

No. 642,028.

Patented Jan. 23, 1900.

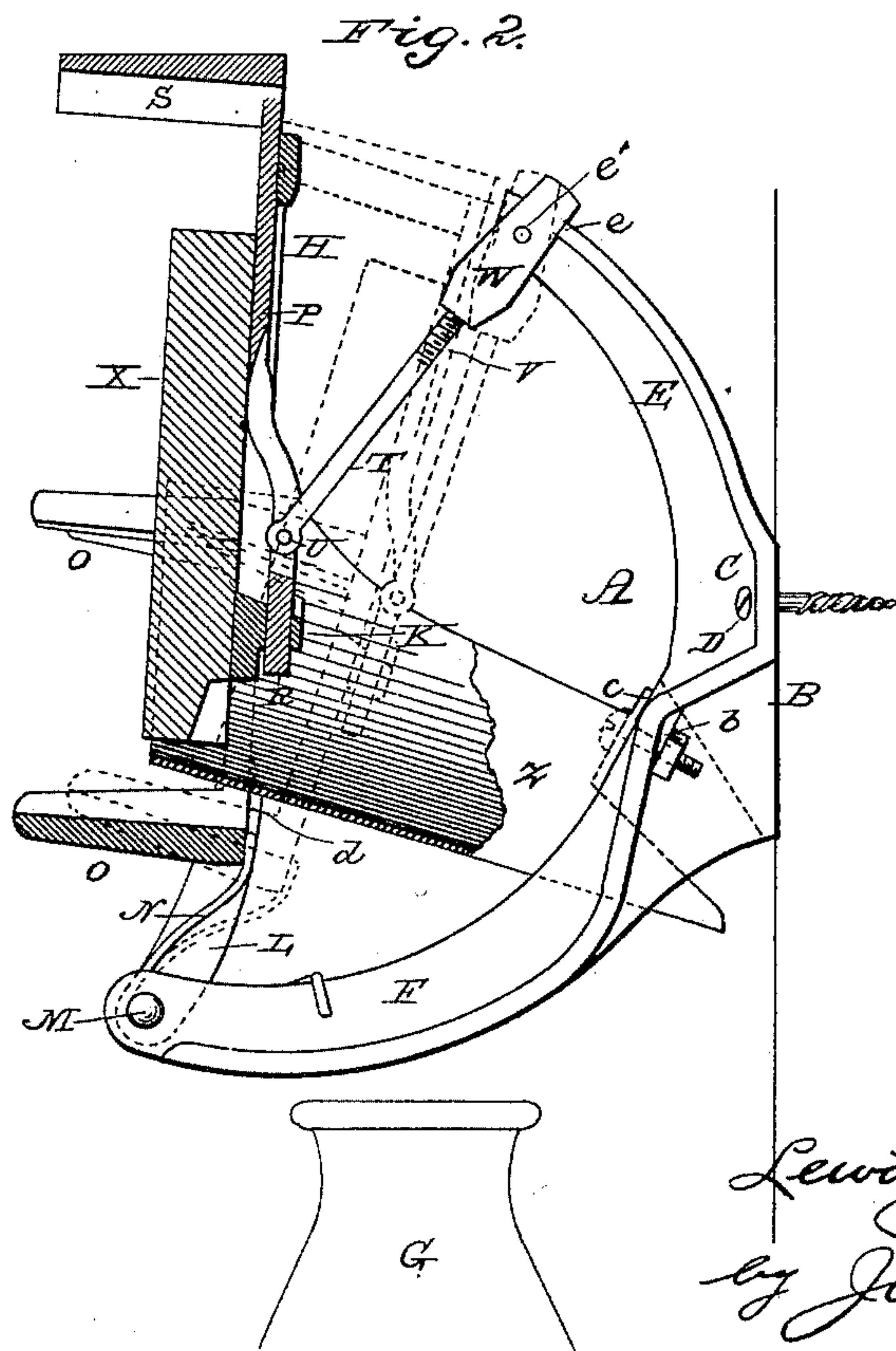
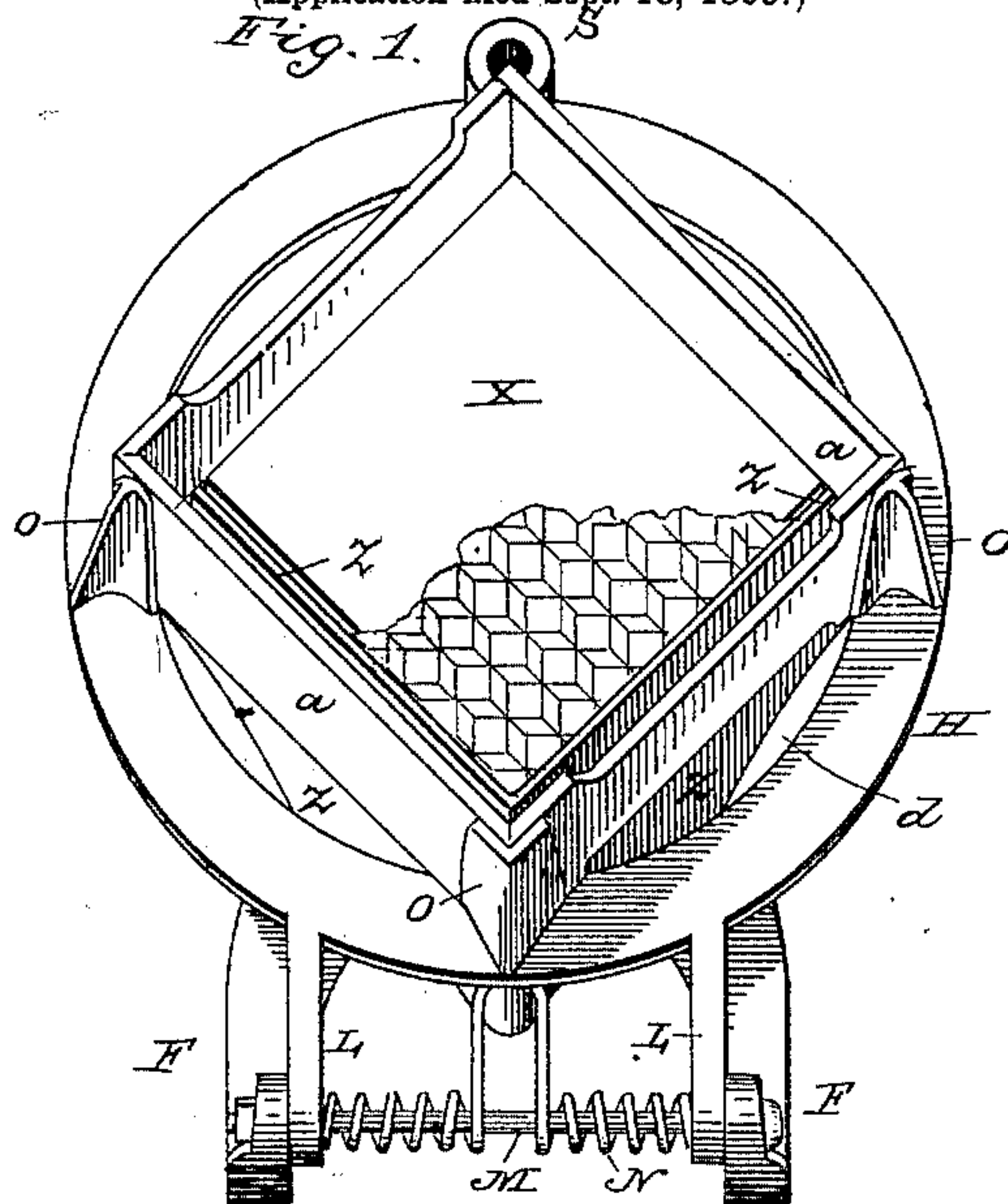
L. J. WHITNEY.

COMBINED SECTION CLOSER AND FOUNDATION FASTENER FOR HONEY SECTIONS OF BEEHIVES.

(Application filed Sept. 18, 1899.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2

Fig. 3.

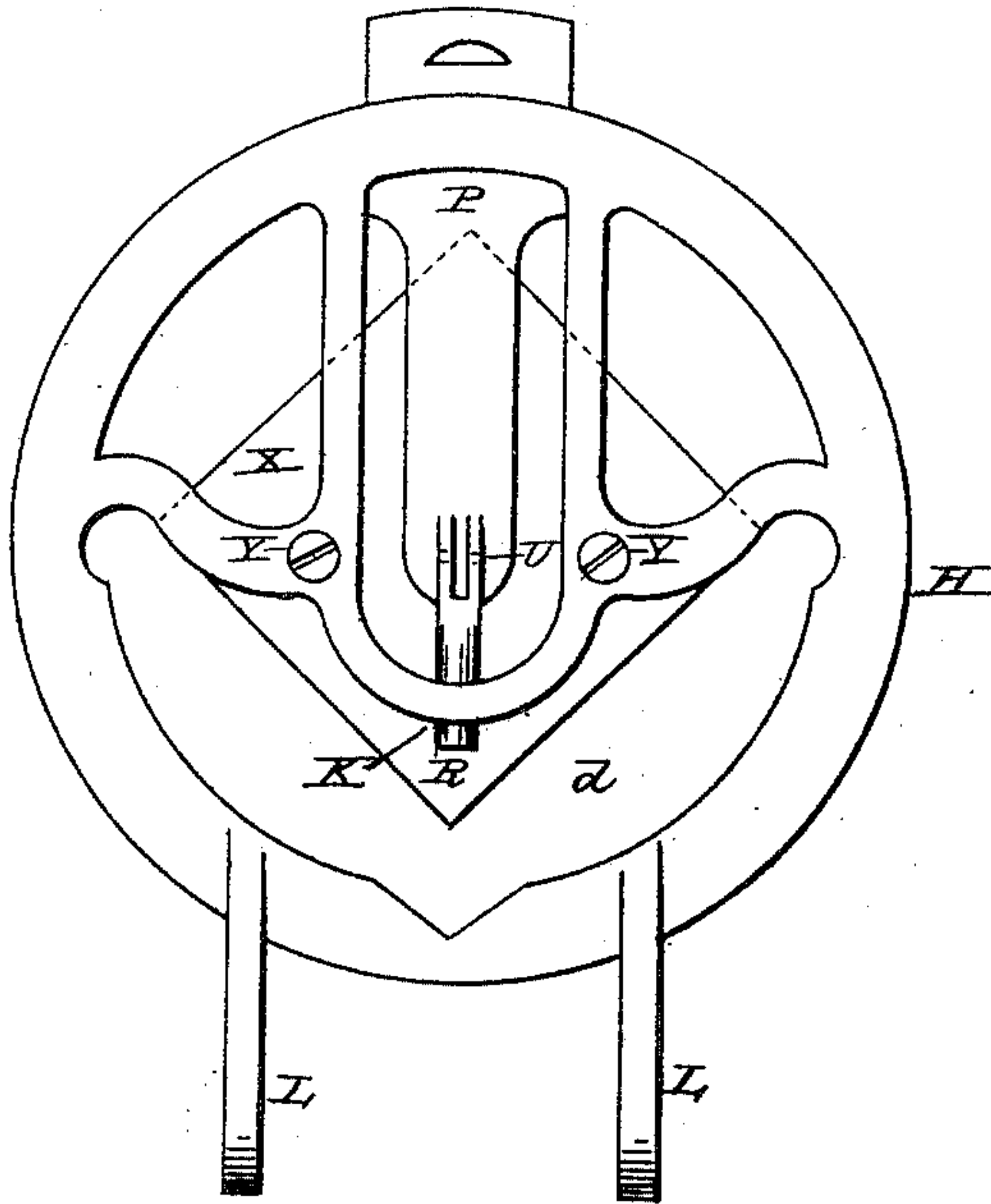


Fig. 4.

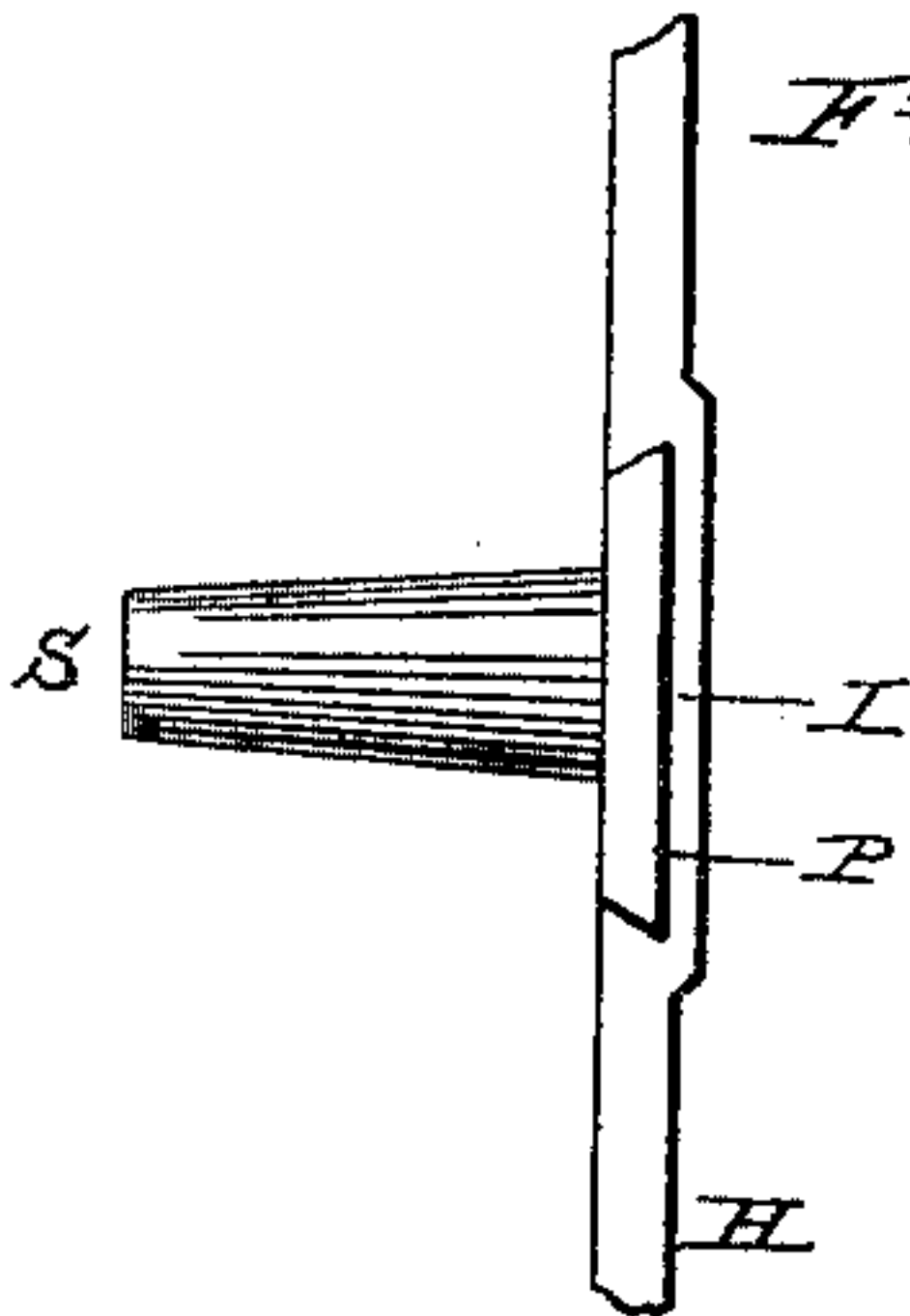
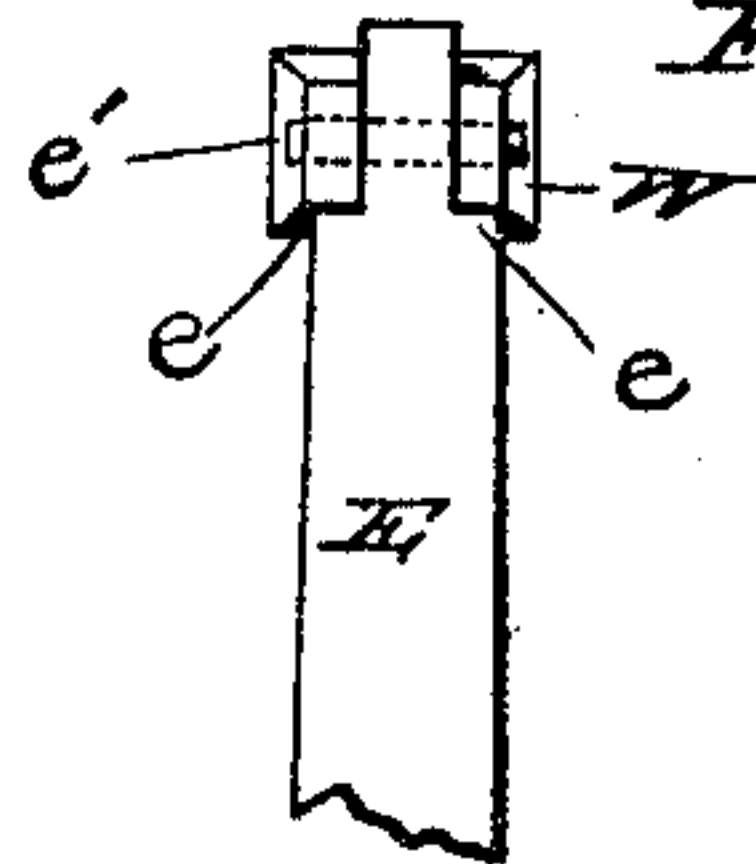


Fig. 5.



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UNITED STATES PATENT OFFICE.

LEWIS JOTHAM WHITNEY, OF MAPLETON, UTAH.

COMBINED SECTION-CLOSER AND FOUNDATION-FASTENER FOR HONEY-SECTIONS OF BEEHIVES.

SPECIFICATION forming part of Letters Patent No. 642,028, dated January 23, 1900.

Application filed September 16, 1899. Serial No. 730,757. (No model.)

To all whom it may concern:

Be it known that I, LEWIS JOTHAM WHITNEY, a citizen of the United States of America, and a resident of Mapleton, in the county of Utah and State of Utah, have invented a new and useful Improvement in a Combined Section-Closer and Foundation-Fastener for the Honey-Sections of Beehives, of which the following is a specification.

The object of my invention is to provide a cheap, simple, and efficient machine for closing together the dovetailed ends of the honey-sections of beehives, and for also simultaneously attaching the "foundations" of artificial honeycomb to the said sections as the latter are shaped and closed; and to these ends my invention consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front perspective view of my improved combined section-closer and foundation-fastener. Fig. 2 is partly an elevation and partly a vertical sectional view of the same. Fig. 3 is a detail rear elevation of the face-plate and the plunger. Fig. 4 is a detail edge view of the same, showing the plunger in the guideways formed in the face-plate. Fig. 5 is a detail rear view of the upper portion of the arm E of the frame and of the yoke of the pitman.

The frame A is made of suitable metal, is substantially semicircular in form, and comprises the central portion B, having the pair of ears or lugs C, with screw-holes D, the upper arm E, and the pair of forked or bifurcated lower arms F. By means of the ears and screw-holes the frame is adapted to be secured to any suitable vertical support or standard and at a suitable height above an ordinary lamp, which in the drawings is indicated as at G.

H represents the face-plate, which is preferably made of metal, is of open construction, and has a vertical guideway I arranged in its center near its upper side, and a guide-opening K at a suitable distance below its center. From the lower side of the face-plate depend a pair of ears or arms L, which are pivoted to the outer ends of the bifurcated arms F by means of a pivot-bolt M, which thus serves to establish a hinged connection

between the frame and the face-plate, as will be understood. A spring N is coiled on the pivot-bolt and bears against the lower side of the face-plate and the arms F and serves to move the face-plate normally forward from the frame. Standards O project from the face-plate at points corresponding to three of the corners of a honey-section a.

P represents a plunger which works in the guideway I and has a lower extension R, which works in the guide-opening K, and from the face of the plunger, at its upper end, projects a standard S, which when lowered is adapted to engage the ends of the strip of wood which is to be bent into form for a honey-section and to cause the dovetailed extremities thereof to be forced together, so as to complete the formation of the honey-section.

A pitman T has one end pivoted to the plunger, as at U, and the other end screw-threaded, as at V, and provided with a yoke W, which receives the threaded end of the pitman and is pivoted to the upper end of the arm E of the frame, as at e'. A block X, which is preferably made of wood, is secured to the center of the face-plate by screws Y, and is of suitable size and is square or lozenge-shaped.

A right-angled heater-plate Z is secured to the frame, as at b, by bolts which engage the upturned ears c of the heater-plate, and the front end of the plate extends through a suitable opening d in the face-plate. In operation this heater-plate, which is arranged above the lamp, has its temperature raised to a sufficient degree to melt beeswax.

The operation of my invention is as follows: The face-plate is normally moved forward from the frame by the spring and the plunger elevated by the pitman, so as to cause the standard S to be maintained at a suitable height above the block. A strip of wood, such as is now an article of commerce and prepared and adapted to be formed into a honey-section, is bent by the hands of the operator and placed on the face-plate, in engagement with the standards thereof and with its dovetailed ends under the standard of the plunger, which is caused to descend and engage said dovetailed ends and to unite them together by pressure when the face-plate is swung backward toward the frame, the stand-

ards maintaining the corners of the honey-section and causing the same to be formed into proper rectangular shape, as will be readily understood. As soon as the honey-section is thus formed and while the face-plate is pressed backward toward the frame the operator places on the block a foundation of artificial honeycomb, the lower edges of which melt immediately on coming into contact with the heater-plate, and, as will be understood, the honey-section is released by the upward movement of the plunger when the face-plate swings forward, and the block X moves the foundation forward until it clears the heater-plate, when the foundation then drops to the lower angle or corner of the honey-section, at a point midway between the front and rear edges thereof, the heater-plate being so proportioned in length, and the edges of the foundation being in a melted condition from contact with the heater-plate said foundation adheres to the honey-section when cooling in contact therewith and is thereby firmly attached thereto, whereupon the honey-section is removed from the machine and the operation of forming another honey-section and attaching another foundation then proceeds.

By providing the pitman with the screw-yoke the length of the pitman, and hence the "throw" of the plunger, can be regulated at will.

It will be observed by reference to the drawings that the point U, at which the pitman is connected to the plunger, is without the plane of the inner side of the face-plate, and that when the face-plate is swung backward to the frame and the plunger lowered by the pitman the latter lies at a slight angle within a direct line drawn from the pivot-rod M to the pivotal connection between the pitman and the upper arm of the frame, this position being indicated in dotted lines in Fig. 2, and thereby the pitman exerts a "dwell" upon the plunger and tends to hold the face-plate momentarily in the closed position, thus insuring the thorough uniting of the dovetailed ends of the honey-section before the face-plate is swung outward from the frame by the spring and the plunger released from its pressure upon the joint of the honey-section. It will also be observed that the arm E is provided with shoulders *e* below the pivotal point *e'* of the yoke W of the pitman and that the said yoke engages with the said shoulders when the face-plate is swung outward, and thereby the said shoulders form stops which effectually limit the outward movement of the face-plate.

Having thus described my invention, I claim—

1. In a combined section-closer and foundation-fastener, the combination of the frame, the heater-plate, the hinged face-plate con-

nected to the frame and having the standards, and the center block, the plunger working in guideways in the face-plate and having the standard S, and the pitman, connecting the plunger to the frame, for the purpose set forth, substantially as described.

2. In a combined section-closer and foundation-fastener, the frame comprising the central portion B, the upper arm E and the pair of lower arms F, the heater-plate secured to the frame, the hinged face-plate connected to the lower arms F and having standards O, the plunger in a guideway in the face-plate and having standards S, and the pivoted pitman connecting the plunger to the arm E, for the purpose set forth, substantially as described.

3. In a combined section-closer and foundation-fastener, the combination with the frame, the face-plate pivoted or hinged thereto, and having the guideways and standards, of the plunger in said guideways, and having the standard S, and the adjustable or extensible pitman, connecting the plunger to the frame, for the purpose set forth, substantially as described.

4. In a combined section-closer and foundation-fastener, the combination with the frame A and the pivoted face-plate H having the standards O, of the plunger having the standard S and in guideways in the face-plate and having the pivotal point U disposed at a distance without the plane of the inner side of the face-plate, and the pitman T connected to the pivotal point U and also pivotally connected to the frame A, whereby when the face-plate is at the inner limit of its movement, the said pitman will lie at an angle to and within a line between the pivotal connections of the face-plate and pitman, respectively, with the frame, for the purpose set forth, substantially as described.

5. In a combined section-closer and foundation-fastener, the combination of the frame A having the arm E, with stops *e*; the swinging face-plate pivoted to the frame having the standards O; the plunger having the standard S, and in guides in the face-plate; and the pitman pivoted to the arm E and connected to the plunger, said pitman being adapted to engage the stops *e*, and thereby limit the outward throw of the face-plate, substantially as described.

In testimony that I claim the foregoing I hereunto append my signature, at Mapleton, in the State of Utah, this 28th day of June, 1899, in the presence of two subscribing witnesses.

LEWIS JOTHAM WHITNEY.

Witnesses:

C. P. HUTCHINSON,
M. C. BUGHER.