F. GIROUD, DEC'D.
E. E. CHAPMAN, EXECUTRIX.
WRAPPING OR PACKAGING MACHINE.
APPLICATION FILED JULY 15, 1909.

**1,133,633.**

Patented Mar. 30, 1915.

9 SHEETS—SHEET 1.

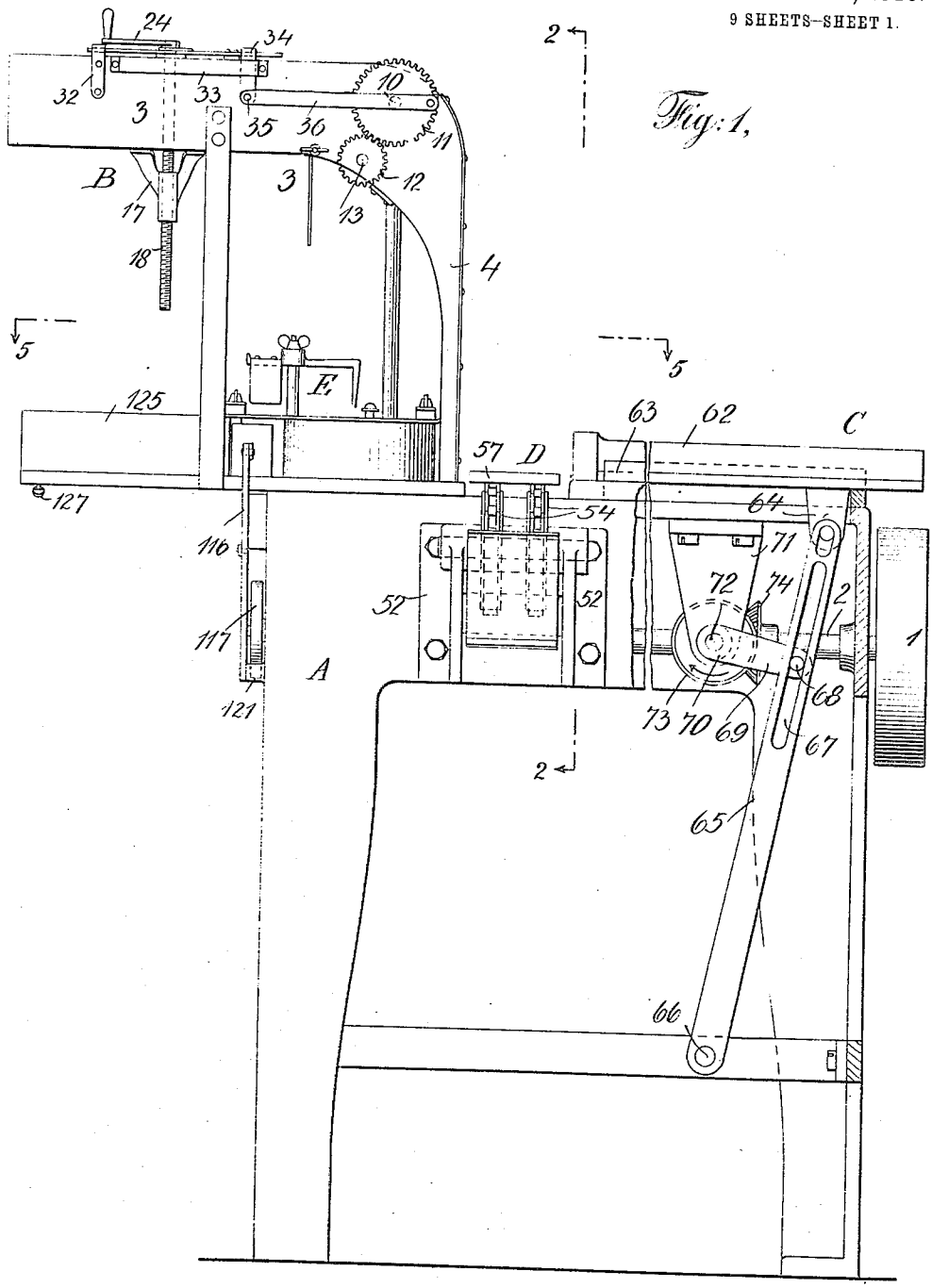



Fig. 1.

Witnesses:
Max. B. A. Döring
Sarah Semlear

Inventor
Felipe Giroud
By his Attorneys
Macdonald Macdonald & Cavanagh

F. GIROUD, DEC'D.
E. E. CHAPMAN, EXECUTRIX.
WRAPPING OR PACKAGING MACHINE.
APPLICATION FILED JULY 15, 1909.

**1,133,633.**

Patented Mar. 30, 1915.

9 SHEETS—SHEET 2.

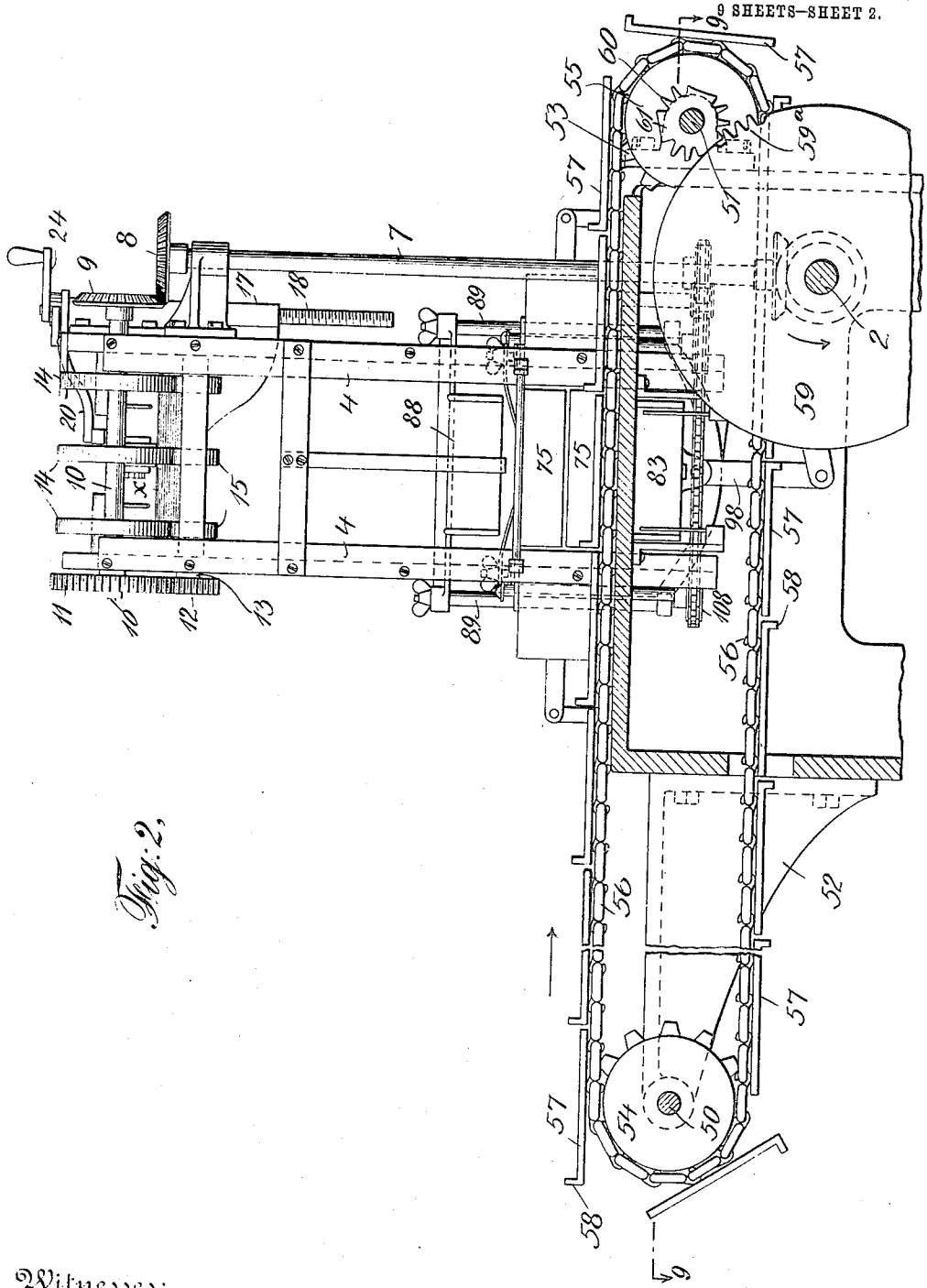


Fig. 2.

Witnesses:
Max B. A. Döring.
Sarah Semlear.

Inventor
Felipe Giroud
By his Attorneys
Macdonald Macdonald & Cavanagh

F. GIROUD, DEC'D.
E. E. CHAPMAN, EXECUTRIX.
WRAPPING OR PACKAGING MACHINE.
APPLICATION FILED JULY 15, 1909.

**1,133,633.** Patented Mar. 30, 1915.

9 SHEETS—SHEET 3.

Fig. 3,

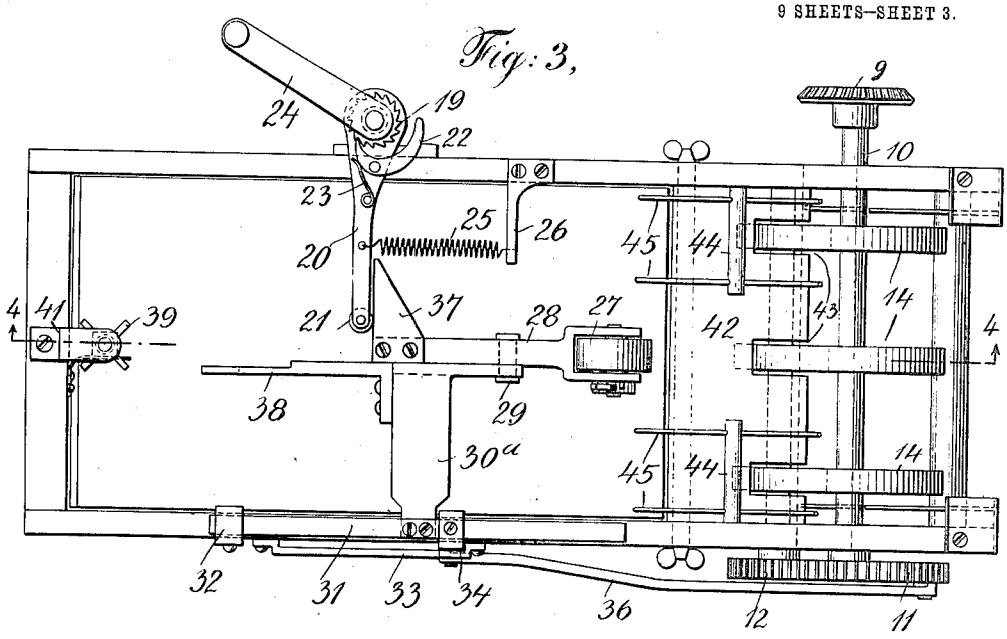
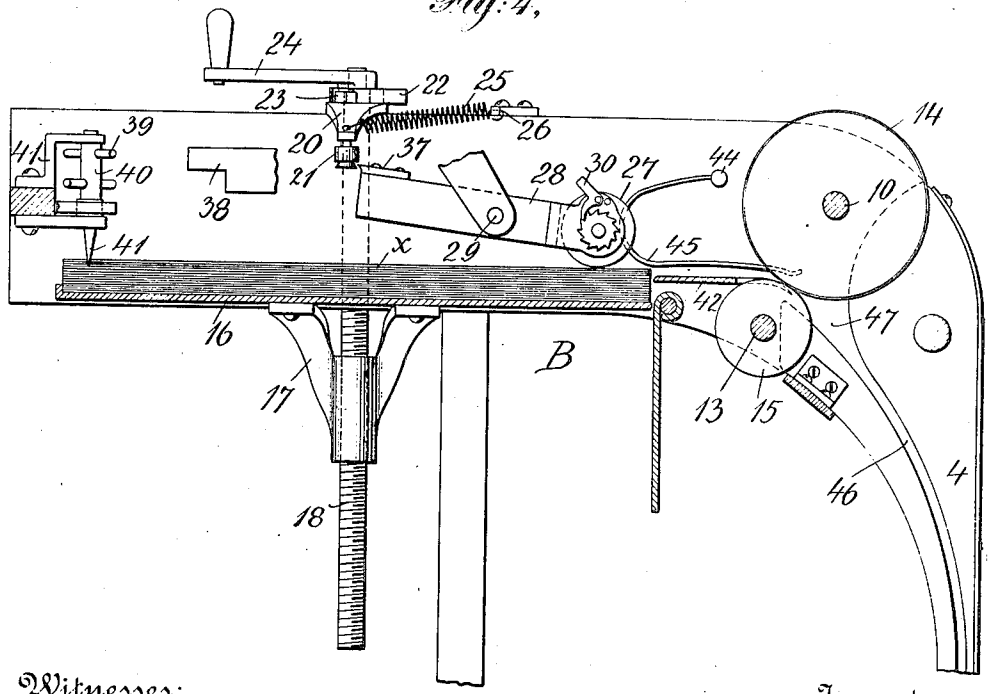



Fig. 4,




Witnesses:
Max B. A. Doring.
Sarah Semlear

Inventor
Felipe Giroud
By his Attorneys
Macdonald Macdonald & Cavanagh

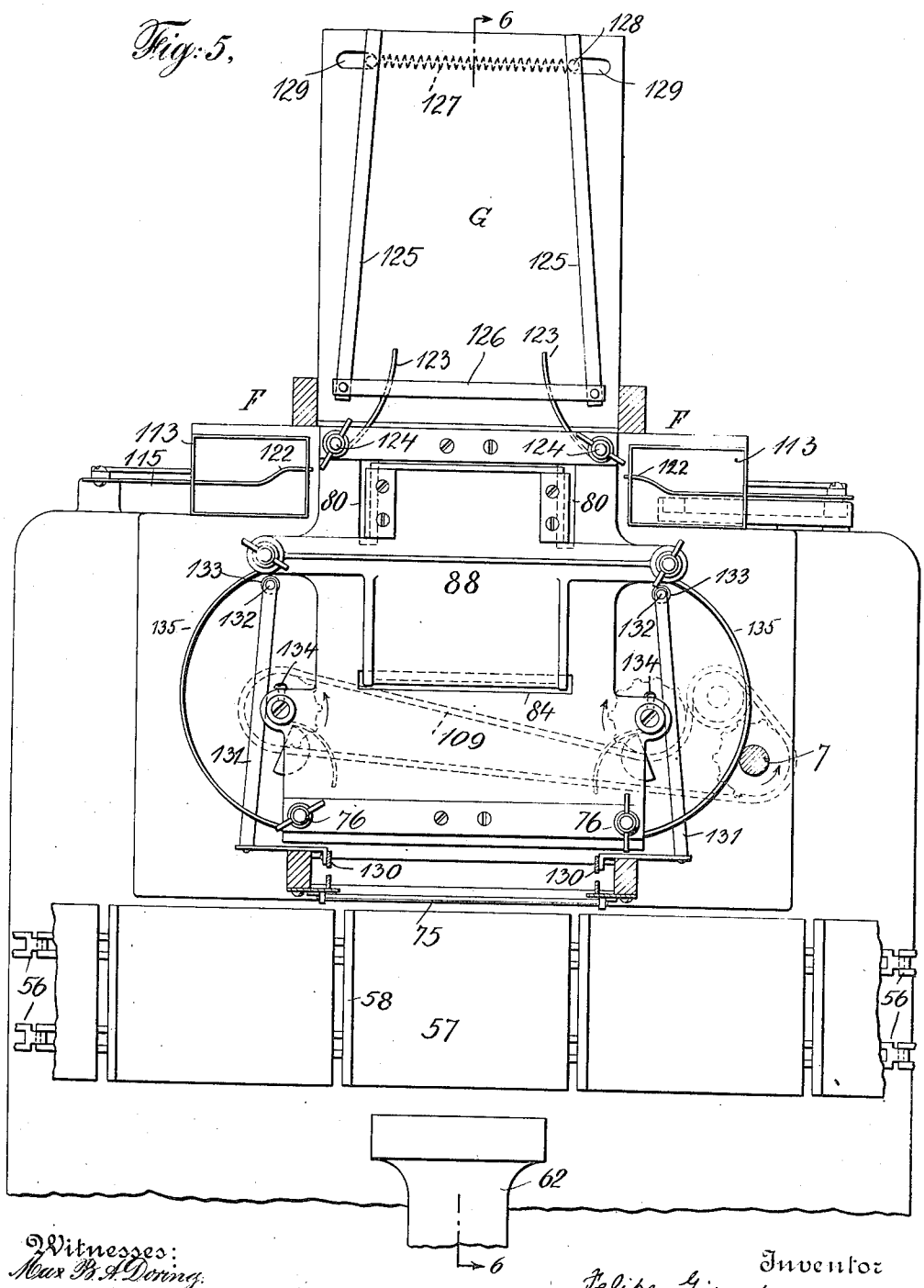
F. GIROUD, DEC'D.
E. E. CHAPMAN, EXECUTRIX.
WRAPPING OR PACKAGING MACHINE.
APPLICATION FILED JULY 15, 1909.

**1,133,633.**

Patented Mar. 30, 1915.

9 SHEETS—SHEET 4.

Fig. 5.




Witnesses:
Max B. A. Döring.
Sarah Semlear.

Inventor
Felipe Giroud
By his Attorneys
Macdonald Macdonald & Cavanagh

F. GIROUD, DEC'D.

E. E. CHAPMAN, EXECUTRIX.

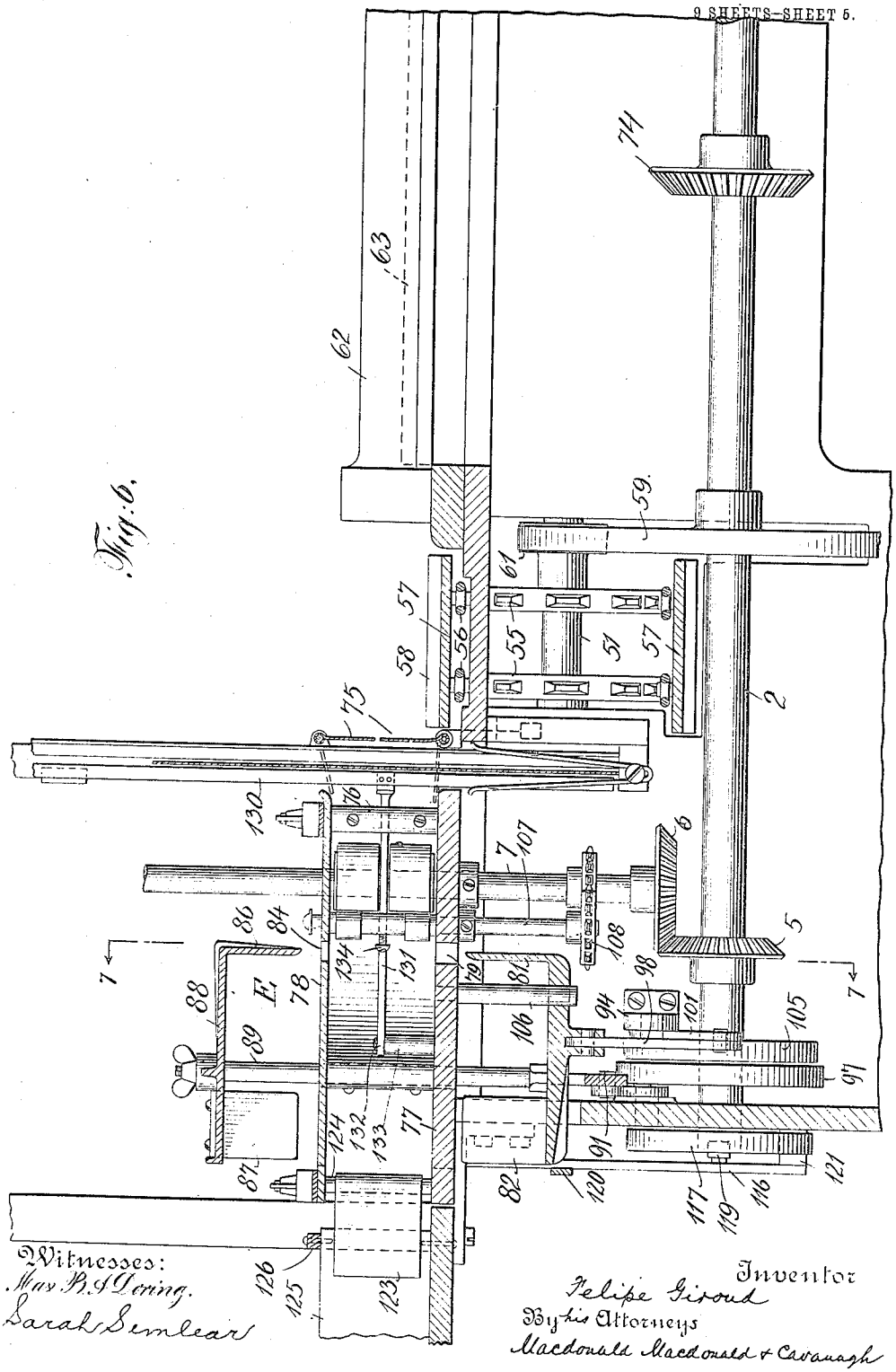
WRAPPING OR PACKAGING MACHINE.

APPLICATION FILED JULY 15, 1909.

**1,133,633.** Patented Mar. 30, 1915.

9 SHEETS—SHEET 5.

Fig. 6.




Witnesses:
Wm. B. Loring.
Sarah Semlear

Inventor
Felipe Giroud
By his Attorneys
Macdonald Macdonald & Cavanagh

F. GIROUD, DEC'D.
E. E. CHAPMAN, EXECUTRIX.
WRAPPING OR PACKAGING MACHINE.
APPLICATION FILED JULY 15, 1909.

**1,133,633.**

Patented Mar. 30, 1915.

9 SHEETS—SHEET 6.

Fig. 7,

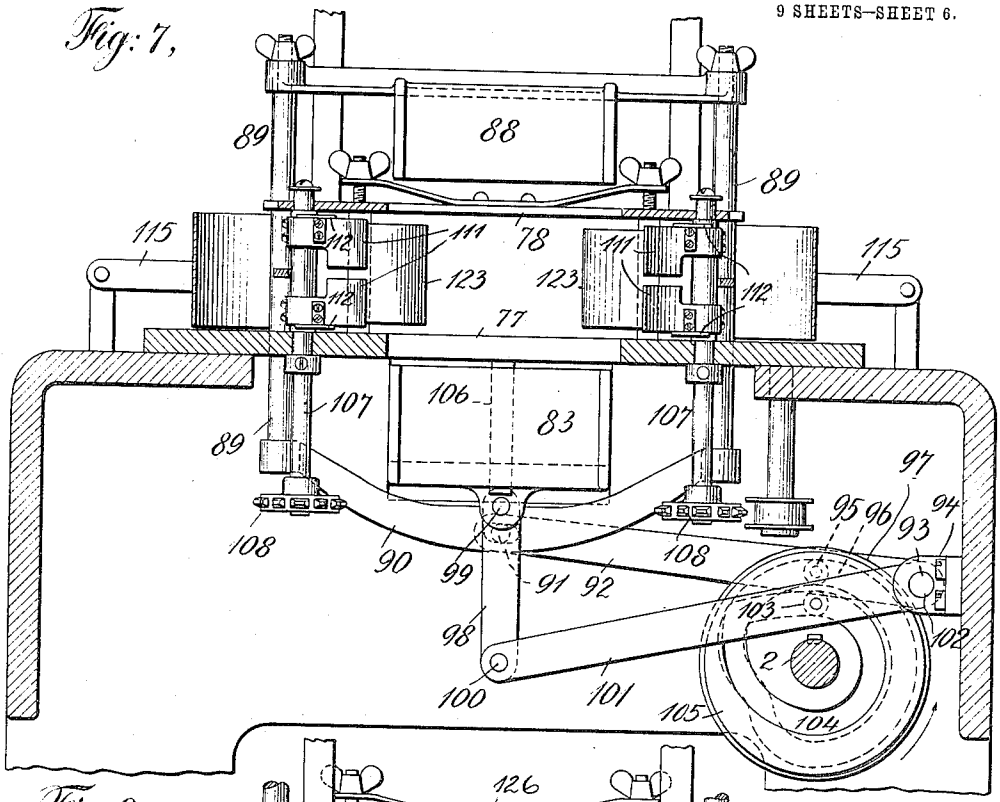
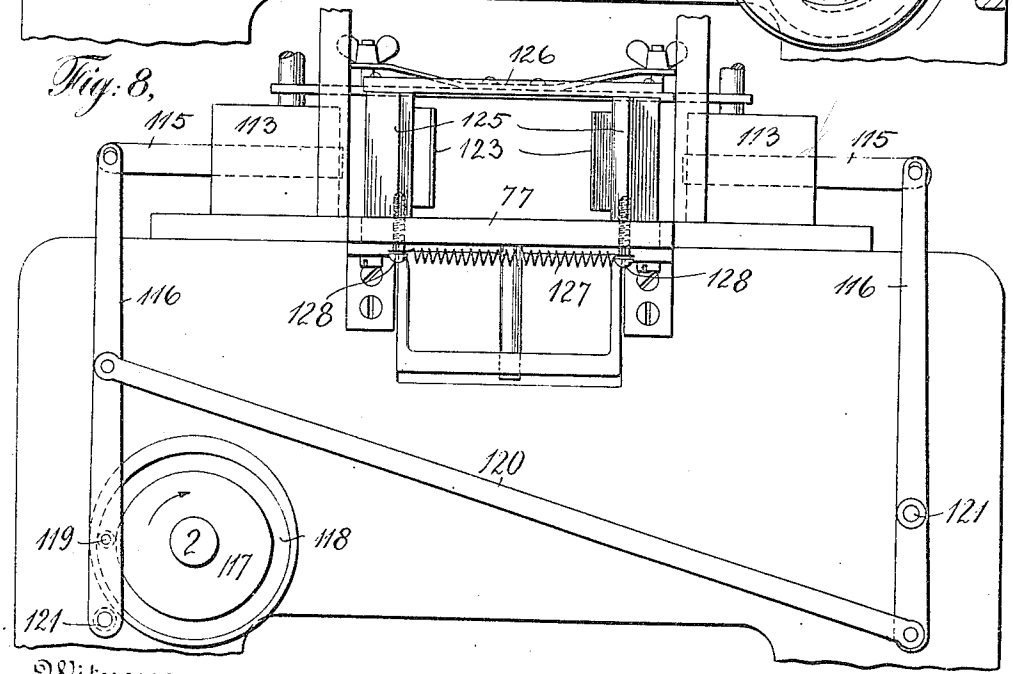



Fig. 8,




Witnesses:
Max B. A. Loring.
Sarah Sentner

Inventor
Felipe Giroud
By his Attorneys
Macdonald Macdonald & Cavanagh

F. GIROUD, DEC'D.
E. E. CHAPMAN, EXECUTRIX.
WRAPPING OR PACKAGING MACHINE.
APPLICATION FILED JULY 15, 1909.

**1,133,633.**

Patented Mar. 30, 1915.

9 SHEETS—SHEET 7.

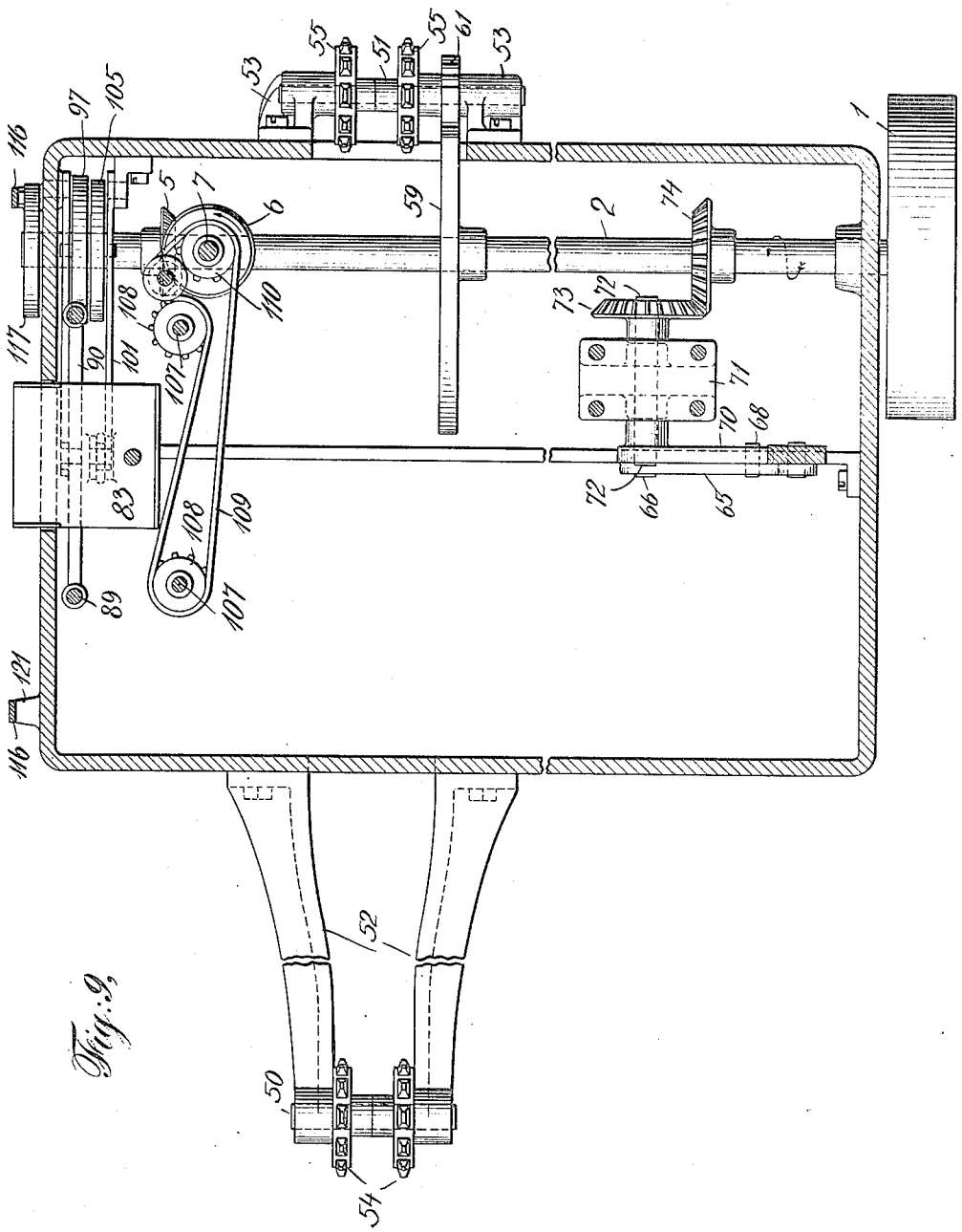



Fig. 9.

Witnesses:
Max B. A. Dering.
Sarah Semlear

Inventor
Felipe Giroud
By his Attorneys
Macdonald Macdonald & Cavanagh

F. GIROUD, DEC'D.
E. E. CHAPMAN, EXECUTRIX.
WRAPPING OR PACKAGING MACHINE.
APPLICATION FILED JULY 15, 1909.

**1,133,633.** Patented Mar. 30, 1915.

9 SHEETS—SHEET 8.

Fig: 10.

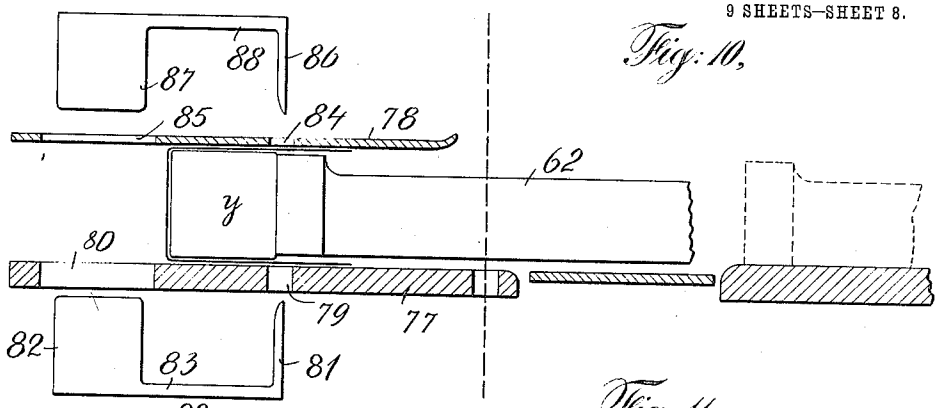



Fig: 11.

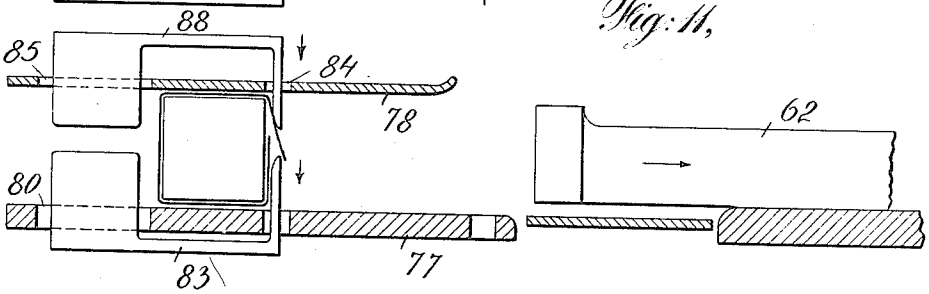



Fig: 12.

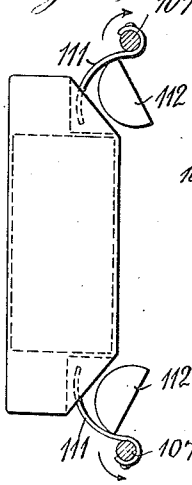



Fig: 12a

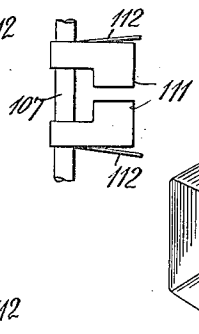
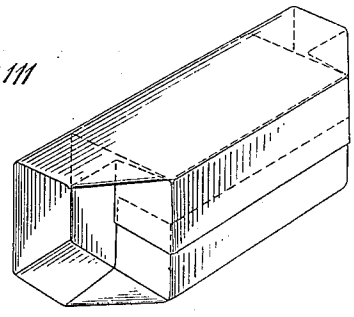



Fig: 13.



Witnesses:
Max. B. A. Döring.
Sarah J. Semlear

Inventor
Felipe Giroud
By his Attorneys
Macdonald Macdonald & Cavanagh

F. GIROUD, DEC'D.

E. E. CHAPMAN, EXECUTRIX.

WRAPPING OR PACKAGING MACHINE.

APPLICATION FILED JULY 15, 1909.

**1,133,633.** Patented Mar. 30, 1915.

9 SHEETS—SHEET 9.

Fig: 14.

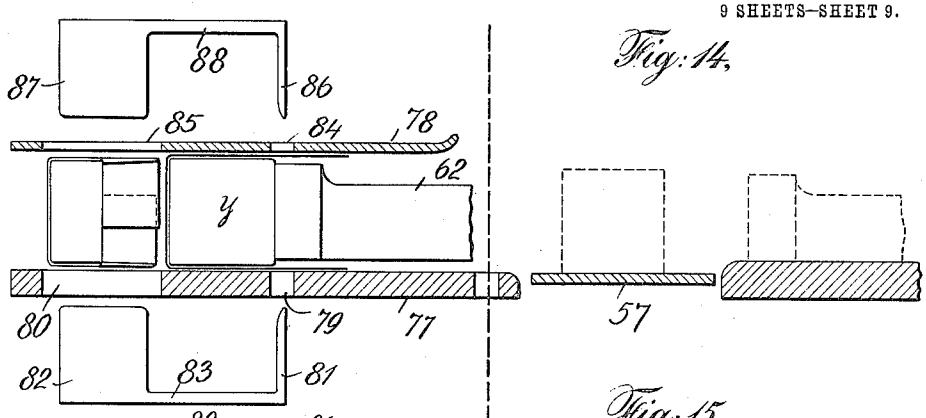



Fig: 15.

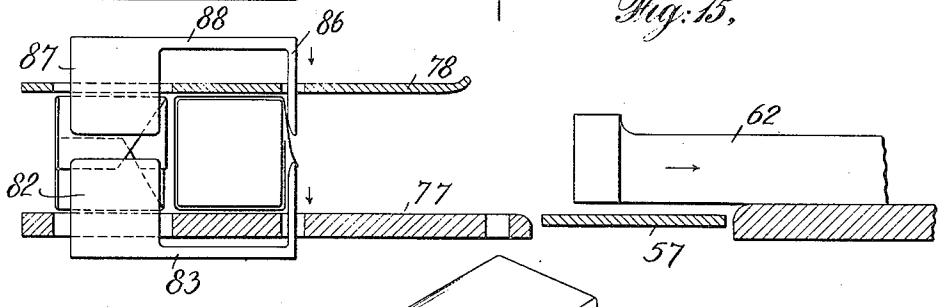



Fig: 16.

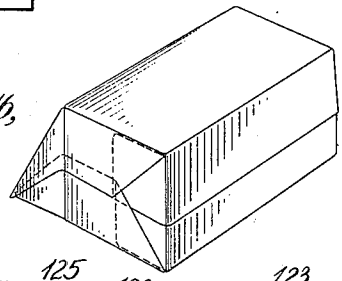


Fig: 17.

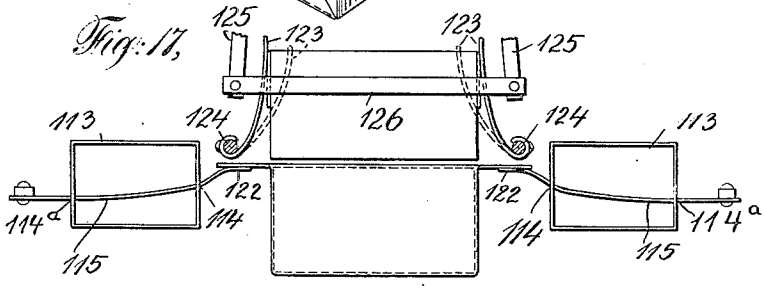
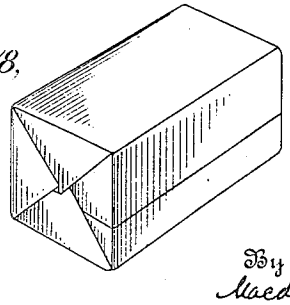



Fig: 18.



Witnesses:
Wm. B. Doring.
Sarah Semlear

Inventor
Felipe Giroud
By his Attorneys
Macdonell Macdonald & Cavanagh

# UNITED STATES PATENT OFFICE.

FELIPE GIROUD, OF NEW YORK, N. Y.; EDITH E. CHAPMAN, EXECUTRIX OF SAID FELIPE GIROUD, DECEASED, ASSIGNOR TO PACKAGE MACHINERY COMPANY, A CORPORATION OF MASSACHUSETTS.

## WRAPPING OR PACKAGING MACHINE.

1,133,633. Specification of Letters Patent. Patented Mar. 30, 1915.

Application filed July 15, 1909. Serial No. 507,735.

*To all whom it may concern:*

Be it known that I, FELIPE GIROUD, a citizen of Cuba, and a resident of New York city, in the county of New York and State of New York, have invented certain novel and useful Improvements in Wrapping or Packaging Machines, of which the following is a specification.

This invention relates to wrapping or packaging machines and has particular application to a machine adapted for wrapping and packaging butter, soap, chocolate and other small masses of material or articles. In this connection I wish to say that while I have herein shown and described a machine adapted particularly for wrapping butter, I do not wish to limit myself to that use as the machine is capable of other uses.

In carying out my invention it is my purpose to provide a machine by which the material may be rapidly, economically, and securely wrapped.

My invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings like characters of reference indicate like parts in all the views.

In the drawings: Figure 1 is a view in side elevation of a machine embodying my invention; Fig. 2 is a vertical sectional view of the machine taken on line 2—2 of Fig. 1 and looking in the direction of the arrows; Fig. 3 is a plan view of a portion of the machine, such view illustrating the mechanism for feeding the paper employed as a wrapper for the packages; Fig. 4 is a vertical sectional view taken through Fig. 3 on the line 4—4 and looking in the direction of the arrows; Fig. 5 is a horizontal cross sectional view taken on the line 5—5 of Fig. 1; Fig. 6 is a vertical sectional view taken through the machine on the line 6—6 Fig. 5, the paper feeder being omitted; Fig. 7 is a vertical cross sectional view taken on the line 7—7 of Fig. 6 in the direction of the arrows; Fig. 8 is a view of the rear of the machine and showing the mechanism for making the final fold in the package and also illustrating the mechanism for sealing or pasting the package; Fig. 9 is a horizontal cross sectional view taken through the frame of the machine, below the table and showing the power transmitting mechanism; Fig. 10 is a diagrammatic view showing the first step in forming the packaging; Fig. 11 illustrates the second step; Fig. 12, the third step; Fig. 12ª is a side view of the spring blade shown in Figs. 7 and 12. Fig. 13 shows the package after the third step; Fig. 14 shows the fourth step in the formation of the package, and also shows the first step in the wrapping of the second package; Fig. 15 illustrates the fifth step in the formation of the package; Fig. 16 shows the package after the fifth step; Fig. 17 is a top plan view of the pasting mechanism for sealing the package; Fig. 18 shows the package completely wrapped.

In the preferred form of machine, which is shown in the accompanying drawings, the cake of butter or other material is placed upon a suitable conveyer and carried into position for the beginning of the wrapping operation. It is then removed from the conveyer by a plunger and brought into contact with the wrapper of paper or other material, which has been fed into proper position by mechanism hereinafter described. The plunger for feeding the material proceeds in its travel to carry the material and wrapper to the folding or wrapping mechanism, which in the present instance is located on the table of the machine beneath the paper or wrapper feeding mechanism. By means of the main wrapping mechanism the paper is folded as hereinafter described and the package partially wrapped and then moved past the pasting mechanism which applies sealing material to the final flap or fold, and the package then continues its movement to the delivery table, the final flap having been pasted or sealed.

A characteristic feature of this machine consists in the fact that the articles are placed successively into the path of a plunger for moving the same into the wrapping mechanism proper, in such a way that after a first article is moved into a first operative position in the wrapping mechanism, a second and the following articles are made use of to push the first or preceding articles from one position into the other for the successive wrapping operations, until the wrapped article or package has been sealed

and finally delivered, thus not only simplifying the mechanism, but also speeding the work.

Referring now to the accompanying drawings in detail A designates the frame of the machine which may be of any suitable and desired character. Carried by the frame are certain elements and their coöperating parts, which, for the sake of convenience, I will designate as an entirety by letters. The letter B designates the mechanism for feeding the paper employed as a wrapper for the package, C indicates the mechanism for feeding the material from the conveyer to the wrapping mechanism, D is the conveying device for bringing the packages to the feed mechanism, E is the main folding mechanism for accomplishing the preliminary steps of folding, F designates the paste or sealing devices and G shows the delivery table with the means for making the final fold in the package.

The numeral 1 designates a belt pulley carried by and driving the main power shaft 2 of the machine, the latter being suitably journaled in the frame, and it is through this shaft that the power is transmitted to the various parts of the machine.

*The wrapper feeding mechanism.*—I will first describe in detail the wrapper feeding mechanism and the means for bringing the sheets of paper, or wrappers, into position to receive the material as it is moved from the conveyer by the feed mechanism C. This wrapper feeding mechanism indicated as an entirety by B, comprises an angular frame embracing the horizontal section 3 and the vertical section 4. 5 indicates a bevel gear carried by the shaft 2 imparting motion to the bevel gear 6 of the shaft 7 of the paper feed. This shaft extends upward alongside the vertical portion of the frame 4 and carries at its upper end the bevel gear 8 meshing with a similar gear 9 on the horizontal shaft 10 having at the opposite end the gear wheel 11 meshing with the pinion 12 on the shaft 13. The shaft 10 carries the relatively large feed rolls 14 spaced apart at suitable intervals and bearing against the smaller feed rolls 15 on the shaft 13. The table 16 carrying the stack of wrappers $x$, in the present instance relatively thin sheets of paper, is supported from the tubular bracket 17 interiorly threaded and adjustably mounted upon the screw shaft 18. At its upper end this shaft is provided with ratchet 19, and 20 designates a horizontally extending arm provided at its free end with the shouldered roller bearing 21 and at its end adjacent to the bracket with the pawl 22 tensioned by the spring 23. 24 is a handle for turning the shaft to reset the table, and 25 is a spring connected at one end to the arm 20 and at its opposite end to a small inwardly extending arm 26, this spring tensioning the arm 20 in the manner hereinafter described. The feed roll for the paper is shown at 27 pivotally mounted on the bifurcated arm 28, the ratchet and pawl 30 permitting the wheel to revolve in but one direction and that when the roll is moving toward the rear of the machine. The bifurcated arm 28 carrying the feed roll is pivoted as at 29, to the slide $30^a$, the bar 31 being guided in its sliding movement by the stationary guide 32, the guide strip 33 and the sliding guide 34. The latter is connected to and moves with the slide bar 31, and at its depending end is pivoted as at 35, to the link rod 36, eccentrically connected to the gear wheel 11, so that as the gear turns the slide and its connected parts will move back and forth. 37 is a trip adapted to strike at predetermined times against the roller 21 and turn the ratchet 19 to elevate the shaft 18 a predetermined distance and thereby compensate for decrease in the stack of paper. The arm 38 at the rear of the slide $30^a$ is shouldered as at 38, and in the receding movement of the slide carrying the feed roll is adapted to strike against the pins 39 of the spindle knife 40, the sharpened point 40′ of the latter penetrating a certain distance into the stack of wrappers. A bracket 41 supports the spindle at the rear of the frame. At the forward portion of the paper feed frame and in front of the paper table I provide a horizontal delivery plate 42, having slots 43, for the passage of the peripheries of the feed rolls 14 and 15, the slotted end of the plate being tapered and curved downwardly. Extending inwardly from the frame above the plate 42, are the small bars 44, carrying the U-shaped springs 45, suitably spaced apart and having their free ends extending approximately parallel with the plate, so that a guideway is formed for directing the paper to the feed rolls. On the opposite side from the springs or forward of the feed rolls 14 and 15, and in the vertical portion of the frame I form a guide way 46 having the relatively wide mouth 47, and when the paper has been fed from the table through the rolls, it enters this vertical guideway and descends to a position in front of the plunger C. The rear walls of the guideway are movable in the manner hereinafter described for the purpose of enabling the paper to be easily removed therefrom by the action of the plunger pushing the cake or block of butter against the same.

The above is a brief description of the parts composing the wrapper or paper feeding mechanism and the operation of bringing the paper from the stack in single sheets to a position vertically in front of the material to be wrapped as follows: Motion is imparted through the shaft 2 and the vertical shaft 7 and the gears 8 and 9 to the

shaft 10 which in turn revolves the gear wheel 11 meshing with the gear 12 and through the link rod 36 the slide 30ª is moved back and forth. As this slide reciprocates the feed roller 27 in the bifurcated arm is moved backward and forward revolving as it moves toward the rear of the machine and frictionally engaging a sheet as it moves forward, rotation of the roller on the forward movement being prevented by the ratchet and pawl. Normally the trip 37 passes beneath the roll 21 as the arm slides back and forth but as the stack of paper decreases the arm 28 tilts on the pivot 29, raising the rear end of the arm carrying the trip and causing the edge of the latter to engage with the shouldered portion of the roll 21, thus moving the arm 20 and turning the ratchet one tooth, the trip passing the arm which is then retracted to its normal position by the tension spring 25. As the ratchet is turned the shaft 18 is also turned and the table 16 elevated a predetermined distance. As the arm 38 in the movement of the slide approaches the rear of the machine the projecting end thereof strikes against the uppermost of the pins 39 on the knife 40 and the shoulder of the arm strikes the lowermost of the pins, thus turning the knife in the stack of paper. The point of the knife penetrates several sheets and in turning when the pins are struck by the arm the knife cuts a small piece from the paper and dislodges said piece so that, instead of these small pieces accumulating and clogging the knife and thereby interfering with the sheets being fed singly they are cut away and freed by the turning of the knife so that the latter is kept clear at the point and sides, thus enabling the top sheet to be drawn off without disturbing or disarranging the other sheets. The feed roller at this time is at the limit of its rearmost movement, and as it starts forward it frictionally engages the top sheet and carries it along to the space between the plate 42 and the spring arm 45 whereby it is directed between the feed rollers 14 and 15 to the guideway 46 and thence vertically downward in the guideway to a position in front of the plunger as shown in Fig. 6.

*The conveyer mechanism.*—The mechanism for bringing the cakes of material into position to be wrapped is in the present instance in the form of an endless chain conveyer, the detail construction of which is as follows: 50 and 51 indicate two horizontally disposed shafts one at each side of the machine, the shaft 50 being journaled in the bracket 52, while the shaft 51 is hung in the bracket 53. The shaft 50 carries the sprocket wheels 54—54, while the shaft 51 carries the sprocket wheels 55—55. 56 designates the endless chain or belt having secured at suitable intervals thereon the plates 57, said plates being approximately right angular in form, the upward extension 58 preventing the material from becoming dislodged in its travel to the wrapper. It is desired to give to the endless conveyer an intermittent motion so that the plates will stop in front of the wrapper and thus permit the plunger to push the cake from the plate against the wrapper. To accomplish this intermittent traveling of conveyer any desired form of power transmitting mechanism may be employed, and in the present instance, I have shown a relatively large drive-wheel 59 mounted upon the power shaft 2 a portion of the periphery of the wheel 59 having teeth 59ª to engage with the teeth 60 of the pinion 61 which pinion is fast on the shaft 51. It will be noted by this drive construction that at every revolution of the wheel 59 the pinion 61 makes a third of the revolution so that the conveyer belt is given a step by step movement. The material, such as the cakes of butter or the like, are placed upon the plates of the conveyer and carried to position in front of the plunger.

*The article-feeding mechanism.*—The operation of the plunger or article-feeding mechanism is as follows: The plunger which is indicated at 62 slides in guides 63 and is linked as at 64 to the rock arm 65 pivoted at 66 to the lower portion of the frame of the machine. This arm 65 is slotted as at 67 to receive the pin 68 carried by the crank 69, having its end 70 secured to the shaft 72 hung in the bracket 71. 73 is a beveled pinion meshing with a smaller beveled pinion 74 on the power shaft 2. As the power shaft revolves motion is transmitted through the beveled pinions 74 and 73 to the shaft 72, thence to the crank 69, and as the latter revolves with the shaft 72 it moves in the slot 68 in the arm 67, rocking such arm backward and forward on its pivot 66 thus imparting a reciprocating movement to the plunger 62 and giving to the head of the plunger a movement forward and across the adjacent conveyer plate as far forward as the first folders, as is shown in Fig. 10, and thence backward into inoperative position beyond the conveyer plate.

*The folding mechanism.*—As the plunger moves forward and into contact with a cake of material on the conveyer it pushes the cake against the vertically arranged spring tensioned gates 75 hung directly across the path of movement of the plunger so that as the material strikes these gates they are swung inward as shown in dotted lines in Fig. 6. The gates are wider than the article to be wrapped, and as they move inwardly against the paper wrapper, the latter is creased over the edges of the gates as the latter contact with table 77 and top plate 78. The plunger continuing its forward move-

ment carries the cake and wrapper past the posts 76 making the first fold as illustrated in Fig. 10. The package is now in a passageway formed by the base or table 77 of the machine and the top plate 78 extending above and parallel with the table, the former is slotted as at 79 and 80 to permit the passage of the vertical end plate 81 and side plates 82 of the lower folder 83 while the plate 78 is similarly slotted as at 84 and 85 to permit the passage of the vertical end plate 86 and the side plates 87 of the top folder 88. It will be noted that the top and bottom folders are of approximately right angular form, each folder having a front end plate and two side plates, and by reference to Figs. 6 and 7 the manner of and means for operating the folders will be readily understood. The top folder is carried by the movable posts 89 sliding through openings bored in the table, the lower ends of said posts being yoked to the bar 90 having a slot and pin connection 91 with the cam lever 92 pivoted at 93 to the bracket 94 on the machine frame. 95 is a roller on the lever traveling in the groove 96 of the cam 97, the latter fast with and turning on the power shaft 2. As the power shaft revolves the posts 89 are reciprocated and the top folder is moved up and down through the connections just described. The means for reciprocating the lower folder 83 to bring the latter into and out of folding operation comprises the link 98 connected at one end 99 to the bottom of the folder, and at its opposite end is pivoted at 100 to the cam lever 101, the latter in turn being pivoted to the bracket 94 at 102. A cam roller 103 is carried by the lever 101 and travels in the groove 104 in the cam 105 fast on the shaft 2. A guidepost 106 depending from the under side of the table projects through an opening bored in the horizontal base of the lower folder and guides the latter in a straight path.

Referring now to Fig. 11 it will be seen that when the machine is in operation and the top folder descends, the vertical face 86 descends through the slot 84 and into contact with the upper flap of the wrapper around the package and folds such flap over the lower flap of the sheet which has been similarly folded by the part 81 of the folder 83, projecting through the slot 79, the folders have been moved toward each other through the train of mechanism just described and to which power is imparted by the shaft 2. At this point in the operation of wrapping the ends of the paper at the rear portion thereof are folded and tucked inward and under as shown in Figs. 12 and 13 by the following mechanism.

107—107 are two small vertical shafts extending through the base or table of the machine and carrying at their lower ends the sprockets 108 driven by the endless chain belt 109 which in turn is actuated by the sprocket 110 which engages therewith and which is mounted upon and driven by the shaft 7. These vertical shafts 107 extend upward and through the table of the machine and to a point above the plate 78. The portions of the shafts between the table and the top plate carry the curved blades 111, as shown in Figs. 12 and 12ª. Each of these blades carries a small approximately semicircular spring plate 112, the free portion of which is inclined slightly beyond the outer edges of the blades. As the latter are carried around by the revolution of their shafts the ends of the curved blades strike the paper and fold the same in under as is shown in Fig. 12, the small spring plates 112 being depressed by striking the paper contacted with the upper plate 78, and creases the fold so that the package at this step is wrapped as shown at Fig. 13. By this time the conveyer has moved forward a step to bring another cake of material in position to be fed to the wrapping mechanism and as the plunger moves forward against this second cake it pushes it from the conveyer, following the steps just described for the first cake, and brings it into contact with such first cake moving the latter along the way formed by the plate 79 and the table 77 and into the position shown in Fig. 14. The top and bottom folders which have been retracted from the first cake again move toward each other and as they make the preliminary fold in the second or succeeding cake the vertical side walls 87 and 82 contact with the top and bottom flap at the end of the package and fold the same inwardly as clearly shown in Fig. 15 so that the second package at this step appears as shown in Fig. 16. The feeding of a third package to the machine now carries the other two forward so that the cake first inserted, and which is now folded as shown in Fig. 16 is moved past a pasting device to receive sealing material and thence is finally folded. This is accomplished as follows:

Referring now to Figs. 5, 8 and 17, 113—113 indicate receptacles or boxes for any suitable adhesive material such as paste, these receptacles being open at their tops and arranged one at each side of the path of movement of the packages. The boxes are slotted in opposite walls, in different planes, as at 114—114ª to permit the passage therethrough of the curved pasting strips 115 which are given a reciprocating movement by means of the arms 116, to which they are pivoted. Such arms being actuated by means of a cam 117 at the end of the power shaft 2, said cam having a groove 118 in which rides the roll 119 carried by one of the lever arms 116, said arm being connected to the one on the op-

posite side by the bar 120, both of the levers 116 being suitably pivoted as at 121. It will be seen that the pasting strips 115 are bent or curved at their free ends as at 122 so that they are reciprocated through the mass of paste in the receptacle and through the slots at the inward end of the receptacle near the path of movement of the package, the bent edge of the arms having the pasting materials thereon will move against and wipe the front end flaps of the package, as is shown in Fig. 17 and thereby apply the paste thereto. The package which is continuously pushed or moved toward the delivery end of the machine by the continuous advance of succeeding packages is now moved past the curved spring blades 123, carried by posts 124, arranged one at each side of the path of movement of the package, and such blades while yielding to permit the cake to pass, still exert enough pressure against the ends thereof to fold the remaining flap, which carries the adhesive material, so that as this flap is folded in contact with the rest of the package the latter is now as shown in Fig. 18, that is to say, it is completely folded and sealed. The package is now passed between the side bars 125 of the frame 126 on the delivery table G, these side bars being pivoted at their ends adjacent to the spring blades 123, the free ends of the bars of the frame being normally drawn together by the retractile spring 127 located beneath the delivery table, the ends of the spring being secured to pins 128 carried by the side bars and projecting through slots 129 in the delivery table. As the package passes between these side bars the latter tend to compress the flaps at the ends of the package so that the folds or flaps are firmly pressed and sealed. After the package has been carried to the delivery table as just described it, being completely folded, may be removed.

*Wrapper-holding means.*—In order that the paper sheet of the wrapper may be held in a vertical position until the cake is brought into contact therewith and may then be easily removed from the vertical guideway, I form rear walls of the guideway of movable strips 130 carried by the arms 131, which arms are pivoted at the opposite ends at 132 to the posts 133. The heads of the screws 134 revolving with the shafts 107, strike against the arms 131 and as the package is pushed against the paper in the guideway the movable walls 130 yield outwardly and permit the paper to be easily carried from the guideway to the folding mechanism. The movable walls 130 are returned to normal position by any suitable means, such as by springs.

If desired the folding mechanism may be partially inclosed by suitable metallic guards such as shown at 135.

While I have herein shown and described one particular embodiment of my invention, I do not wish to limit myself to the details herein set forth as modification and variation may be made without departing from the spirit of the invention or the scope of the claims.

What I claim is:

1. The combination with an article-carrier, of wrapper-supplying means, a wrapper-folding channel, gates normally closing said channel and extending substantially across its entire width, means for moving an article from said carrier through said gates into said channel and to cause said gates to initiate the folding throughout its width of a wrapper, and means in said channel for folding said wrapper around the top, front and lower side of said article.

2. The combination with an article-carrier, of wrapper-supplying means, vertical guiding means for wrappers, a wrapper-folding channel, a horizontal plunger for moving an article horizontally from said carrier into said channel, movable portions on said guiding means adapted to permit the passage of an article with said wrapper from said carrier into said folding channel, and means in and adjacent to said channel for folding a wrapper in successive operations around all sides of said article.

3. The combination with an article carrier, of means for holding a supply of ready cut wrappers, a wrapper folding channel, means for delivering wrappers one at a time from said supply to said channel, means for delivering articles one at a time from said carrier to said channel, means in said channel for folding said wrapper around the top, front and bottom of one of said articles, reciprocating means for folding said wrapper against the rear of said article, rotatable means for folding the side extensions of the rear flaps of said wrapper against the sides of said article, reciprocating means for folding the side extensions of the top and bottom flaps of said wrapper against the sides of said article, and yielding means for folding the side extensions of the front flap of said wrapper against the sides of said article.

4. The combination with an article carrier, of means for holding a supply of ready cut wrappers, a wrapper folding channel, means for delivering wrappers one at a time from said supply to said channel, means for delivering articles one at a time from said carrier to said channel, gates normally closing said channel and when opening said channel adapted to initiate the folding of said wrapper around said article, parallel plates in said channel adapted to fold said wrapper around the front, top and bottom of said article, means adapted to fold said wrapper against the rear of said

article, means comprising radially extending rotatable blades adapted to fold the side extensions of the rear flaps of said wrapper against the sides of said article, and resilient plates adapted to crease the side extensions of the upper and lower flaps of said wrapper.

5. The combination with wrapper folding means, of article delivery and wrapper delivery means, reciprocating means having rear and side folding members, means for moving a partially wrapped article between said reciprocating means, means for causing said reciprocating means to fold the rear flaps of said wrapper against the rear of said article, means adapted to fold the side extensions of the rear flaps of said wrapper against the sides of said article and alternate with said article moving means to move forward a partially wrapped second article into the position of the first article thereby causing the first article to be moved in a second position where said reciprocating folding means fold the side extensions of the top and bottom flaps of the wrapper of the first article against the sides of said article simultaneously with the folding of the rear flaps of the wrapper of the second article against the rear of said second article and alternate with said article moving means to move forward a partially wrapped third article into the position of the second article thereby causing the second article to be moved in the second position of the first article and the first article into a third position, and means for applying an adhesive to the wrapper of the first article while in the third position simultaneously with the operation of said reciprocating folding means upon the wrappers of the second and third article.

6. The combination with an article carrier, of wrapper supplying means, a channel, gates normally closing said channel, means for moving an article from said carrier through said gates into said channel and for causing said gates to initiate the folding of a wrapper, and means in said channel for folding said wrapper around the top, front and bottom of said article.

7. The combination with means adapted for receiving articles, and wrappers to be folded around said articles, of means for folding one of said wrappers around the top, front and bottom of one of said articles, means for folding the rear extensions of said wrapper against the rear of said article, means for folding the side extensions of the rear flaps of said wrapper against the sides of said article, means for folding the side extensions of the top and bottom flaps of said wrapper against the sides of said article, and yielding means for folding the side extensions of the front flaps of said wrapper against the sides of said article.

8. The combination with means adapted to receive articles and wrappers to be folded around said articles, of means for folding one of said wrappers around the top, front and bottom of one of said articles, means for folding the rear extensions of said wrapper against the rear of said article, means for folding the side extensions of the rear flaps of said wrapper against the sides of said article, means for folding the side extensions of the top and bottom flaps of said wrapper against the sides of said article, means for applying paste to the side extensions of the front flaps of said wrapper, and yielding means for folding the last-named side extensions of said wrapper against the sides of said article.

9. In a machine for wrapping articles and fastening the wrappers thereon, the combination of a wrapper folding channel, wrapper supplying means, means for moving the articles through said channel, and a receptacle for an adhesive having a self-wiping member reciprocating through said receptacle and adapted to apply paste to the flaps of the wrappers upon said articles as they pass through said channel.

10. In a machine for wrapping articles and fastening the wrappers thereon, the combination of a wrapper folding channel, wrapper supplying means, means for moving the articles through said channel, and a receptacle juxtaposed to said channel, said receptacle having slits and a member reciprocating through said slits and adapted to apply a paste contained within said receptacle to the flaps of the wrappers upon said articles as they pass through said channel.

11. In a machine for wrapping articles and fastening the wrappers thereon, the combination of wrapper supplying means, means for folding one of said wrappers around the top, front and bottom of one of said articles, means for folding the rear extensions of said wrapper against the rear of said article, means for folding the side extensions of the rear flaps of said wrapper against the sides of said article, means for folding the side extensions of the top and bottom flaps of said wrapper against the sides of said article, means for applying an adhesive to the remaining flap of said wrapper, and means for folding and compressing the last-named flap against the sides of said article.

12. In a machine for wrapping articles and fastening wrappers thereon, the combination of a horizontally disposed wrapping channel, wrapper supplying means, means for moving an article into said channel, means connected with said channel for completely folding the wrapper around the sides and ends of said article excepting the front flap, means for applying an adhesive

to the rear side of the last-named flap, and means for folding and compressing the latter as it passes out of said folding channel.

13. In a machine for wrapping articles and fastening the wrappers thereon, the combination of a wrapper-folding channel, wrapper-supplying means, means for moving the articles through said channel and a receptacle juxtaposed to said channel, said receptacle having slits and a curved member reciprocating through said slits and adapted by its curvature to move into said channel and then change its direction so as to follow the article in applying a paste contained within said receptacle to the flaps of the wrappers upon said article as it passes through said channel.

14. In a wrapping machine, a guideway for holding the wrapper in a vertical position in the path of the article to be wrapped, said guideway having movable walls, and means for automatically moving said walls out of said path at a predetermined point in the approach of the article.

15. In a wrapping machine, means extending along the sides of the wrapper for holding the latter in vertical position in the path of the article to be wrapped, said holding means being adapted to recede and thereby release the wrapper at a predetermined point in the approach of the article.

16. In a wrapping machine, the combination with a wrapping-folding channel, of wrapper-supplying means, guides for holding a wrapper in vertical position, and gates extending across the folding channel to initiate the folding of a wrapper around an article, a portion of said guides being adapted to move out of the path of said gates as the latter go into operation.

17. In a wrapping machine, the combination with wrapper-supplying means, of a wrapping-folding channel, guides for holding a wrapper in vertical position, and gates extending across the folding channel to initiate the folding of a wrapper, said guides having movable walls, and means for moving said walls out of the path of said gates as the latter go into operation.

18. In a wrapping machine, the combination with wrapper-supplying means, of a wrapping-folding channel, guides for holding a wrapper in vertical position, gates extending across the folding channel to initiate the folding of a wrapper, means for moving an article through said gates to cause the latter to initiate the folding of a wrapper around said article, said guides having a movable portion, and means for moving said movable portion from the path of said gates as the latter go into operation.

FELIPE GIROUD.

Witnesses:
ROBERT W. ASHLEY,
SARAH SEMLEAR.