

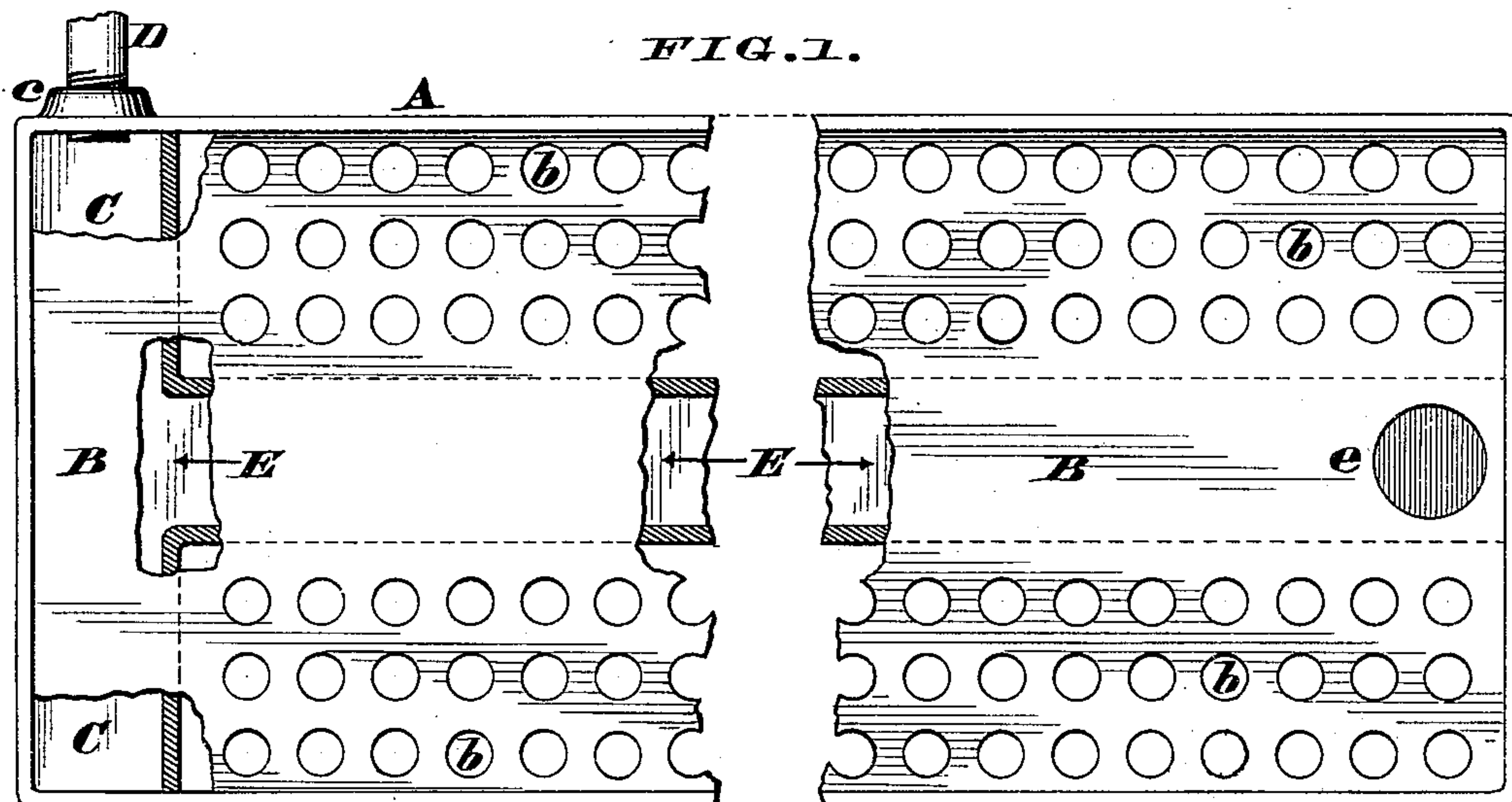
(No Model.)

W. H. HANEY.

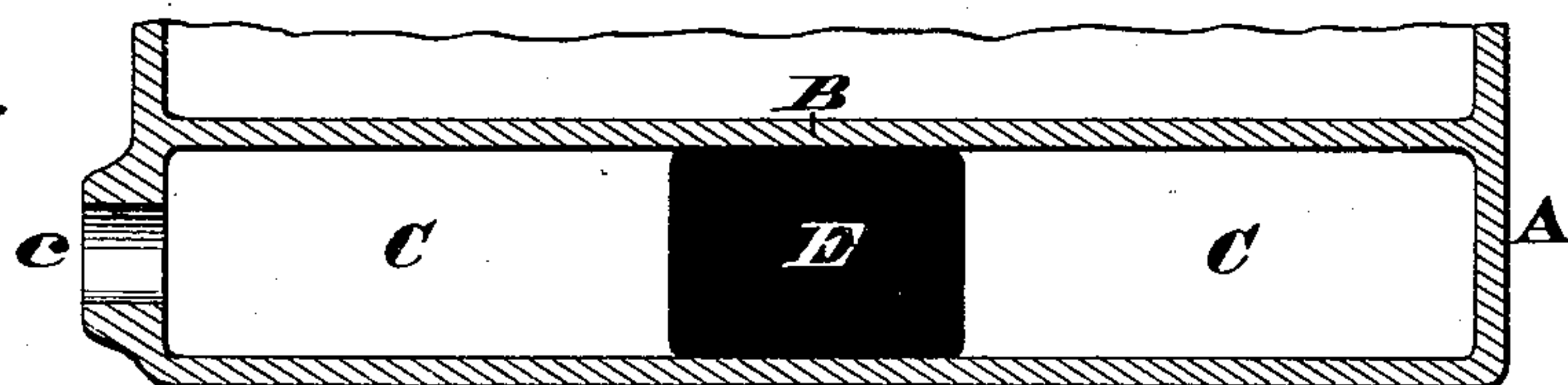
CANDLE MOLDING MACHINE.

No. 272,876.

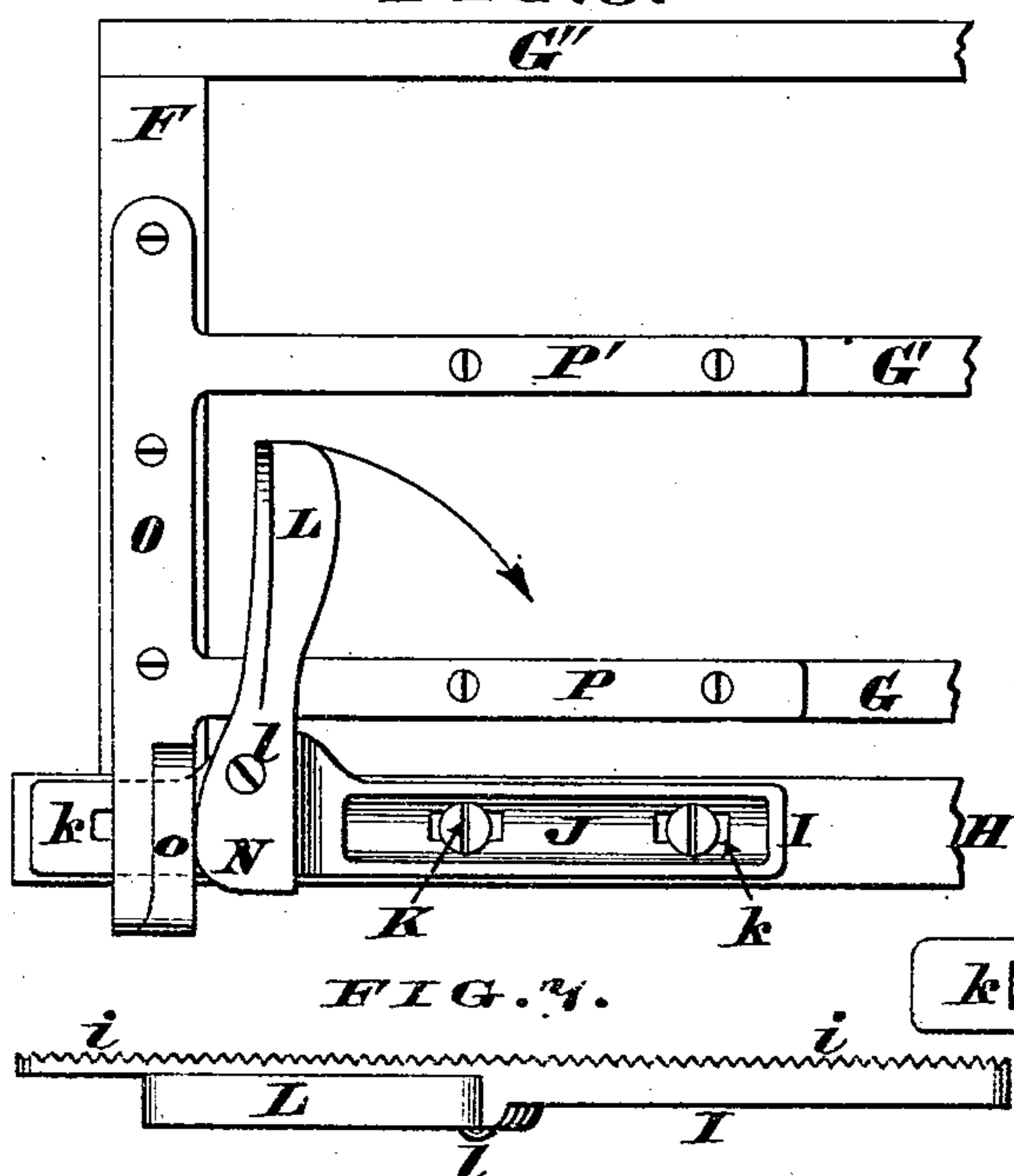
Patented Feb. 27, 1883.



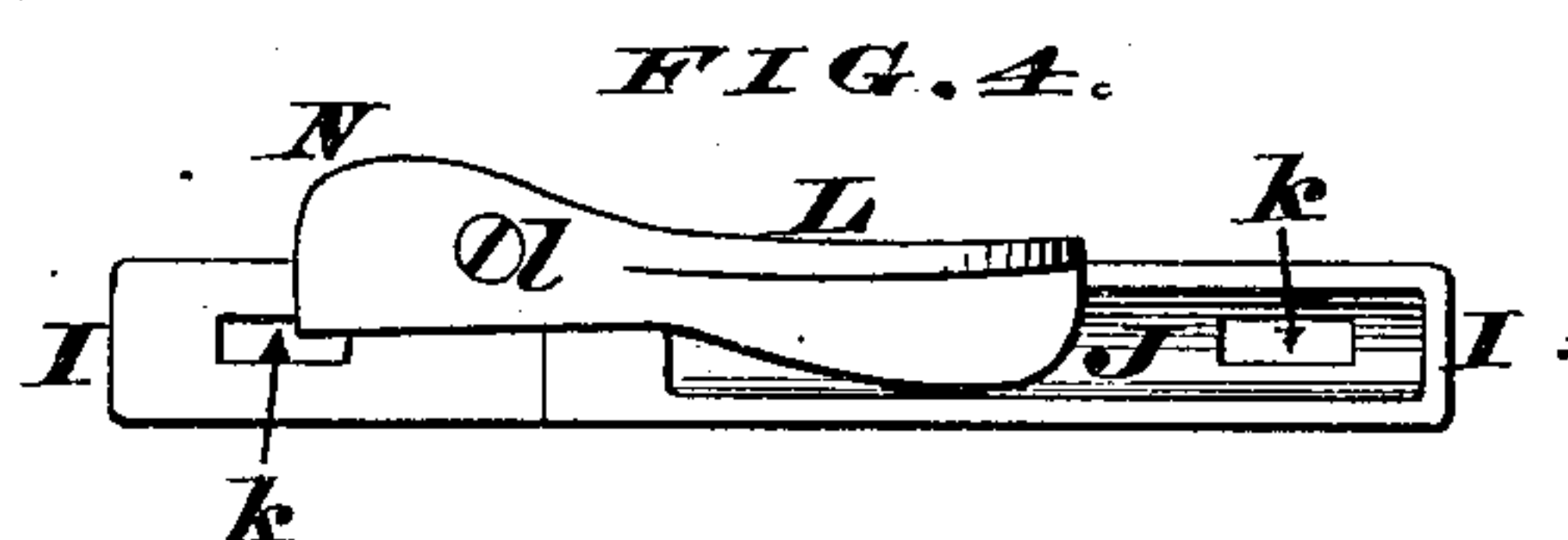
**FIG. 2.**



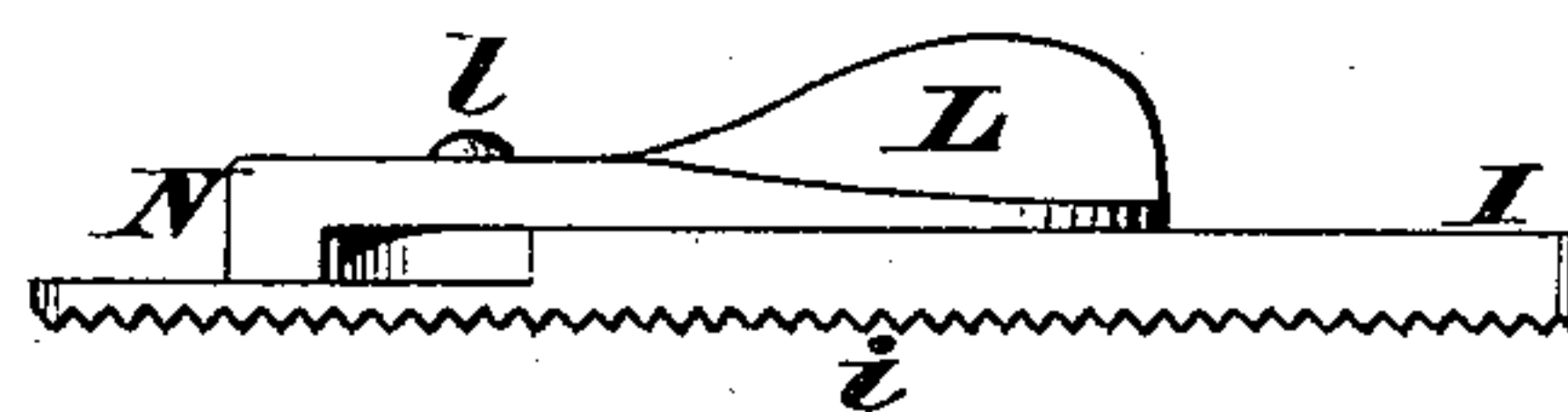
**FIG. 3.**



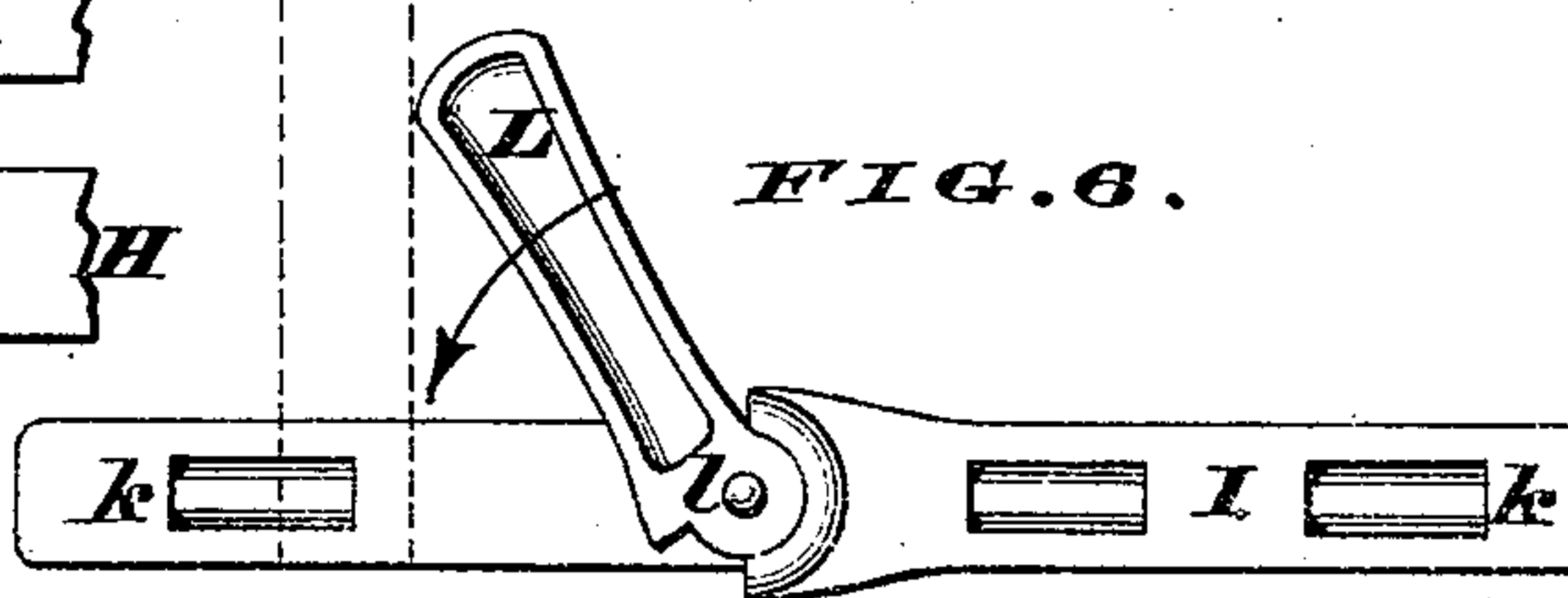
**FIG. 4.**



**FIG. 5.**



**FIG. 6.**



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# UNITED STATES PATENT OFFICE.

WILLIAM H. HANEY, OF CINCINNATI, OHIO, ASSIGNOR TO HENRY KORF, JR.,  
OF SAME PLACE.

## CANDLE-MOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 272,876, dated February 27, 1883.

Application filed January 11, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. HANEY, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Candle-Molding Machines, of which the following is a specification.

My invention comprises certain improvements in those machines which include a steam-tight box containing a number of vertical candle-molds and an elevated rack within which the molded candles are temporarily clamped before their wicks are severed preparatory to being removed from the machine.

The first part of the improvement consists in casting one or more channels in the bottom plate of the mold-box, through which passages steam enters and is then discharged into said box, so as to circulate freely around all the molds contained therein. In the preferred construction one of these channels is arranged transversely of the box and communicates with another passage occupying the center of the receptacle, in order that this central duct may be clear of the nuts wherewith the molds are secured in position. Consequently these communicating ducts have a T shape, the steam being received at one end of the transverse channel, and being discharged at the remote end of the longitudinal passage, as hereinafter more fully described, and pointed out in the claims.

The second part of my invention comprises a novel construction of eccentric, wherewith the clamping-slide of the rack is shifted, the object of this feature being to afford a greater range and more accurate adjustment of said slide than has heretofore been obtainable, the details of said eccentric being hereinafter more fully described and pointed out in the claims.

In the annexed drawings, Figure 1 is a plan of my mold-box, the molds proper being omitted therefrom, and portions of the bottom plate being broken away to expose the steam-channels, the sides of the latter being sectioned. Fig. 2 is an enlarged vertical section of the lower part of the mold-box, said section being taken in the plane of the transverse channel. Fig. 3 is a side elevation of one end of the rack

that is applied to the top of the mold-box, the slide of said rack being shown in its advanced position. Fig. 4 is an elevation of the eccentric detached from said slide. Fig. 5 is a plan of the under side of said eccentric. Fig. 6 is an elevation, and Fig. 7 a plan of a modification of the eccentric.

Referring to Fig. 1, A represents a steam-tight box, the bottom plate of which, B, is pierced at *b* to admit a series of vertical candle-molds of any desired size, said molds being secured in position by nuts that engage with their lower ends and bear against the under side of plate B. In this respect said box is substantially the same as those employed with ordinary candle-molding machines.

Cast with the bottom plate, B, and preferably arranged beneath the same, is a transverse channel, passage, or duct, C, of any desired shape and area, one end of said channel having a neck, *c*, to admit a steam-pipe, D. This channel is completely closed, except where the longitudinal passage E opens into it, said passage E being disposed practically in the center of the box, and being made as wide as possible without coming in contact with the retaining-nuts at the lower ends of the molds. The central passage, E, has preferably but a single outlet, *e*, made directly in the bottom plate, B. This opening *e* may have an elbow screwed into it, or a deflecting-plate may be fitted above said opening, the object of these devices being to direct the current of steam toward the opposite end of box A, so as to cause a thorough circulation of the hot vapor around all the molds contained in said box. Adapted to be applied to the top of this mold-box is a rack, the principal end of which is seen in Fig. 3, said rack being composed of a head, F, three parallel boards, G G' G'', and a longitudinally-shiftable slide or clamp plate, H, said members G G' G'' H being perforated and adapted to operate in precisely the same manner as the device described in G. Roth's Patent No. 36,798.

I represents a plate, the rear surface of which is either corrugated, roughened, or provided with a rasp-surface, *i*, to enable said plate to obtain a firm hold on the edge of slide H, the outer surface of said plate being concaved at J to



admit the heads of screws K, which latter traverse slots *k* of plate I. Furthermore, this plate has pivoted to it at *l* a lever, L, carrying at its shorter end an eccentric or cam-head, N, the latter being adapted to bear against a flange, *o*, projecting from the casting O, applied to the head F of the rack-frame. This casting has lateral bars P P' screwed to the edges of boards G G', so as to bind the latter immovably to the head of the rack.

The advantages derived from the above-described improvements in candle-molding machines are as follows: By making the steam-channels O E integral with the bottom plate, B, the heat is conducted through all parts of box A in the most thorough and uniform manner, and consequently the stock in the molds can be subjected to any desired temperature. Again, as these channels project from the under side of bottom plate, B, the upper surface of the latter is perfectly level from end to end, thereby rendering it an easy matter to clean the plate of any sediment or deposit that would prevent the radiation of heat, which unobstructed access cannot be obtained where the mold-box is traversed by one or more steam pipes or coils. Another advantage due to the integral ducts is that they impart additional strength to the plate B, the perforations of which, *b*, weaken it considerably and render it more liable to crack than any other part of the mold-box. If preferred, other channels can be cast alongside the box A and parallel with central duct, E, and either or all of the passages may be provided with drain-cocks to draw off condensed water; or the channel C may be duplicated at the opposite end of box A, and either or both of these channels may be located above the plate B, but arranged to communicate with the longitudinal passage E beneath the same. In another modification the channels C E may be cast in the shape of a trough and be bolted to the under side of box A; but this construction is not advised, on account of the difficulty of making the joints steam-tight.

The eccentric L N is operated simply by swinging the free end of its lever down, as indicated by the arrow in Fig. 3, which act retracts the slide H and locks the molded candles in the rack in the same manner as described in Roth's patent previously alluded to. The advantage of this eccentric is that any shrinkage or loosening of the slide H can be

readily compensated for by simply slackening the screws K, then properly shifting the plate I, and again screwing home said fastening devices K. The slots *k* permit any possible range of adjustment of plate I, while the teeth, ribs, or other projections *i* at the back of said plate embed themselves in the slide H and prevent accidental shifting of the plate in either direction. Furthermore, as the cam-lever is pivoted wholly to plate I—not to the slide H—it is evident said lever will always maintain its proper position with reference to said plate, no matter whether the latter is advanced or retracted. In the modification seen in Fig. 6 the slide is retracted by forcing down the free end of lever L, as indicated by the arrow, the position of plate I against which said lever bears, being designated by dotted lines. In Fig. 7 this lever is shown as fully depressed. Finally, it is preferred to furnish this improved molding-machine with air-distributor and candle-gage, seen respectively in Letters Patent No. 268,888 and No. 269,664.

I claim as my invention—

1. A candle-mold box having one or more channels integral with the bottom plate of the same and adapted to receive steam and discharge it into said box, for the purpose stated.

2. A candle-mold box having one or more channels integral with and projecting from the under side of the bottom plate, said channels being adapted to receive steam and discharge it into the mold-box, for the purpose described.

3. The box A, having a bottom plate, B, pierced at *b*, to admit the candle-mold, said bottom plate having cast with it a transverse channel, C, communicating with a longitudinal passage, E, which ducts receive steam at *c* and discharge it at *e*, as and for the purpose described.

4. The slotted plate I, having pivoted to it at *l* a cam-lever, L, the rear surface of said plate being roughened, as at *i*, to afford a secure hold on the slide H, for the purpose stated.

5. The clamp-iron O, applied to the head F of a candle-rack, and having lateral bars, P P', secured to the parallel member G G' of said rack, as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. HANEY.

Witnesses:

JAMES H. LAYMAN,  
SAMUEL S. CARPENTER.