

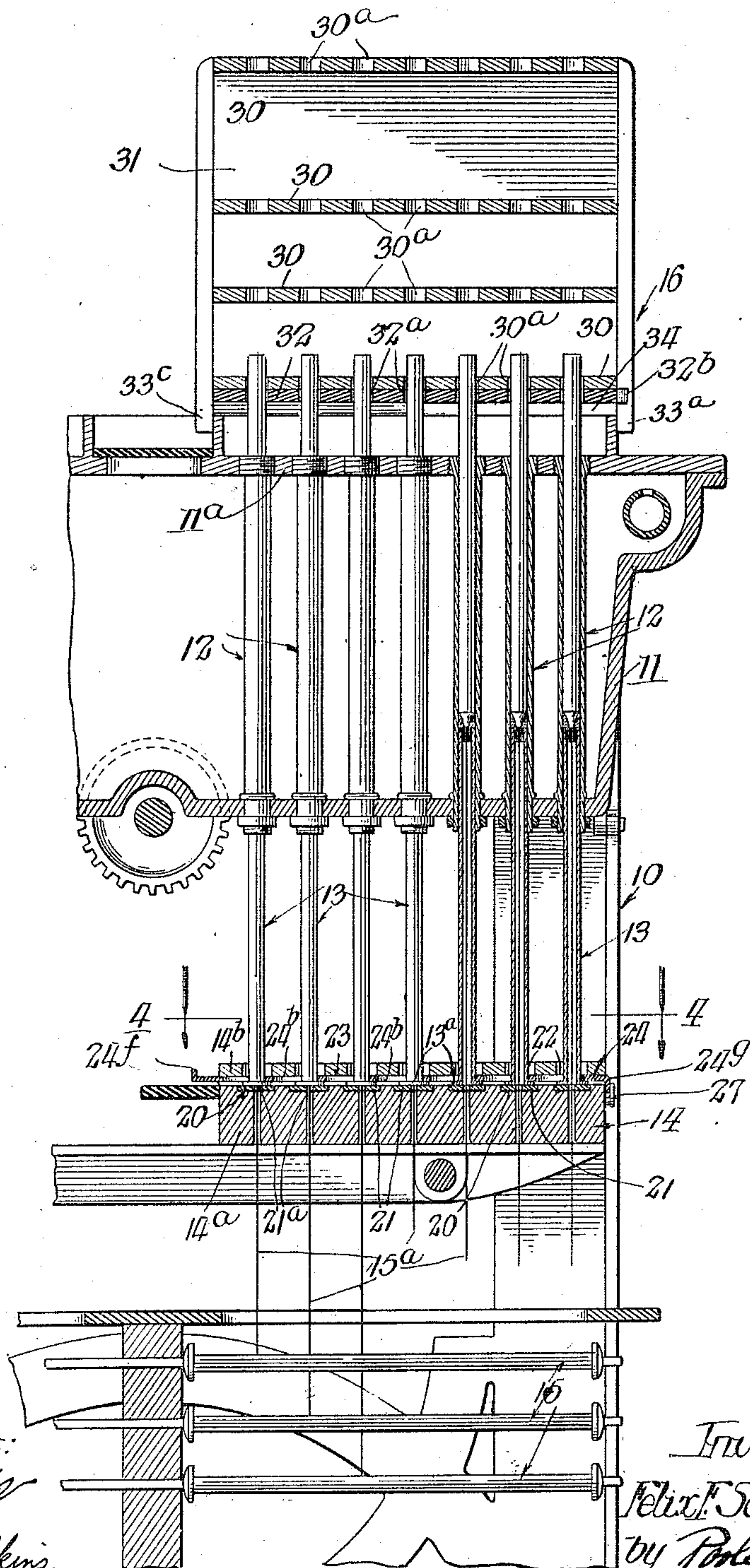
F. F. SCHMITT, DEC'D.
 O. SCHMITT, EXECUTRIX.
 CANDLE MOLDING MACHINE.
 APPLICATION FILED OCT. 20, 1910.

995,378.

Patented June 13, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2

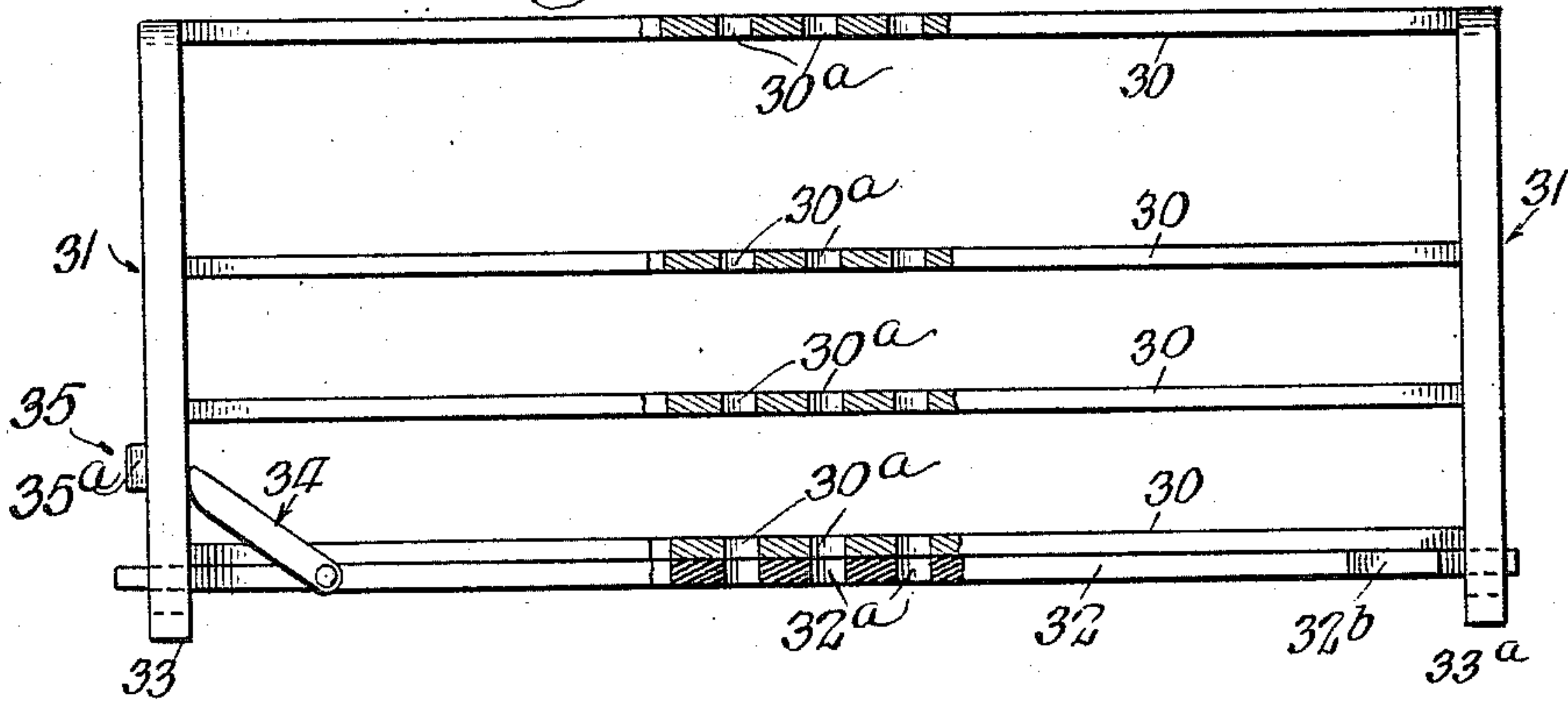


Fig. 3

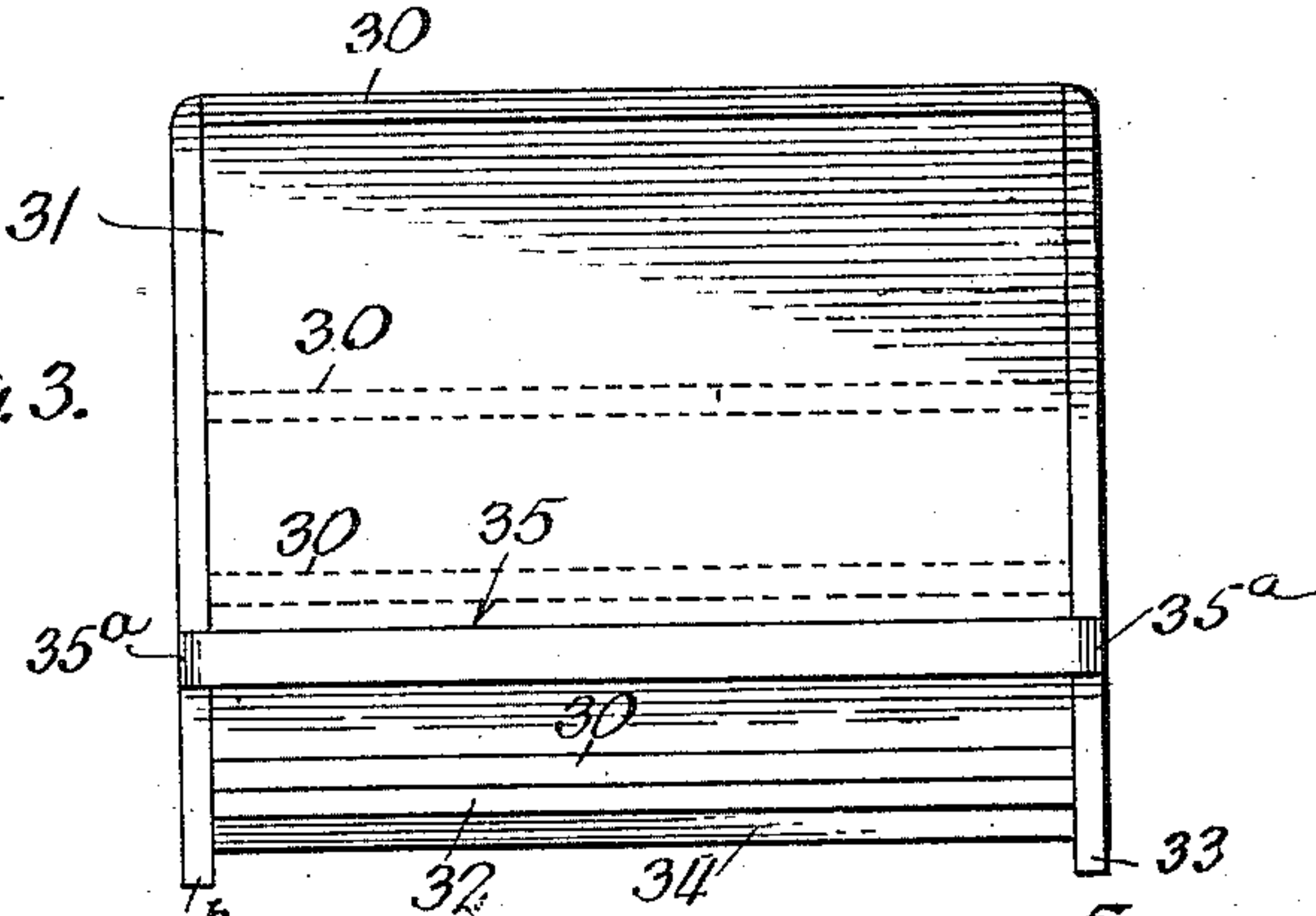


Fig. 4

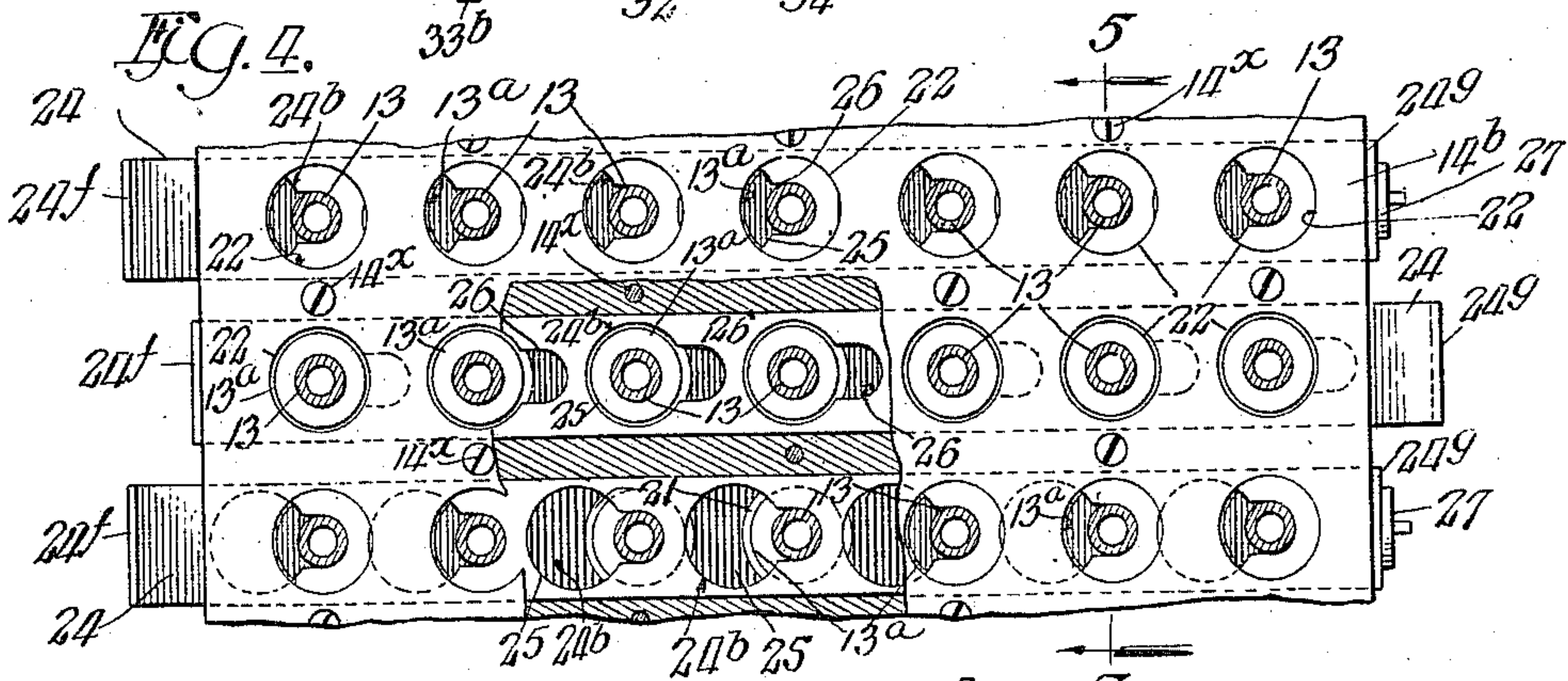
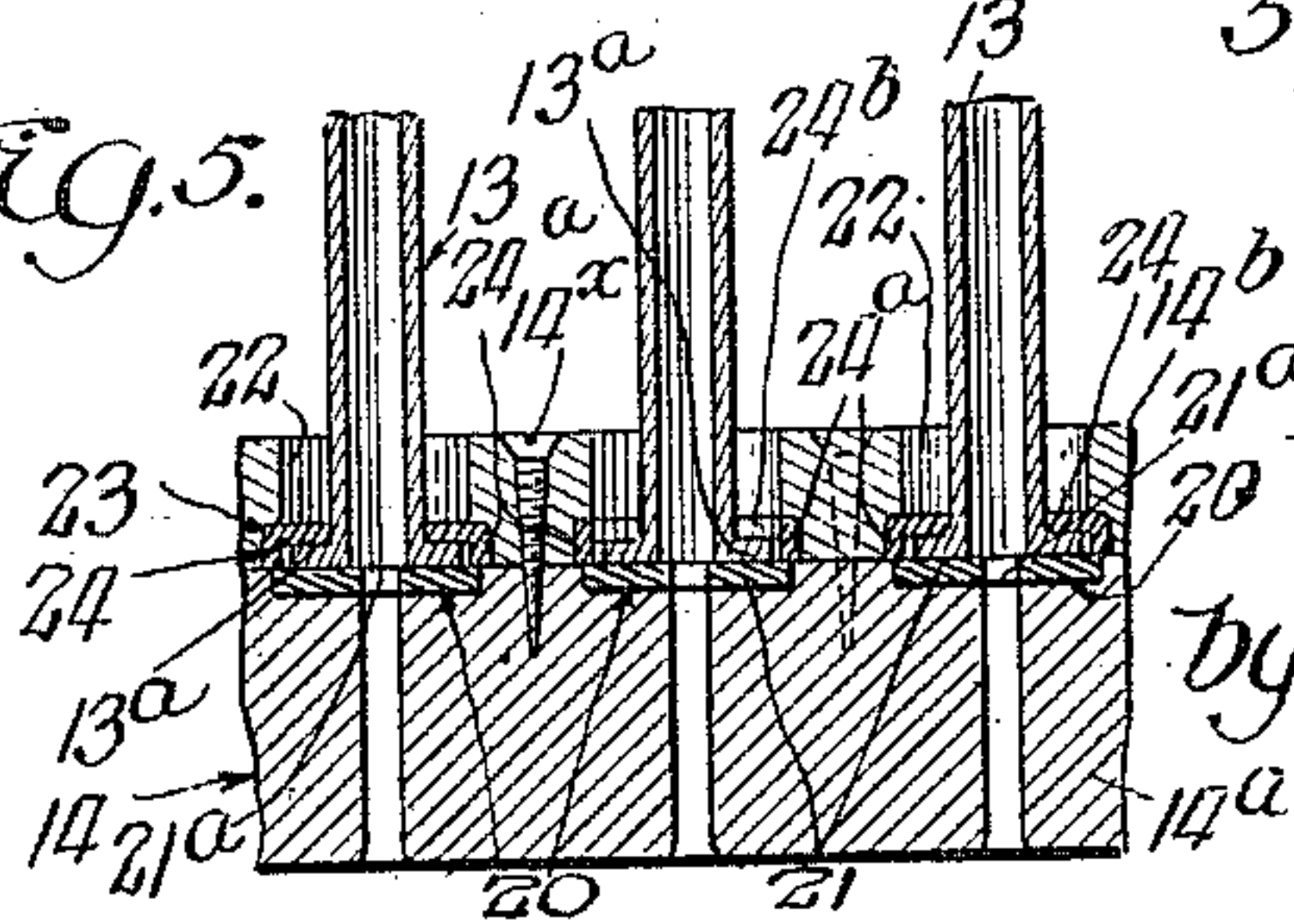


Fig. 5



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UNITED STATES PATENT OFFICE.

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CANDLE-MOLDING MACHINE.

995,378.

Specification of Letters Patent. Patented June 13, 1911.

Application filed October 20, 1910. Serial No. 588,085.

To all whom it may concern:

Be it known that I, FELIX F. SCHMITT, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Candle-Molding Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain novel features of construction in candle making machines and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a vertical sectional view through a candle making machine provided with my improvements. Fig. 2 is a side elevation of one of the racks for receiving the candles after they are finished, said view being partially in vertical section. Fig. 3 is an end elevation of said rack. Fig. 4 is a transverse section through Fig. 1 on the line 4—4 of Fig. 1. Fig. 5 is a cross-section through Fig. 4 on the line 5—5 of Fig. 4.

In the drawings 10 indicates the frame of the machine; 11, the water-cooling tank; 12, the vertically arranged, tubular molds supported in said tank in parallel rows and opening through the top wall 11^a of said tank; and 13, the tubular pistons or plungers which engage within the tubular molds 12. Said plungers have conical recesses at their upper ends to form the tip of the candle and act as the bottom of the mold when the melted stock is poured in, and when the stock has hardened, said plungers are adapted to expel the formed candles from the molds.

14 indicates the follower or cross-bar which supports and operates said plungers.

15 indicates the spools or bobbins containing the wicks 15^a to be fed to the molds, and 16, the rack located above the molds and adapted to receive the candles after they have been formed and delivered from the molds.

The main features of construction of the machine thus far referred to are substan-

tially as usual and form no part of the invention.

The plungers 13 are secured to the follower or cross-head as follows: Each plunger 13 is provided at its base with an annular flange 13^a. The cross-head 14 comprises a base-board 14^a and a top board 14^b which are secured together by means of screws 14^x. The base-board 14^a is provided on its surface with a plurality of recesses 20, one for each plunger 13 in which are located disks 21 against which the lower flanged ends of the plungers rest. Said disks are used to prevent the plungers from wearing the base-board, and are provided with central apertures 21^a through which the wicks 15^a pass into the plungers 13. In the upper board 14^b are formed a plurality of apertures 22, one for each plunger, which are slightly larger in diameter than the flanges 13^a at the lower ends of said plungers. The top board 14^b has on its under surface a plurality of parallel, longitudinal grooves 23, a groove being located under each longitudinal row of plungers, in which are slidably mounted plates 24. Each plate 24 has depending lateral flanges or ribs 24^a, 24^a which are adapted to embrace the edges of the flanges 13^a of the plungers. In the plate 24 are formed a series of elongated apertures 24^b which have a part 25 of diameter larger than the flanges 13^a of the plungers, and a part 26 which is of a diameter slightly larger than the diameter of the plungers 13.

The plates 24 are normally in a position such that the plunger rods extend through the smaller parts 26 of the apertures 24^b. In this position said plates engage against the tops of the flanges 13^a of the plungers and lock the plungers in position (see Fig. 4). When said plates are drawn to the right as, for example when they are in the position of the middle plate shown in Fig. 4, the part 25 of the apertures 24^b are brought above the flanges 13^a of the plunger rods, so that the plunger rods may be raised from the baseboard 14, their flanges passing through the parts 25 of the apertures 24^b in the plates 24 and through the apertures 22 in the upper board 14^b.

It is apparent that by reason of this con-

struction, when it is desired to remove one of the plunger rods for repair, or in order to replace it by another one, it is only necessary to withdraw the plate 24 of the particular row in which said plunger stands until the larger parts 25 of the apertures 24^b come above the flanges of the plunger rod whereupon the particular plunger rod that is to be removed may be withdrawn without disturbing the plungers in the other rows. The slide plates 24 are provided at their opposite ends with flanges or stops 24^f, 24^g adapted to engage the ends of the cross-head and limit the movement of said slide in either direction. In order to retain said slide in its closed position with the plungers locked in place, I provide a button 27 which engages against the flange 24^g. The location of the flange 24^f with reference to the flange 24^g is such that the flange 24^f will strike its associated end of the cross-head when the larger parts 25 of the apertures 24^b come to register above the flanges 13^a of the plunger rods.

Referring now to the rack 16, said rack comprises a series of horizontal, vertically spaced boards 30, as shown in the drawings four in number (see Fig. 2), vertically arranged end boards 31, and upright corner posts 33, 33^a, 33^b, 33^c. Each board 30 is provided with a plurality of apertures 30^a arranged in horizontal rows to correspond with the rows of molds 12. Corresponding apertures 30^a in the several boards are located vertically in line above an associated mold, so that when the candles are pushed upwardly by the plungers they will pass up through the vertical rows of apertures 30^a above them. Below the lowest board 30 of the rack is slidably mounted a base-board 32 which has apertures 32^a to correspond with, and normally registering with, the apertures 30^a in said lowest board. The base-board 32 is supported on cross-bars 34 which are secured between the end posts below the lowest board 30. A stop lug 32^b is located on one edge of the base-board 32 and is adapted to engage against the end post 31^a, when said board is moved to the right to support the candles in the usual manner. Said board is held in this position by a swinging gravity latch 34 pivotally connected to the edge of said base-board near its opposite end and engaging against the vertical face of the corner post 33 at that end. The construction and arrangement of the rack is thus far as usual. In the continuous use of the rack the operation of the latch against the corner post 33 tends in time to loosen said corner post and destroy its rigid connection with the rack. To brace the post against this action of the latch I provide a cross-bar 35 which is secured to the end board 31 and has an end

35^a projecting laterally beyond said board so as to engage against that face of the corner post 33 which is opposite the face engaged by the latch 34. This cross-bar thus opposes the action of the latch and prevents the corner post engaged thereby from losing its rigid connection with the rack under the action of the latch.

I claim as my invention:—

1. In a candle making machine, in combination with the fixed tubular molds arranged in parallel, horizontal rows, plungers working in said molds, said plungers having lateral flanges at their lower ends, a cross-head to which said plungers are removably secured, said cross-head embracing a base-board on which said plungers rest, and movable plates, one for each longitudinal row of plungers, engaging above said plunger flanges to hold them in place and provided with openings through which said plunger flanges may be withdrawn when said plates are in a predetermined position.

2. In a candle making machine, in combination with the fixed tubular molds arranged in parallel, horizontal rows, tubular plungers working in said molds, said plungers having flanges located at their lower ends, a cross-head to which said plungers are secured, said cross-head comprising a base-board, an upper board secured to said base-board and provided with apertures through which the flanges of said plungers are adapted to pass, said upper board being provided on its under surface with parallel longitudinal grooves, one for each longitudinal row of plungers, and movable plates mounted in said grooves and engaging the tops of the flanges of said plungers, said plates having elongated apertures, one for each plunger in the row, one part of each aperture being large enough to permit the flange of said plunger to pass through it and the other part being smaller than the flange of said plunger.

3. In a candle making machine, in combination with the fixed tubular molds arranged in parallel, horizontal rows, tubular plungers in said molds, said plungers having flanges located at their lower ends, a cross-head to which said plungers are secured, said cross-head comprising a base-board, an upper board secured to said base-board and provided with apertures through which the flanges of said plungers are adapted to pass, said upper board being provided on its under surface with parallel longitudinal grooves, one for each longitudinal row of plungers, movable plates mounted in said grooves and engaging the tops of the flanges of said plungers, said plates having elongated apertures, one for each plunger in the row, one part of each aperture being large enough to permit the flange of said plunger

to pass through it and the other part being
smaller than the flange of said plunger, said
plates having lateral ribs extending at each
side of the flanges of the plungers in the
5 associated row, said ribs engaging against
the top surface of said base-board, lugs
formed on said plates to limit their move-
ment in either direction, and locking devices
to retain said plates in closed position.

In testimony, that I claim the foregoing 10
as my invention I affix my signature in the
presence of two witnesses, this 15th day of
October A. D. 1910.

FELIX F. SCHMITT.

Witnesses:

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GEORGE R. WILKINS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
