

No. 759,960.

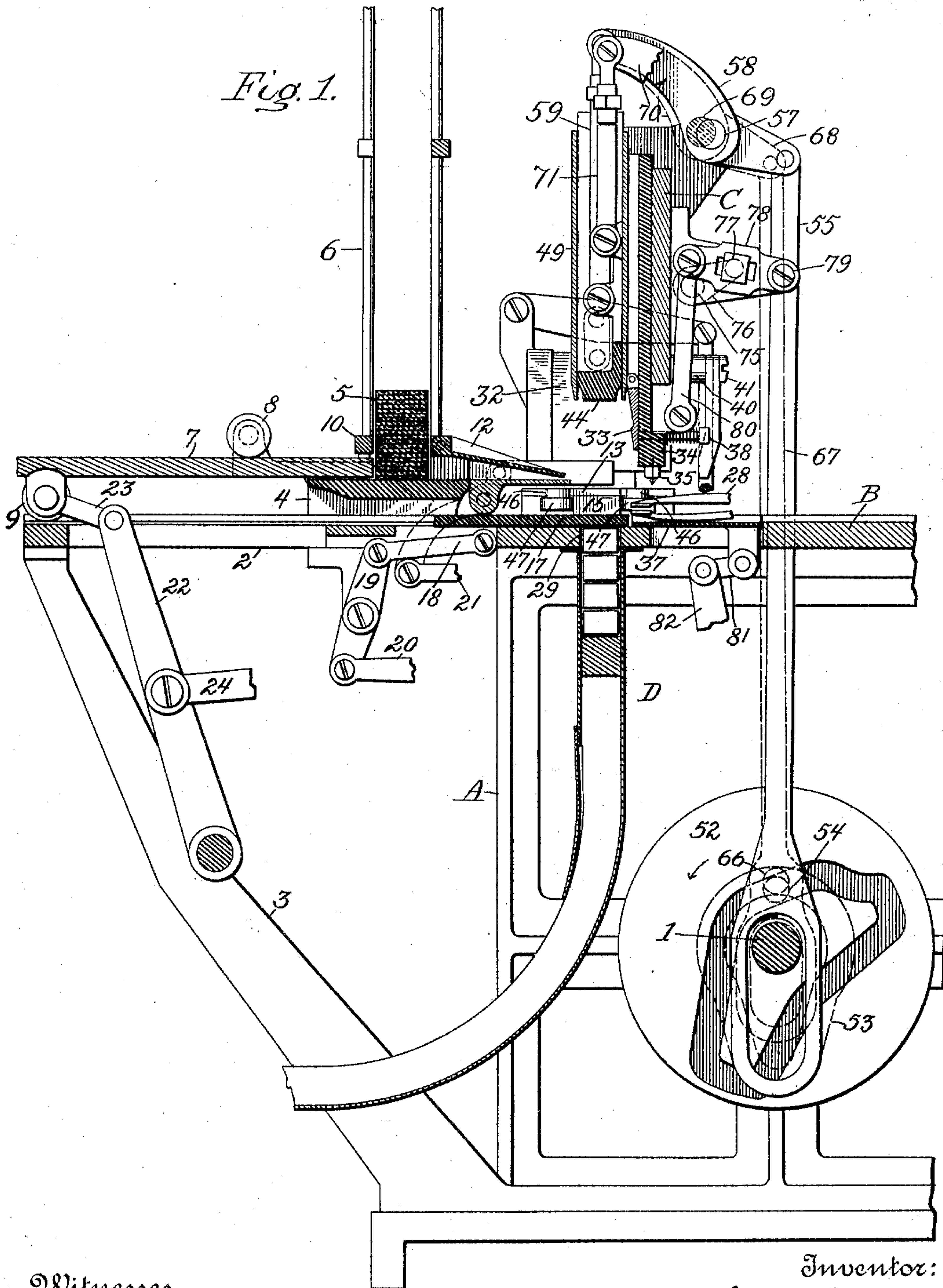
PATENTED MAY 17, 1904.

A. BAYLER.  
WRAPPING MACHINE.

APPLICATION FILED JULY 28, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses  
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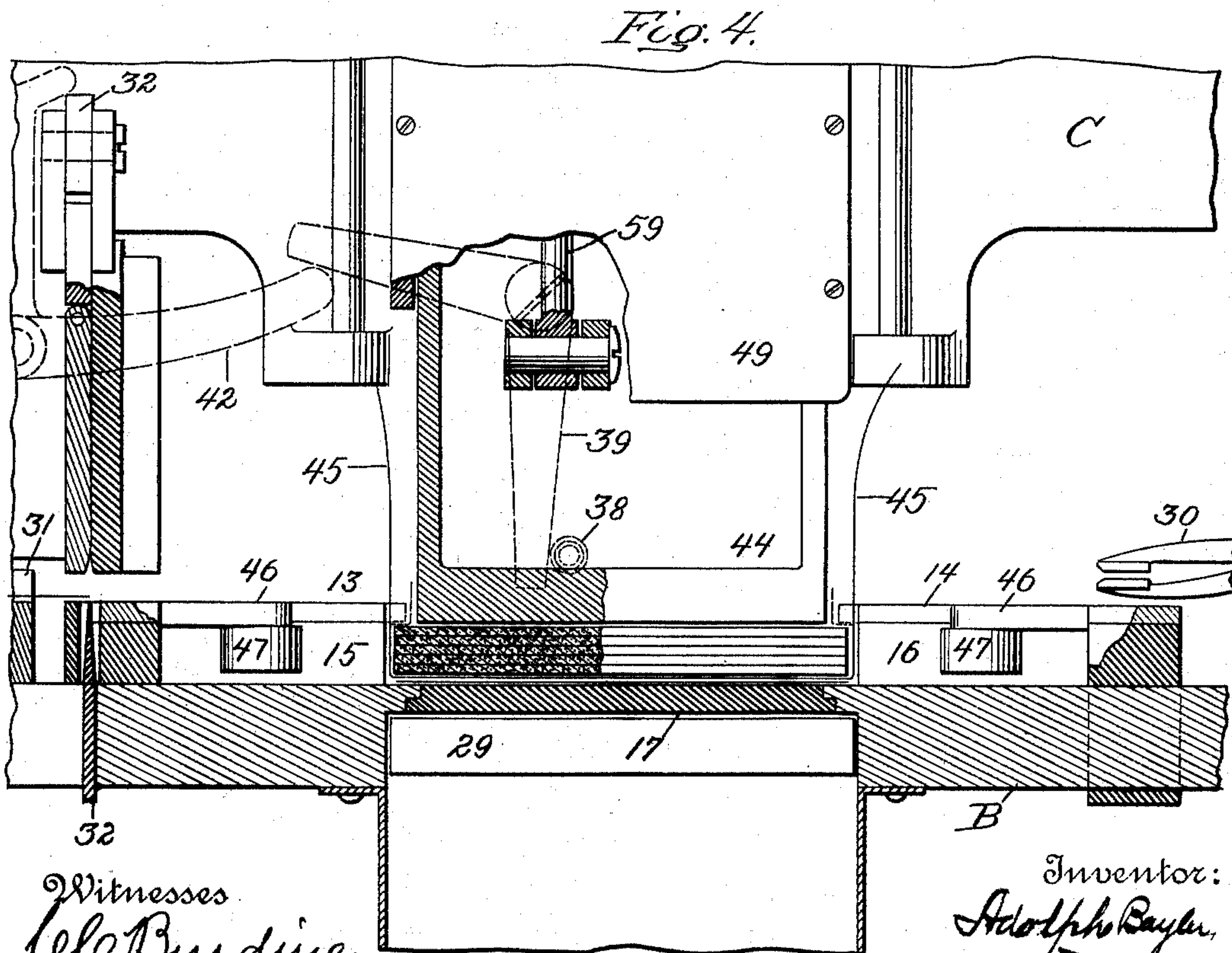
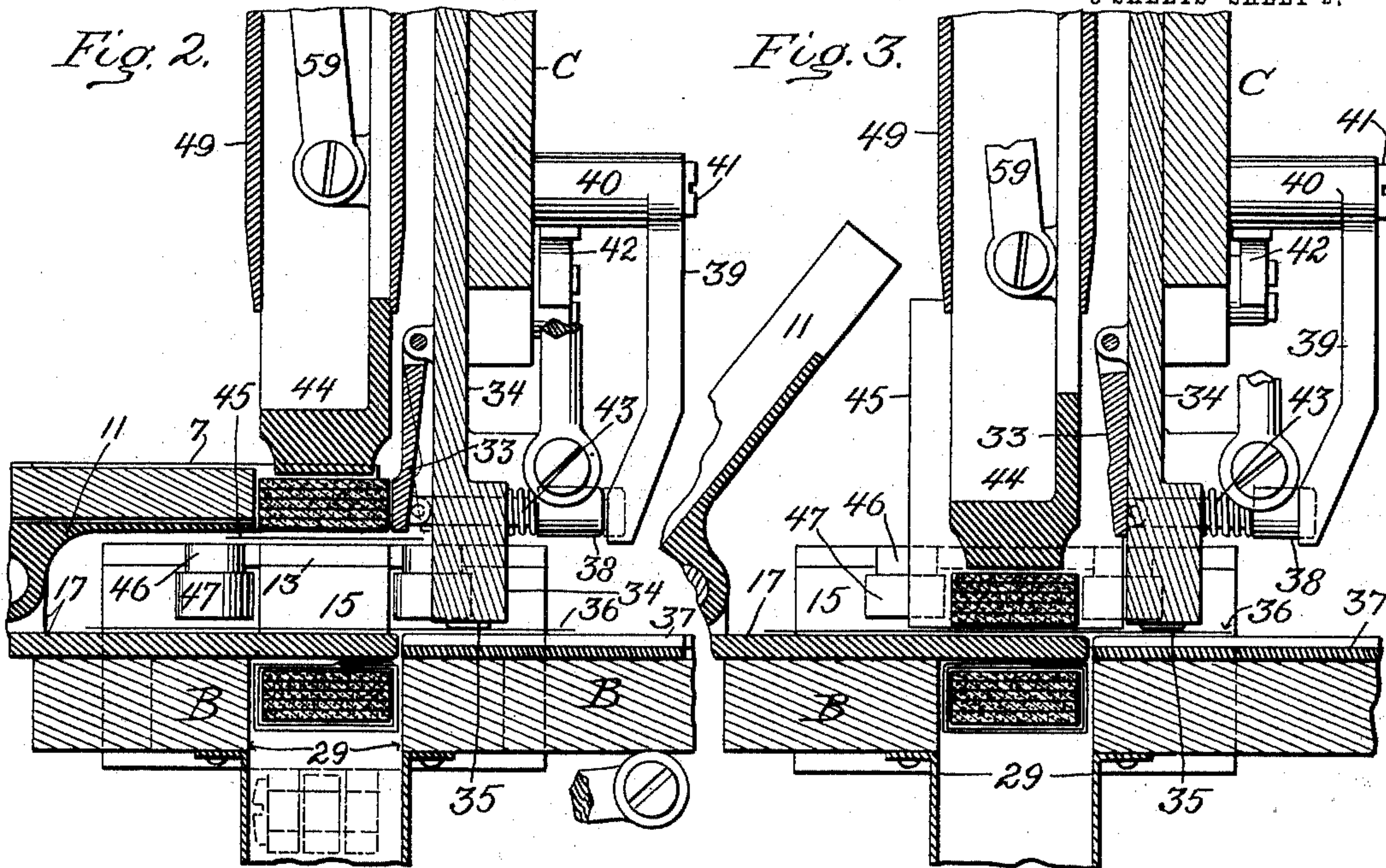
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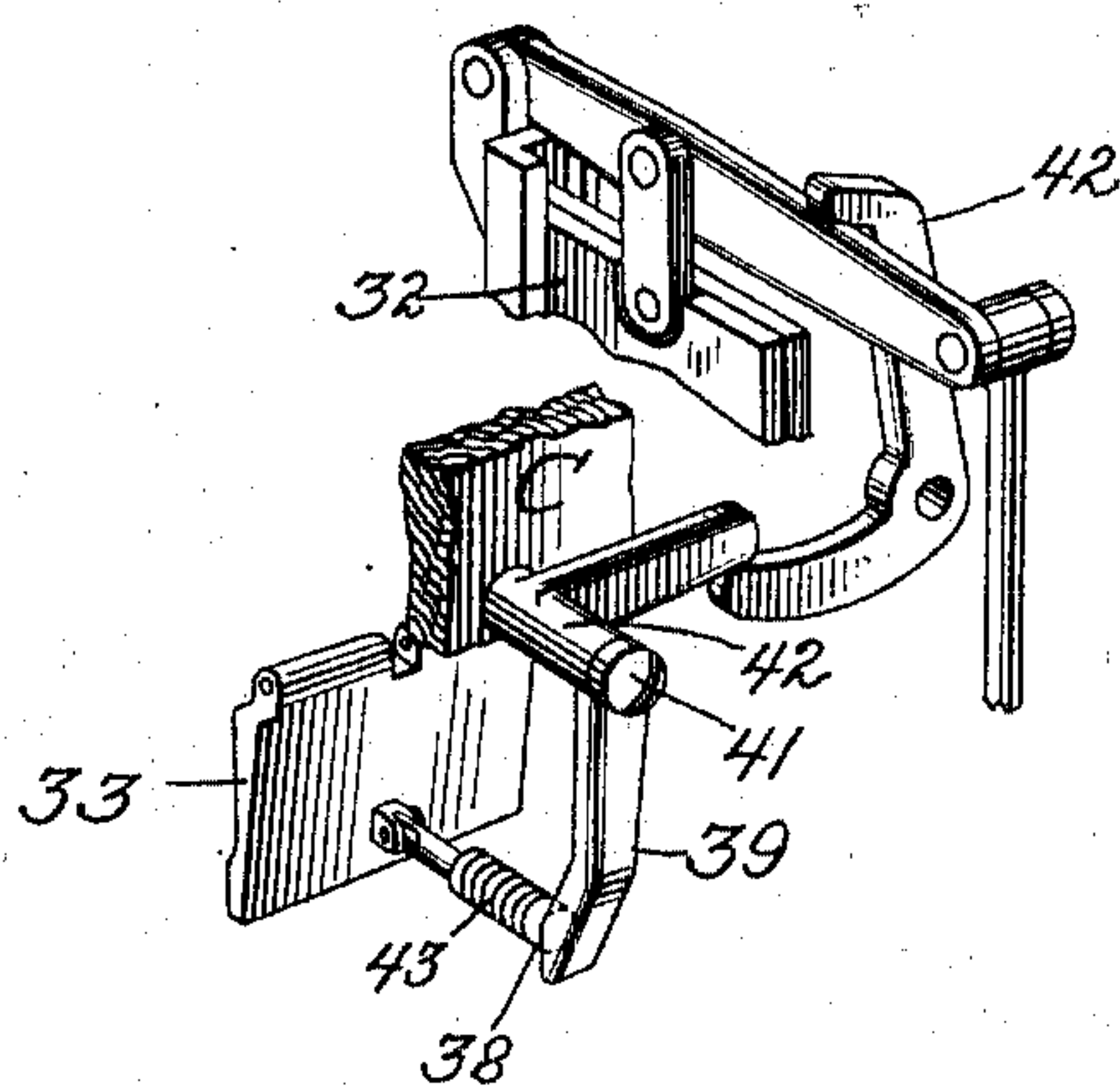
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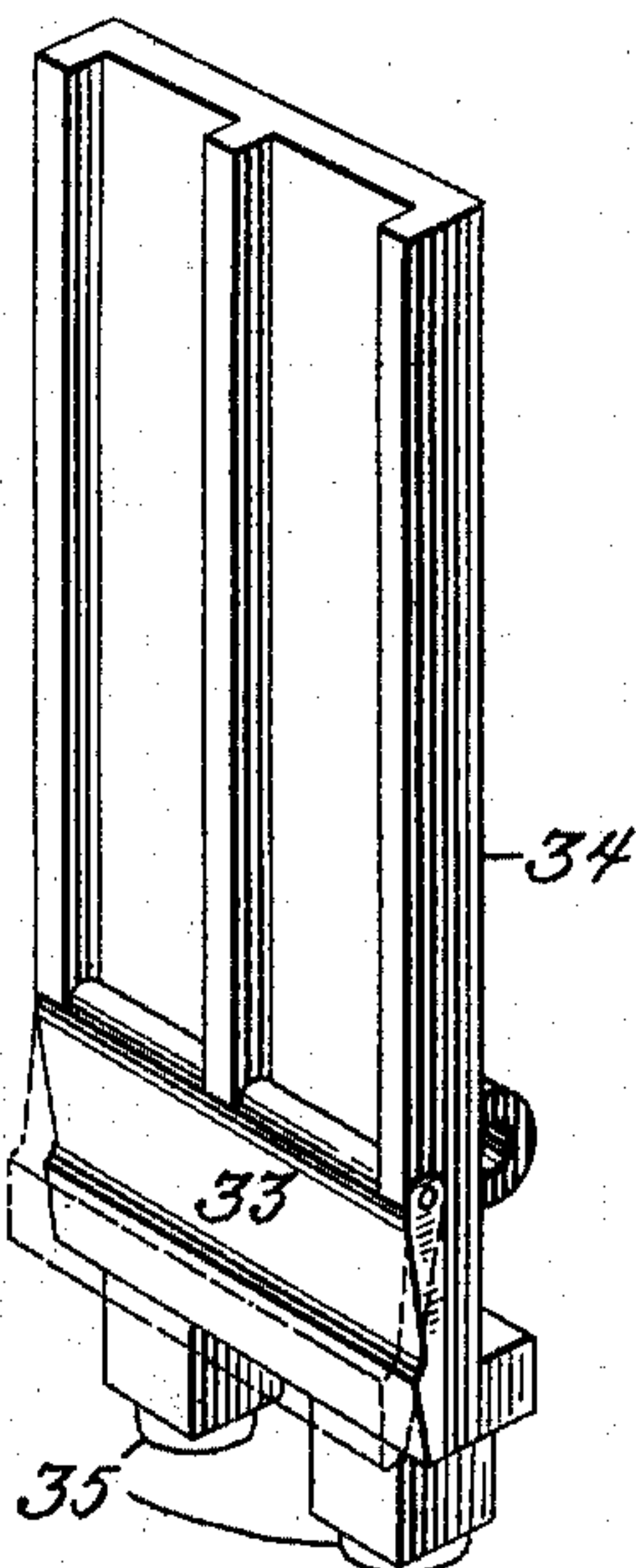
NO MODEL.

3 SHEETS—SHEET 3.

*Fig. 5*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

ADOLPH BAYLER, OF BROOKLYN, NEW YORK, ASSIGNOR TO THOMAS ADAMS, SR., OF BROOKLYN, NEW YORK.

## WRAPPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 759,960, dated May 17, 1904.

Application filed July 28, 1902. Serial No. 117,381. (No model.)

*To all whom it may concern:*

Be it known that I, ADOLPH BAYLER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Wrapping-Machines, of which the following is a specification.

My invention pertains to machinery for wrapping small packages or bodies, such as blocks of gum, chocolate, &c.

The particular feature to which my invention is directed is a stop or gage to limit and determine the movement of the merchandise from a magazine or feeding-point to the point of wrapping and the combination of said gage or stop with folding or wrapping devices and with means for placing the stop or gage in and removing the same from its operative position.

Parts and mechanisms illustrated but not specifically indicated as being of my invention are not claimed by me.

In the accompanying drawings I have shown so much of the machine as is necessary to a clear and proper understanding of the particular feature or portion of the machine in which my invention resides. All parts not fully set forth may be of the construction illustrated or of any other suitable construction adapted for use in connection with the stop or gage and its controlling devices herein set forth.

In the drawings, Figure 1 is a vertical sectional view through the machine or a portion thereof at about the mid-length of the machine; Figs. 2 and 3, enlarged views of portions of the machine shown in Fig. 1, said Figs. 2 and 3 illustrating the action particularly of the gage-plate or stop; Fig. 4, a face view, partially in section, illustrating the devices for tripping the cam or incline by which the gage-plate is set; Fig. 5, a perspective view further illustrating the same; and Fig. 6, a perspective view of the slide to which the gage-plate is pivoted, said gage being shown in full lines in its inoperative position and by dotted lines in its operative position.

In the drawings there is shown a framework comprising standards A, a horizontal bed or table B, and a vertical cross-bar C. The standards or uprights A are furnished with suitable

bearings, in which is carried a main driving-shaft 1, on which are secured the various cams by or from which motion is imparted to the moving elements of the mechanism.

Shaft 1 may and preferably will receive motion through suitable automatic clutch mechanism from another shaft, so that it shall go out of action in the event of any failure of the goods or of the wrappers and that it may promptly go into action upon renewal of the same. These and other features are, however, omitted from the present showing as immaterial thereto.

Projecting from the front or feeding side of the machine is a table extension or runway 2, the outer end of which is supported by an arm or bracket 3. Above and reaching across said runway or extension is a bed or platform 4, upon which rests the lower end or base of a column 5 of the cakes, blocks, or bodies of merchandise to be wrapped, these being held in vertical column by a magazine 6, composed of a series of vertical rods suitably stepped at their lower ends in the bed or plate 4 or in the track frame or runway 2, upon which said bed is supported. A horizontal slide 7 is arranged to move over the upper face of the bed or table 4 and in close contact therewith, being held against rising by means of rollers 8, carried by arms projecting outwardly from the base of the magazine and overhanging the edges of the slide. The outer end of the slide 7 is furnished with rollers 9, which, traveling upon the track or way 2, support the outer end of the slide and guide it in its movements, while at the same time tending to reduce friction between the slide and its supporting track or way.

The slide 7 is made of a thickness equal to that of the block or cake or to that of the number of blocks or cakes of material to be delivered from the magazine at each stroke of said slide. It moves beneath the lower frame 10 of the magazine and encountering the side of the block or blocks pushes it or them beneath said frame 10 and from the bed or table 4 in a horizontal direction to a rocking bridge or guide 11. A gravitating plate 12, overhanging the inner edge of the bed or table 4



and the bridge or guide 11, serves to hold down the block or cake or the series of blocks or cakes as they pass to the inner or delivery side of the bridge or guide 11.

5 The bridge or guide serves not only to support and direct the incoming merchandise until delivered at the point of wrapping or of being placed upon the wrappers, but it has the further function of a clamp to bear upon  
10 and hold down the inner wrapper, which immediately surrounds the merchandise, and is preferably and for the class of goods for which this machine is particularly designed a compound wrapper composed of an inner layer  
15 of paraffined paper and an outer layer of metal foil.

The upper face of the bridge is normally in plane with and constitutes a continuation of the bed or table 4. At its inner side or edge  
20 it is cut away, as indicated in Fig. 1, to permit the blocks or cakes of material to be deposited and forced downward upon the wrapper and into the folding space or chamber, the inner wrapper at such time being clamped  
25 by the inwardly-extending end flanges or walls of the bridge upon the upper faces of two slides 13 and 14, as indicated in Fig. 2, the parts being there shown separated or out of contact to avoid confusion of lines. The  
30 slides 13 and 14 in the present instance move over guiding blocks or ways 15 and 16, which are of a thickness equal to that of the cake or block or series of cakes or blocks to be wrapped at one time. The inner wrapper  
35 therefore lying upon the slides 13 and 14 and clamped thereon by the arms of the bridge or guide 11 will be above the bed or platform B a distance somewhat greater than the thickness of the block or series of blocks to be  
40 wrapped. The inner or facing ends of the guide-blocks 15 and 16 form limits or boundaries of the space through which the merchandise and its wrappers descend and act during the descent of the goods to bend or fold upward in a vertical direction the ends of the  
45 inner wrapper, and slides 13 and 14, moving inward toward each other over and beyond the facing ends of the guide-blocks 15 and 16, turn or fold down the ends of the inner wrapper and lay them upon the upper face of the  
50 merchandise.

Moving in the track or way 2 beneath the table or bed 4 is a plate 17, one office of which is to support the merchandise during the folding operation or a portion thereof and until  
55 the inner wrapper is completely folded, with the exception of turning up the lower longitudinal flap or fold at each side. This slide 17 is connected by a link 18 with a rocking bar or lever 19, which receives motion through  
60 a connecting-bar 20 from a cam on the shaft 1 or other suitable source through intermediate connection. This slide 17 moves beneath the bridge or guide member 11, and its  
65 upper face lies in plane or substantially in

plane with the top face of table B. When a package is to be wrapped, it occupies the position shown in Fig. 2, and the bridge member 11, which is pivoted at the side nearest the bed or base 4, occupies the position shown  
70 in the same figure, being moved to that position by a link 21, as seen in Fig. 1, connected to an arm depending from the guide or bridge member, said link being connected with a lever actuated by a cam on the shaft 1 in a  
75 manner similar to slide 17. Similarly the feeder-slide 7 is moved by a lever 22, with which it is connected by a link 23, the lever 22 being connected by a rod 24 with another lever, actuated by a cam on the shaft 1. As  
80 the arrangement of cams and intermediate connections is variable at will, I have not deemed it necessary to show them here in detail.

A pair of nippers located in line with the  
85 trough or guide of the outer wrapper moves forward at the proper moment, seizes the protruding end of the strip, draws the same longitudinally beneath a cutting device, and holds it in the path of a second pair of nippers 28.  
90 The requisite length to produce a wrapper-blank is severed by the cutting device, and the blank is grasped by the nippers 28, which, moving forward at right angles to the line of travel of the nippers, place said blank over  
95 an opening 29 made in the bed or table B. The nippers 28 then release the wrapper-blank and recede. After the blank for the outer wrapper has been thus positioned a third pair of nippers 30 moves forward toward the  
100 delivery end of a trough or guide 31, which carries the inner wrapper-strip, which may be a compound strip. Grasping the forward or protruding end of the wrapper-strip the nippers recede, drawing from the trough a length  
105 sufficient to produce the inner or main wrapper-blank. This blank is severed by a cutter 32 and is drawn by the nippers 30 to a position directly over the opening 29, its ends lying upon and supported by the slides 13 and  
110 14, hereinbefore referred to as "folding-slides." When drawn to this position, the inner wrapper-blank is clamped by reason of the bridge or guide 11 descending from the position shown in Fig. 3 to that shown in Figs.  
115 1 and 2, in which latter it presses upon the blank and holds its ends lightly upon the slides 13 and 14. The two wrappers being thus placed in position a vertically-movable slide 34 descends, and spring-pressed plungers  
120 or studs 35, protruding from its lower end, bear upon and serve to clamp the outside wrapper 36, lying upon the slide 17 and upon a second slide 37, hereinafter referred to.

33 indicates a stop-arm or gage pivotally  
125 attached to or suspended from lugs on the forward or outer face of the slide 34. Attached to the lower end of this slide and extending through an opening in the latter is a stem 38, provided with an enlarged and prefer-  
130



ably slightly-rounded head, as shown in Figs. 1, 2, 3, and 5. In descending with the slide 34 this head encounters and rides upon the beveled face of an arm 39, extending radially downward from a boss or sleeve 40, which is free to rock upon a pivot screw or stud 41. In riding down the beveled face of the arm 39 the stem 38 is moved endwise and carries before it the gage plate or arm 33 to the position indicated in Fig. 2. The slide 7 is now caused to move forward or inward and to push from the bottom of the stack or column 5 the predetermined number of blocks or cakes of merchandise, forcing the same over the bridge or guide 11 beneath the plate to a position directly over the wrappers and coincident with the opening 29 in the table B.

As the gum moves inward it encounters the stop-arm 33 and is thereby prevented from moving beyond its proper position over the opening 29.

After the gum is placed in position it is desirable to withdraw the gage or stop-arm 33. This is effected by means of an elbow-lever 42. (Seen in dotted lines in Fig. 4 and in perspective in Fig. 5.) This lever 42 is fulcrumed upon a suitable support on the machine and has one arm arranged in the path of the vertically-oscillating actuating-lever of the cutting device 32, so that upon the ascent of this actuating-lever it shall rock lever 42, causing its arm to take beneath a second and substantially horizontal arm of the lever 39 and to throw its lower end sidewise out of alinement with the stem 38. When the stem is thus released, it is moved longitudinally backward by means of a spring 43, encircling it and bearing at one end against the movable plate 34 and at the other end beneath the head of said stem 38. The spring thus serves to move longitudinally the stem 38 and to carry the gage or stop-plate to the position shown in Fig. 3. After the stop-arm 33 has been thus moved back a plunger-head 44 is caused to descend, bearing at its lower end upon the gum or merchandise to force the same downward with the inner wrapper 45 into the space above the slide 17 and between the proximate ends of the guide-blocks 15 and 16. This operation causes the ends of the inner wrapper to be folded upward from a horizontal position to a vertical position (indicated in Fig. 4) and causes the body or medial portion of the wrapper 45 to be pressed down to and into contact with the outer wrapper 36. The first and second positions of the gum and wrapper are indicated by Figs. 2, 3, and 4, Fig. 2 showing the gum in its elevated position and lying upon the inner wrapper 45 immediately above the slides 13 and 14, and Figs. 3 and 4 showing the gum and the upper wrapper pressed down and resting upon the outer wrapper 36.

The plunger in its descent brings the upper surface of the gum or other merchandise,

whether there be one cake or several, very slightly below the level of the under faces of the slides 13 and 14, which then move inward, as indicated in Fig. 4. The movements of the various parts are so timed and arranged that just as the slides 13 and 14 reach the positions indicated by dotted lines in Fig. 4, and thereby obtain a hold upon or over the material to be wrapped, the slide or plunger 44 rises, thus leaving a free way or clearance for the slides 13 and 14 to turn inward and to lay flat upon the top of the gum or other material the two ends of the wrapper 45. The length of the inner wrapper 45 is preferably such as to permit the inturned ends to overlap a short distance, though this is not requisite. The ends may meet or abut, especially when, as is ordinarily the case, the outer wrapper is used therewith, because such outer wrapper serves to cover any joint that might be left between the ends and to exclude dust and moisture.

It is advisable, though not essential, that the movements of the slides 13 and 14 be slightly different in time in order that one end or fold of the inner wrapper may be laid flat in advance of and covered by the other.

Each slide 13 and 14 is formed with projecting ears or lugs 46, each of which carries a roller 47, rotatable about a vertical axis. These several rollers are of a thickness or measurement in the direction of their axes about equal to the height or thickness of the cake or body of gum or other merchandise to be wrapped. The lugs are set back from the advancing or forward ends of the slides 13 and 14, so that the rollers 47 reach the ends of the cake or body of material shortly before the slides 13 and 14 reach their extreme limit of inward movement. As indicated in Fig. 2, the wrapper 45 is considerably wider than the cake or package of gum or merchandise, and consequently when the ends of the wrapper 45 are folded down upon the body to be wrapped the vertical or end portions of the applied wrapper project beyond the sides of said merchandise and lie directly across the paths of the rollers 47. As a consequence of this the rollers in their inward movement engage such projecting vertical portions of the wrapper and bend or fold the same in. This action produces triangular folds. The ends of the wrapper 45 being thus laid flat and the triangular end folds having been made, the slides 13 and 14 withdraw, and as this occurs plunger 44 and an incasing slide or shell 49 descend, the latter reaching the wrapper in advance of the plunger 44. This shell 49 is cut away at the ends and brought to a comparatively thin lower edge along its sides, as indicated in Figs. 1, 2, and 3. In descending its side walls encounter the overhanging edges of the wrapper 45 and bend or fold the same closely down upon the vertical sides of the cake or body of gum or merchandise, thereby producing a longitudinal fold. By



reason of the previously-formed triangular folds this flap has its ends slanting inward away from the end of the package, and hence not liable to be caught and turned outward or  
 5 to make a thick and clumsy projection, detracting from the appearance of the finished package. After forming the fold, which is done while the merchandise still lies above and upon the slide 17, the shell or outer slide  
 10 49 rises; but before this occurs the plunger 44 again descends and coming into contact with the package forces the same bodily down into the opening 29 in the bed or platform of the machine, which opening is of a size just sufficient to freely receive the package, and consequently causes the lower longitudinal flap or fold of the inner wrapper 45 and the portions of the wrapper 36 projecting each way from the merchandise to be folded or bent  
 20 and to assume a substantially vertical position. The second descent of plunger 44 is of course carried farther than the first, since the first was merely required to bring the gum or other merchandise from the level of the upper face of slides 13 and 14 to a plane immediately beneath said slides, the merchandise resting upon and above slide 17, while the second descent carries the merchandise below the slide 17 and into the opening 29 in the bed or  
 30 table of the machine.

Prior to the second descent of the plunger 44 to force the partially-wrapped merchandise into the opening 29 the slide 17 is of course withdrawn to uncover said opening.  
 35 Immediately after the plunger thus forces the package into the opening 29 the slides 17 and 37 move inward for the double purpose of beginning to fold the edges of the outer wrapper 36 over and upon the gum or merchandise and one upon the other. It is desirable that this action begin before the plunger 44 withdraws or begins its ascent, so that the merchandise may not rise and follow the plunger, as it would otherwise be apt to do owing  
 45 to the accumulation of freshly-wrapped packages in the opening 29 and the space or chute beneath the same. In order to permit this partial inward movement of the slides 17 and 37 before the plunger 44 rises, the latter is  
 50 cut away at its lower end along each side face, as shown in Figs. 1, 2, and 3, thus letting the slides 17 and 37 move inward slightly above the gum before the ascent of plunger 44 takes place. After the slides 17 and 37 have reached  
 55 the position indicated the plunger 44 withdraws, and said slides make further inward movement, the slide 17 moving inward a predetermined distance and then withdrawing and the slide 37 following up the receding  
 60 slide 17 and folding down the wider and up-standing flap or fold of the outer cover 36 upon and in contact with the previously-folded opposite edge or flap.

The outer wrapper is gummed along one  
 65 edge on its inner face prior to being fed to the

cutter and folding devices, and on its travel to position for folding about the merchandise said wrapper has its opposite edge moistened on the outer face. From this it follows that  
 70 upon turning or folding over the flap having the moistened outer surface the moistened face will be caused to lie uppermost, and upon folding and pressing down the opposite flap or fold of the wrapper upon such moistened  
 75 edge the two surfaces will be caused to adhere together, and thus the outer wrapper will be firmly secured in place.

The various movements described are produced through cam-and-lever mechanism, which it is not deemed necessary here to set  
 80 forth in detail.

Having thus described my invention, what I claim is—

1. In combination with a magazine and a delivery-slide for delivering material therefrom, a stop plate or abutment movable to and from  
 85 a position to arrest the travel of material advanced by the delivery-slide, to limit its movement and determine its position, and positively-acting mechanism for moving said stop-plate  
 90 to and holding it in its arresting position.

2. In a wrapping-machine, the combination of a bed or table; a magazine for containing merchandise; a slide for delivering merchandise from the magazine to a point over the  
 95 table; means for placing a wrapper upon the table at a point beneath that to which the merchandise is carried by the slide; a vertically-movable slide serving to clamp and hold the wrapper upon the bed or table; and a gage  
 100 or stop-arm carried by said slide and serving to arrest the inward movement of the merchandise and determine its position.

3. In a wrapping-machine, the combination of a bed or table B, having an opening 29; supports 15 and 16 at opposite ends of said  
 105 opening; means for placing a wrapper upon said supports and across the intervening space; a pivoted bridge or support 11 movable toward and from the supports 15 and 16 and adapted  
 110 to clamp a wrapper thereon; slides 17 and 37 movable relatively to the opening 29; slides 13 and 14 movable toward each other over the supports 15 and 16 and provided with rollers or folders 47; vertically-movable slide 34 provided with clamping-lugs 35; gage or stop 33  
 115 carried by the slide 34; plunger 44 movable vertically toward and from the opening 29; hollow shell or plunger 49 likewise vertically movable toward and from the opening 29; and  
 120 means substantially as described for imparting motion to said parts in their proper time or order.

4. In a wrapping-machine, the combination of a bed or support; a magazine; a delivery-slide for said magazine; a stop-arm or gage  
 125 arranged across the plane of travel of the merchandise delivered by the slide to arrest and position said merchandise; means, substantially as described, for positively placing and  
 130



holding the gage in, and means for removing it from its gaging or arresting position at proper times.

5 5. In a wrapping-machine, in combination with the bed or table; a magazine; a slide for delivering merchandise from said magazine to the wrapping-point; a vertically-movable plunger or slide 34; a stop-plate or gage pivotally attached to said slide and provided with a  
10 projecting stud or pin; a cam or inclined arm located in the path of said stem and serving to force the stem and stop-plate or gage forward into the path of the incoming merchandise; a spring acting upon said stem and  
15 tending to retract the gage or stop; and means, substantially as described, for throwing the cam or inclined arm out of alinement with the stem or pin to permit the spring to carry the gage-plate out of its operative position.  
20 6. In combination with a bed or table; a magazine for merchandise; a delivery-slide for delivering merchandise from the magazine to the point of wrapping; a vertically-movable slide or plunger 34 provided with a stop-plate  
25 or gage 33, having a pin 38 and reacting-

spring 43; elbow-lever 39 located normally in the path of the pin 38; and a trip adapted to act upon one arm of the lever 39 and to throw its inclined end out of alinement with the pin, substantially as and for the purpose set forth. 30

7. In a wrapping-machine, the combination of a bed or table, provided with an opening through which the goods and wrapper may be forced in the act of applying or folding the wrapper about the goods; a stop-arm or gage 35 located in the path of the material as the latter is moved across the bed or table; positively-acting mechanism for automatically placing and for holding said stop-arm in position to arrest the movement of the goods or material; 40 and means for removing it from said position after its arresting office is fulfilled.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ADOLPH BAYLER.

Witnesses:

WM. P. Cook,  
F. L. Cook.