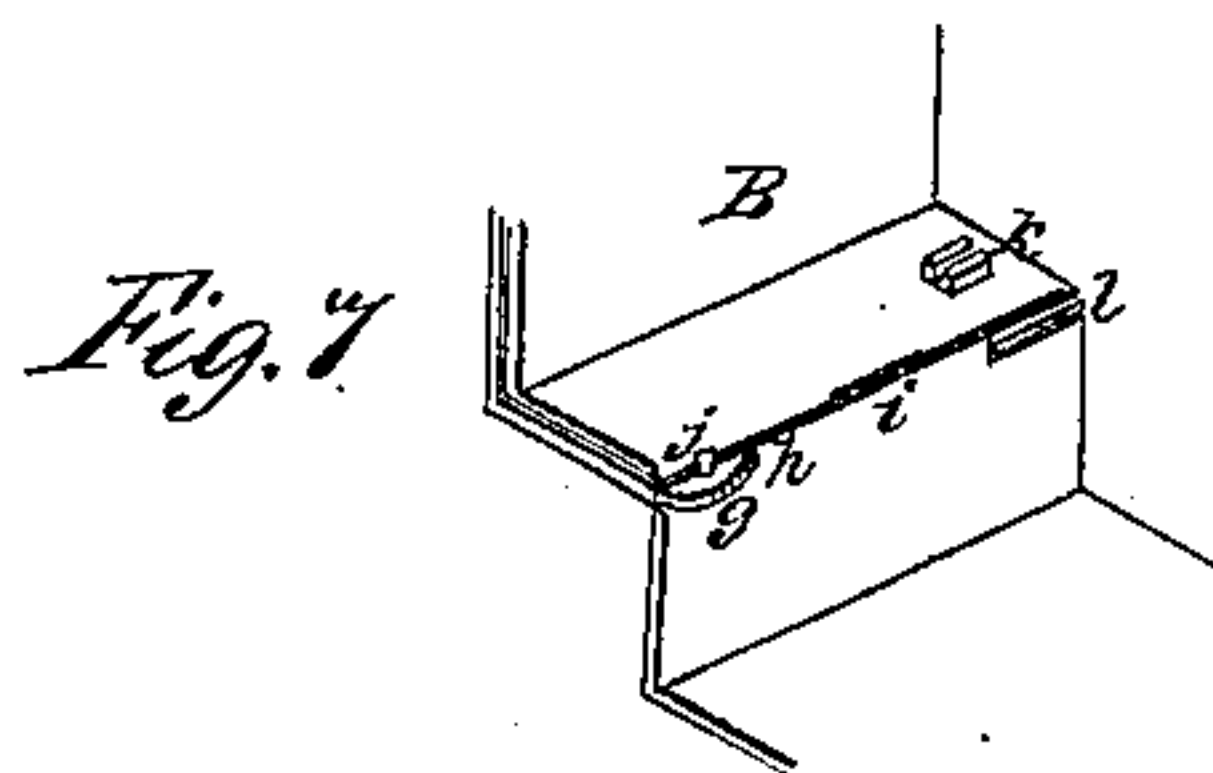
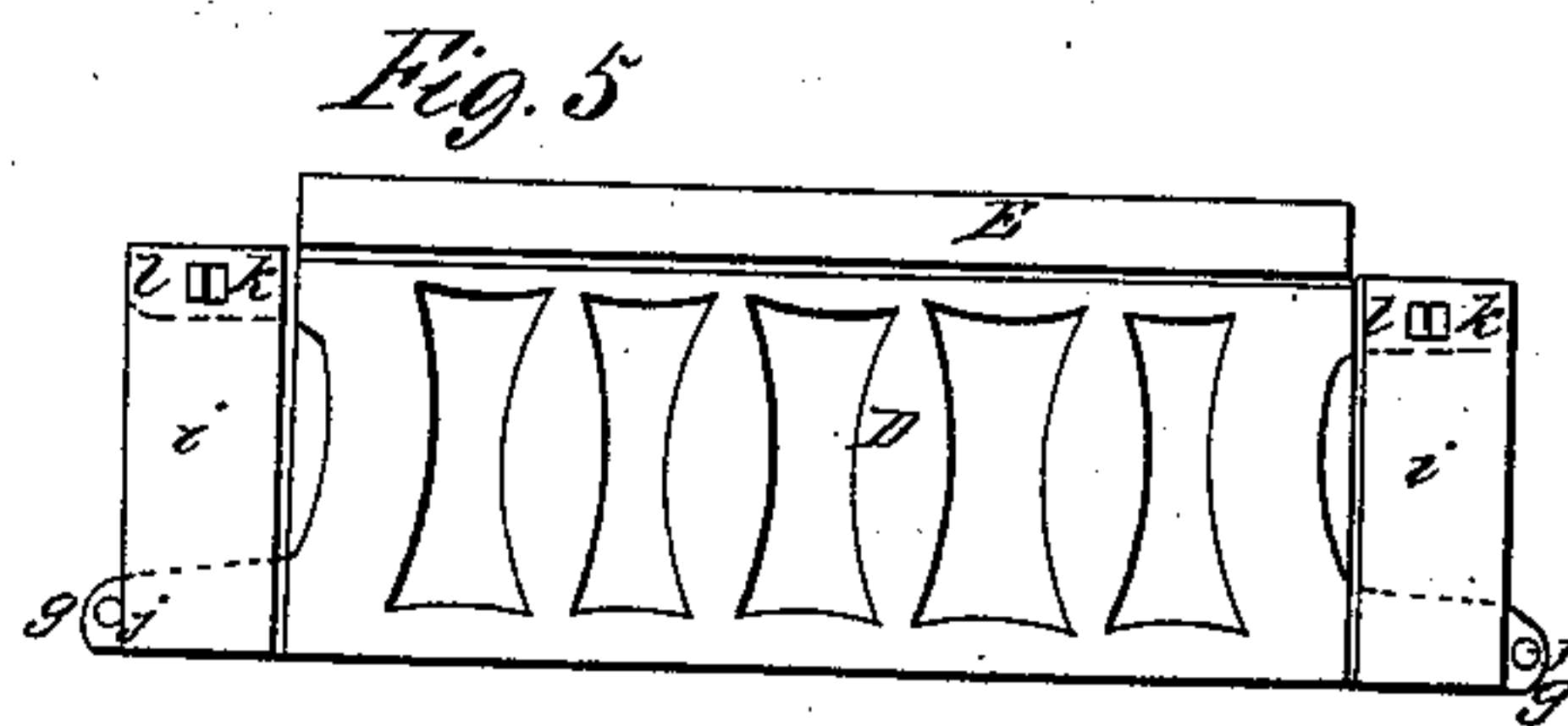
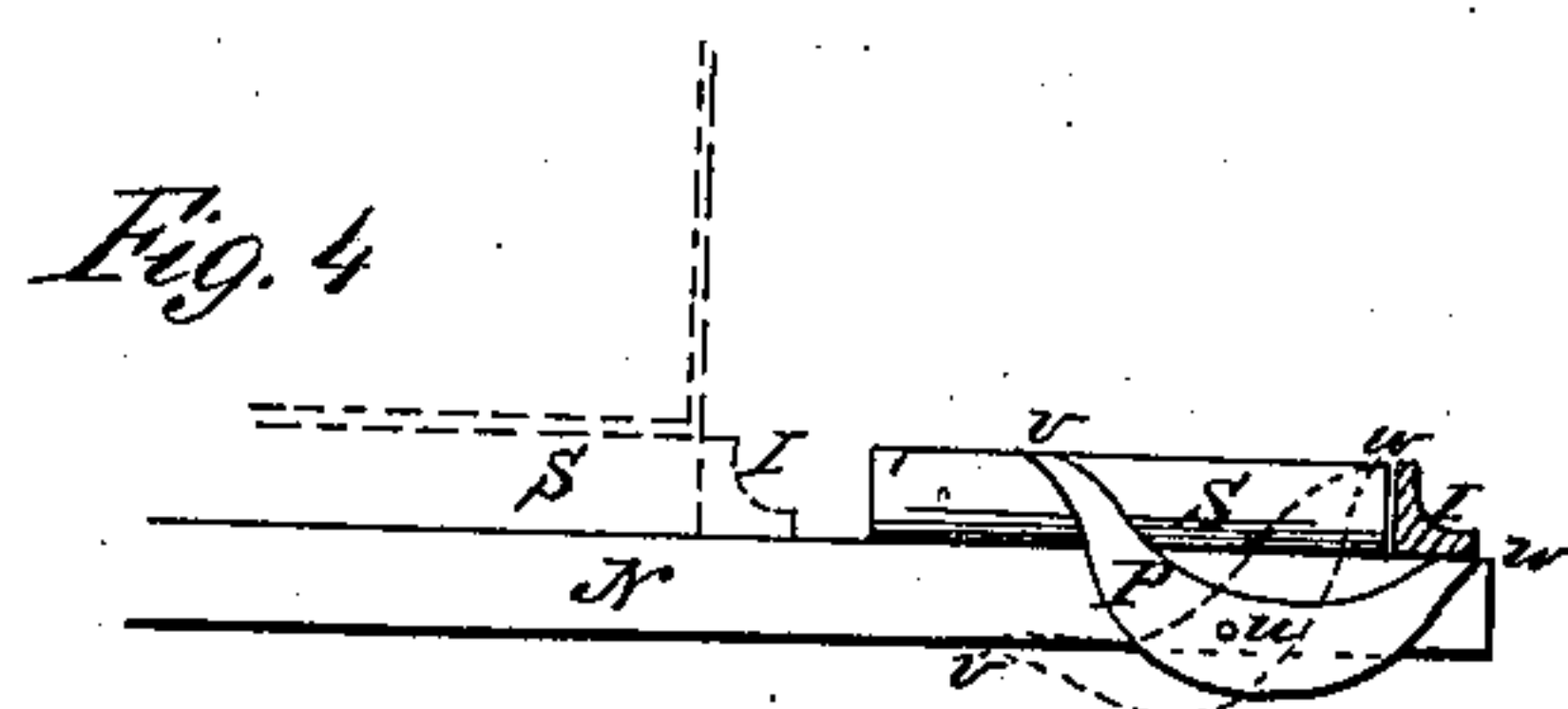
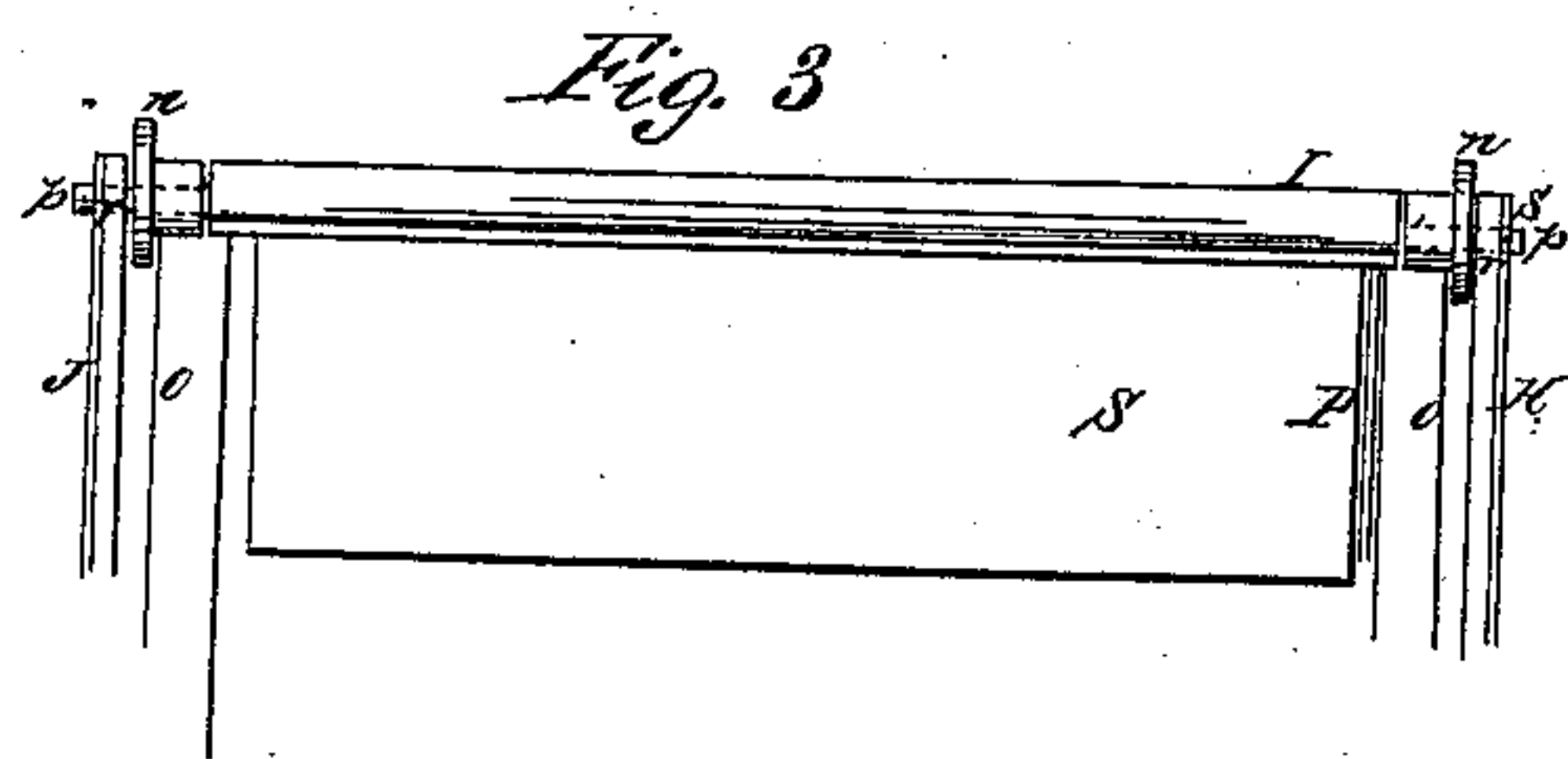
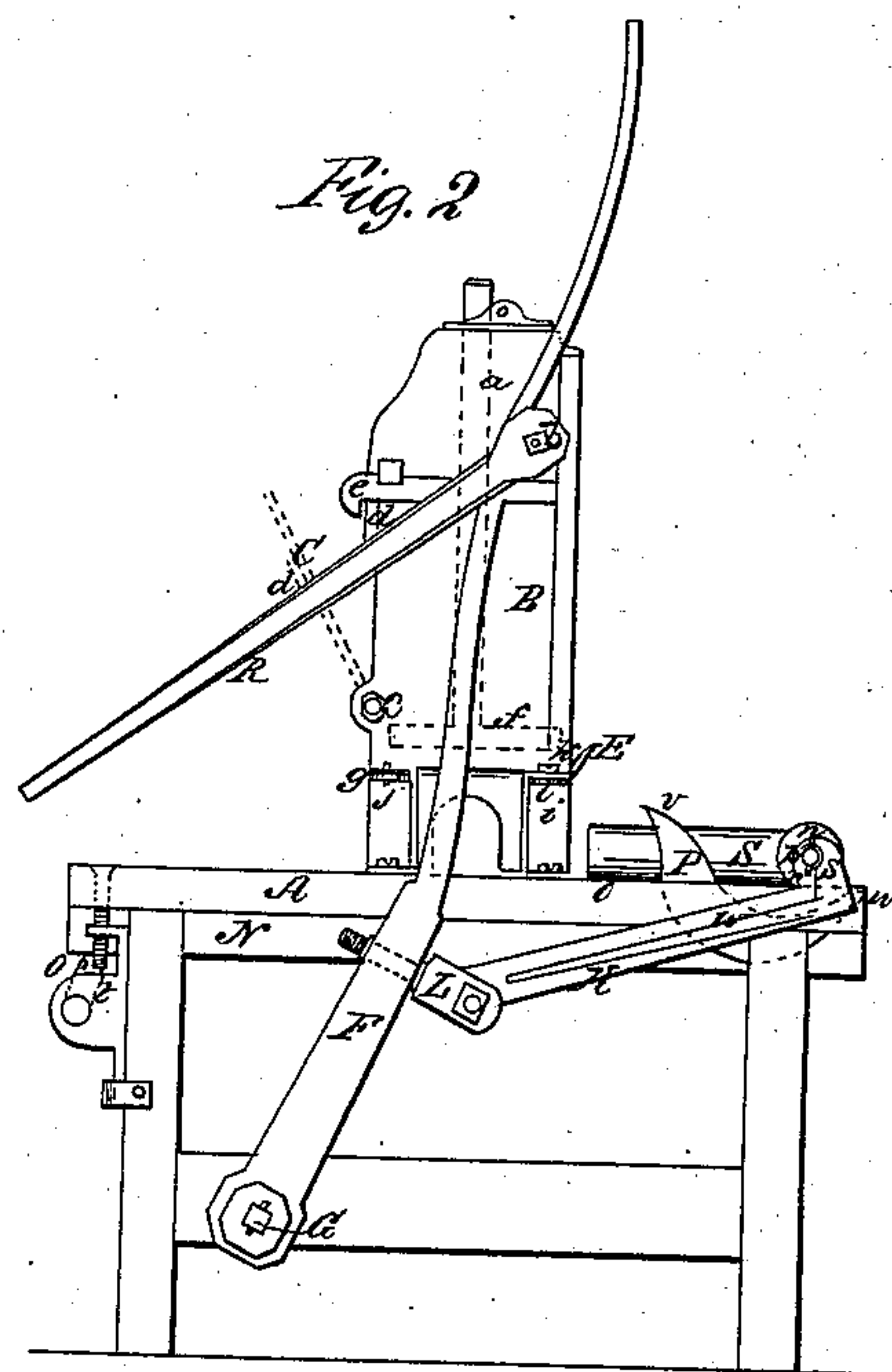
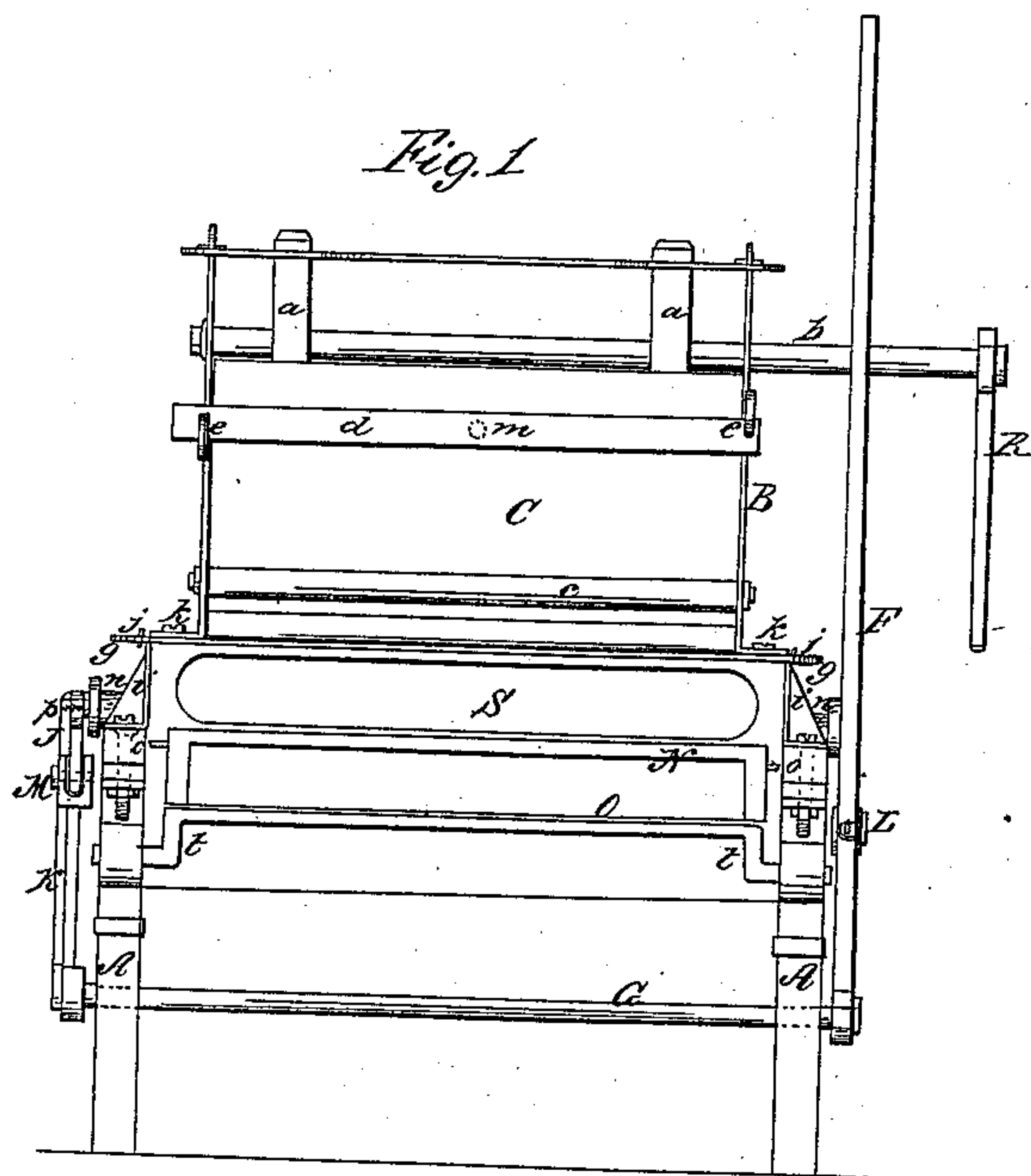


Brick Machine.

Brick Machine.

N^o 10,612.

Patented Mar. 7, 1854.



UNITED STATES PATENT OFFICE.

SEAMAN C. RIPLEY, OF NEW YORK, N. Y.

BRICK-MACHINE.

Specification of Letters Patent No. 10,612, dated March 7, 1854.

To all whom it may concern:

Be it known that I, SEAMAN C. RIPLEY, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Making Brick; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a front elevation of the machine. Fig. 2, is a side elevation of the same. Fig. 3, is a top view of the force-bar, by which the molds are forced underneath the box which contains the follower. Fig. 4, is a section, showing the operation of the mold gage. Fig. 5, is a top view of the grate or clod-cutter, at the bottom of the box which contains the follower. Fig. 6, is a transverse section of the force-bar. Fig. 7, is a section, in perspective, showing the manner in which the grate or clod-cutter, is secured to the box which contains the follower. Fig. 8, is a section, showing the operation of the eccentric bar.

Similar letters of reference indicate corresponding parts, in each of the several figures.

My invention consists in the employment or use of a gage constructed, arranged, and operating, as will be presently shown, by which gage, the molds may be properly adjusted upon the carriage, to be forced square under the clod-cutter.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, represents the frame of the machine, which frame may be constructed in any proper manner; and B, is a box placed on the frame, which box contains a follower, (f), see dotted lines in Fig. 2, operated by racks, (a), (a), and pinions, hung on a shaft, (b). The front of the box, B, is provided with a door, C, having a hinge or joint, (c), at its lower end, as seen in Fig. 1. The door, C, at its upper part, is provided with a swing-bar, (d), the ends of which, when the door is closed, fit in catches, (e), (e), attached to the ends or sides of the box. The bar, it will be seen, works in a pivot, (m); and, when in the position as seen in Fig. 1, the bar secures the door when closed.

D, is a grate or clod-cutter, placed at the bottom or lower end of the box, B. The

back part of the grate or clod-cutter is provided with a curved flange, E, (see Figs. 2 and 5,) which flange curves upward and outward from the box, B. The sides of the grate or clod-cutter, at its front end, have two projections, (g), (g) which fit in slots, (h), (h), cut in the supports, (i), (i), of the box, B, as seen in Fig. 7, in which figure, one of the projections is seen in its slot. A small pin, (j), passes through each projection, which pins prevent the front part of the grate or clod-cutter from moving laterally. The back part of the grate or clod-cutter is secured to the box, B, by bolts, (k), (k), which pass through the supports, (i), (i), and through the back of the grate or clod-cutter; see Figs. 5 and 7; the back part of the grate or clod-cutter having flanges, (l), (l), through which the bolts, (k), (k), pass. This grate or clod-cutter is constructed with the design to be readily removed from the box, B, for the purpose of substituting another, for a different kind of brick, cornice, tile, &c.

F, is a lever, the lower end of which is attached to a shaft, G, hung on the lower part of the frame, A. To this lever, F, there is attached a connecting-rod or arm, H; said rod, H, connecting a bar, I, with the lever, F; see Fig. 2. The bar, I, is placed transversely on the back of the upper part of the frame; and rollers, (n), (n), one at each end of the bar, rotate or work on the top side rails, (o), (o), of the frame, A. The opposite end of the bar, I, has also a connecting rod or arm, J, which is attached to a shank, K, (its movement corresponding with that of the lever, F,) the lower part of which shank is secured to the shaft, G; see Fig. 1.

The ends of the bar, I, (see Fig. 3,) have journals or gudgeons, (p), (p), which pass through the rollers, (n), (n); and the connecting-rods or arms, H, J, fit on these journals or gudgeons, and are secured on them by pins, (r), (r); one of these pins rests or bears against a shoulder, (s), placed at the end of the connecting rod or arm, H, whereby the bar is prevented from turning as it is operated, by the lever, F; a little play being allowed between the shoulder and pin, to permit the ends of the connecting-rods or arms to turn the requisite distance on the journals or gudgeons, as the lever, F, is operated.

The connecting rod or arm, H, is attached to the lever, F, by means of a screw socket,

L, (see Fig. 2,) by which the rod, H, may be lengthened or shortened, as desired; the object of this will be hereafter shown. The other connecting rod or arm, J, is represented as being attached to the shank, K, by an ordinary joint, M, not adjustable. There may, however, be a screw-socket employed for the purpose of attaching this rod, J, to its shank, K, if desired.

N, is the carriage-bed, on which the mold is placed. The back part of this carriage-bed may rest on the frame, A, in any proper manner. Directly under the front part of the carriage-bed, there is an eccentric or crank-bar, O, (see Fig. 1,) having a crank, (t), at each end. Now, when the crank-bar, O, is in the position as shown in Fig. 1, the carriage-bed, N, is elevated to its proper height; but, when the crank-bar is turned outward, the carriage-bed will be lowered, as will be seen by referring to Fig. 8, in which the red lines indicate the altered position.

P, is a gage, the precise shape of which is shown in Figs. 2, and 4; the gage is attached by a pivot, (u), to the inner side of one of the side rails, (o). The office of this gage is to allow the mold to be properly adjusted on the carriage-bed, N.

Operation: The clay of which the bricks are to be made, is properly tempered and placed in a tub or pug-mill, (not represented,) directly back of and adjoining the box, B. The back of the grate or clod-cutter, D, or rather the flange E, will project some distance into this tub; and the sweep-knives, as they rotate, will consequently force the clay into the box, B, and down upon the grate, because the sweep-knives are over the flange, E. Now, by operating the lever, R, which is attached to one end of the shaft, (b), the follower, (f), will be forced downward, and press the clay through the grate or clod-cutter, D, and into the mold, S, which is under the box, B, when the follower is depressed. The mold is forced under the box, B, by operating the lever, F, as will be readily seen, because the bar, I, is directly back of the mold; and this bar always bears upon the whole surface of the back of the mold, for, if it should ever get out of line, it is adjusted in line by operating the screw-socket, L; by screwing this socket in or out from the lever, F, the connecting rod or arm, H, will be lengthened or shortened, and consequently, the bar, I, be brought parallel with the back of the box, B, and mold, S. The bar, I, as it is operated, is prevented from turning in the rollers,

(n) (n), by means of the pin (r), bearing against the shoulder, (s); this will be fully understood by referring to Fig. 2; some play being allowed the pin, in order to compensate for the sweep of the connecting rods or arms, H, J. The bar, I, may be rectangular, or it should have one or two flat surfaces, (as shown in Fig. 6,) so that a flat surface may bear against the back of the mold. The gage, P, prevents the mold from being improperly placed upon the carriage-bed, N. When the mold is placed on the carriage-bed, its end is made to touch or bear against the gage, see Fig. 3; and when the mold is forced under the box, B, the bar, I, traverses over one of the points, (v), of the gage, and depresses it, and consequently, the opposite point, (w), is elevated, as shown in red lines in Fig. 4; this latter point, (w), is depressed, as the bar is forced backward, and the point, (v), is again elevated to its original position; thus, the gage is operated by the bar, I, as it is moved backward and forward. This is illustrated in Fig. 4; the red lines showing the position of the parts, when the mold is under the box, B. The door, C, is opened or let down, in order that any obstruction may be removed; in fact, the whole of the interior of the box, B, is exposed; and any improperly-tempered clay or other obstruction may be readily removed from the box, underneath the follower. The object in lowering the carriage-bed, N, is to allow the passage of stones, chips, or other obstructions that may catch between the lower part of the box, B, and the mold. By lowering the bed, N, the mold is also lowered, and the obstructions are allowed to pass out from under the box, B.

I do not claim broadly the use of a gage for guiding the molds in entering under the grating, as such a gage provided with a weighted lever for throwing it back to its place on the backward movement of the force bar, has been used in the machine of Collins B. Baker, patented March 26, 1850; but

What I do claim is—

Throwing the gage back to its place by means of a tail or cam or the equivalent thereof, upon which the force bar acts on its backward movement, substantially as herein described.

Dated in Washington, Feby. 16th, 1854.

SEAMAN C. RIPLY.

Witnesses:

S. H. WALES,
EFFINGHAM EMBREE.