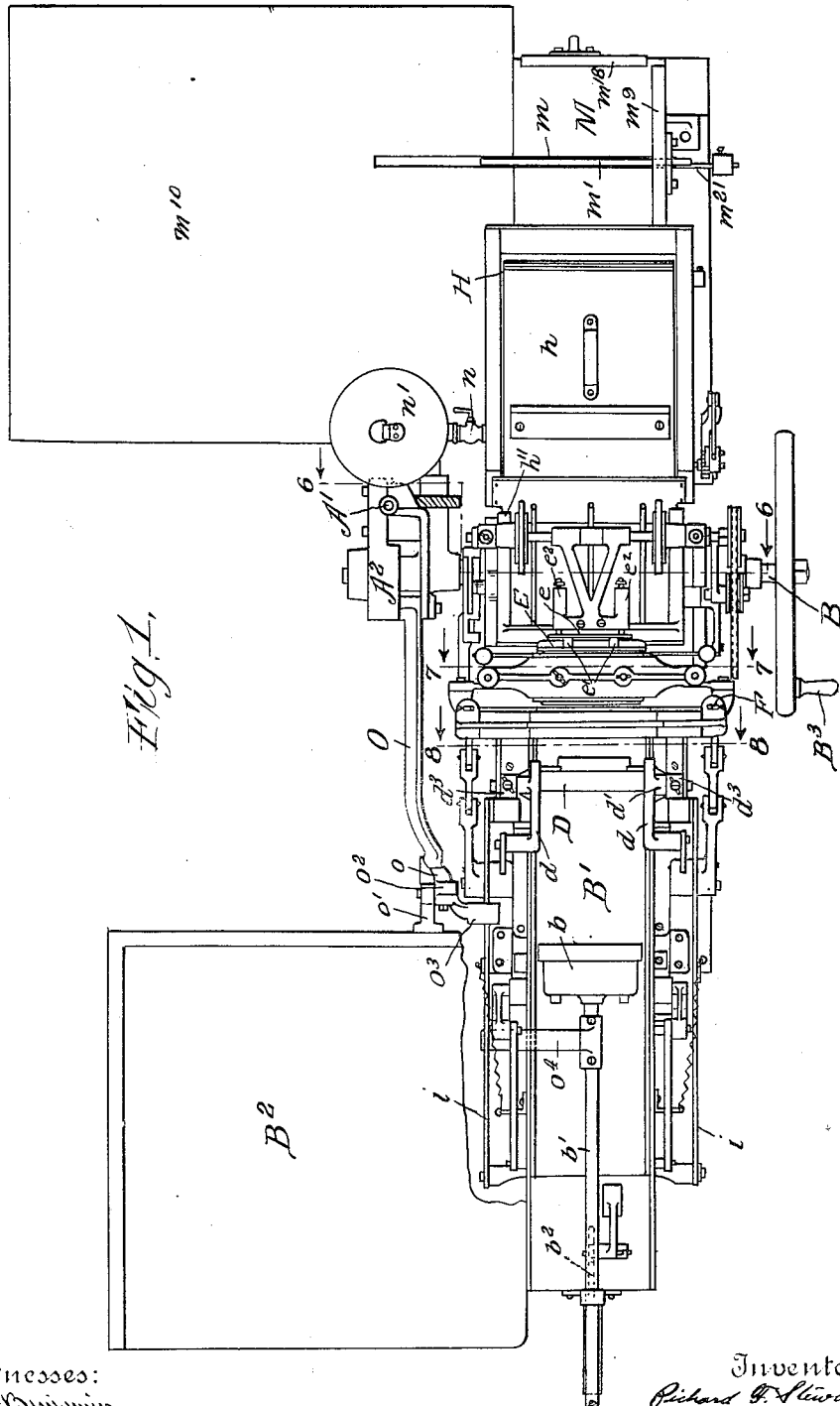


R. F. STEWART.
 BUTTER PRINTING AND CUTTING MACHINE.
 APPLICATION FILED MAR. 10, 1911.

1,065,185.

Patented June 17, 1913.

10 SHEETS—SHEET 1.



Witnesses:
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1,065,185.

10 SHEETS—SHEET 2.

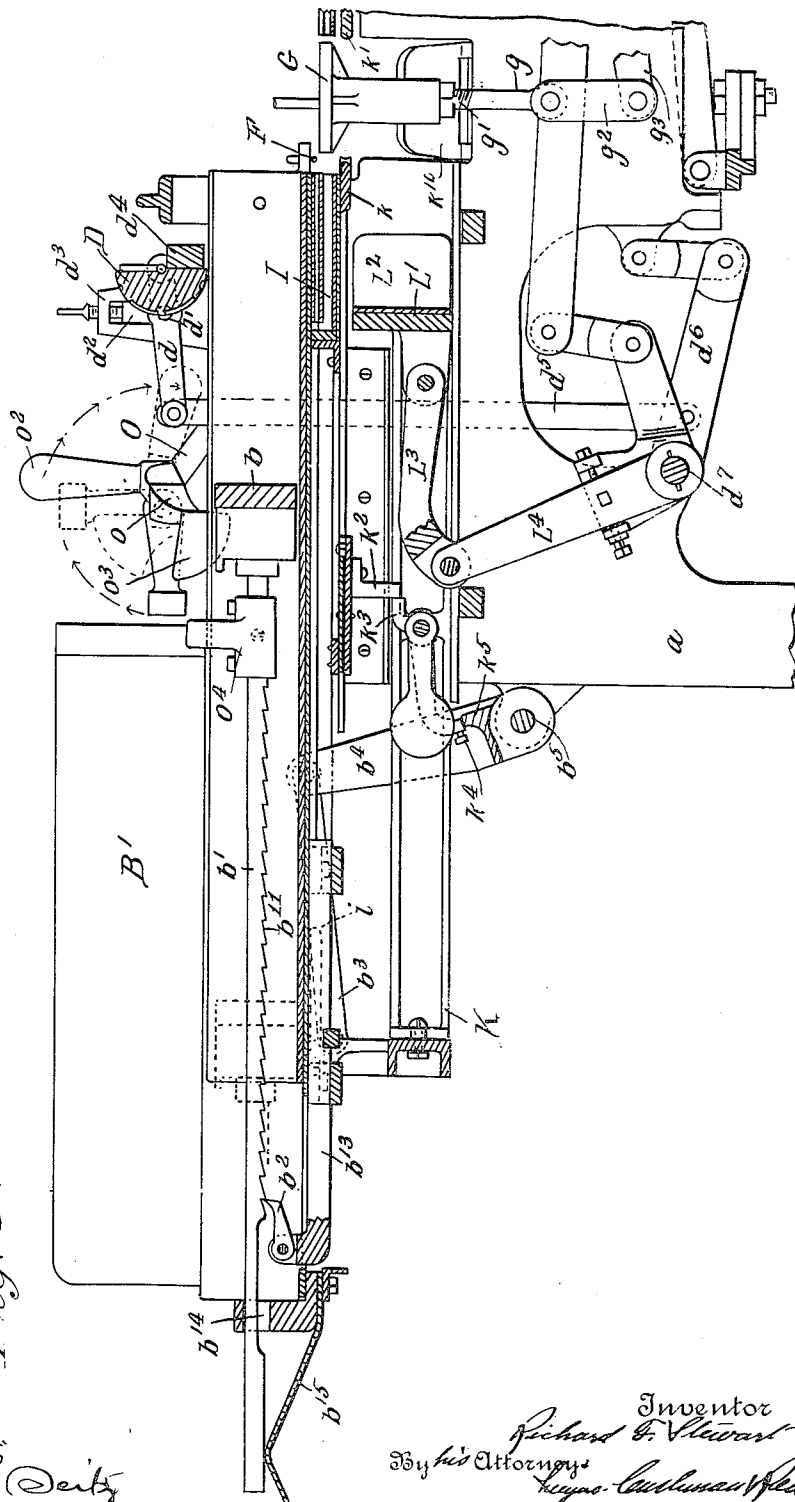


Fig. 2.

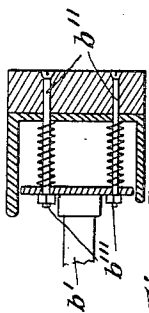


Fig. 3.

Witnesses:
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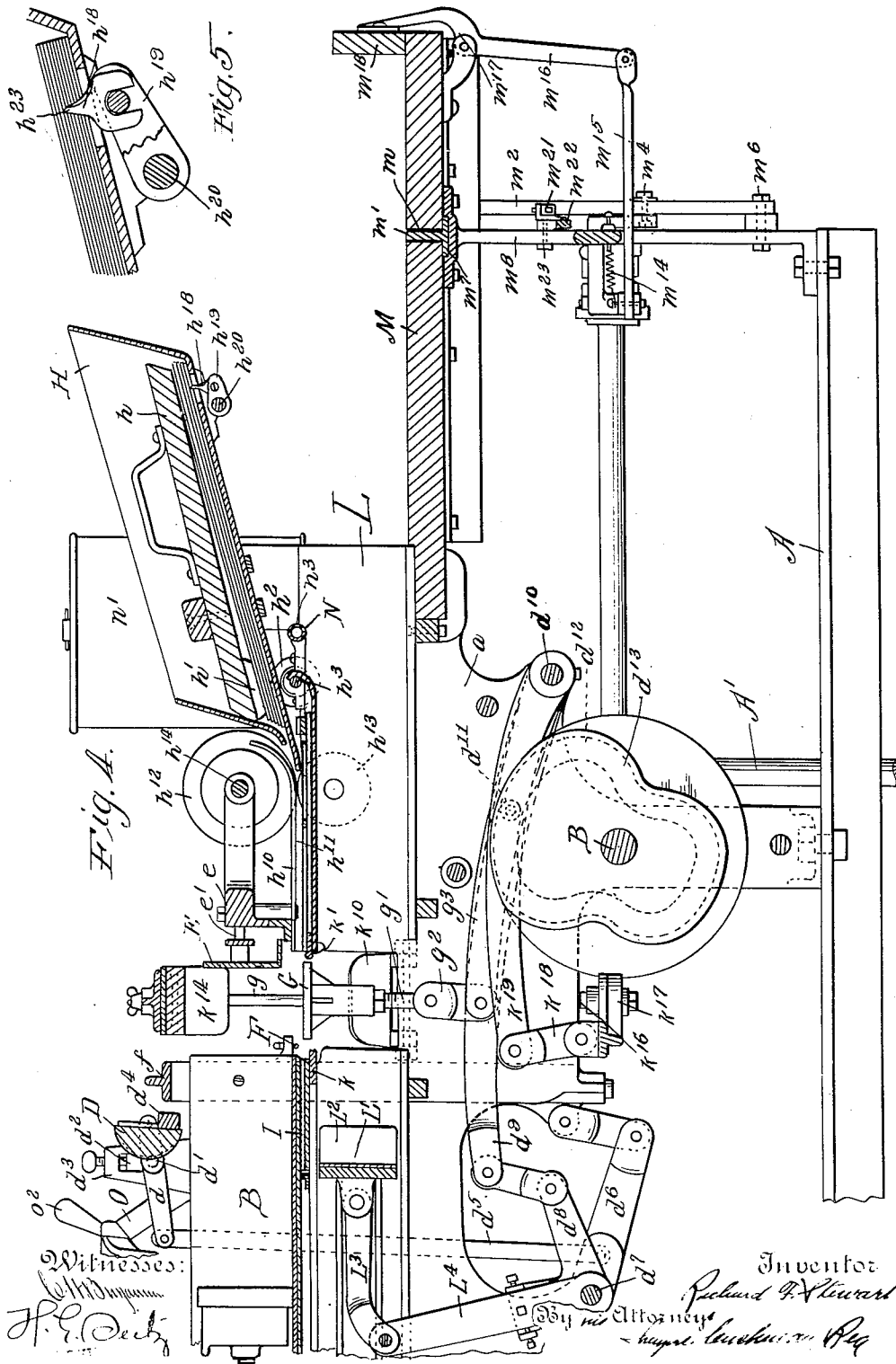
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10 SHEETS—SHEET 3.



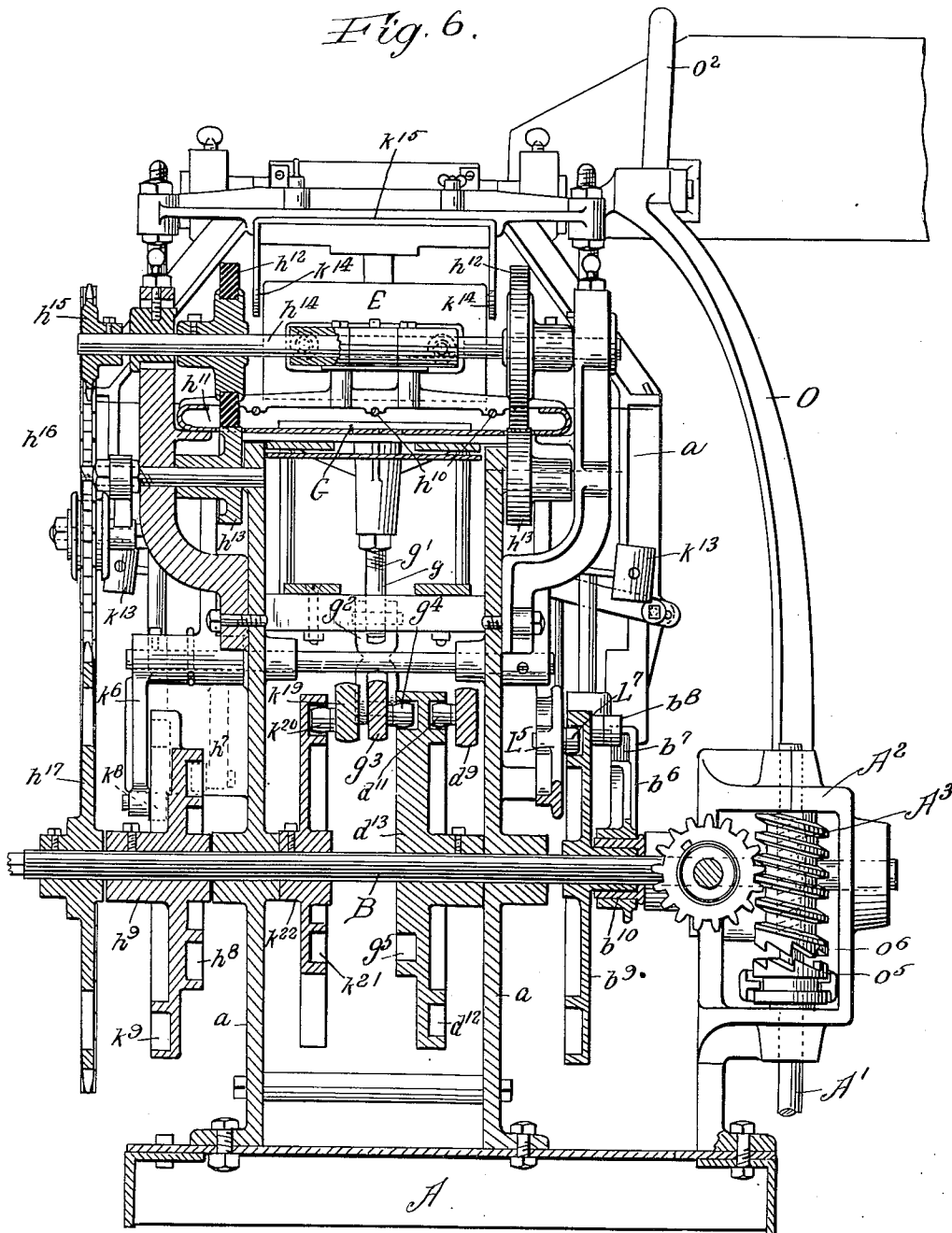
R. F. STEWART.
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1,065,185.

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10 SHEETS—SHEET 4.

Fig. 6.



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Patented June 17, 1913.

10 SHEETS—SHEET 5.

Fig. 8.

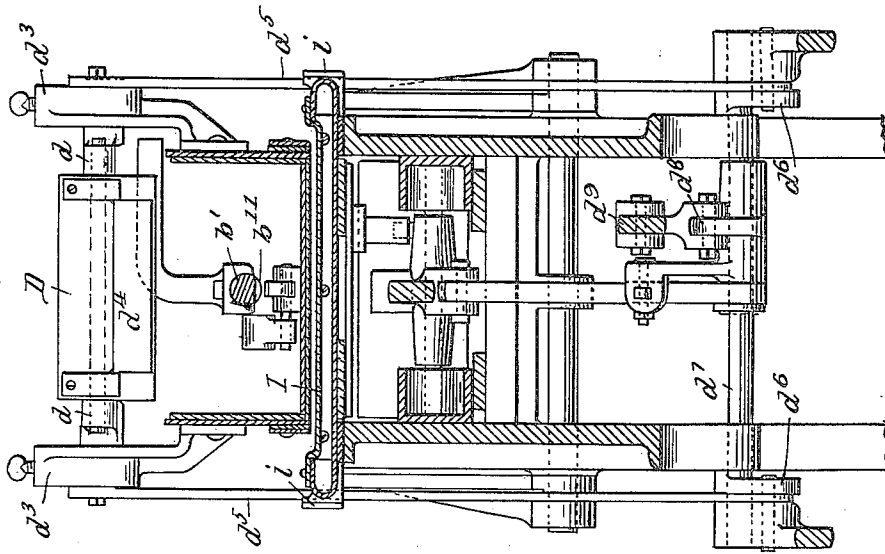
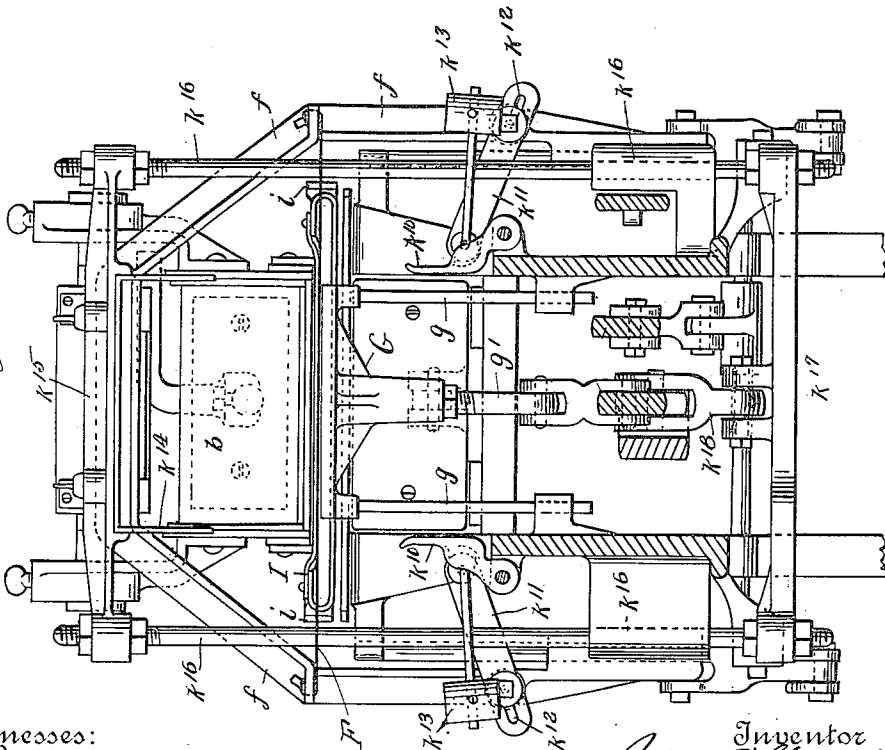


Fig. 7.



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Patented June 17, 1913.

10 SHEETS-SHEET 6.

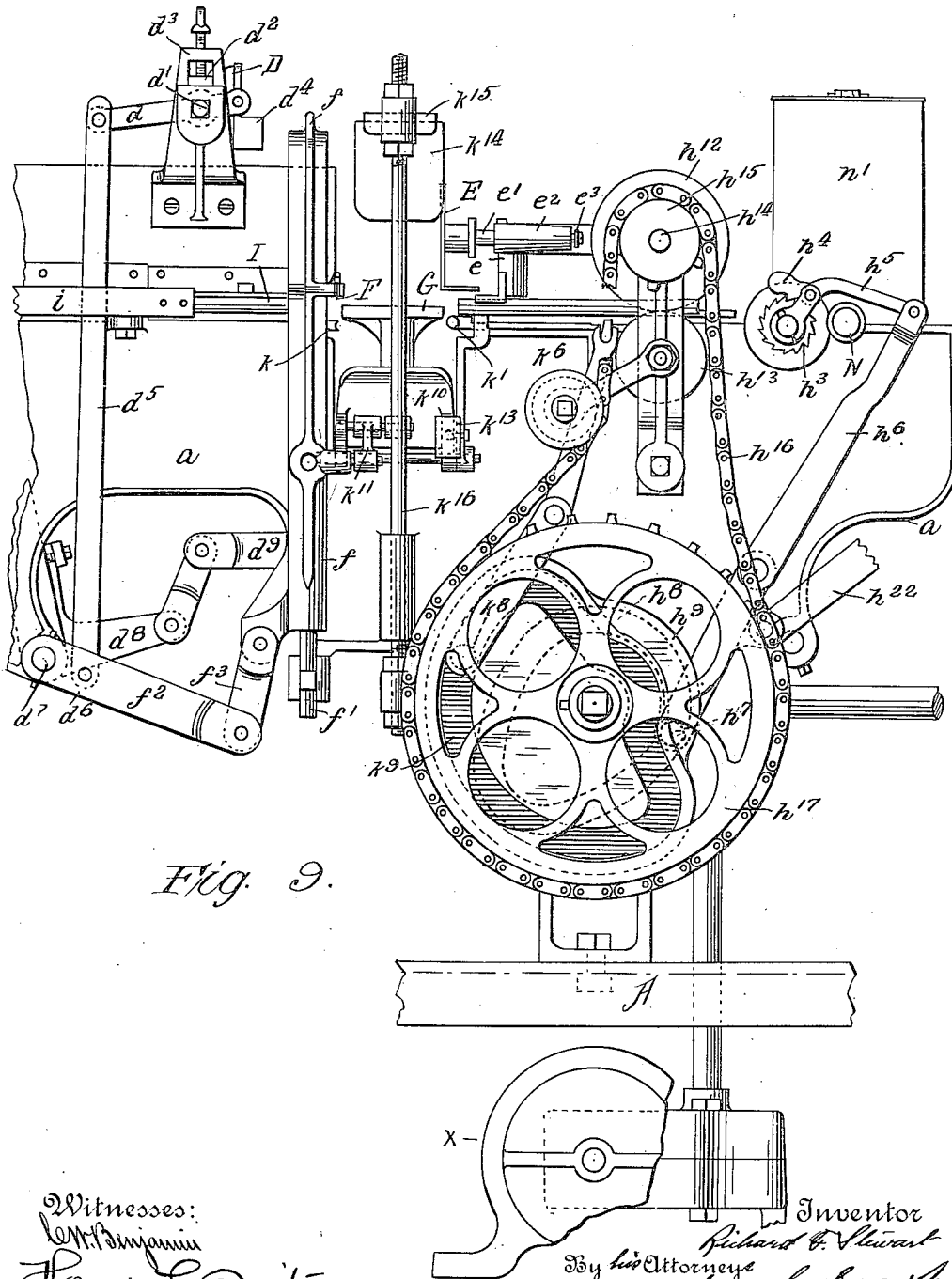


Fig. 9.

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1,065,185.

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10 SHEETS—SHEET 7.

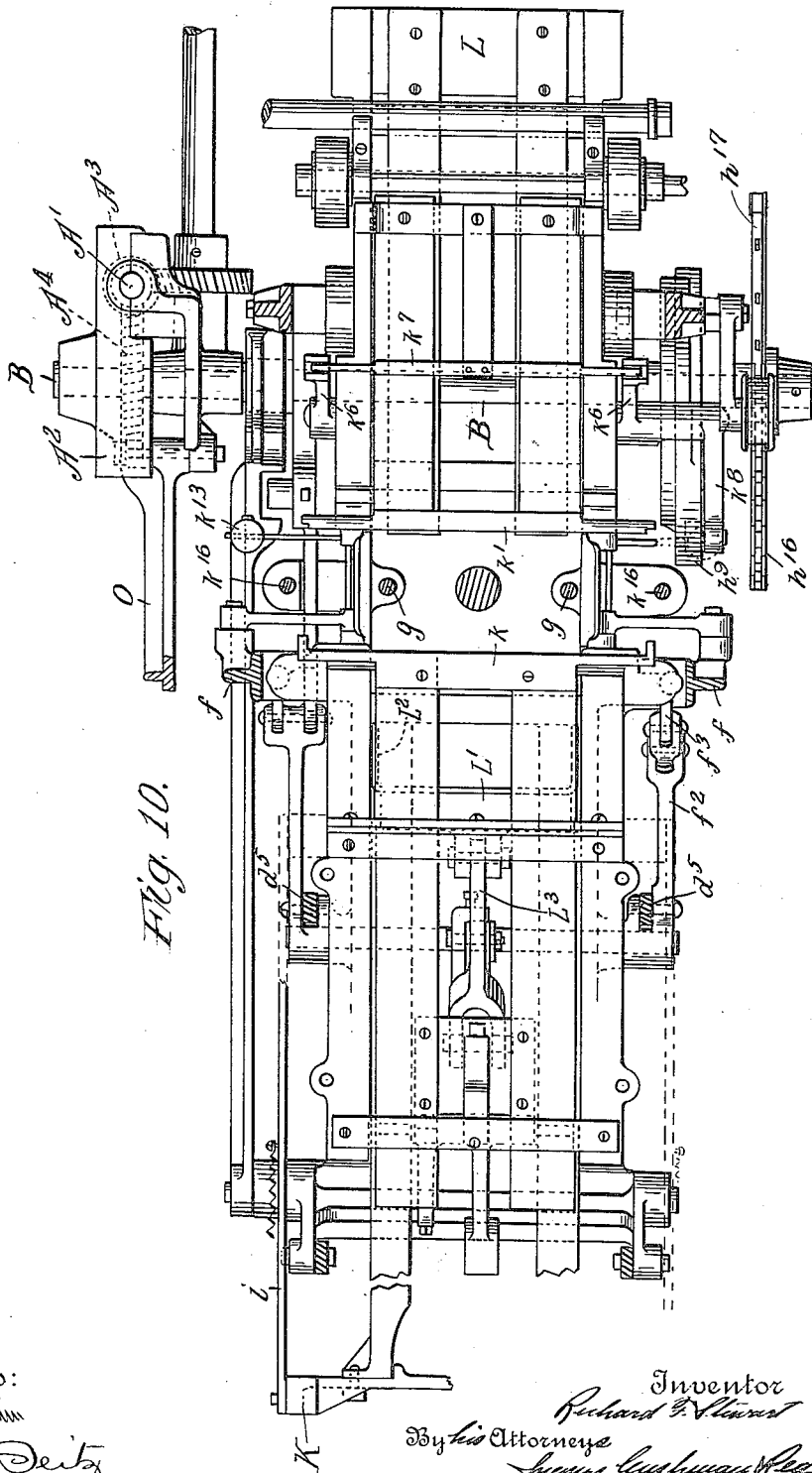


Fig. 10.

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10 SHEETS—SHEET 8.

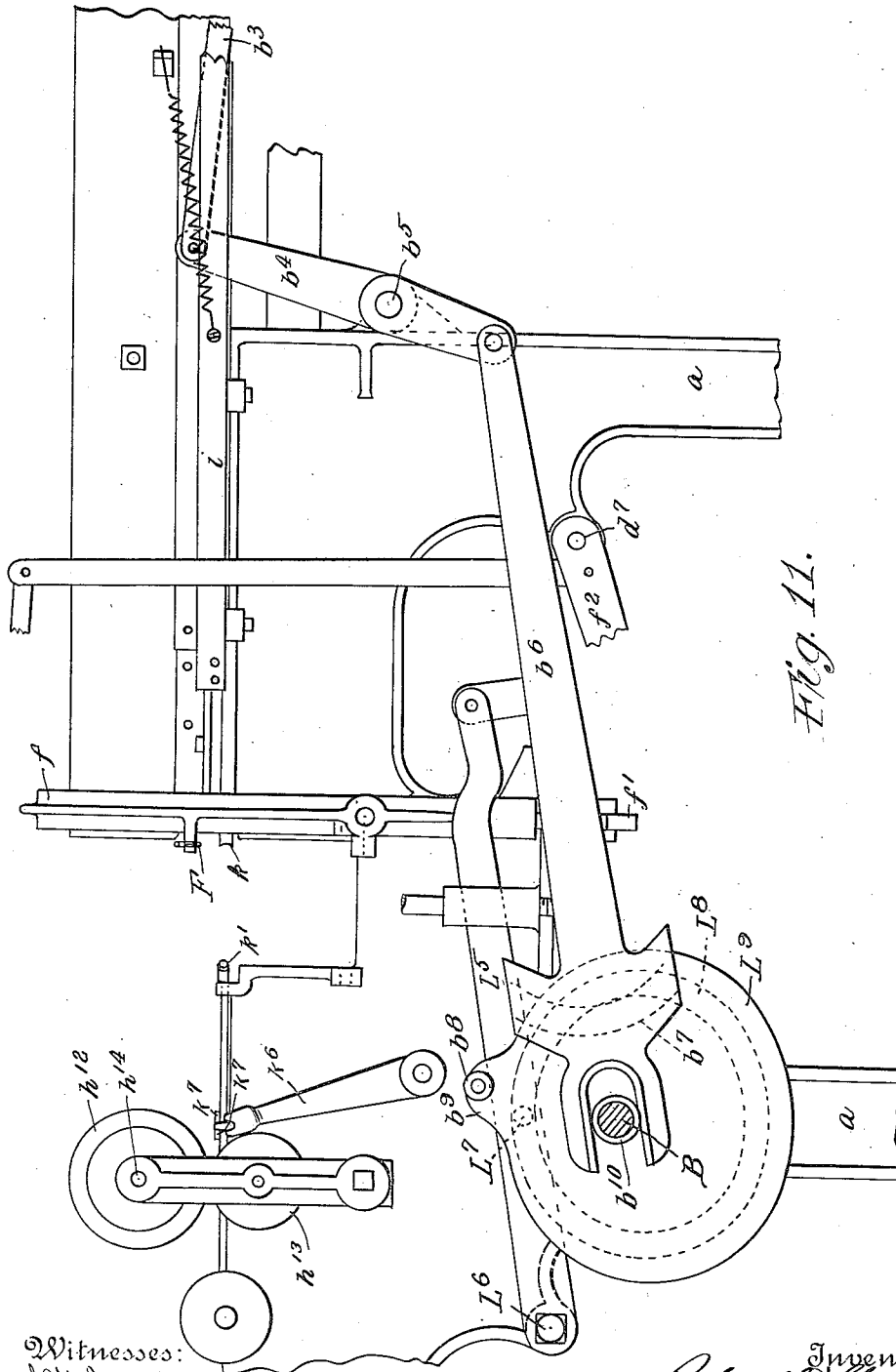


Fig. 11.

Witnesses:
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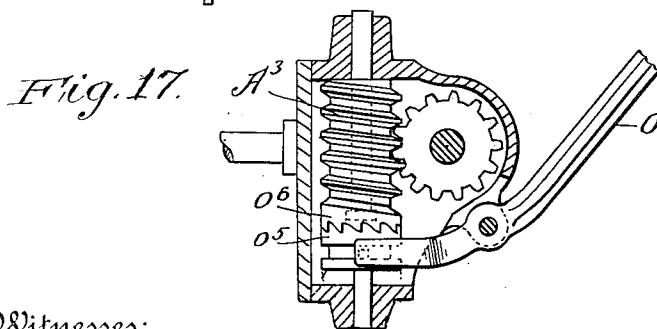
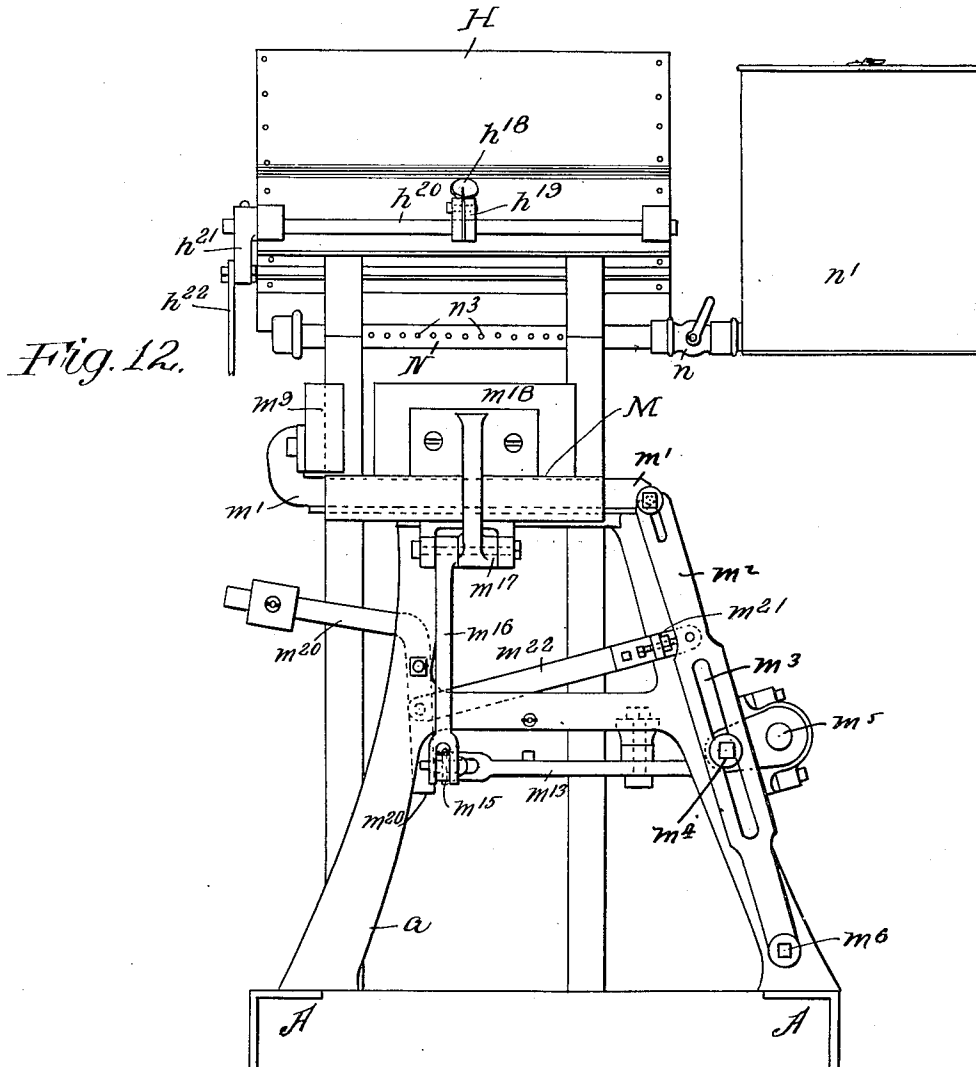
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BUTTER PRINTING AND CUTTING MACHINE.
APPLICATION FILED MAR. 10, 1911.

1,065,185.

Patented June 17, 1913.

10 SHEETS—SHEET 9.



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 BUTTER PRINTING AND CUTTING MACHINE.
 APPLICATION FILED MAR. 10, 1911.

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1,065,185.

10 SHEETS—SHEET 10.

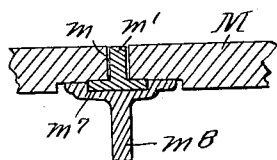


Fig. 16.

Fig. 15.

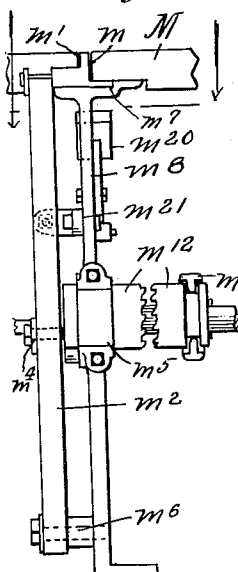


Fig. 14.

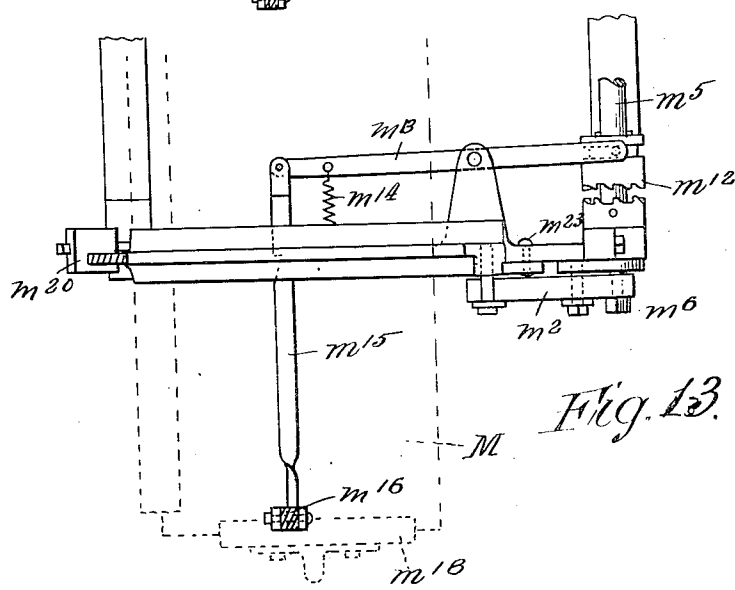
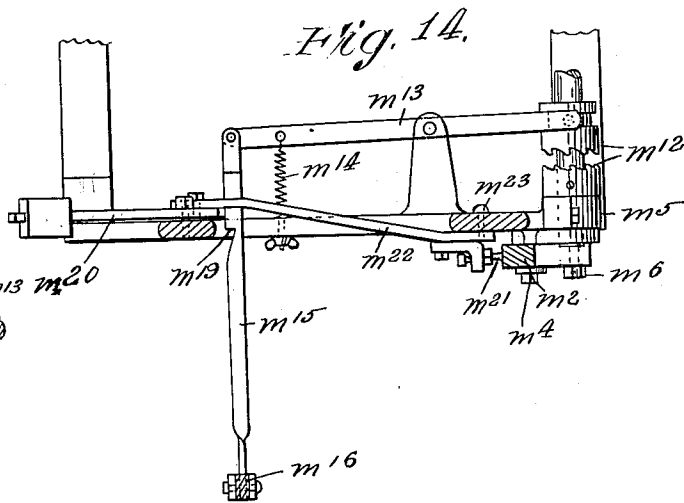


Fig. 13.

Witnesses:
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UNITED STATES PATENT OFFICE.

RICHARD F. STEWART, OF NEW YORK, N. Y.

BUTTER PRINTING AND CUTTING MACHINE.

1,065,185.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed March 10, 1911. Serial No. 613,653.

To all whom it may concern:

Be it known that I, RICHARD F. STEWART, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Butter Printing and Cutting Machines, of which the following is a specification.

The present invention relates to machines for handling bulk material, printing and cutting it off, particularly that class of merchandise which it is desirable shall be mechanically handled, both for speed in putting into marketable condition and for sanitary reasons, and in its present embodiment is shown as applied to machines for forming prints of butter from slabs.

The machine herein disclosed is designed to receive slabs of butter cut from a tub; print thereon any initialing or design desired; and sever the slab-end thus marked into prints of uniform weight and size. The machine is designed to perform all of these steps in sequence, each operation taking place automatically and without the necessity of manual operation or the attention of an operator, except to insert the slabs of butter at one end of the machine and remove the prints at the other end, and each mechanism is so timed as that only one mechanism will be operating at a time; although the arrangement is such and the timing is so worked out that the successive manipulations of the print follow each other quickly and without loss of time, so that the output of the machine is large and a machine capable of rapid driving is provided.

Referring to the drawings, which illustrate one embodiment of my invention and form a part of this disclosure—Figure 1 is a view in plan of the machine. Fig. 2 is a view on an enlarged scale of the slab-receiving hopper (shown at the left, Fig. 1), portions of the structure being in section to better illustrate the mechanism for operating the several parts. Fig. 3 is a detail sectional view of the plunger head for advancing the slabs. Fig. 4 is a view on substantially the same scale as Fig. 2, of the wrapping mechanism, wrapper-feed, and print-delivering plunger, parts of the structure being in section to better illustrate the operating mechanisms. Fig. 5 is a detail sectional view through the wrapper box to show on an enlarged scale the controlling finger for the wrapper-pack. Fig. 6 is a

cross sectional view on approximately the dotted line 6—6, Fig. 1. Figs. 7 and 8 are cross-sectional views on approximately the dotted lines 7—7 and 8—8, respectively, Fig. 1. Fig. 9 is an enlarged detail view, in elevation, to show the wrapping-well through which the print passes during the wrapping operation, and its related parts. Fig. 10 is a plan view, somewhat enlarged, of the central portion of the machine, with the hopper and wrapper-box removed, to illustrate the wrapping well through which the print moves during the wrapping operation and the cooperating parts. Fig. 11 is a view from the back of the machine to show the slab-receiving hopper and the operating parts for handling the wrapper end-folding devices. Fig. 12 is a view, in elevation, at the delivery-end of the machine, showing the delivery-mechanism for handling the assembled prints, the pack-holding knife or blade for the wrapper-pack, and the sprinkling pipe. Figs. 13, 14, 15, and 16 are detail views of the mechanism for delivering the assembled prints. Fig. 17 is a detail view of the main drive and clutch box.

Referring to the drawings by letters, like letters illustrating like parts in the several views, A (Figs. 4 and 6) denotes the machine frame, which may be of any suitable design to form a proper support for the operating parts of the machine, said frame as shown being formed of angle iron, and it may be so constructed as to support in a proper position some prime mover, conventionally shown at X, (Fig. 9,) from which the machine is driven. Mounted upon the top of said frame are standards or a super-frame *a*, which supports for the most part the operating mechanisms of the machine, which operating parts will be described in detail hereinafter.

Main drive and slab feed.—The power-shaft A' (see Figs. 1, 4 and 6) which drives the various mechanism rises from its prime motor to a suitable gear and clutch box A², from which power is transmitted to the different parts of the machine.

The main drive or cam shaft B, which operates the several instrumentalities of the machine, is best shown in Fig. 6, with its various driving cams and sprockets in section, this drive shaft being driven by the worm A³ and worm wheel A⁴ (see Fig. 10) in the box A², or it may be rotated by hand, the present illustration showing a conven-

tional hand wheel B³, (see Fig. 1,) by which shaft B may be turned.

At one end of the machine is provided a hopper B', (Figs. 1 and 2) in which the
5 slabs of butter which have been cut from the tub in any suitable manner, as for example by the well-known American Butter Cutting Machine Company's slab cutter, illustrated in the Stewart Patent No.
10 804,566, are put, a slab holding table B² being provided for convenience at one side of the slab hopper B', as shown in Fig. 1. The said hopper B' has a slab-advancing plunger b mounted to reciprocate therein,
15 the head of which is resilient, as shown in Fig. 3, being mounted on spring rods b'' so as to yield slightly as the slab feeds forward, an adjustment of the plunger being provided for by means of adjusting
20 nuts b'''. The stem b' of this plunger is connected by a pawl b² with a sliding frame, (see Fig. 2) which is connected by a link b³ with an operating lever b⁴ mounted on a rock shaft b⁵, (see Figs. 2, 6 and 11) which
25 rock shaft in turn is oscillated by a cam rod b⁶ which is provided with a groove b⁷ to receive a cam-roll b⁸ mounted on the cam b⁹ and designed to engage at regular intervals in its rotation the grooved lever b⁶ and give
30 a feeding-thrust through it and the connected parts to the plunger b, the said thrust lever b⁶ being forked at its free end so as to engage a supporting thimble b¹⁰ on the shaft B and thereby support the le-
35 ver.

In order to get a step-by-step feed to the plunger b its stem b' is provided on its under side with a ratchet b¹¹, this ratchet being
40 so cut as to give a definite advance to the plunger b each time the plunger-advancing mechanism is operated, the movement of the plunger, of course, determining the size of the prints which are severed from the slab as it is fed from the hopper, the present
45 machine being designed to give a two-and-a-half-inch feed so as to give a print of two and one-half inches in width. The plunger b and its ratcheted stem, which normally lie in the position shown in dotted lines in
50 Fig. 2, are advanced by means of the pawl b², heretofore referred to, said pawl being weighted to keep it in engaging position, and mounted on the sliding frame b¹³, which, as stated connects with the link b³,
55 lever b⁴, shaft b⁵, and thrust lever b⁶, with the operating cam on the main shaft B heretofore described.

It will be obvious that, with the mechanism just set forth, each reciprocation of
60 the pawl-carrying frame b¹³ will step the plunger b and its ratchet stem forward one or more teeth or ridges, depending on what advance is to be given to the plunger, and that after an advance and return of the
65 operating parts the plunger b will come to

a state of rest until the operating cam-roll b⁸ has completed its revolution, when the advance of plunger b will be repeated. It will be observed that the cam groove b⁷ in the thrust lever b⁶ is of such shape as
70 that it will first advance the lever to throw the plunger b forward, through the operating lever, links, and pawl b², and it will then return the thrust lever b⁶ to its normal position, trailing the pawl b² back idly over
75 the ratchet. The stem b' of the plunger b preferably extends backward through an opening b¹⁴ in an abutment at the rear of the hopper and is upheld by a spring b¹⁵, which steadies the movements of the stem
80 and insures a proper relation of the ratchet and pawl.

Printing mechanism.—As the slab is advanced in the hopper B' it passes to a printing mechanism (see Figs. 2, 4, 7, 8 and 9)
85 from which it receives its imprint or design, which imprint will, of course, be that of the particular dealer who is forming the prints, and this printing mechanism comprises a half-roller or block D, suitably cut on its
90 under surface with the dealer's design, and pivotally mounted in the ends of levers d which are carried on rock shafts d' mounted in adjustable blocks d² in suitable standards d³ on the sides of the hopper B'. The print
95 block d normally stands in the position shown in Fig. 2, raised above the hopper, and it is weighted by a suitable weight d⁴ at its rear end so that it stands, as shown, with its circumferential face turned toward
100 the approaching slab. As the slab is advanced and approaches the printing point the levers d are rocked, through the link d⁵ and lever d⁶, which is carried by a rock shaft d⁷, said rock shaft receiving its movement
105 from the shaft-operating lever d⁸ linked, as shown in Fig. 4, to a lever d⁹ mounted at its rear end on an oscillating support or shaft d¹⁰, said lever d⁹ being provided with a cam roll d¹¹ (see Fig. 6), which takes into a
110 cam groove d¹² on the cam d¹³, so that at the proper interval in the operation of the machine the lever d⁹ will be rocked, and, through the connections just described, drop the print roll D just within the hopper and
115 into contact with the advancing slab. It is obvious that the moment this freely oscillating or rocking print-block D engages the surface of the slab it will be rotated and imprint its design upon the slab, and after this
120 half rotation of the print block D has been made the timing of the cam d¹³ is such that the block D will again lift, and, being weighted at its rear, at once swing to its normal position as shown in Fig. 2.

Print regulator.—The slab thus printed is stepped forward at the next movement of the plunger b in the hopper B' and its end feeds past the end of the hopper against
125 a regulating plate E, shown in Figs. 1, 13

4, and 9, which is carried by a frame *e* by means of adjustable spring-mounted rods *e'*, which have a resilient mounting in barrels *e''* so that the stop or regulating plate *E* may yield slightly, and preferably the plate *E* is adjustable with respect to the supporting frame *e* by means of adjusting nuts *e'''* on the supporting rods *e'* as shown, it being understood that the rods *e'* within the barrels *e''* are surrounded by spiral springs so as to give the resilient play to the plate *E*. This arrangement with the resilient head *b''* on plunger *b*, gives a very efficient regulation and feed for the slab.

15 *Print cutting mechanism.*—In this position of the slab the cutting mechanism is brought into play (Figs. 1, 4, 7, 8 and 9), which cutting mechanism comprises a severing wire *F* carried by a rising and falling frame or yoke *f* mounted on suitable standards *f'* secured to the frame, said yoke *f* being operated from the shaft *d'* heretofore described, lever *f''*, and link *f'''*; the shaft *d'*, as stated, being oscillated through the lever *d''* which is linked to the lever *d'''* driven from the cam *d''''*. The rising and falling of the wire-carrying yoke *f* is so timed that it will make its descent and cut off a print the moment the printed slab end is fed forward against the regulating device and over the wrapping table, presently to be described, to bring the slab end in proper relation to the cutting mechanism.

Included in the structure of this machine is a wrapping and wrapping feeding mechanism which I will now only briefly describe.

Referring to Figs. 4, 5, 9, and 10, it will be observed that there is a well in the machine at the end of the hopper *B'*, which contains a print platform *G* provided with guiding rods *g* which slide in suitable ears on the upper machine frame or superstructure *a*, as shown in Fig. 4, so as to guide the platform *G* in its rising and falling movements, the movements of the platform in the well being effected through the adjustable connection *g'* depending from the platform, as shown in Fig. 2, this adjustable connection *g'* being linked by a small link *g''* to an actuating lever *g'''* mounted on the oscillating shaft *d''''*, and actuated by a cam roll *g''''*, taking into a cam *g'''''* as shown in Fig. 6, the cam *g'''''* being fixed to and revolving with the drive shaft *B*. The cam *g'''''* is so timed as to give a falling movement to the platform *G* immediately the severing wire *F*, carried by the yoke *f'*, has completed its cut and deposited the print, severed from the end of the slab, upon the platform *G*.

60 The wrapper feeding mechanism comprises a stack receptacle *H*, which is preferably mounted in the inclined position shown in Fig. 4 so that the wrappers will stand in the staggered position shown, a weighted handle board *h* being provided to

hold the stack in proper position, and at its forward end the handle board *h* preferably has two strips *h'* on either side, which lie above the ejecting wheels *h''* so as to insure a proper contact between these feed wheels and the paper, without unduly increasing the friction on the stack. The ejecting feed rollers *h''*, which pick off the bottom sheet of the stack and forward it to the feeding rolls, which are shown in Fig. 4, project slightly through the bottom of the hopper *H* so as to bear against the lowermost sheet of the stack, and these ejecting wheels are operated at regular intervals by a ratchet wheel *h'''* (see Fig. 9) which receives an intermittent motion from a weighted pawl *h''''* linked by a link *h'''''* to an oscillating lever *h''''''*, the lower end of which has a cam roll *h'''''''* taking into a cam groove *h''''''''* on the cam disk *h'''''''''*, as shown in Fig. 9. From this it will be seen that the shaft *h''''''''* carrying the rolls *h''* will be given an intermittent rotation, and pull forward from beneath the stack the lowermost sheet, which will feed out of the open mouth of the hopper below the sheet-controlling fingers *h''''''''''*, which overlie the trough *h'''''''''* and are carried by the frame *e*, heretofore referred to, into the trough *h'''''''''*, and, passing along, will come into the nip of the feed rollers *h''''''''*, *h'''''''''*, as best shown in Fig. 4, one set of these rollers *h''''''''* and *h'''''''''* being rubber faced, as shown in Fig. 6, to give a good grip on the sheet. The rollers *h''''''''* are positively driven through the shaft *h'''''''''* and sprocket *h''''''''''*, which, by drive chain *h'''''''''*, connects with the large sprocket *h''''''''''''* on the main shaft *B*, the rollers *h''''''''* being idlers mounted on small stub shafts as shown in Fig. 6 carried by the superframe *a* and serving as rotating abutments for the positively driven wheels *h''''''''* to grip against. The wrapper, thus fed forward, is advanced over the platform *G*, this advance of the wrapper being timed so that it projects over the well and above the platform *G* during the period that the platform with its print is below the plane of the wrapper troughs (Fig. 4). The wrappers are, of course, of thin paper, and in order that the free end of the wrapper may be prevented from dropping into the well and that it may be carried across this open space, I provide a wrapper-receiving slide *I*, shown in Figs. 2 and 4. The wrapper receiving slide *I* is composed of an open ended mouth-piece carried by suitable slide bars *i* which are connected at their rear ends to the carrier frame *b''''*, shown in Figs. 1, 2, 4, and 9, the movements of this carrier frame *b''''* to which the slide bars *i* are connected, being so timed as that it will advance the open-mouthed wrapper slide *I* across the well in alignment with the trough *h'''''''''* to receive the free end of the wrapper as it is fed forward by the

feeding wheels h^{12} , h^{13} , heretofore described, and the wrapper-receiving slide I will, on its return, carry the thin paper wrapper across the well in position to lie upon the table G, when it once more comes to a state of rest in front of the hopper B. The movement of the wrapper from its stack across the well is not, however, a symmetrical movement, so that the wrapper does not lie half-and-half on each side of the well. That portion of the wrapper which actually projects on the side of the well opposite the stack, is only so much as is necessary to give a side fold and relatively short turn-in on top of the print, thus reducing the extent of wrapper movement to a minimum in taking it from the stack and delivering it to the platform. The stack in the hopper H lies, as stated, in a staggered position, owing to the inclined position of the hopper, and at the rear end of the hopper I provide a stack-controlling blade or point h^{18} (shown in detail in Fig. 5) mounted on an arm h^{19} , carried by a rock-shaft h^{20} , which is oscillated by crank-arm h^{21} and link h^{22} (Fig. 12) which connect with lever h^6 , (Figs. 4, 5, and 9) heretofore referred to, and from which the part h^{18} gets its movements. The blade h^{18} will thus be rocked at regular intervals and its point h^{23} worked into the lowermost sheets of the stack. The point h^{23} is rounded, as shown, so as to give a penetrating point; and just below the point h^{23} the rear edge of the blade is brought to a cutting edge so that, as the stack works down, the bottom sheet is but slightly held by the cutting edge and may be readily stripped from the stack by the ejecting wheels and fed forward to the delivering mechanism which carries it to the well and platform. It will be obvious, of course, that the wrapper thus laid upon the table G will project on either side and at the ends of the table, for, as shown in Figs. 1, 4, 8 and 9, the rectilinear dimensions of the object (print of butter) to be wrapped are considerably less than the size of the wrapper, in order that the wrapper may be properly and completely folded about the article. As the table G with the wrapper and print, or other object thereon, descends into its well it will be obvious that the sides of the wrapper will wipe against the sides of the well and be folded up against the print or other object, and this will give the initial side fold. As the platform G with its side-wrapped article drops below the plane of the hopper bed the top fold is made by means of folding slides k , k' (Figs. 4, 9, and 11) which lie on either side of the well, the slide k having a comparatively short movement so as to give the short turn-in to the top edge of the wrapper, said slide k being mounted in suitable ways on the machine frame and being operated by a de-

pending lug k^2 (see Fig. 2) which is engaged by a weighted dog k^3 on the carrier frame b^{13} , this weighted dog k^3 being normally in position to engage the lug k^2 and move the slide k forward a short distance until a trip k^4 engages a toe k^5 , which thereupon trips the dog k^3 , disengages it from the lug k^2 , and permits the carrier b^{13} with its supported parts to move forward without carrying the slide k any farther. The slide k' on the opposite side of the well is given a comparatively long movement passing practically clear across the top of the object to be wrapped so as to lay the long flap of the wrapper over the top of the object, and this slide k' receives its forward thrust or movement from a lever k^6 which engages a cross bar k^7 on the slide (see Fig. 11), the lever k^6 (see Fig. 6) being operated by means of a cam roll k^8 engaging a cam groove k^9 in the cam disk h^9 , heretofore referred to, and best shown in Fig. 6 at the left-hand side, the slides k and k' being timed so as to lay the wrapper across the top of the article and make the top folds when the platform G has dropped to the point where the slides may reciprocate above it and the print thereon. When the top folds have been laid as described, the article, with the wrapper laid about it, has been brought to the plane of the delivery chute L (see Figs. 2 and 3), and at this point the end folding operation is begun. This end folding is accomplished by means of the folding plates k^{10} , shown in Figs. 4, 7 and 9, from which it will be seen that the said plates k^{10} are pivotally mounted at their lower ends to suitable lugs on the frame of the machine, the said folding plates k^{10} being connected by loose link connection k^{11} to the rising and falling yoke or cutter-frame f , so that they are thrust forward and back as the cutter-frame rises and falls, the slots k^{12} at the outer ends of the links k^{11} giving lost motion sufficient to insure a proper throw to the infolding plates k^{10} , the said plates being preferably counterweighted by the weights k^{13} , as shown in Figs. 6, 7 and 9, to insure their remaining in normal position during the further movements of the cutter frame. It will be seen that these plates k^{10} when thrown into folding position will turn in the lower projecting side of the wrapper end, and in order to give a corresponding tuck or fold to the upper side of the wrapper I provide the folding blades k^{14} shown in Figs. 4, 6, 7 and 9, these folding or tucking blades k^{14} being formed, as best shown in Fig. 6, from a single plate, with downturned ends, which is mounted in a cross head k^{15} mounted on traversing rods k^{16} which are slidably mounted at their lower ends in slide bearings and connected by a cross frame k^{17} (see Fig. 4) and link k^{18} with a lever k^{19} mounted on the shaft d^{10}

and connecting by a cam roll k^{20} with a cam groove k^{21} on the cam disk k^{22} , as best shown in Fig. 6. These blades k^{14} it is to be understood, work down just inside the plates h^{10} , which act a little in advance, to complete the end tuck at top and bottom of the article, the plates h^{10} being outturned at their upper ends to permit the tucking blades k^{14} to pass down between them and the package, and insure the tuck. The package is now ready for the final fold of the wrapper, and this is accomplished by means of an ejecting plunger L' which traverses the delivery chute L and is clearly shown in Figs. 2 and 4, this plunger being mounted on the carrier frame b^{13} , and having at its forward end on either side the folding blades L^2 , which embrace the package on the platform G , fold over the side flaps at each end and on one side of the package, and thrust the package forward into the delivery chute L , which is of such dimensions as that when the object is forced forward the sides of the chute L will fold over the last side fold of the package. The side-folding plunger L' and its carrier frame b^{13} are reciprocated through the medium of a link L^3 and a rocking lever L^4 mounted on the shaft d^7 which receives its movements from the lever L^5 pivoted at L^6 to the machine frame and provided with a cam roll L^7 engaging a cam groove L^8 , in the cam disk b^9 heretofore referred to (see Fig. 6). This completes the wrapping operation, and the package, inclosed within the wrapper as described, passes from the feed chute L as the packages are fed along, to a receiving table M which will now be described.

Print delivering mechanism.—The said table M is divided by a slot m as shown in Figs. 1, 4 and 15 in which travels a slide m' , connected, as shown in Fig. 12, to a rocking lever m^2 having a slot m^3 in which a crank pin m^4 plays, said crank pin receiving motion from the shaft m^5 , so that, as the shaft revolves, the lever m^2 , which is pivoted to the frame of the machine at m^6 , will swing backward and forward, reciprocating the slide m' , supported as shown in the detail view Fig. 16, in a track m^7 carried by suitable standards m^8 . At its rear end, see Fig. 12, the slide m' carries a push board m^9 which sweeps the top of the table M and carries the packages which have been ejected from the chute L onto a platform m^{10} from which they may be removed by the attendant, the machine being designed to handle any desired number of packages at a time, this being dependent, of course, on the length of the receiving table M and push-board m^9 . This delivery mechanism just described is operated as heretofore stated, from the shaft m^5 , the said shaft m^5 being continuously driven through the worm and gear connection A^3 shown in Fig. 6, in which

the worm is driven from the main shaft A' connected with the motor. The shaft m^5 (Fig. 13) has one member of a clutch m^{12} pinned to it and rotating continuously therewith, the other member of this clutch being splined to the shaft m^5 and sliding thereon under the influence of the lever m^{13} pivoted to a fixed part of the machine frame and normally thrown out of engagement with its complementary part by a spring m^{14} . The other end of the lever m^{13} is engaged by a pull rod m^{15} connected to the lower end of a lever m^{16} pivoted at m^{17} to suitable hangers on the machine frame, the upper end of this lever carrying an end board m^{18} , which, as shown in Figs. 1, 12 and 13, is in the line of movement of the packages as they come from the chute L . The result of this construction is that when the packages accumulate on the table M until the end package strikes the board m^{18} , the board is pushed away, the lever m^{16} is rocked, and, through the push rod m^{15} and lever m^{13} , the splined member of the clutch m^5 is thrown into engagement, and the slide m' and push board m^9 are moved to deliver the packages in numbers from the table M , as heretofore described.

In order to positively lock the clutch m^{12} in engagement after it is initially started by the packages acting against the end board m^{18} , I provide the thrust-rod m^{15} with a notch m^{19} which is engaged by the tail of a weighted lever m^{20} as the thrust rod moves, said weighted lever holding the parts in position with the clutch in engagement, against the opening stress of the spring m^{14} until the lever m^2 after having carried the push board m^9 across the table makes its return throw, whereupon it strikes an adjustable stop m^{21} on a thrust rod m^{22} connected at its other end to the lever m^{20} , the said thrust rod m^{22} having a pin and slot connection m^{23} at its other end with the standard of the machine frame. When the lever m^2 swings back and strikes this thrust rod m^{22} , the rod will be moved longitudinally and throw the end of the lever m^{20} out of the notch m^{19} , whereupon the spring m^{14} will disengage the clutch m^{12} and the delivery slide or push board m^9 will then lie in its normal position until its movement is again initiated by the accumulating packages striking the end board m^{18} .

In the wrapping of some commodities, it is very desirable to preserve the moist condition of the product, and this is especially true of butter, the juices of which are apt to be absorbed by the wrappers, so that the outer surface of the butter becomes dried out, and since these absorbed juices afterward evaporate as the wrappers dry out, the prints frequently fall below weight. In order to guard against this difficulty I propose to moisten the wrappers after the prints

have been wrapped, so that the paper will have no tendency to absorb the juices of the butter, the butter will continue in proper moist condition for a considerable period, and there will be no loss of weight. I accomplish this by providing a sprinkler which comprises a tube N (see Fig. 12) lying over the delivery chute L and beneath which the wrapped prints will pass as they are shoved forward to the delivery table. This sprinkler tube N is connected by a suitable valved connection n with the tank n' containing water, and along its side and said tube N is provided with a series of perforations or drip openings n^2 through which the water from the tank and pipe N may drip upon the packages. The drip openings n^3 are placed along the side of the tube instead of at the bottom, in order that the sprinkling may be uniform over the packages, for it is obvious that if the tube was perforated at its bottom, the water would spurt from the openings nearest the tank, and but very little would flow from the openings at the end of the pipe N, so that the wrappers would not be uniformly moistened. Preferably the drip openings n^3 are at the horizontal center of the tube, although they might be above or below that center, flowing into the pipe N and rising therein until it reaches the level of the perforations, which level will remain substantially constant and may be regulated by the valve n , and then there will be a uniform flow from all of the perforations in the pipe.

It has been heretofore stated that the controlling and operating cams best shown in Fig. 6, which are fixed to the main drive shaft B, are so timed with relation to each other as that each of the mechanisms starting with the slab advancing plunger will operate in proper sequence, and this, of course, gives a machine which is entirely automatic in its action from the time the slab is placed in the hopper B' until the group of prints are pushed from the delivery table to the receiving platform at the other end of the machine. This automatic operation of the machine, of course, does away with the necessity of attendants, except some one to supply the slab to the hopper and remove the wrapped prints from the receiving platform.

In order that the machine may be entirely automatic, and that upon failure of the slab it will be stopped until the slab advancing plunger is retracted, and a new slab provided, I have furnished it with a stop motion device which, as best shown in Figs. 1, 2, 6, 10 and 17, comprises a stop lever O pivotally mounted on the worm and clutch box A² and connected at its upper end with a tilting lever o carried by a suitable bracket o' conveniently mounted on the slab table B² and provided with a handle o^2 by which it

may be conveniently manipulated. The said tilting lever o has a tripping projection o^3 which lies in the path of an operating arm o^4 carried by the stem b' of the slab advancing plunger. The relation of the operating arm o^4 and the tripping projection o^3 is such that the lever o will be operated when the plunger b has completed its travel forward in the hopper B' and the butter slab has been severed into prints. The lever o^2 will then be thrown, rocking the stop lever O on its pivot, and the said stop lever, as shown in Figs. 6 and 17, is connected by a suitable fork with a splined clutch member o^5 on the power shaft A', which splined clutch member o^5 takes into a fixed clutch member o^6 secured to or formed as a part of the worm A³ heretofore referred to, and from which motion is communicated to the drive shafts of the machine. From this it will be seen that immediately the supply for the machine is exhausted the stop mechanism will be operated and the machine brought to a state of rest, but that as soon as the slab advancing plunger b is returned to its initial position for the insertion of a new slab, the stop lever O will fall to its proper position and the clutch members o^5 and o^6 reengage, and the machine will start upon starting of the motor.

I have, of course, shown a particular embodiment of my invention, and that the best now known to me, but as machines involving the same principles of invention may be constructed by the adoption of mechanical equivalents of those expedients utilized by me, I do not confine myself to the particular mechanical devices herein disclosed for carrying out my invention.

I claim:—

1. In a machine of the class described and in combination; means for feeding the material, printing means automatically operated by the material as it advances, means for normally holding said printing means out of the path of the material, and means for positioning said printing means in the path of the material at pre-determined times.

2. In a machine of the class described and in combination; means for feeding the material, normally inactive printing means adapted to be actuated by the material as it advances, and means for moving said printing means into the path of the material at pre-determined times.

3. In a machine of the class described and in combination; means for feeding the material, a reciprocating printing device normally inactive and adapted to be actuated by the material as it advances, means for moving said printing device into the path of the material at pre-determined times whereby said device is rocked by the material as it advances, and means for releasing said printing device from said material whereby said printing device is adapted to

automatically rock back into normal position.

4. In a machine of the class described and in combination; means for feeding the material, rocking printing means actuated by the material as it advances, means for positioning said printing means in the path of the material, and means for returning said printing means to its normal position after a printing operation.

5. In a machine of the class described and in combination; means for feeding the material, rocking printing means normally out of the path of the material, means for dropping said printing means into the path of the material at predetermined intervals, and means for returning the rocking printer to its normal position after it has printed the material.

6. In a machine of the class described and in combination; means for feeding the material, a rocking printing block having a curved impression face normally out of the path of movement of the material, means for dropping said printing block into contact with the material and removing it therefrom, and means for rocking the printing block to its initial position after it has impressed the material.

7. In a machine of the class described and in combination; means for feeding the material, a rocking and bodily movable printing block normally out of the path of movement of the material, means for moving said printing block toward and away from the material at regular intervals, and means for returning said printing block to its initial angular position after it has impressed the material.

8. In a machine of the class described and in combination; means for feeding the material, a rocking and bodily movable printing block, means for normally holding said printing block in a predetermined angular position, and means for moving said printing block bodily toward and from the path of movement of the material.

9. In a machine of the class described and in combination; means for feeding the material, a gravity-controlled rocking printing block normally held in a predetermined angular position, and means for moving said printing block bodily toward and from the path of movement of the material.

10. In a machine of the class described and in combination; means for feeding the material, an angularly-movable weighted

printing block normally held in a predetermined angular position, and means for moving said printing block toward and from the path of movement of the material, whereby after an impression the said printing block is returned to its initial angular position.

11. In a machine of the class described and in combination; means for feeding the material, a semi-cylindrical rocking printing block weighted at one side to maintain it in an initial angular position, and means for moving said printing block bodily toward and from the path of movement of the material, whereby said block will be automatically returned to its initial angular position after making an impression.

12. In a machine of the class described and in combination; means for feeding the material, means for printing a predetermined portion of said material, means for severing such printed portion, and a rising and falling receiving-table for said printed and separated portion.

13. In a machine of the class described and in combination; a receiving hopper, an advancing plunger in said hopper, means for imparting a step-by-step movement to said plunger, and a stop motion device operable when said plunger reaches its limit of movement.

14. In a machine of the class described and in combination; a receiving hopper, an advancing plunger in said hopper, means for giving a step-by-step movement to said plunger, a trip lever in the path of said plunger, and a stop motion device actuated by said tripping lever when said plunger reaches the limit of its forward movement.

15. In a machine of the class described and in combination; a receiving hopper, an advancing plunger in said hopper, means for giving a step-by-step movement to said plunger, a tripping lever in the path of movement of said plunger and adapted to be thrown from an operative to an inoperative position, and a stop motion device actuated by said plunger when in operative position when said plunger reaches the limit of its forward movement.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

RICHARD F. STEWART.

Witnesses:

WILLIAM A. PRATT,
KATHERINE C. GLANVILLE.