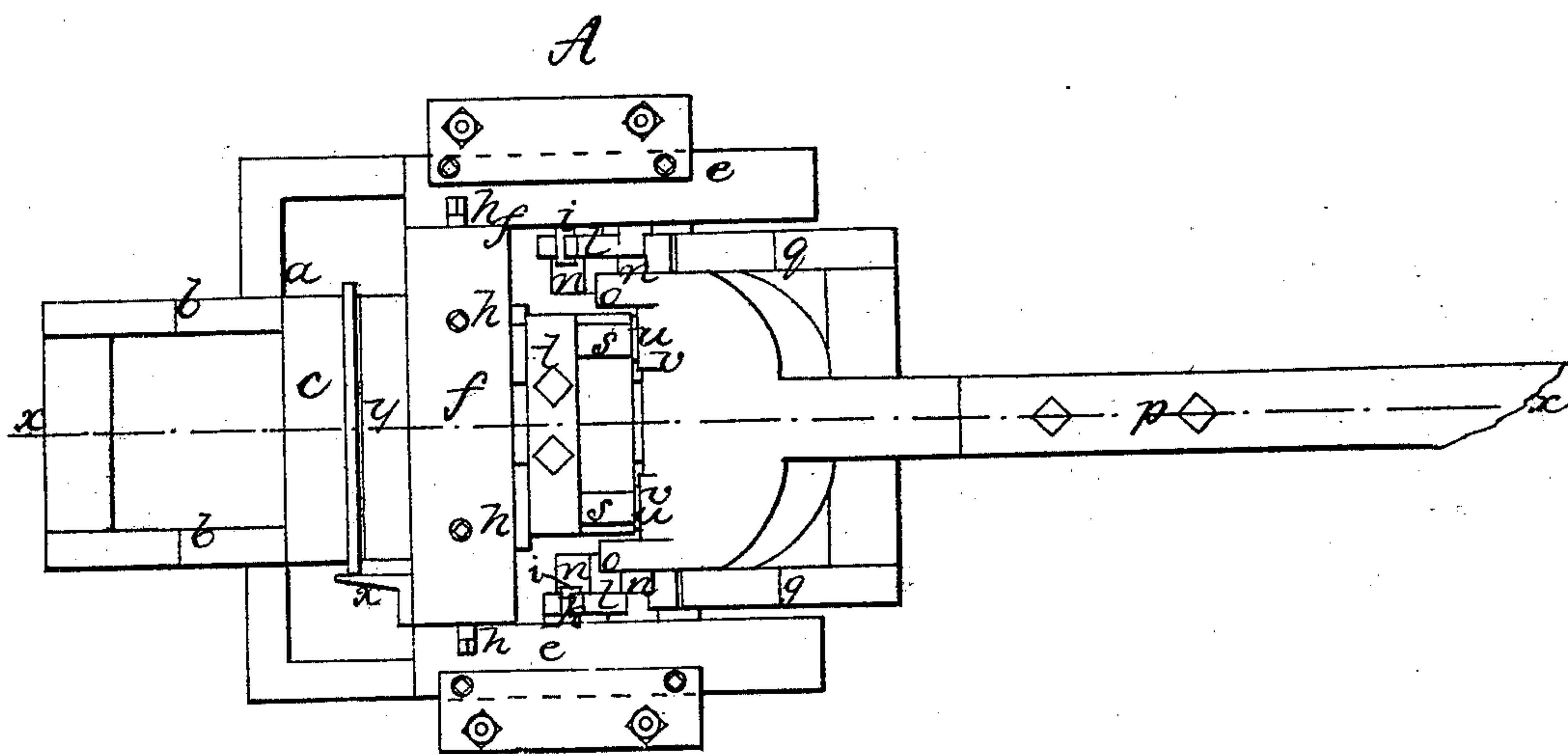
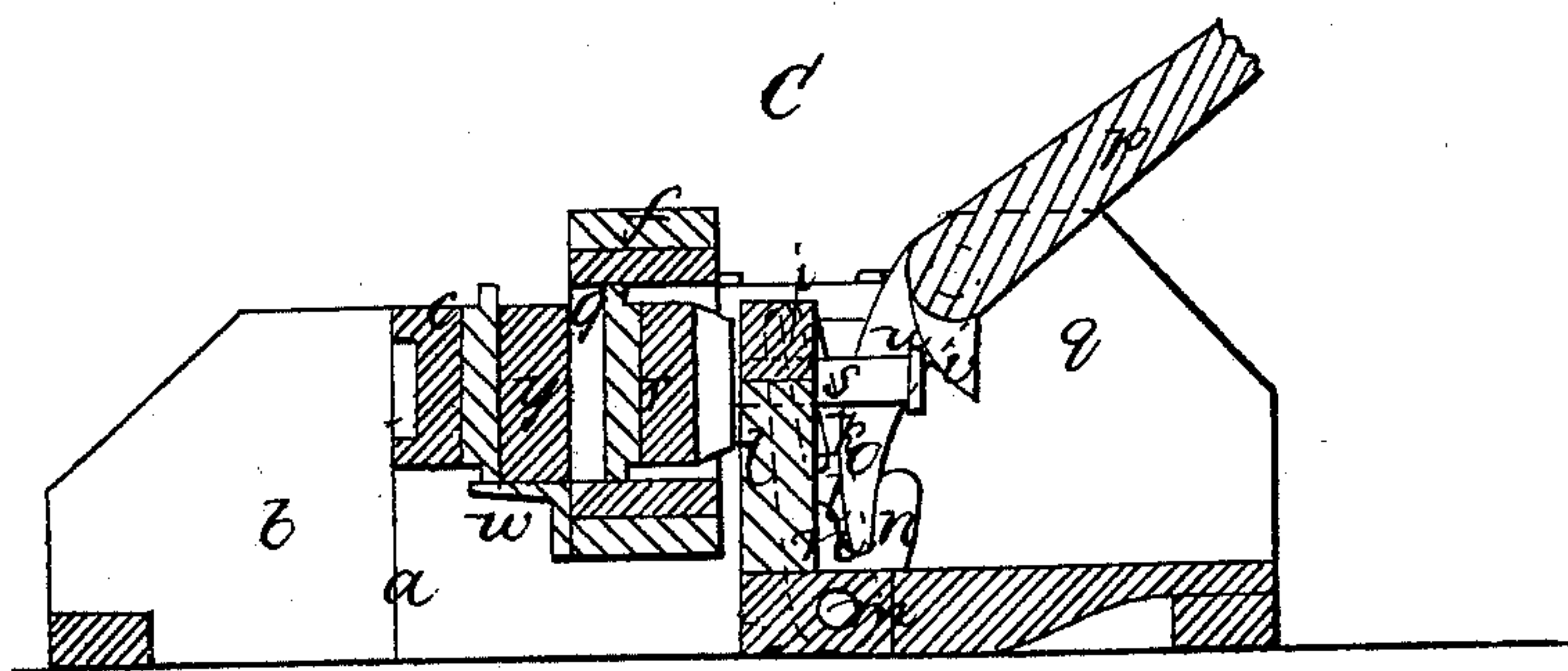
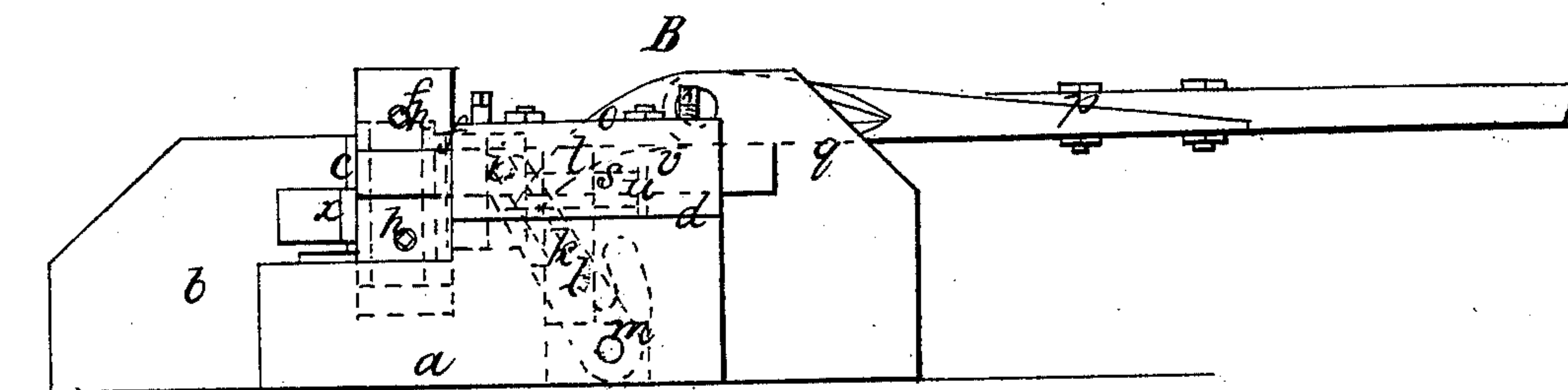


*G. A. Metcalf,*

*Brick Press.*

*No. 90,285.*

*Patented May 18. 1869.*



*Witnesses,*

*S. B. Hedges  
W. W. Frothingham.*

*Inventor,*

*G. A. Metcalf,  
by his Attys  
Crosby Halsted & Gould*



# United States Patent Office.

GEORGE A. METCALF, OF MALDEN, MASSACHUSETTS.

Letters Patent No. 90,285, dated May 18, 1869.

## IMPROVED BRICK-PRESS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE A. METCALF, of Malden, in the county of Middlesex, and State of Massachusetts, have invented an Improved Machine for Pressing Face-Bricks; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

My invention relates, particularly, to the organization or arrangement of mechanism of machines for pressing face-bricks, such bricks being first moulded and dried, or partially dried, and subsequently submitted to pressure in a finishing-mould, to impart smoothness to the surfaces, and sharpness to the edges or corners thereof.

In my machine, instead of forcing the brick into a mould, to be pressed by the piston or follower, I drop the brick down upon a shelf, placed in front of the mould, on a plane with the bottom surface thereof, the brick standing vertically, then feed the mould forward over the brick, and then force the piston or follower into the mould and against the brick, an upright and stationary wall or bed forming one side of the mould.

My invention consists in combining, with the reciprocating mould and piston, a lever, acting by a single movement to first throw forward the mould, and then the piston, as hereinafter set forth.

The drawing represents a machine embodying the invention.

A shows the same in plan.

B, a side elevation of it.

C, a vertical longitudinal section, on line *x x*.

*a* denotes the bed, or frame-work, to be made of cast-iron, and having at one end piers or braces *b b*, for backing up an upright wall or bed, *c*.

Upon the opposite sides of the frame are horizontal ways, or guide-rails *d d*, upon and between which rest and slide the side rails *e* of a reciprocating carriage, the front end of which is composed of a rectangular upright box-frame, *f*, within which, or between the four sides of which, is placed the open mould *g*.

The upper and end plates of the mould are supported, each upon two adjusting-screws, *h h*, working in nut-threads formed in the walls of the frame *f*, and by means of these screws the mould may be accurately adjusted in position in its frame, or carrier, as will be readily understood.

Projecting inward from each rail *e* of the mould-carriage, is a pin, *i*, which extends into a slot, *k*, of a lever-arm, *l*, fulcrumed on a shaft, *m*.

Each lever-arm *l* also has projections *n*, between which is a short arm, or wiper, *o*, of a long, hand-

worked lever, *p*, fulcrumed in uprights *q*, and by means of this lever and the slotted lever-arms *l*, the carriage-frame *f*, and the mould contained within it, are worked to and from the bed-wall *c*, the sides of the mould, when the handle of the lever is pressed down, being made to embrace or surround the bed-piece, as seen by dotted lines at B.

*r* denotes the piston, or follower, by which the brick is compressed while within the mould.

This piston is mounted upon the front ends of two horizontal slide-rods, *s*, which play through a stationary block, *t*, and the heads *u* of the pins are acted upon by wipers *v* on the lever *p*.

Just in front of the mould *g*, and fixed thereto, or with relation thereto, is a shelf, *w*, the top of which is in a plane with the lower surface of the mould, and at one end of the mould is a guide, *x*, the inner surface of which is in a plane with the adjacent inner surface of the mould.

Upon the shelf *w*, with one end against the guide *x*, the brick *y* to be pressed is stood, between the upright bed *c* and the mould, the mould-carriage being slid back and the lever *p* thrown up.

The brick to be pressed being thus positioned, the lever-handle *q* is pressed down, and the arms or wipers *o* of the hand-lever immediately act upon the lever-arms *l*, and carry forward the mould over the brick, or so as to bring the brick within it, and the brick, having been thus enclosed within the walls of the mould, and against the bed-wall *c*, the continued movement of the hand-lever *q* forces the piston, or follower *r*, against the brick, compressing and solidifying the clay, and perfecting all the faces and corners of the brick.

The lever *q* being then thrown up, the mould-carriage and mould will be thrown off from the brick, which may then be removed, to be replaced by a fresh brick, to be similarly treated.

It will be observed that the machine is exceedingly simple and compact in its construction and arrangement, that as the power of the lever is first applied, it quickly moves the mould into position, while, as the follower comes against the brick, the relative position of the lever *q*, and its wipers *v*, and the slide-rods *s*, is such as to enable the maximum of pressure to be easily applied by the lever to compress the brick by the action of the follower against it.

I claim, in combination with the reciprocating mould and piston, the lever *q*, acting by a single movement to first throw forward the mould and then the piston, substantially as set forth.

GEO. A. METCALF.

Witnesses:

FRANCIS GOULD,  
S. B. KIDDER.