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PATENTED MAY 5, 1908.

C. E. COX.

SECTION PRESS AND FOUNDATION SETTING MECHANISM.

APPLICATION FILED SEPT. 17, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

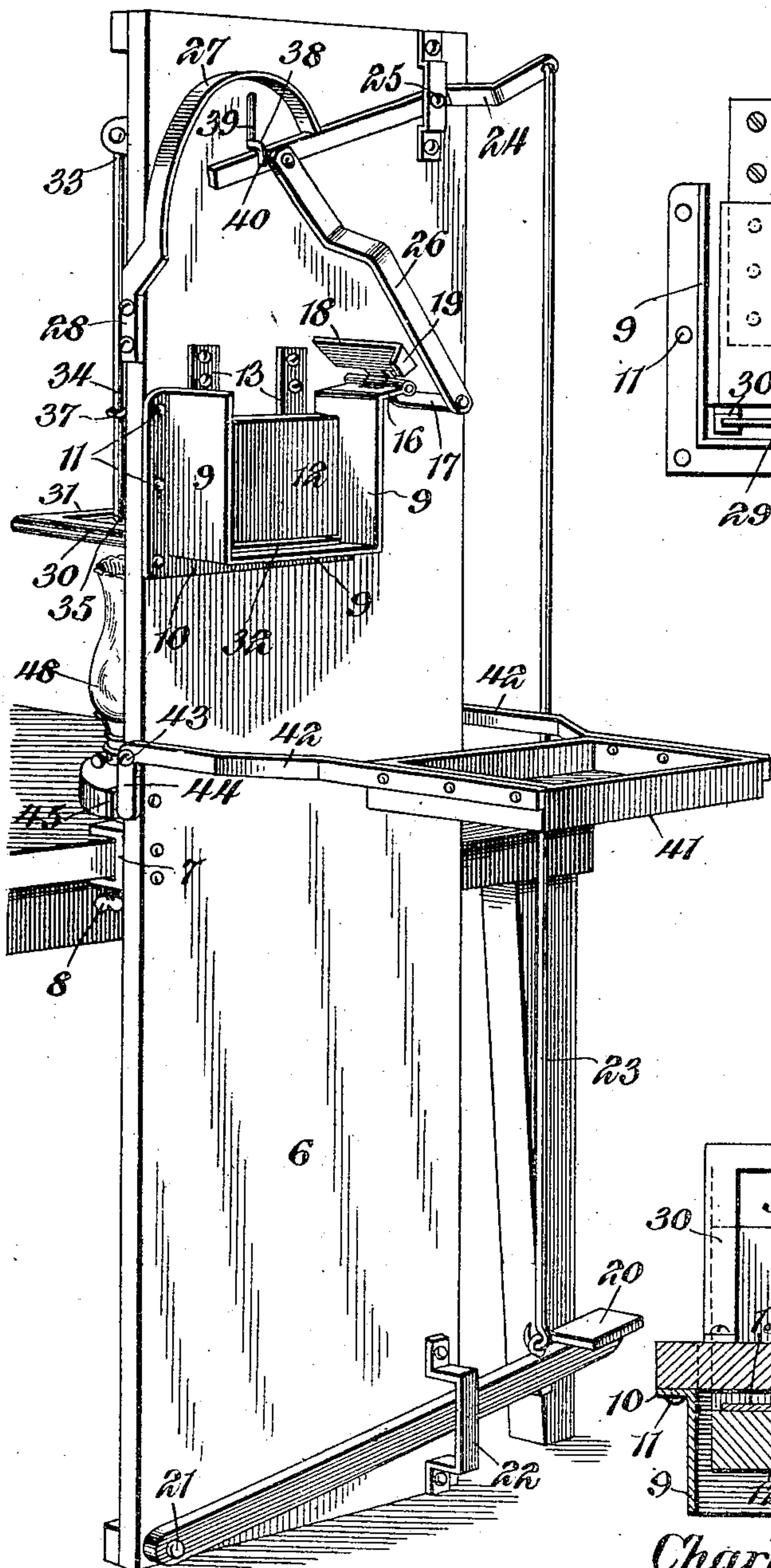


Fig. 4.

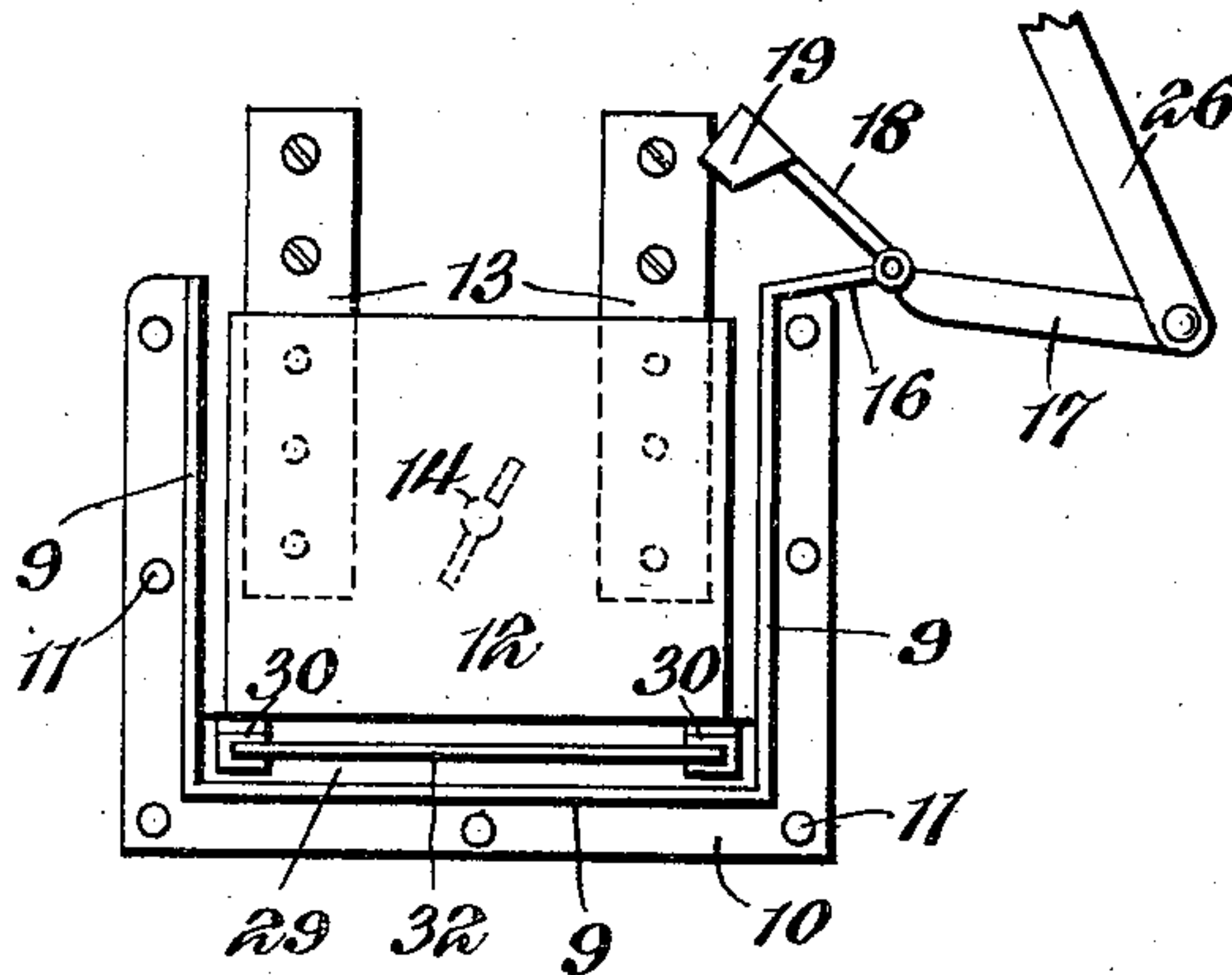
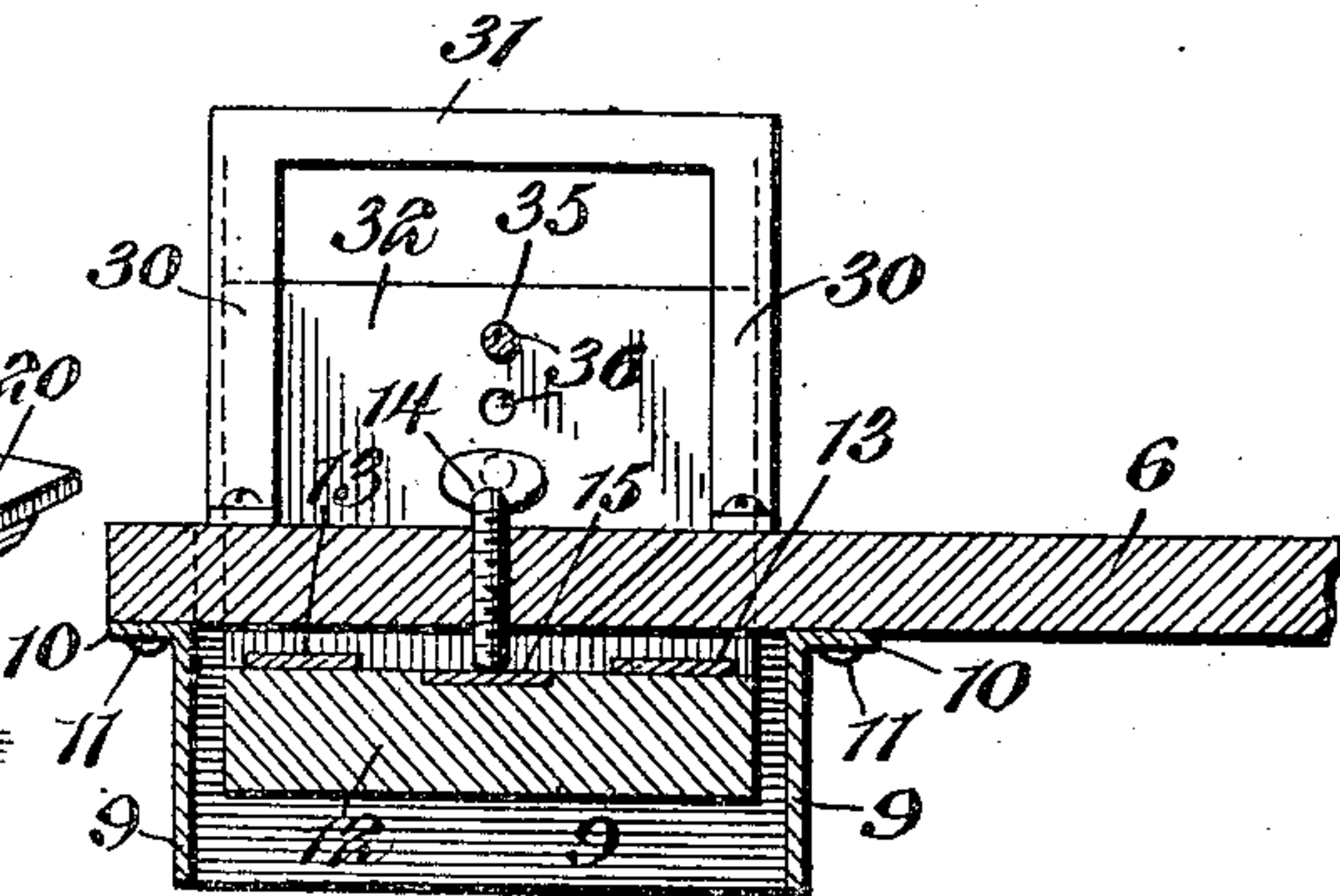


Fig. 5.



Witnesses

Howard D. Carr.

W. J. Felt.

Charles E. Cox, Inventor,

By

E. J. Siggers.

Attorney

No. 886,581.

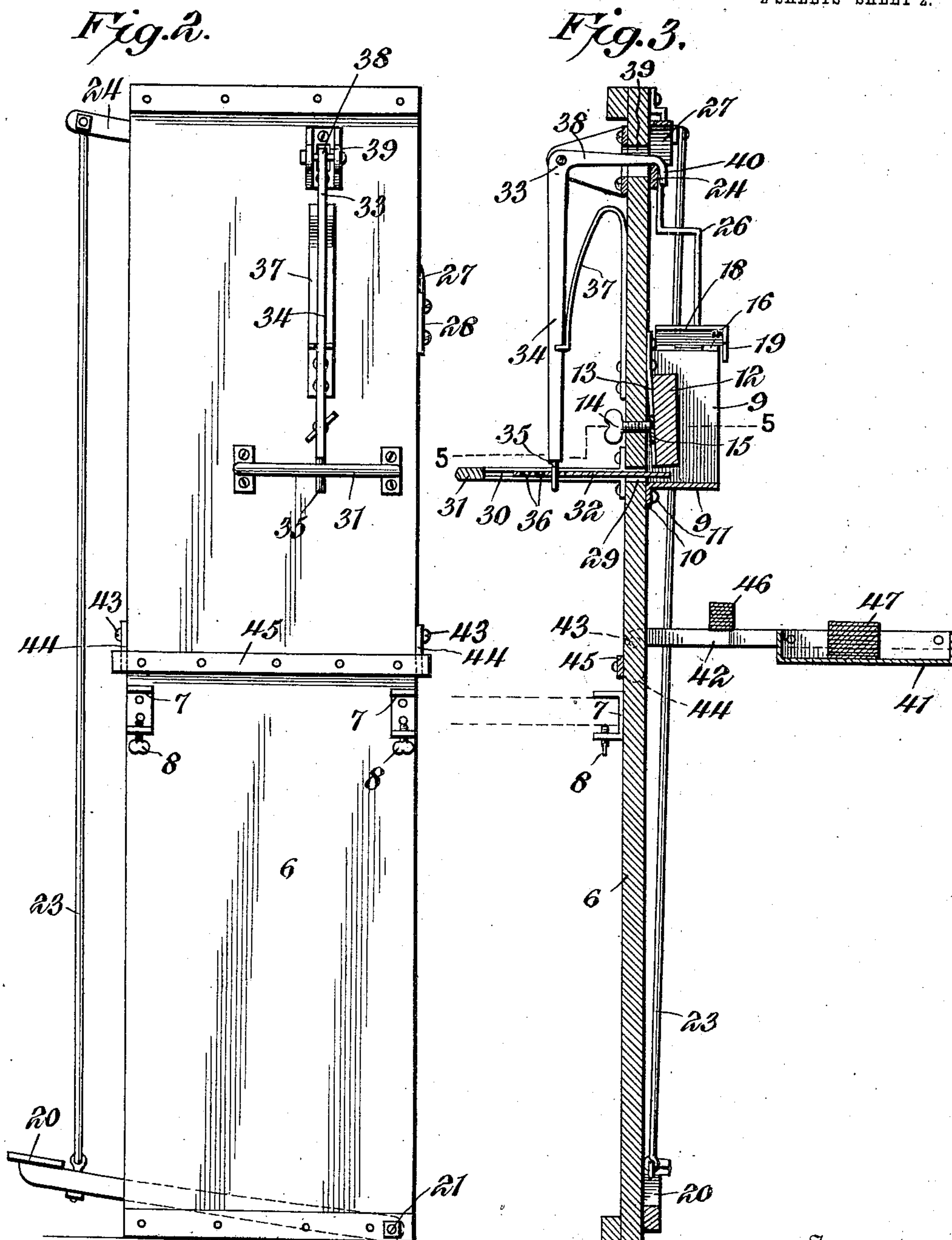
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2 SHEETS—SHEET 2.



Witnesses

Howard D. Cox.

[Signature]

Charles E. Cox, Inventor,

By

[Signature]

Attorney

UNITED STATES PATENT OFFICE.

CHARLES E. COX, OF MERRILL, OREGON.

SECTION-PRESS AND FOUNDATION-SETTING MECHANISM.

No. 886,581.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed September 17, 1907. Serial No. 393,264.

To all whom it may concern:

Be it known that I, CHARLES E. COX, a citizen of the United States, residing at Merrill, in the county of Klamath and State of Oregon, have invented a new and useful Section-Press and Foundation-Setting Mechanism, of which the following is a specification.

The present invention relates to means for preparing honey holding section boxes for use in bee hive supers, and the principal object is to provide novel, simple, and effective means whereby the joints of the section boxes can be pressed together and the foundation applied to said boxes.

The preferred form of construction is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the apparatus. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical sectional view thereof. Fig. 4 is a front elevation of a portion of the mechanism. Fig. 5 is a detail sectional view on the line 5—5 of Fig. 3. Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated a support is employed which is preferably a board that is provided on its rear side with brackets 7 which will embrace the edge of a table top, as shown in Figs. 1 and 3, and to which said brackets may be secured by set screws 8. Secured to the outer side of the support is a section holding frame comprising angularly disposed walls 9 having flanges 10 at their inner margins, which flanges lie flat against the outer face of the support and are fastened thereto, as shown at 11. The upper side of this holder is open and within it is placed an adjustable foundation gage comprising a tapered block 12 suspended from the support by yielding links 13 and having an adjusting and holding screw 14 bearing against its rear side. This screw, as shown in Figs. 3 and 5, is threaded through the support and preferably bears against a wear plate 15 carried by the rear face of the gage block.

One of the upright walls 9 of the section holding frame has at its upper end an upstanding ear 16, and fulcrumed between its ends on said ear is a pressing lever 17 having at its inner end a section-engaging plate 18 that is provided with a depending flange 19. A treadle 20 pivoted, as shown at 21, to the

lower end of the support, has its movement limited by a guide and stop yoke 22, and has a link connection 23 with the outer end of a lever 24 fulcrumed between its ends, as shown at 25, upon the upper end of the support. The inner arm of the lever 24 has a link connection 26 with the outer end of the pressing lever 17. A bowed spring 27 secured, as shown at 28, to one edge of the support, has its free end bearing upon the inner arm of the lever 24, thus serving to normally maintain the section-engaging plate 18 and the treadle 20 elevated.

The support is provided with a transverse slot 29 that opens into the lower portion of the section holder 9 below the gage block 12. Secured to the rear of the support in line with the slot 29 are spaced tracks or guides 30 connected at their rear ends by a cross-piece 31. A reciprocatory heating plate 32 slidably mounted in the tracks or guides 30 is movable through the slot 29 beneath the gage-plate 12, and into projecting relation with the lower portion of the section holding frame 9. The reciprocation of the heating plate 32 is secured by means of a bell crank 33 having a depending arm 34 terminating in a stem 35 that can be engaged in any one of a plurality of openings 36 formed in the rear portion of the heating plate. It will be observed that this arm is movable longitudinally of the path of movement of the plate, and a spring 37 secured to the support and bearing against the arm serves to yieldingly maintain the plate in its rearmost position. The other arm 38 of the bell crank projects forwardly through the opening 39 in the upper end of the support and extends across and above the inner arm of the lever 24, being provided with a depending terminal 40 disposed outside the lever. A shallow tray 41 is located in advance of the support and spaced arms 42, secured to the ends of the tray, have pivotal connections 43 with the opposite edges of the support, said arms terminating at their ends in downturned fingers 44. A cross-bar 45 secured to the rear side of the support extends beyond the same and its ends are thus disposed in the path of movement of the fingers 44.

In using the apparatus, the support is first clamped to a table or other suitable device, the tray is disposed in horizontal position, the section blanks 46 having their joints properly moistened are placed upon the arms 42, and the foundation, shown at 47, is placed

in the tray 41. A lighted lamp 48 of ordinary construction is located upon the table in rear of the support and beneath the heating plate 32.

5 The operation of the mechanism is substantially as follows: An operator seated or standing in front of the machine, takes one of the section blanks 46 from the pile, bends it to approximate shape, and places it in the
10 holder 9 with the open joint beneath the plate 18. He then depresses the treadle 20, whereupon the plate 18 will be moved downwardly and the joint closed. At the same time, the inner arm of the lever 24, striking
15 the outstanding arm 38 of the bell crank 33, will cause the depending arm 34 of said bell crank to move outwardly and the plate 32 will be correspondingly moved so that its outer end will project beyond the front face
20 of the gage block 12. A sheet or strip of foundation is now taken from the tray, placed against the outer face of the gage block, which has been properly adjusted, so that the foundation will be in line with the
25 center of the section, and said foundation is moved downwardly until its lower edge rests upon the projecting end of the heating plate. Said edge will, as a consequence, be melted. Immediately the operator releases the treadle,
30 the springs 27 and 37 will act to raise the plate 18 and move the plate 32 rearwardly until its front edge is behind the plane of the front face of the block 12. The foundation is now slipped quickly downwardly until the
35 melted edge engages the center of the section wall below it, and the wax cooling quickly, will adhere thereto. The section is removed, reversed, and placed on edge, and the operation is repeated.

40 It is thought that from the foregoing, the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape,
45 proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

50 Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In a machine of the character described, the combination with a support, of a section
55 holding frame outstanding from the support and having an open end, a swinging pressing device pivotally mounted on the end of the frame at one side of the open end, and means connected to the device for swinging the same.

60 2. In a machine of the character described, the combination with a section holding frame comprising angularly disposed walls, of a foundation gage located within the frame, a swinging pressing device comprising a lever
65 pivoted between its ends upon one of the

walls, the inner end of said lever having a section engaging plate, and means connected to the outer end for swinging the lever.

3. In a machine of the character described, the combination with a foundation gage, of a
70 heating element having a reciprocatory movement at one side of the gage, a lever engaged with the element and having its path of movement longitudinally of the path of movement of said element, and means
75 for operating the lever to swing it toward and from the foundation gage.

4. In a machine of the character described, the combination with a support, of a foundation
80 gage mounted on the support, a heating plate having a reciprocatory movement beneath the gage, a lever fulcrumed between its ends on the support and having a swinging movement longitudinally of the path of
85 movement of said element and toward and from the gage, one end of the lever being connected to the plate, and operating means engaging the other end of the lever.

5. In a machine of the character described, the combination with a support, of a foundation
90 gage mounted on the support, a reciprocatory heating plate operating beneath the gage, a bell crank lever comprising angularly disposed arms fulcrumed on the support and having a path of movement longitudinally
95 of the path of movement of the heating plate, one arm of said bell crank being engaged with the plate, and operating means including a lever having a path of movement that intersects the other arm of the bell crank.
100

6. In a machine of the character described, the combination with a support, of a section
105 holder mounted thereon, a section pressing device associated with the holder, means for moving the pressing device including a lever, a foundation heating plate, and a bell crank lever having one arm engaged with the plate and having its other arm disposed in the path of movement of the lever.

7. In a machine of the character described,
110 the combination with a support, of a section holding frame including angularly disposed walls mounted on the support, a pressing lever fulcrumed between its ends on one of the walls, a treadle, an actuating lever connected
115 to the treadle and having a link connection with the pressing lever, an adjustable foundation gage located within the section holding frame, guides carried by the support, a reciprocatory heating plate mounted in the
120 guides and movable beneath the gage, a bell crank lever having one arm engaged with the heating plate and the other arm disposed in the path of movement of the actuating lever, and a spring for resisting the downward
125 movement of the treadle.

8. In a machine of the character described, the combination with a support, of a section
holder and foundation gage mounted on the support, section pressing and foundation
130

heating means cooperating with the section holder, operating mechanism for the pressing and heating means, a foundation holding tray located in advance of the support, and
5 spaced section-blank supporting arms secured to the tray and to the support.

9. In a machine of the character described, the combination with a support, of a section holder and foundation gage mounted on the
10 support, section pressing and foundation heating means cooperating with the section holder, operating mechanism for the pressing and heating means, a foundation holding

tray located in advance of the support, spaced section-blank holding arms secured to 15 the tray and pivoted to the support, and means for limiting the downward movement of the arms.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature 20 in the presence of two witnesses.

CHARLES E. COX.

Witnesses:

A. R. TENBROOK,
D. W. Cox.