

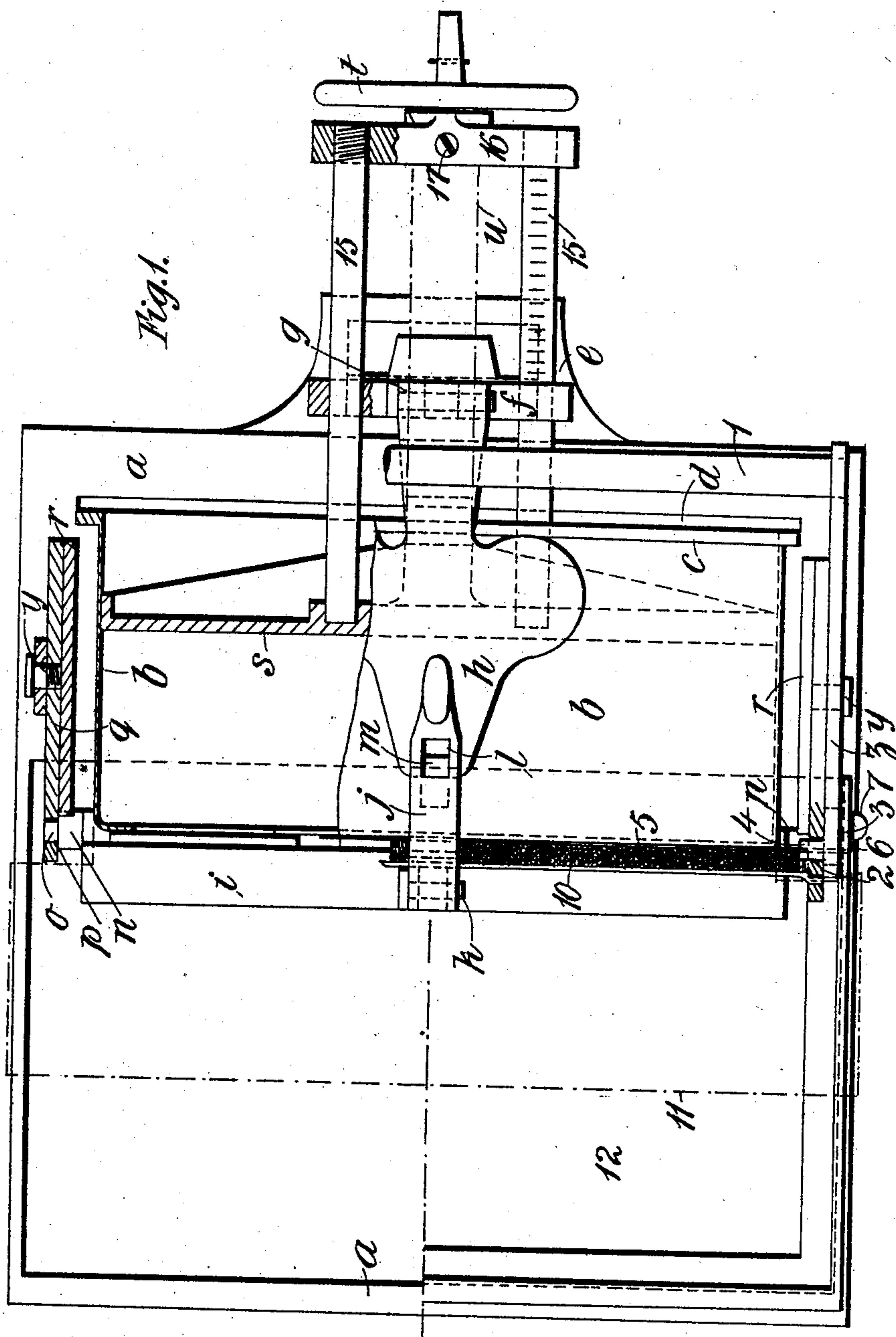
No. 796,737.

PATENTED AUG. 8, 1905.

J. C. LAWSON.
MACHINE FOR STAMPING, FORMING, AND DELIVERING BLOCKS OR PATS
OF BUTTER, &c.

APPLICATION FILED AUG. 8, 1904.

4 SHEETS—SHEET 1.



Witnesses.
Fency M. Goodwin.
Robt Hunter

Inventor. John Charles Lawson
by His Attorney
Genj. J. J. J.

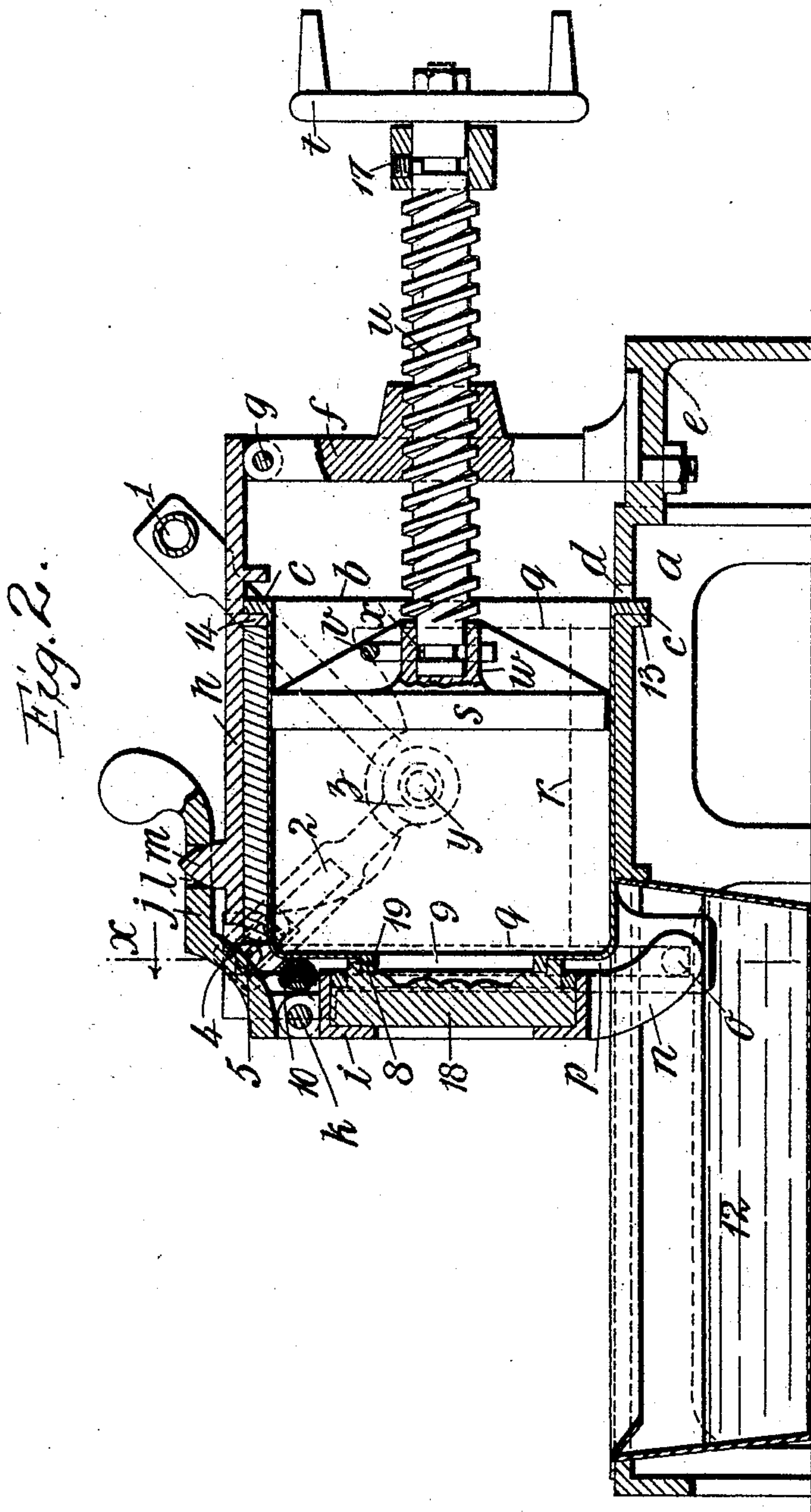
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Witnesses.
Percy M. Goodwin.
Robt. Hunter

Inventor John Charles Lawson
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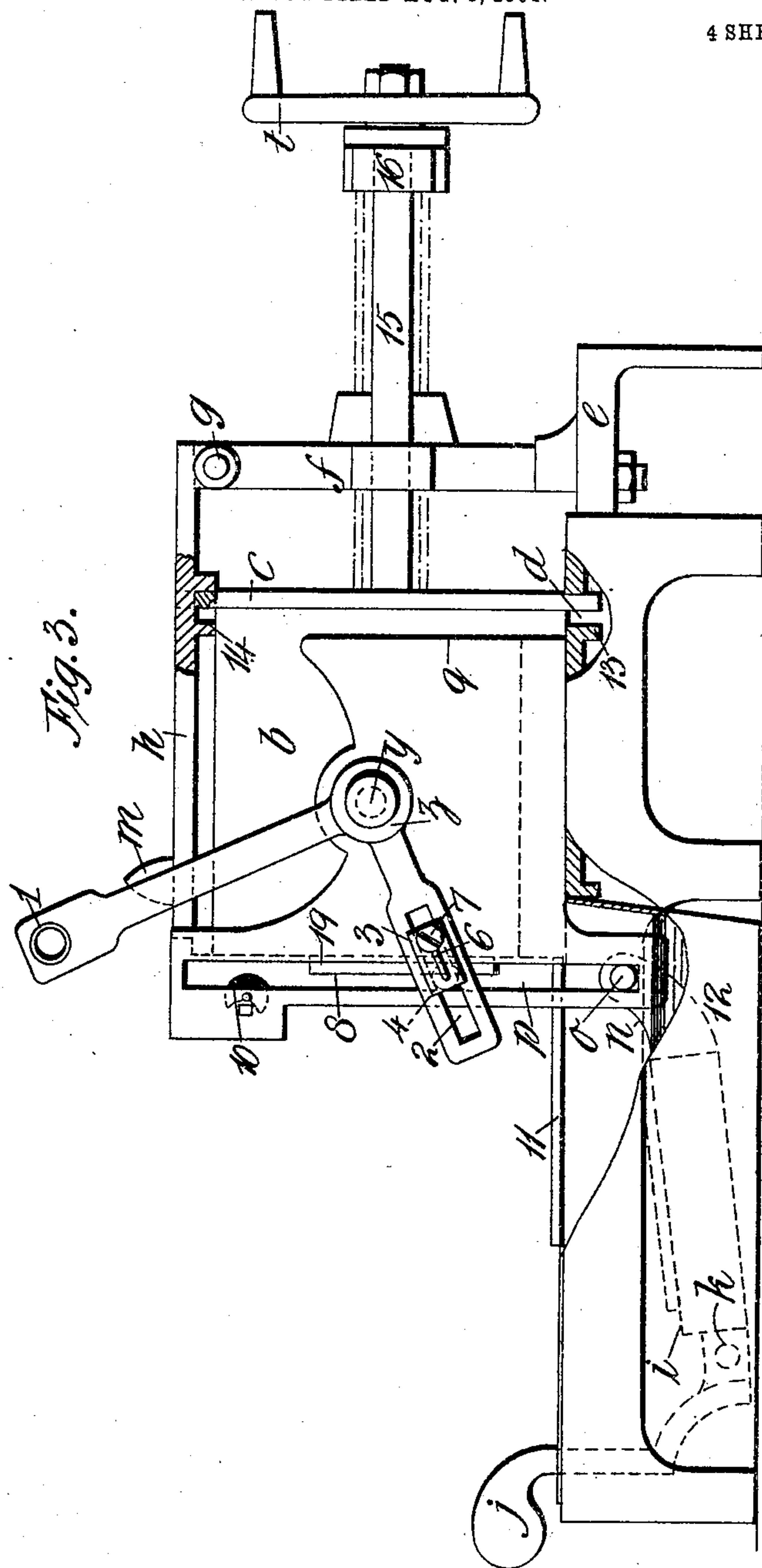
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Fercy M. Goodwin.
Robt Hunter

Inventor: John Charles Lawson
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J. C. Lawson

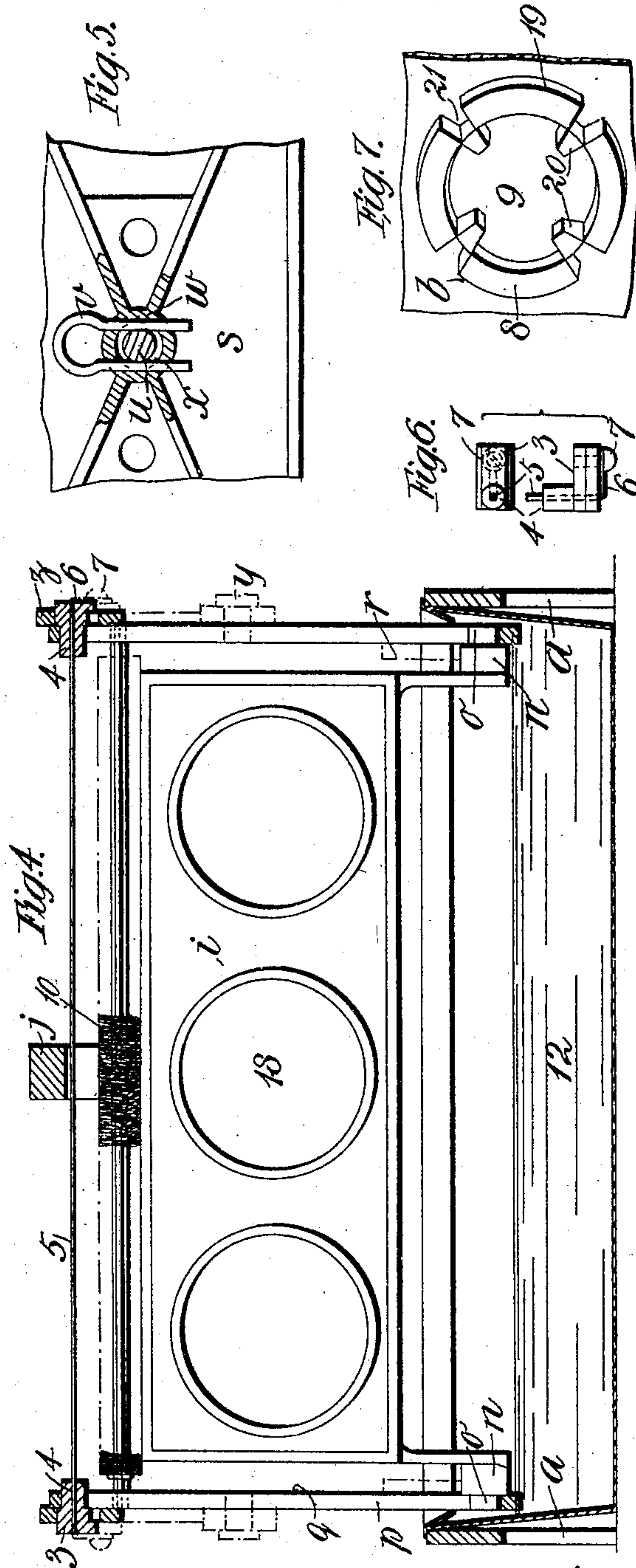
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J. C. Lawson

UNITED STATES PATENT OFFICE.

JOHN CHARLES LAWSON, OF LONDON, ENGLAND.

MACHINE FOR STAMPING, FORMING, AND DELIVERING BLOCKS OR PATS OF BUTTER, &c.

No. 796,737.

Specification of Letters Patent.

Patented Aug. 8, 1905.

Application filed August 8, 1904. Serial No. 220,036.

To all whom it may concern:

Be it known that I, JOHN CHARLES LAWSON, a subject of the King of Great Britain and Ireland, residing at 327 Euston road, London, England, have invented certain new and useful Improvements in Machines for Stamping, Forming, and Delivering Blocks or Pats of Butter or other Plastic Material, of which the following is a specification.

This invention relates to an improved machine for forming, stamping, and delivering blocks or pats of plastic material, more especially butter, and is hereinafter set forth and illustrated as applied to the latter article or material, and has for its object the construction and arrangement of such a machine combined with the maximum of strength, lightness, cheapness, portability, and one which when after use can be easily and rapidly dismantled, scoured, and cleansed, and as easily set up again.

In order that the said invention may be readily understood, reference is to be had to the following description and accompanying sheets of drawings, in which—

Figure 1 is a plan view partly in section. Fig. 2 is a longitudinal central section, cutter being at the commencement of its stroke. Fig. 3 is a side elevation partly in section, cutter being nearly at the end of its stroke. Fig. 4 is a transverse section on the line xx of Fig. 2 looking in the direction of the arrow. Fig. 5 is a detail view illustrating the method employed for connecting the pressure-screw to the plunger. Fig. 6 represents details hereinafter referred to. Fig. 7 illustrates a pattern-ring on an orifice of the container.

In carrying the said invention into effect I arrange upon a skeleton or frame a , Figs. 1 to 4, and in a horizontal plane a container b , whose flange c is adapted to engage in a slot d of the frame a , and upon an extension (rearward) e I mount either rigidly or loosely an upright or standard f , having pivoted at g in its upper end a bridge piece or clasp h , adapted to engage with the block-die or stamp carrier or holder i by means of the hinged link j , pivoted to the carrier i at k and slotted at l to engage with the lug or projection m on the clasp or bridge-piece h . The carrier at the lower end and in extending arms n thereon I provide with pins o , adapted to engage in vertical slots p , arranged in the forward ends of the side plates or cheeks q , connected to the frame a by means of the upwardly-ex-

tending lugs r or by any other equivalent means.

From the foregoing it will be seen that when the above-mentioned parts are connected up the container lies within a frame and is only capable of a slight longitudinal movement, amount of said movement being controlled by the width of the space or slot d in the frame a and also by a slot on the under side of the clasp h .

The plunger s I operate by the hand-wheel t of the pressure-screw u , which screws through the boss of the standard f and is connected to (and disconnected from) the said plunger by means of the double pin v , as shown in Figs. 2 and 5, the legs of the pin passing through the boss w and a groove x in the end of the screw.

To sever the protruded plastic material, I employ the following arrangement, viz: On the side plates or cheeks q I pivot at y , the bell-crank levers z , connected together at their outer ends by the rod 1, the same forming the operating-handle. In the other ends of the said bell-crank levers I form slots 2, adapted to receive slides 3, having inwardly-projecting pins 4, adapted to slide vertically in the slots p . Through the pins 4 I pass the wire 5 (the same forming the cutter) and fasten the ends 6 down by means of the screws 7, as shown in Figs. 1 and 6, so that on bringing the handle 1 forward the wire, through the medium of the pins and slots, is given a vertical downward movement across the faces 8 of the orifices 9 of the container b , thereby severing the protruding material. A set-screw or equivalent may be adapted to the end of the slides 3 to more finely adjust the position of the cutting-wire 5. As it is essential that the cutting-wire should be free from any remnants of plastic material left from previous cuttings, I arrange a brush 10, passing above and across the top of the block or die-carrier sprung into or otherwise fixed to the cheek-plates q , (see Figs. 1 and 2,) so that the cutting-wire in its up-and-down movement is wiped by means of the said brush 10. Further, when the material placed in the container is loose or broken I interpose between the container and the carrier a loose plate 11, said plate being of such a length as to extend right across the width of the apparatus, inserting the plate through the slots p of the side cheeks so as to cover the orifices 9 of the container in order that when the carrier is

locked in position pressure may be exerted to render the plastic material homogeneous without allowing any of its substance to exude. The plate 11 when not used for this purpose serves as a means for removing the blocks or pats, the same when cut off falling on the plate, which rests across and fits between the side cheeks, as shown in dot-and-dash lines, Fig. 1, and in full lines, Fig. 3.

The orifices and their attendant rings of the container I may make of any desired form or design, so that the plastic material forced through said openings can be given an external form and perforations according to the pattern either with or without a background.

A bath 12 is provided at the forward end of the frame *a* for the reception of the carrier *i*, as seen in Fig. 2, so that the blocks, stamps, or dies may be damped at every operation.

In operation the plastic material having been inserted in the container the same is locked in position, as above set forth, its flange *e* engaging with the lip 13 of the slot *d* and also with the lip 14 of the clasp *h*, said lips serving to resist the forward movement of the container and the thrust of the pressure-screw. The plunger being inserted and pressure exerted by the screw the plastic material is forced into the blocks, stamps, or dies, the amount of material (number of pats or the like) used being indicated on one of the guide-rods 15, as seen in Fig. 3, said guide-rods serving as distance-pieces between the plunger *s* and the connecting-piece 16. (See Fig. 3.) On pressure being removed the container moves slightly backward, (see Fig. 2,) and the carrier *i* is disengaged, the same falling into the tank 12. The cutting-wire can now be moved across the face of the orifices 9, thereby severing the plastic material.

When it is desired to clean the apparatus, it is only necessary to free the container, remove the pin of the hinged link, freeing the link, tilt the carrier, when the same can be removed from out of the slots of the side cheeks. The clasp is then freed from the standard and the standard in its turn from the frame, and the screw freed from the plunger by withdrawing the double pin, the screw being freed from the connecting-piece 16 by loosening the screw 17. The brush is then withdrawn and the crank-levers, slides, and pins removed and the whole of the various parts (skeleton included) scalded or otherwise cleansed.

The blocks or dies 18 I so form as to fit closely, as in Fig. 1, over the projecting rings or patterns 19 of the orifices of the container, so that when pressure is exerted the plastic material in case of an excess of matter being in the container may exude, the pats or the like notwithstanding being cut cleanly off by the wire.

In Fig. 7 I have illustrated by way of example only a pattern-ring having inward projections 20 and recesses 21, which are engaged by corresponding projections on the block or die 18.

Although I have described and shown my said invention as applied to a horizontal device or apparatus, yet by slightly modifying the same I may make it to work in a vertical or other suitable plane.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus of the class described, a frame, a container provided in its base with a plurality of pat-forming orifices each having about its edge an offstanding ring or pattern, a shiftable die-carrier, separate die-blocks mounted in the carrier and provided with portions having an overlapping engagement upon said rings or patterns of the orifices, and the plunger arranged to operate in the container.

2. In an apparatus of the class described, a frame, a container mounted in the frame and provided in its base with a plurality of pat-forming orifices, a swinging die-carrier, a screw-carrying standard, a pressure-screw carrying the plunger, a bridge-clasp hinged to said standard and interlocked with the container, and a hinge-link connected with the die-carrier and having a latching engagement with the bridge-clasp.

3. In an apparatus of the class described, a frame, a container mounted on the frame and having a loosely-interlocked engagement therewith, said container being provided with pat-forming orifices, a swinging die-carrier, a screw-supporting standard, a pressure-screw mounted in the standard and carrying the plunger, a bridge-clasp hinged to the standard and having a loosely-interlocked engagement with the container, and a hinge-link fitted to the die-carrier and having a latching engagement with said bridge-clasp.

4. In an apparatus of the class described, a frame, a container slidably and detachably mounted on the frame, a swinging die-carrier having a detachable hinge-support, a screw-carrying standard detachably mounted on the frame, a pressure-screw mounted in the standard, a plunger detachably fitted to one end of the screw, an operating device detachably fitted to the opposite end of the screw, and a bridge-clasp hinged at one end to the die-carrier and having a temporary latching engagement with the bridge-clasp.

5. In an apparatus of the class described, a frame, a container mounted in the frame and provided with pat-forming orifices, a die-carrier, a screw-supporting standard mounted on the frame, a pressure-screw mounted in the standard and carrying a plunger, an indicator associated with said pressure-screw, a bridge-clasp mounted on the standard and

engaging with the container, and a temporary latching connection between the die-carrier and said bridge-clasp.

6. In an apparatus of the class described, a frame, a damping-bath, a container mounted on the frame and provided with pat-forming orifices, a swinging die-carrier operating over the orifices of the container and arranged to swing into the bath, a suitable support, a pressure-screw carrying the plunger, a bridge-clasp mounted on the said support, and a latching connection between said clasp and the die-carrier.

7. In an apparatus of the class described, the frame having oppositely-arranged guides, a container provided with pat-forming orifices, a die-carrier, cutter-carrying slides working in said guides, and oppositely-arranged connected swinging bell-crank members operatively connected with said slides.

8. In an apparatus of the class described, the frame, a container provided with pat-forming orifices, oppositely-arranged cheek-pieces having slots, slotted lever members arranged upon the cheek-pieces, cutter-carrying slides mounted in the slotted lever members and provided with elements also operating in the slots of the cheek-pieces, and a cutter-wire secured to the oppositely-located slides.

9. In an apparatus of the class described, the frame, a container provided with a plurality of pat-forming orifices, cheek-pieces arranged at opposite sides of the container and

provided with slots, oppositely-arranged connected bell-cranks pivotally supported on the opposite cheek-pieces, one arm of said bell-cranks being provided with slots, cutter-carrying slides working in said slots of the bell-crank arms and provided with inwardly-projecting pins working in the slots of the cheek-pieces, and a cutter-wire secured at its ends to the opposite slides.

10. In an apparatus of the class described, the combination with the container having pat-forming orifices, of oppositely-arranged levers having cutter-carrying slides, a cutter-wire having its ends passed through said slides and bent over the outer faces thereof, and holding-screws mounted in the outer sides of the slides and engaging the terminals of the wire.

11. In an apparatus of the class described, the frame, the container having pat-forming orifices, oppositely-arranged cheek-pieces provided with slots, oppositely-arranged swinging elements having slides operating in the slots of the cheek-pieces, a cutter-wire carried by the said slides, and a brush extending across the interval between the opposite cheek-pieces and projecting into the path of the cutter-wire.

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

JOHN CHARLES LAWSON.

Witnesses:

ROBT. HUNTER,
P. M. GOODWIN.