No. 722,879. PATENTED MAR. 17, 1903.

C. OWENS.

FOLDING, WRAPPING, AND PASTING MACHINE.

APPLICATION FILED DEC. 6, 1901.

NO MODEL. 3 SHEETS—SHEET 1.

Fig. 5

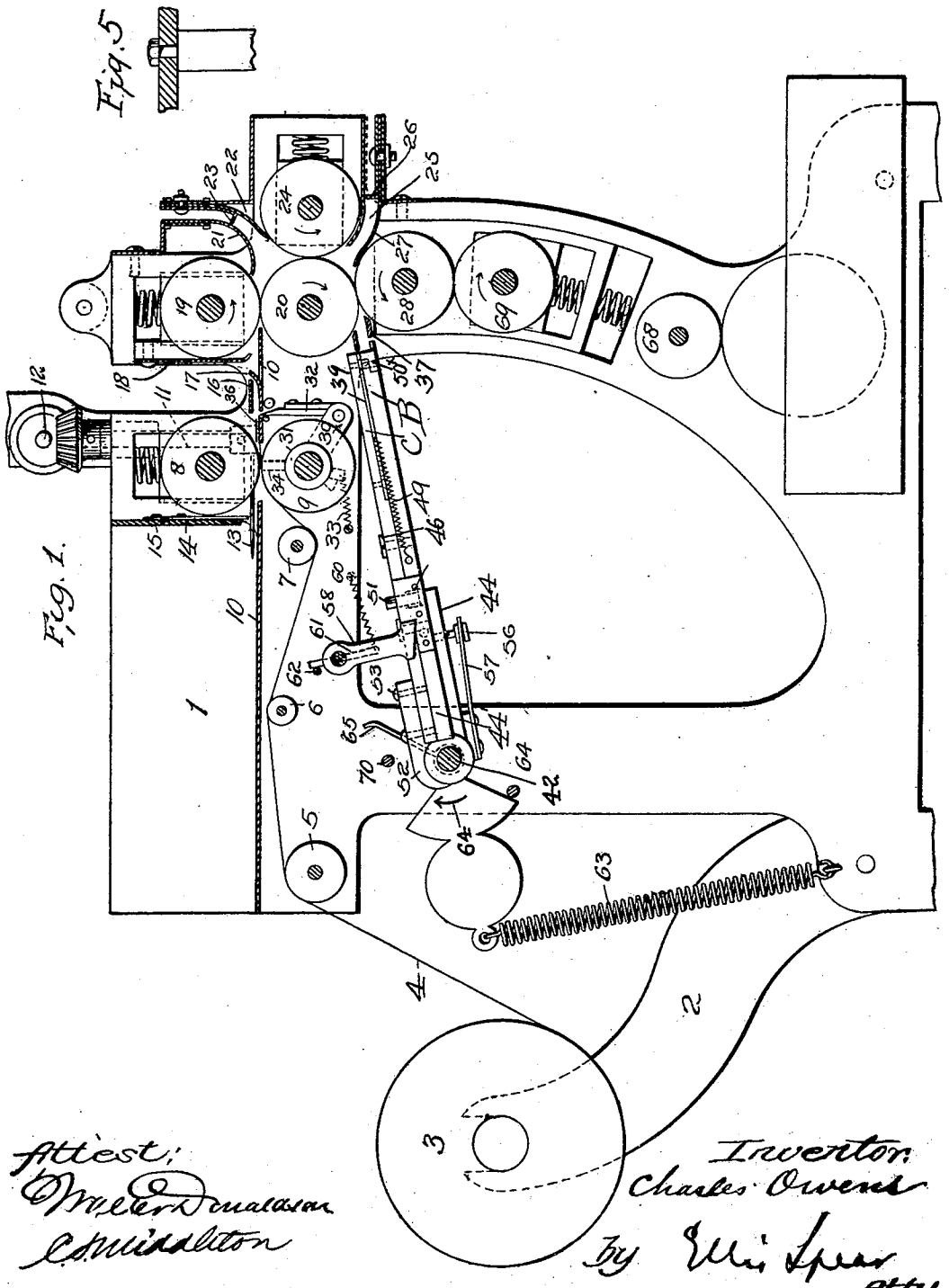

Fig. 1.

Attest:
W. Miller Donaldson
C. Middleton

Inventor
Charles Owens
By Ellis Spear
Atty.

No. 722,879. PATENTED MAR. 17, 1903.

C. OWENS.

FOLDING, WRAPPING, AND PASTING MACHINE.

APPLICATION FILED DEC. 6, 1901.

NO MODEL. 3 SHEETS—SHEET 2.

Fig. 2.

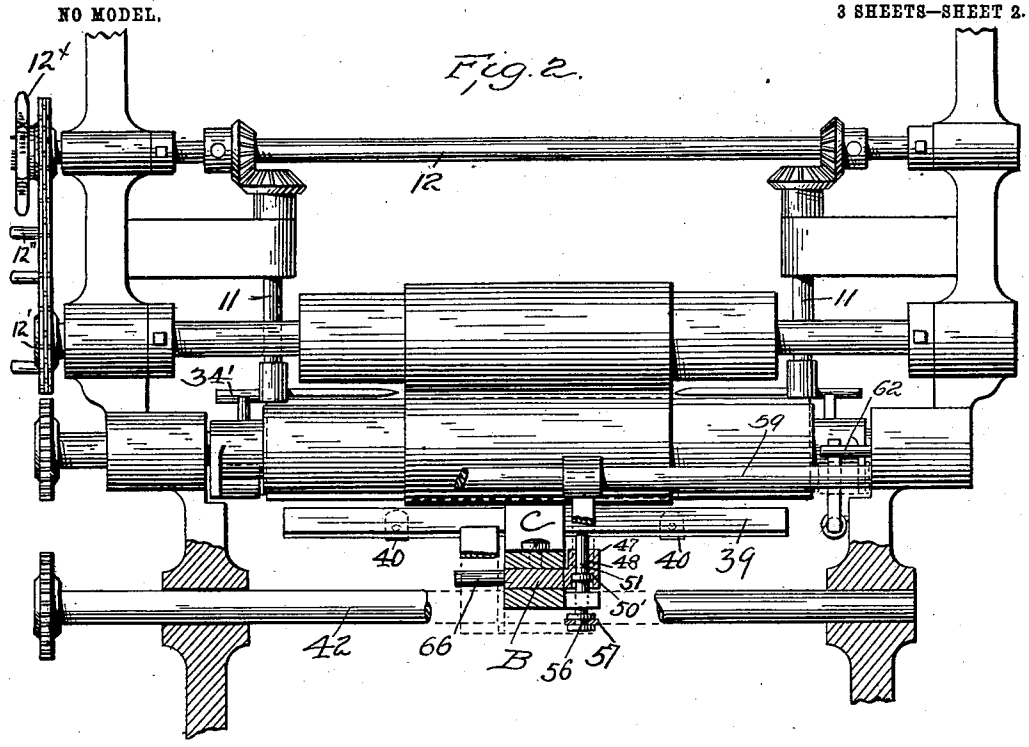


Fig. 3.

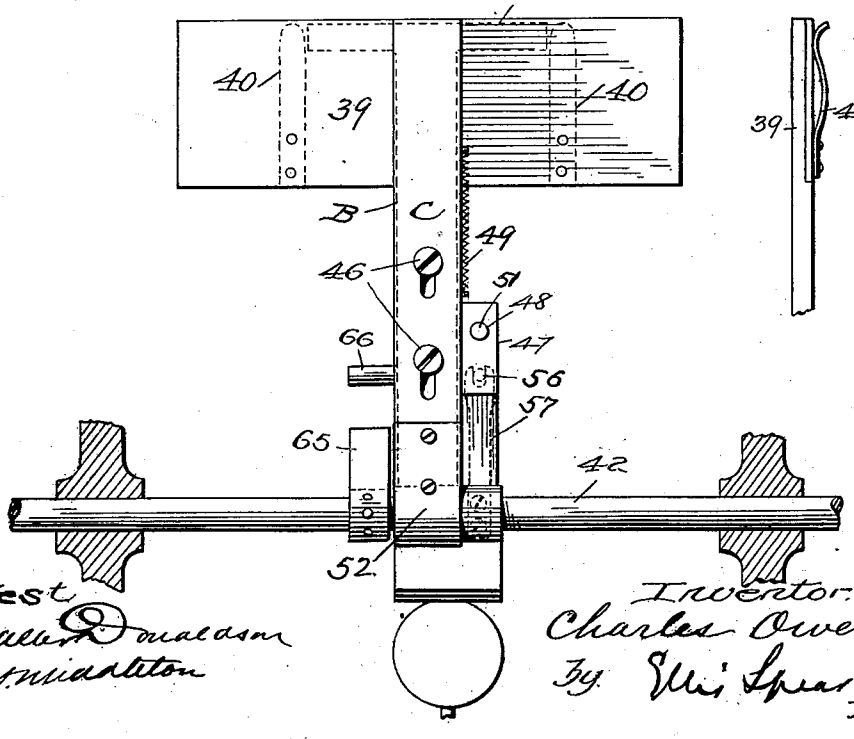


Fig 4.




Attest
Walter Donaldson
L. Middleton

Inventor:
Charles Owens
By Ellis Spear Atty.

No. 722,879. PATENTED MAR. 17, 1903.

C. OWENS.

FOLDING, WRAPPING, AND PASTING MACHINE.

APPLICATION FILED DEC. 6, 1901.

NO MODEL. 3 SHEETS—SHEET 3.

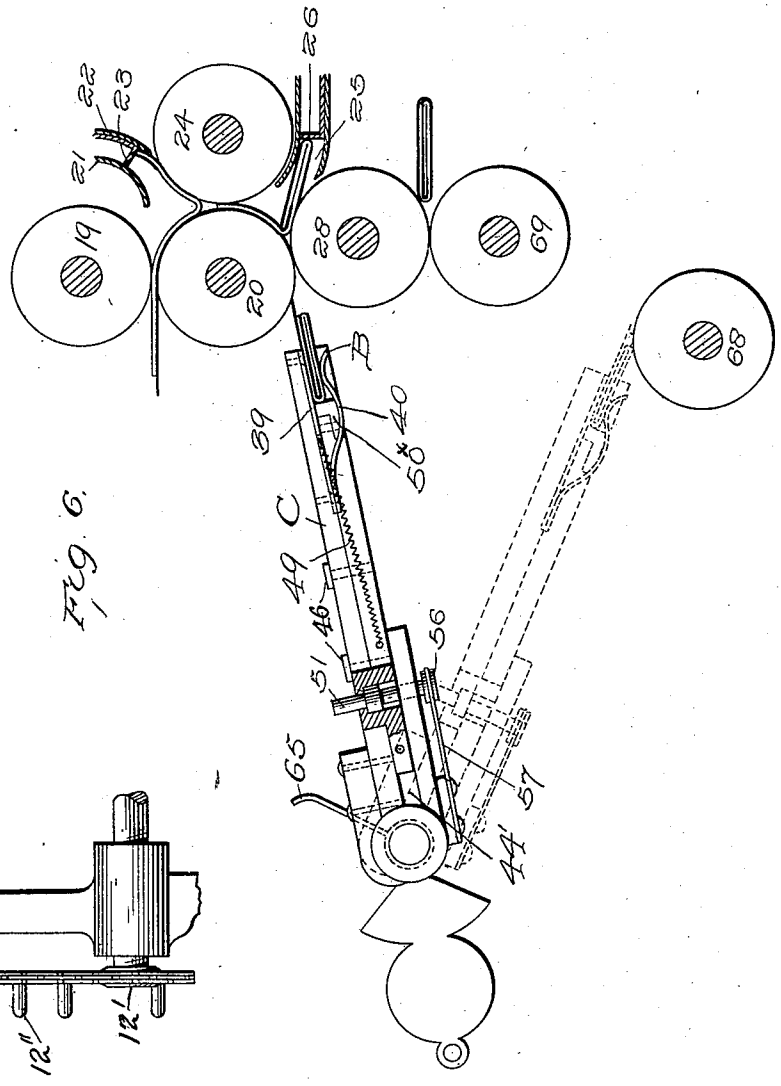


Fig. 6.




Fig. 7.

Attest.
Constantine
Walter Donaldson

Inventor.
Charles Owens.
By Ellis Spear
Atty

# UNITED STATES PATENT OFFICE.

CHARLES OWENS, OF CHATTANOOGA, TENNESSEE, ASSIGNOR OF ONE-HALF TO DWIGHT PRESTON MONTAGUE, OF CHATTANOOGA, TENNESSEE.

## FOLDING, WRAPPING, AND PASTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 722,879, dated March 17, 1903.

Application filed December 6, 1901. Serial No. 84,951. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES OWENS, a citizen of the United States, residing at Chattanooga, Hamilton county, Tennessee, have invented certain new and useful Improvements in Folding, Wrapping, and Pasting Machines, of which the following is a specification.

My invention is an improvement in folding, wrapping, and pasting machines, and is designed especially for the wrapping of books and magazines, although it may be applicable to other articles of similar form or character. It will be understood, therefore, from the following description that when I use the term "magazines" it is used for convenience only and is intended to represent all papers and articles of similar form of whatever character that require to be covered by a paper wrapper.

Although I have used the term "wrapping and folding" it will be also understood that with some modification my machine may be used to wrap without folding, as hereinafter described.

I have hereinafter explained the operation of my machine with all the details shown and have indicated the general principles, as well as the details of construction, in the claims appended hereto.

In the drawings, Figure 1 is a vertical sectional view of the machine with parts in side elevation. Fig. 2 is a detail front view of the feeding-in rolls and adjacent devices. Fig. 3 is a plan view of a detail relating to the pasting mechanism. Fig. 4 is a detail view of the carrier for the magazine, said carrier belonging to the pasting mechanism. Fig. 5 is a view of a further detail. Fig. 6 is a view in the nature of a diagram, showing the operation of folding the magazine and wrapper and applying to the same the paste. Fig. 7 is a detail view showing how the feed-fingers are driven intermittingly.

In the drawings, 1 represents the box or rack for holding the magazines or other articles, which are piled one upon the other next to the rear wall of the box, with their backs or folded edges to the rear—that is to say, against the wall. This box or rack is supported upon the frame of the machine, (shown in Fig. 1,) and upon an arm of that frame (shown at 2) is mounted in bearings a roll 3 of paper, the web of which (marked 4) is led over the supporting-rolls 5 6 and under another roll, 7, and is thence carried between feed-rolls 8 and 9. The top of the table 10 forms in part the bottom of the box and the bed upon which magazines or papers rest.

Mounted in suitable bearings on each side of the machine is a shaft 11, having a beveled gear at its upper end meshing with another gear on a shaft 12, by which the shaft 11 is rotated with suitable mechanism for giving it an intermittent motion. Preferably for this purpose I use an endless chain driven from a sprocket-wheel 12′ on the shaft of the upper feed-roller and provided with pins 12″, suitably arranged so that these pins strike a sprocket-wheel $12^{\times}$ on the shaft 12, so as to give the required intermittent motion. On the lower end of each of these shafts is set horizontally a finger in the form of a blade, (marked 13,) which is adapted to enter between the leaves. These blades have sharp points and blunt lateral edges. The shafts turn in opposite directions, so that both blades are caused to approach the ends of the magazines simultaneously and to enter between the leaves and bear against the folded edge, and thus at once take hold of the magazine. It will be understood that the back 14 of the box is provided near its lower edge with a slot through which the blades move in engaging with the magazine, the slot extending the full width, so as to allow the magazine to be drawn through by the blades. On the outside or back side of the box are several flat springs 15, fixed to the back at their upper ends and projecting down a little below the upper edge of the slot through which the magazine passes, so that the lower ends impinge against the upper surface of the magazine or near it, so as to cause it to pass beneath under some tension. This holds back the other magazines lying above that which has been drawn through, the blades being arranged so as to invariably take the magazine lying at the bottom. Thus operated the blades draw the magazine into the bite of the rollers 8 and 9, and the upper roller 8 is pressed down by suitable springs so as to grip the magazine with sufficient force to draw it forward. The rollers are

speeded a little faster than the blades, so as to draw the magazine therefrom, the blades being caused to rest when they have arrived in position in front of the rollers and have presented the magazine thereto. This effect is caused by means of the spaces between the pins on the chains aforesaid. It will be understood that the front end of the web 4 has been drawn through between the feed-rolls before the feeding-blades begin to operate. The web is normally at rest between the rolls 8 and 9, which are slightly separated, and when the magazine is drawn into the bite of the rollers the under surface of it impinges against the web and by frictional contact therewith draws the web on and feeds it forward. In thus drawing the web through at the beginning of the operation a sufficient lead is given to the web to leave it in advance of the magazine, and thus afford a margin to be folded over the back of the magazine, an inch and a quarter being ordinarily sufficient for this purpose. Across the surface of the table, a little in rear of the feed-rollers, sufficiently above the surface of the table to leave space for the magazine, is a steel plate 16, under which the magazine passes. Underneath this plate in a series of longitudinal slots is a series of light longitudinally-arranged flat springs 17, slightly turned up, as shown in Fig. 1. These lie across the path of the magazine and are arranged so as to be pressed down into the slots as the magazine rides over them. They are of sufficient tension, however, to cause the edge of the paper in advance of the magazine to be turned up against a series of springs 18. These springs are fixed to the frame at their upper ends, the lower ends extending down and being bent rearward, so that the magazine passes under them, and as it passes these lower ends the edge of the wrapping-paper which projects beyond the magazine and forms a flap will be turned down onto the magazine. It will be understood that as the forward end of the paper advances it is turned up by the springs 17 against the springs 18; but as the magazine follows it presses down the spring 17 and progresses underneath the spring 18. This causes the paper to be folded over the advance edge of the magazine. Continuing on in the same movement the magazine passes into the bite of the rollers 19 and 20, similar to rollers 8 and 9, and by them is drawn on into another channel formed by stiff guide-plates 21 22, which channel is curved upward. In this guideway is an adjustable stop 23 or abutment, set according to the width of the fold of the magazine. By this the rearward movement of the magazine is arrested; but feed motion of the rolls 19 and 20 continues, and the magazine being already curved upward by the form of the way the pressure imparted by the rollers causes it to bulge downward, with the width of fold depending upon the position of the stop, until the fold is caught in the bite of rollers 20 and 24, which press the magazine into a fold and thus folded draw it downward. Continuing the rollers 20 and 24 advance the folded magazine into another curved guideway formed of several steel strips, the channel being marked 25. This way has another adjustable stop 26, against which the folded edge of the magazine is arrested before the magazine leaves the bite of the rollers 20 and 24. It will be understood that the parts are so arranged, as heretofore described, that the first fold is only one-third of the entire width of the magazine, so that the upper fold formed by the rollers 20 and 24 is equal to the width of the remaining unfolded parts. It should be noted in relation to the movement of the magazine that before entering the bite of the rollers 20 and 24 it moves straight across until the advanced edge strikes the lower part 22 of the upper guideway. The lower edge of this part 22 therefore is made to project downward in its relation to the roller 24 to receive the advance edge of the magazine and turn it up, and this arrangement of the lower edge of 22 prevents the wrapping-paper from being pulled and displaced in relation to the magazine, and, similarly, as the folded edge of the magazine moves downward between the rollers 20 and 24 it strikes first the longer part 27 of the lower guideway, which part is extended sufficiently to catch the said edge as it comes down and to turn it into the lower guideway. Also the edge of the upper wall of the lower guideway 25 is so adjusted as to press down and hold the folded-back edge of the magazine, so as to insure its being properly located in the second fold. When therefore the edge of the first fold is brought against the stop 26, it is arrested, and the continued movement of the rollers 20 and 24 will cause it to bulge toward the rollers 20 and 28 and be thereby forced into the bite of said rollers, which form a second fold. By this it is carried, completely folded, to the pasting mechanism.

The pasting mechanism includes the carrier, which reciprocates to receive the folded magazine, convey it to the pasting mechanism, and to return and deliver it to discharging-rollers; but before describing this mechanism I will describe the web-cutting mechanism. (Shown in Fig. 1.) This mechanism consists of an arm 30, mounted on a collar 31 on the shaft of the feed-roll 9. On its free end is pivoted a knife-blade 32, which projects upward through a slot in the table, being arranged so as to sever the web at the proper interval after the magazine has passed over said edge. The knife is operated intermittently and is drawn and held normally back by means of a spring 33, connected to a stud on the collar. The collar also carries a pin 34, which is in range with an arm 34′ on the hub of the shaft 11. These parts are duplicated on each side of the machine, there being two collars with their arms and pins 34. The arm on the hub of the shaft 11 is

set so as to strike the pin 34 at each end at the proper time to sever the web at the proper point.

In order to hold the paper so that it may be severed by the knife, a thin steel plate 36 is placed above the surface of the table, leaving a sufficient space underneath to allow the paper to pass, the rear edge of said plate coinciding with the edge of the knife-slot through which the edge of the knife passes, so as to sever the paper while it is held down by the plate 36.

The rollers 20 and 28 discharge the folded magazine through a guideway 37 into a receiver B. This receiver is shown more clearly in Figs. 3 and 4. It is composed of a plate 39, provided with spring-fingers 40, which fingers are adapted to receive the magazine as it comes from the guideway 37. The receiver comprises a carrier for the magazine having a rotary movement about its shaft and automatically controlled in its action by feeding thereto a magazine to be pasted. This carrier or receiver is made up of an arm C, extending radially from the shaft 42, upon which it is supported by a bracket or casting 52, loosely mounted upon said shaft. The casting or bracket has a lower arm 44, arranged at a slight distance from the arm C, so as to leave an intermediate space or channel 44′ for the movement therein of the rear end of the plunger B. This plunger is supported by and has a sliding connection with the arm C by means of screws 46 in the plunger passing through slots in the arm C, the heads of the screws resting upon the upper surface of said arm C. At the forward end of the arm C of the carrier a plate 39 is fixed, extending laterally, as shown in Fig. 3. Upon each side of the said arm and upon the front end of the plunger a head $50^{\times}$ is arranged, extending laterally on each side of the main part of said plunger. Upon the under side of the plate 39 spring-fingers 40 are secured, as shown in Figs. 2 and 3, having their free ends reaching forward adjacent to the head $50^{\times}$. The plunger B is held normally forward by means of a spring 49, connected thereto at one side and to the arm C. In the normal position of the parts, as shown in Fig. 1, the magazine emerging from between the rollers 20 and 28 will be thrust against the front edge of the head $50^{\times}$ of the plunger, and said plunger will yield rearwardly, this action being permitted by the action of the spring 49. The parts are so positioned that portions of the magazine will reach beyond the ends of the head $50^{\times}$ and will thus enter between the springs 40 and the under surface of the plate 39, it being understood that the springs 40 are properly curved downwardly at their free ends to permit the magazine to insert itself between said fingers and the plate 39.

The plunger has a lateral offset 47 fixed thereto, in which there is formed a hole 48, enlarged at its lower end and holding a pin 51 loosely therein, the pin having its enlarged portion or head 50′ fitting in the enlarged part of the opening. The lower arm 44 of the carrier has a pin 56 movably supported therein and pressed normally upwardly by a spring 57. Above the arm is a pivoted trip and stop 58. It is on the shaft 59 and is in range of the pin 56 in the arm. It is drawn normally to the rear by means of a spring 60, which is connected to a pin 61, fixed in the shaft 59 and extending upward above the shaft, so as to be in range with a stop-pin 62. The receiver-arm is held normally up by a spring 63 on its rear end beyond its pivotal shaft. The shaft 42 rotates constantly through sprocket-wheels, in Fig. 2 turning in the direction of an arrow 64. It carries a spring-arm 65, which is in range with a pin 66 on the end of the plunger B when the plunger is pushed back by the entrance of the folded magazine into the receiver. When so pressed back, the pin 66 is struck by the spring-arm 65, which immediately causes the arm to swing downward. The plunger in moving back causes the pin 51 to move into position over the pin 56. That pin rises by means of the spring and entering the hole 48, thus locks the plunger in its backward position and allows the magazine to be retained in the receiver. The arm continues its movement, causing the magazine to move downward past the roller 28, this movement continuing until the magazine has reached the paste-roller 68. It will be borne in mind, however, that the flap of the cover, which is on the rear edge of the folded magazine, as it advances remains unfolded and is on the upper side of the magazine as it is carried down by the arm. It therefore drags on the rollers 28, as well as on its companion roller 69, so that when the magazine reaches the paste-roller 68 the folded part of the wrapper touches the paste-roller near the edge of the magazine while the flap is above it. The parts are so adjusted that the movement of the arm is arrested at this point by the stop 70. At that instant the spring-arm 65 slips from the pin 66 and the force of the shaft 42 ceases to act upon the arm, which is instantly retracted by the spring 63. It will be understood that the pin 51, which is raised by the spring 57, has been held back by the pin 56 in range with the trip 58, so that as the magazine carrier or receiver swings upwardly the pin 51 will engage the trip 58 on its lower edge. This occurs when the receiver is opposite the bite between the rollers 28 and 69. At that moment the trip presses back the pin 56, releases the plunger, which immediately throws into action the spring 49, forcing the magazine into the bite between the rollers 28 and 69. It will be seen from Fig. 1 that the pin 51 when pressed down by the trip 58 momentarily arrests the ascent of the receiver or carrier, and this stoppage is maintained while the pin 51 is moving along the edge of the trip, so as to free itself therefrom, this movement of the pin being due to the movement

of the plunger to thrust the magazine into the bite of the said rolls 28 and 69. In the reverse or upward movement of the frame the flap comes in contact with the roller 69 and is thus folded down toward the pasted part of the wrapper, and it is pressed thereon by its passage between the rollers 28 and 69, from which the magazine is discharged. After having discharged the magazine from the receiver the arm continues its movement to the position first indicated and is ready to receive another folded magazine, and the operation is finished. The arrangement of parts is such that the rolls 19 and 20 take the magazine and wrapping-paper before the web of wrapping-paper is severed, and when the magazine is initially bent and is in the bite of the rolls 20 24 the severing of the web takes place. By this arrangement and action of the parts the web is properly controlled.

I claim—

1. In combination with a pair of feed-rolls and means for feeding single magazines thereto, mechanism for conducting a web of paper to said feed-rolls underneath the magazine, means for holding down said paper in advance of the magazine and mechanism intermittingly operated for severing said web, in connection with said holding-down means and folding and wrapping mechanism for folding and wrapping the magazine after the paper is cut, substantially as described.

2. In combination with the feed-rolls, means for feeding the magazine thereto and means for feeding the web underneath the magazine, a plate 36 having a space underneath for the advance of the web, said plate being in rear of the feed-rollers, a slot in rear of the plate and a knife intermittingly operated through the slot to sever the web in advance of the magazine, the said feed-rollers acting to feed both the magazine and the web, substantially as described.

3. In a machine for wrapping magazines, a pair of feed-rollers, feeding mechanism whereby the paper and the magazine are fed simultaneously, means for wrapping the paper about the magazine and a reciprocating receiver combined with pasting mechanism, said receiver being adapted to take the magazine from the wrapping mechanism and apply it to the pasting mechanism, remove it from the paste mechanism and deliver it, substantially as described.

4. In a machine for wrapping and folding magazines, magazine-feeding mechanism, paper-feeding mechanism, folding mechanism, means to fold the magazine and at the same time to apply the wrapper thereto, a reciprocating carrier adapted to receive the wrapped and folded magazine and apply it to the pasting mechanism, and means for discharging the magazine during the return of the carrier to normal position, substantially as described.

5. In a machine for wrapping and folding magazines and the like, a pair of feed-rollers and means for feeding the wrapping-paper to the magazines and to said rollers, with the edge of the wrapping-paper in advance of the magazine, mechanism for turning said edge of the paper as the latter advances, a curved passage for guiding the magazine into a pair of folding-rollers, and mechanism for feeding the magazine into said curved passage and over said folding-rollers, substantially as described.

6. In combination in a machine for wrapping magazines, means for feeding a magazine and wrapping-paper simultaneously, and in contact to cutting mechanism, cutting mechanism for severing the paper between the magazines as they are fed into the machine to leave a flap or end projecting in advance of each magazine, means for first folding said flap down onto the magazine, and means for folding the magazine and paper, the said cutting mechanism being located between the folding means and the feeding means, substantially as described.

7. In combination, a machine for wrapping magazines, means for feeding the magazines one by one into the machine, together with the wrapping-paper, cutting mechanism for severing the wrapping-paper between the magazines to leave a flap projecting in advance of each magazine and folding means for said flap comprising the curved spring part for turning the flap upwardly, said spring yielding to the pressure from the magazine to allow the same to pass, and means for directing the magazine past the said part in the direction of the length of the magazine, substantially as described.

8. In combination, a machine for wrapping magazines, means for feeding the magazines one by one into the machine, together with the wrapping-paper, cutting mechanism for severing the wrapping-paper between the magazines to leave a flap projecting in advance of each magazine and folding means for said flap comprising the curved spring part for turning the flap upwardly, said spring yielding to the pressure from the magazine to allow the same to pass, and a plate for guiding the magazine and holding it down against the spring-pressure, substantially as described.

9. In combination, rolls for feeding a continuous web of wrapping-paper and the articles to be wrapped thereby into the machine simultaneously and in contact, cutting mechanism for severing the web in proper relation to the article and means for wrapping the paper about the article, said severing means being located between the folding and the feed rolls, substantially as described.

10. In combination, in a wrapping-machine for magazines and the like, feed-rollers for the magazines and wrapping-paper, means for severing the wrapping-paper between the magazines to leave projecting flaps and folding means for the said flaps comprising the curved spring for turning the flap upwardly and an abutment or spring for turning the

flap downwardly, said parts being supported on stationary portions of the machine adjacent to the path of the wrapping-paper and magazine and having yielding movement only, the magazine passing the said parts in the direction of its length, substantially as described.

11. In combination, a pair of feed-rollers for feeding the magazine and wrapper in contact, cutting means for severing the wrapping-paper with a flap in advance of the magazine, means for folding the advance flap of the wrapping-paper over onto the magazine and a pair of folding-rollers in rear of said flap-turning means, substantially as described.

12. In combination, in a folding-machine, rollers for moving the magazine or the like and an abutment against which the magazine or the like strikes to be initially bent by the continued passage of the magazine through said rollers, the relation of the parts being such that the rollers continue to act on the magazine after the same strikes the abutment, substantially as described.

13. In combination in a folding-machine, rollers for moving the magazine or the like and curved guide and abutment against which the magazine or the like strikes to be initially bent by the continued passage of the magazine through said rollers, the relation of the parts being such that the rollers continue to feed forward the magazine after its front edge has been arrested by the abutment, substantially as described.

14. In combination in folding mechanism, rollers for moving the magazines and an abutment against which the edge of the magazine strikes to be initially bent by the feeding action of the rollers, said bent portion being directed to the bite of another roller, substantially as described.

15. In combination in a folding mechanism, a group of rollers, an abutment against which the edge of the magazine strikes when fed by a pair of the rollers to initially bend the magazine by the continued feeding action of the rollers on the magazine and to direct its bent edge to the bite between another roller and one of the pair, substantially as described.

16. In combination, in a folding mechanism, a group of rollers and a plurality of abutments against which the magazine strikes, said groups of rollers comprising a pair to feed the magazine to the first abutment, and a third and fourth roller each coöperating with one of the pair of rollers and with the second abutment to give the magazine a further fold, substantially as described.

17. In combination with feed-rollers, a cutting-knife and feed-fingers, a rotary shaft for operating the feed-fingers and means carried by the rotary shaft for operating the cutting-knife, substantially as described.

18. In combination, folding mechanism, pasting mechanism normally at rest and means whereby the pasting mechanism is automatically set in motion by feeding thereto a magazine to be pasted, substantially as described.

19. A machine for applying wrappers to magazines and the like comprising a paste-carrier, a movable receiver to receive and carry the magazine to the paste container or carrier and means for automatically operating the said receiver when the magazine is fed thereto, said means being controlled by the feeding of a magazine to the receiver, substantially as described.

20. In combination, a paste carrier or container, a movable receiver and carrier for the magazines, feed-rolls for directing a magazine into the receiver, automatically-operating means controlled by the feeding into the receiver of a magazine for operating said receiver, and means for arresting said receiver in position to discharge the magazine therefrom after being pasted with means for effecting said discharge, substantially as described.

21. In combination, a pasting-roller, a series of rollers through which the magazine is intended to be passed and folded, a movable receiver to receive a magazine from one bite between the rollers, means for operating the receiver to carry the magazine to the pasting-roller, means for checking the receiver when it arrives opposite another bite between the rollers after the paste has been applied and means for discharging the magazine from the said receiver into the bite last mentioned whereby the parts to be pasted are made to contact and the magazine is discharged, substantially as described.

22. In combination, holding means for the paste, means for placing the wrapper about the magazine leaving one flap free and a carrier with operating means therefor to move the wrapped magazine into contact with the paste-holding means and to withdraw the same therefrom by a reverse movement of the carrier means and means for folding down the flap, substantially as described.

23. In combination with folding mechanism, pasting mechanism comprising a paste-holder, a movable carrier, a plunger on said carrier arranged to be forced back by contact of the magazine when fed into the carrier, means for operating the carrier normally running idly and a device whereby the carrier is thrown into connection with the operating means by the movement of the plunger, substantially as described.

24. In combination with folding mechanism, pasting mechanism comprising a paste-holder, a movable carrier, a plunger on said carrier arranged to be forced back by contact of the magazine when fed into the carrier, means for operating the carrier normally running idly and a device whereby the carrier is thrown into connection with the operating means by the movement of the plunger, said device comprising a pin on the plunger arranged to be moved into the path of the operating means, substantially as described.

25. In combination, a paste-holder, a carrier means for feeding the magazines thereto, said carrier having a plunger, a catch-pin for engaging the plunger when thrust back by the feeding in of the magazine, means for operating the carrier when the plunger is thrust back, means for retracting the carrier to normal position, means whereby the plunger is released on the return movement of the carrier and means for forcing the plunger back to normal position to thereby discharge the pasted magazine from the carrier, substantially as described.

26. In combination, a paste-holder, a carrier having a plunger, means for feeding the magazines to the carrier, a check for holding the plunger in its rearward position, means for operating the carrier toward and from the paste-holder, a pin for releasing the check and means for operating said pin, substantially as described.

27. In combination, a paste-holder, a series of rolls through which the magazine is adapted to pass, a carrier to receive the magazine from one bite between the rolls, means for moving the carrier to and from the paste-holder, a plunger on the carrier, a check for holding the plunger in retracted position, a pin for releasing the check and a trip-lever pivoted to the frame and arranged to strike the said pin when the carrier arrives in front of the bite between the rollers through which the magazine is to be discharged whereby the plunger will be released and means for forcing the released plunger forward, the said plunger carrying the releasing-pin whereby the same is released from the trip-lever as the plunger moves forward so that the carrier may return to its normal position, substantially as described.

28. In combination, a paste-holder, a carrier to move the wrapped magazine toward the same to receive the paste, a roller arranged to fold the flap toward the magazine after the paste has been applied and as the carrier is returning toward normal position, and means for operating the receiver controlled by feeding a magazine thereto, substantially as described.

29. In combination, a paste-holder, a carrier to move the magazine toward and from the paste-holder, said carrier having a plunger, rollers for directing the magazine against the plunger to move the same rearwardly and guiding means between the rollers and the plunger to prevent buckling of the magazine when thrust against the plunger.

30. In combination, a paste-holder, a carrier to move the article to be pasted toward and from the paste-holder, a series of rollers, said carrier being arranged to receive the magazine from one bite between the rollers and move it to the paste-holder, a plunger on the carrier, means for holding the plunger in retracted position and a trip for automatically releasing the plunger when it arrives before another bite between the rollers, said trip checking the movement of the carrier for the discharge of the magazines and automatically releasing the carrier for its continued movement when the plunger effects the discharge of the magazine, substantially as described.

31. In combination movable fingers for engaging opposite ends of the magazine, intermittent rotary means for operating the same, and rollers for taking the magazine from the feed-fingers, said feed-fingers being at rest while the magazine is carried away therefrom, substantially as described.

32. In combination, feed-rollers, feed-fingers with means for operating them, and a cutting-knife with connections for operating the same from the operating means of the feed-fingers, substantially as described.

33. In combination, feed-rollers, feed-fingers with means for operating them intermittingly, a cutting-knife and devices for operating the same intermittingly from the operating means of the feed-fingers, substantially as described.

34. In combination, feed-fingers, means for giving them rotary motion, a reciprocating cutting-knife, a rocking arm carrying the same and a device for operating said arm from the operating means of the feed-fingers, substantially as described.

35. In combination, a pair of rollers, feed-fingers operating immediately in front of said rollers and a cutting-knife operating immediately in rear of said rollers to cut the wrapping-paper in advance of each magazine fed into the machine so as to leave a flap, means for first folding down said flap and means for folding the magazine and wrapper, substantially as described.

36. In combination, the feed-rollers, a horizontally-movable feed-finger, a vertically-movable knife and a vertical shaft with connections for operating both of said parts, substantially as described.

37. In combination, feed-rollers, feed-fingers, the shafts carrying the same to cause them to feed the magazines to the feed-rollers, a cutting-knife, a spring for holding the knife normally retracted and devices for intermittingly operating the knife from the shaft of the feed-fingers, substantially as described.

38. In combination in a folding and wrapping machine, a movable carrier, means for feeding the magazines thereto, a plunger on the carrier, means for holding it in a retracted position on the carrier when the magazine is in place, a paste-holder to which the carrier moves the magazine, and means for moving the carrier, substantially as described.

39. In combination in a folding and wrapping machine, a movable carrier, means for feeding the magazines thereto, a plunger on the carrier, means for holding it in a retracted position on the carrier when the magazine is in place, a paste-holder to which the carrier moves the magazine, and means for moving the carrier and means for releasing the plun-

ger when the carrier reaches its discharging position, substantially as described.

40. In combination in a machine for folding and wrapping pamphlets and the like, a pasting device comprising a paste-holder, a movable carrier for the magazines, means for feeding the magazine thereto, means for moving the carrier to the paste-holder and for giving said carrier a movement back to its former position and for causing a dwell in said return movement and means to discharge the magazine during said dwell, substantially as described.

41. In combination with folding-rollers, a curved channel, a stop therein and means for forcing a magazine or the like into said curved passage and arranged to continue feeding the magazine after its advanced edge has abutted against the stop whereby the magazine bends intermediate of its length toward the folding-rollers, substantially as described.

42. In combination in feeding mechanism for magazines and the like, means for holding the magazines, a feed-finger adapted to enter between the leaves of the magazine, means for moving said finger intermittingly, and means for taking the magazine away from the finger while the same is at rest, substantially as described.

43. In combination in a feeding mechanism for magazines and the like, means for holding the magazines, a feed-finger adapted to enter between the leaves of the magazine, means for rotating the finger and feed-rollers speeded faster than the feed-finger for taking the magazine away therefrom, substantially as described.

44. In combination, a paste-container, a movable carrier for the magazine, feed-rollers for directing the magazine to be engaged and held by the carrier, automatically-operating means controlled by the feeding into the carrier of a magazine for operating said carrier and for arresting the carrier in position for the discharge of the magazine therefrom substantially as described.

45. In combination, a paste-container, a movable carrier for the magazines, a pair of rollers for feeding the magazines to the carrier, means for automatically giving the carrier a movement when the magazines are fed thereto and controlled by the feeding in of the magazine, discharge-rollers and means for arresting the carrier when it arrives opposite the bite of the discharge-rollers, substantially as described.

46. In combination, a paste-container, a carrier, means for feeding the magazines to the carrier, automatically-operating means for moving the carrier, said means comprising a constantly-rotating part with a device for connecting the same with the carrier when the magazine is fed into the carrier and controlled by the feeding in of the magazine, substantially as described.

47. In a machine for wrapping magazines and the like, a pair of initial feed-rolls, means for supplying the web of wrapping-paper thereto, said paper being normally at rest between said rolls and means for feeding the magazines to the said rollers and onto the stationary web of wrapping-paper to carry the same into the machine intermittingly, by the added thickness of the magazine, substantially as described.

48. In a machine for wrapping magazines and the like, a pair of initial feed-rolls, means for supplying the web of wrapping-paper thereto, said paper being normally at rest between said rolls and means for feeding the magazines to the said rollers and onto the stationary web of wrapping-paper to thereby carry the same into the machine intermittingly, and means for severing the web after each feeding action adjacent to the feed-rolls to leave the end of the wrapping-paper projecting through them and at rest and upon which end the next magazine is fed, substantially as described.

49. In a machine for wrapping magazines, means for feeding the wrapper and the magazine simultaneously and in contact (the magazine being in an unfolded condition) with the forward end of the wrapper in advance of the magazine, means for folding this free advance end of the wrapper over onto the magazine, and means for then folding the magazine, whereby the wrapper is folded within the magazine, substantially as described.

50. In combination, the feed-rolls 8 and 9 adapted to permit the wrapping-paper alone to remain normally at rest between them and adapted when a magazine is between them to press upon the paper whereby the added thickness of the said magazine causes the paper to be fed, rolls and folding mechanism in rear of the rolls 8 and 9 adapted to draw the web until it is severed, severing means and means for feeding a second magazine to the feed-rolls after the web has been severed and adjacent to the severed end of the web, substantially as described.

51. In combination, the feed-rolls arranged to hold the end of the web between them normally at rest, means for supplying the magazines to the rolls to thereby cause the feeding in of the web by the added thickness, folding mechanism and pasting mechanism, said pasting mechanism being rendered operative by the feeding thereto of the magazine, substantially as described.

52. In combination, pasting mechanism comprising a paste-holder, a receiver for the magazine normally at rest and set in motion by feeding the magazines directly thereto and means for folding down the final flap to which means the receiver directs the magazine, substantially as described.

53. In combination, a series of rolls and means for receiving the magazines from a bite between two of the rolls and directing the same to another bite, said means com-

prising a spring-pressed part normally at rest and rendered active by feeding a magazine thereto, substantially as described.

54. In combination, means for folding down the last flap of the wrapper, paste-holding means, means for directing the magazine after receiving paste to the folding-down means, said directing means comprising a part normally at rest and rendered active by feeding a magazine thereto and a spring for placing said part under tension, substantially as described.

55. In combination, a receiver for the magazine and means for directing the magazine thereto, said receiver being set in motion by the direct pressure from the magazine against a part of said receiver, substantially as described.

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

CHARLES OWENS.

Witnesses:

C. S. MIDDLETON,

UPTON H. RIDENOUR, Jr.