

W. MENDHAM & C. CHAMBERS, Jr.
BRICK MACHINE.

No. 109,034.

Patented Nov. 8, 1870.

Fig. 1.

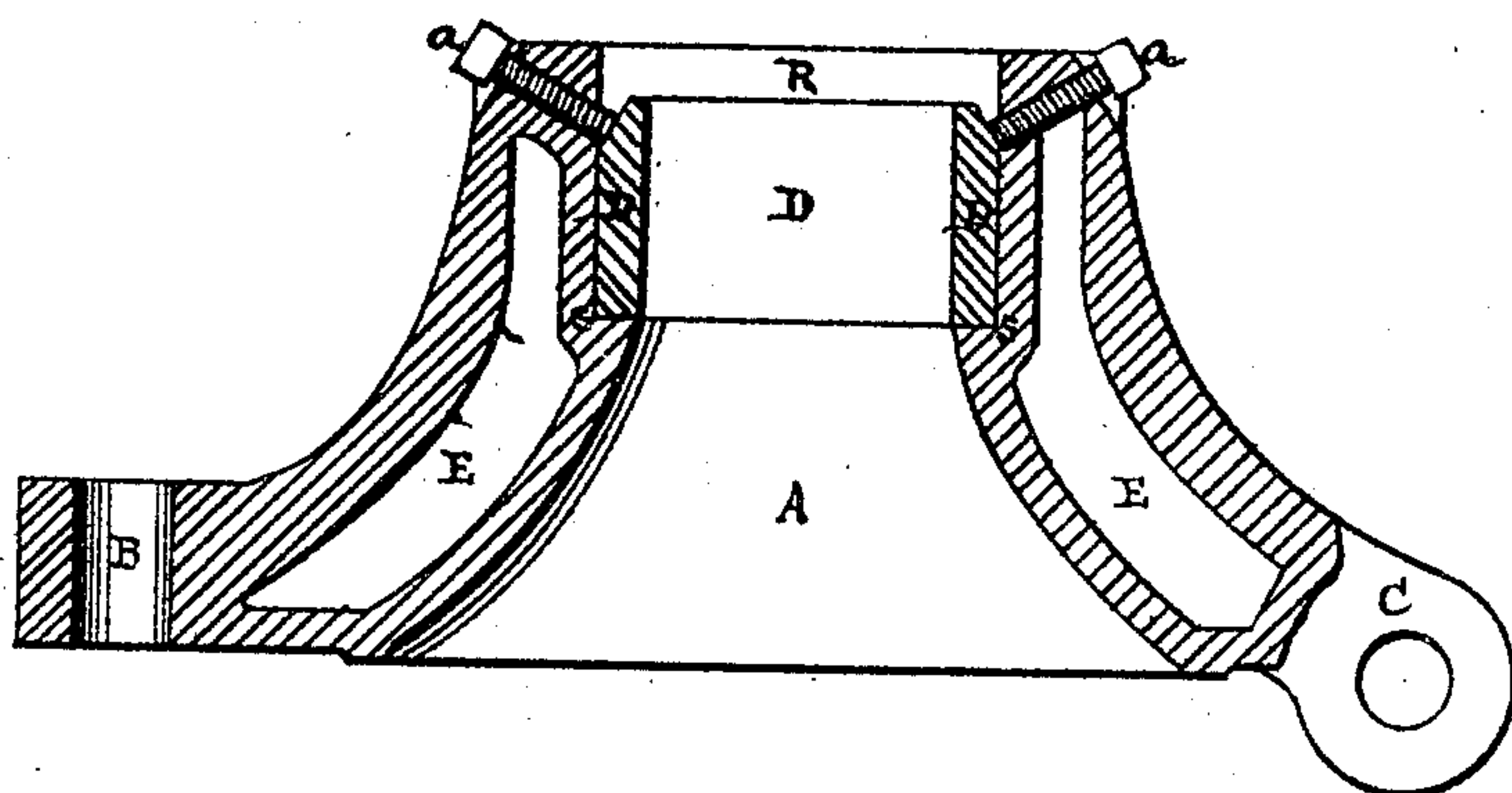


Fig. 2.

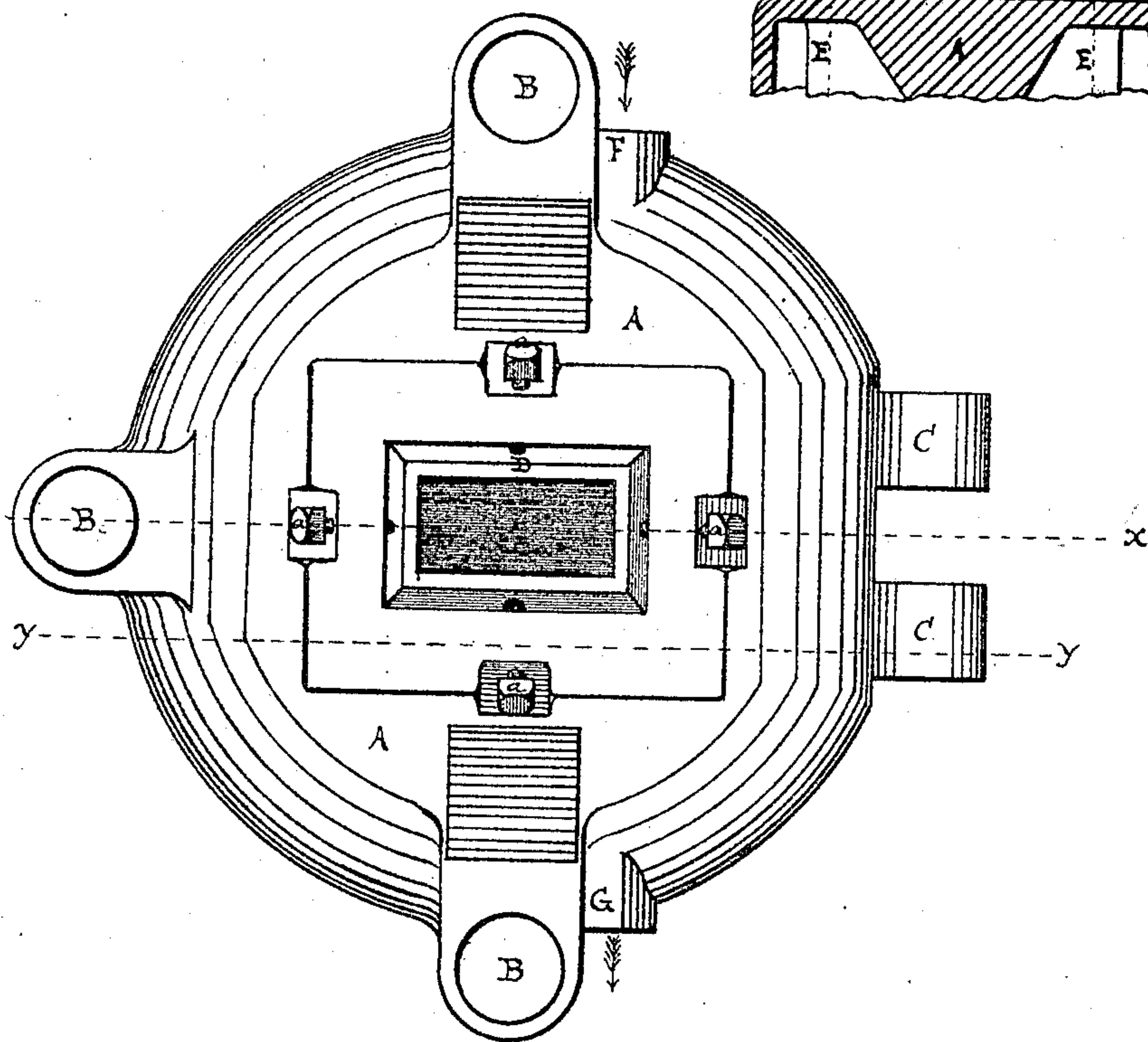


Fig. 3.



Witnesses.
F. H. Howard
A. Bradley

Mendham & Chambers
By their Attorney
Chas. F. Painsbury

United States Patent Office.

WILLIAM MENDHAM AND CYRUS CHAMBERS, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO EDWIN CHAMBERS AND CYRUS CHAMBERS, JR., OF SAME PLACE.

Letters Patent No. 109,034, dated November 8, 1870.

IMPROVEMENT IN BRICK-MACHINES.

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

To all whom it may concern:

Be it known that we, WILLIAM MENDHAM and CYRUS CHAMBERS, Jr., both of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Brick-Machines; and we do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a horizontal section of the die and "former," on line *x x* of fig. 2;

Figure 2 is an end elevation of our improved former and die; and

Figure 3 is a section, on line *y y* of fig. 2, of a portion of the former, showing the arrangement of the steam-space.

The same letter marks the same part in the several figures where it occurs.

Our invention relates to that class of brick-machines in which clay is forced in a continuous bar through a die, and then cut into proper lengths for bricks. Such a machine is described in the patent of Cyrus Chambers, jr., dated September 2, 1863.

Our improvement is in those portions of the machine known as the former and die, through which the clay passes immediately prior to its exit from the pugging and tempering-chamber.

It consists in recessing the outer end of the former, and inserting in it a die, which forms a thin lining, preferably of steel, such die being held in place and adjusted by means of set-screws, and being removable, at pleasure, for renewal or repair, without involving the removal of any portion of the former.

It further consists in giving such a form to the steam-chamber of the former as to supply the greatest heat to the angles of the die, all as hereinafter more fully set forth.

The construction of our improved die and former is clearly shown in the drawing.

The former A is intended to be attached to the end of the pugging-chamber by means of the hinge C and bolts passing through the lugs B B B.

It is provided with a chamber, E, through which steam is caused to pass in the direction shown by the arrows, entering by a pipe inserted at F, and escaping through another pipe inserted at G.

The construction of this steam-chamber is such, as shown in section in fig. 3, that the steam is admitted to the corners of the die where the friction of the passing clay is greatest, and is kept from the middle portion of the sides of the die, where the friction is least, the object being to equalize the friction, and thus prevent the uneven strain upon the bar of clay, which would tend to weaken its structure and to roughen the edges of the bricks.

An oblong shouldered recess, R, is made in the end of the former A, which receives a die, D, of corresponding shape, forming a thin steel lining to the mouth of the former.

The inner rim of this die rests upon the shoulder *s* of recess R.

Its outer rim is beveled, as shown, the beveled surface affording a bearing for the inner ends of the set-screws *a a a*, by which the die is held in place. If the die should be slightly smaller than the recess R, the screws *a a a* afford the means of adjusting it accurately in relation to the opening in the former, from which the clay enters the die.

In a brick-machine of the character referred to above the die is found to wear more rapidly than other parts of the machine. Its convenient and economical replacement hence becomes a matter of primary consideration.

Having thus fully described our invention,

What we claim, and desire to secure by Letters Patent, is—

1. The hollow former A of a brick-machine, having a recess, R, to receive and surround a removable die, as and for the purpose specified.

2. The steam-chamber E in the former A, with its walls thinner at the corners than at the sides, so as to direct the heat from the steam to the angles of the die, as and for the purpose set forth.

The above specification of our said invention signed and witnessed at Philadelphia this 19th day of March, A. D. 1870.

WILLIAM MENDHAM.
CYRUS CHAMBERS, JR.

Witnesses:

THORWALD CHR. DAMBORG,
W. PRICE DAVIS.