

(No Model.)

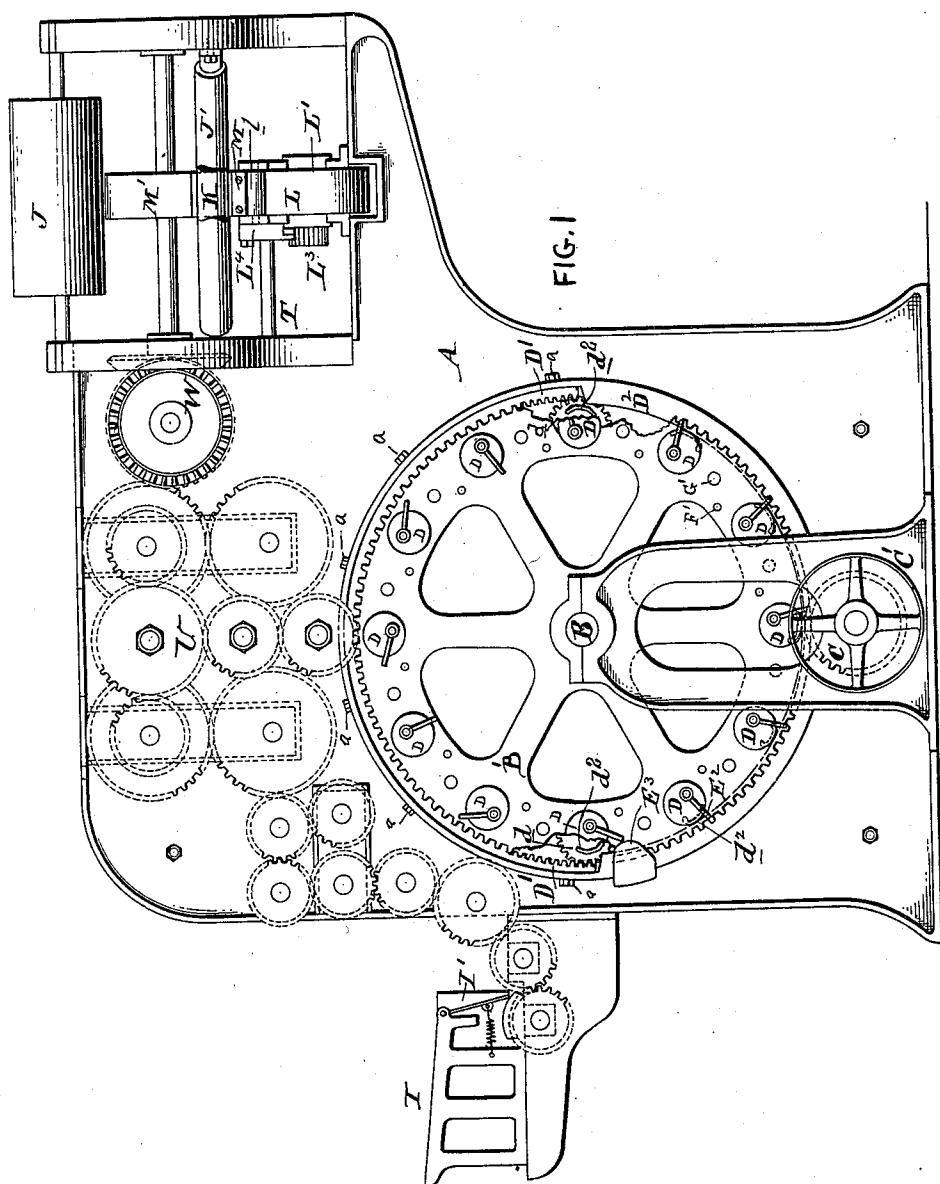
7 Sheets—Sheet 1.

H. B. CLARK.

WRAPPING MACHINE FOR NEWSPAPERS, &c.

No. 593,959.

Patented Nov. 16, 1897.



Witnesses.

Henry D. ...
R. M. Kelly,

Inventor.

H. B. Clark
By [Signature]
Attorney.

7 Sheets—Sheet 2.

WRAPPING MACHINE FOR NEWSPAPERS, &c.

Patented Nov. 16, 1897.

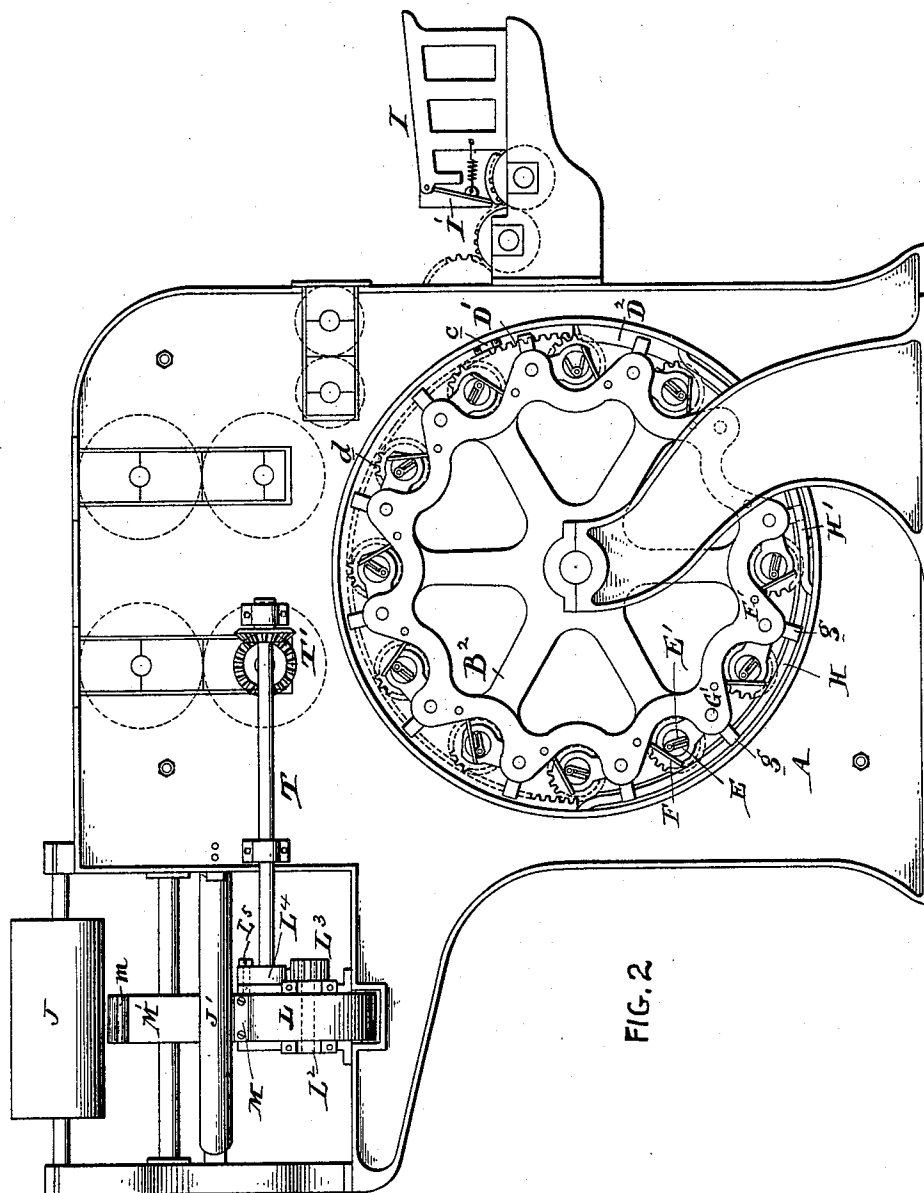


FIG. 2

Thank You
R. M. Kelly,

Inventor.

H. B. Clark

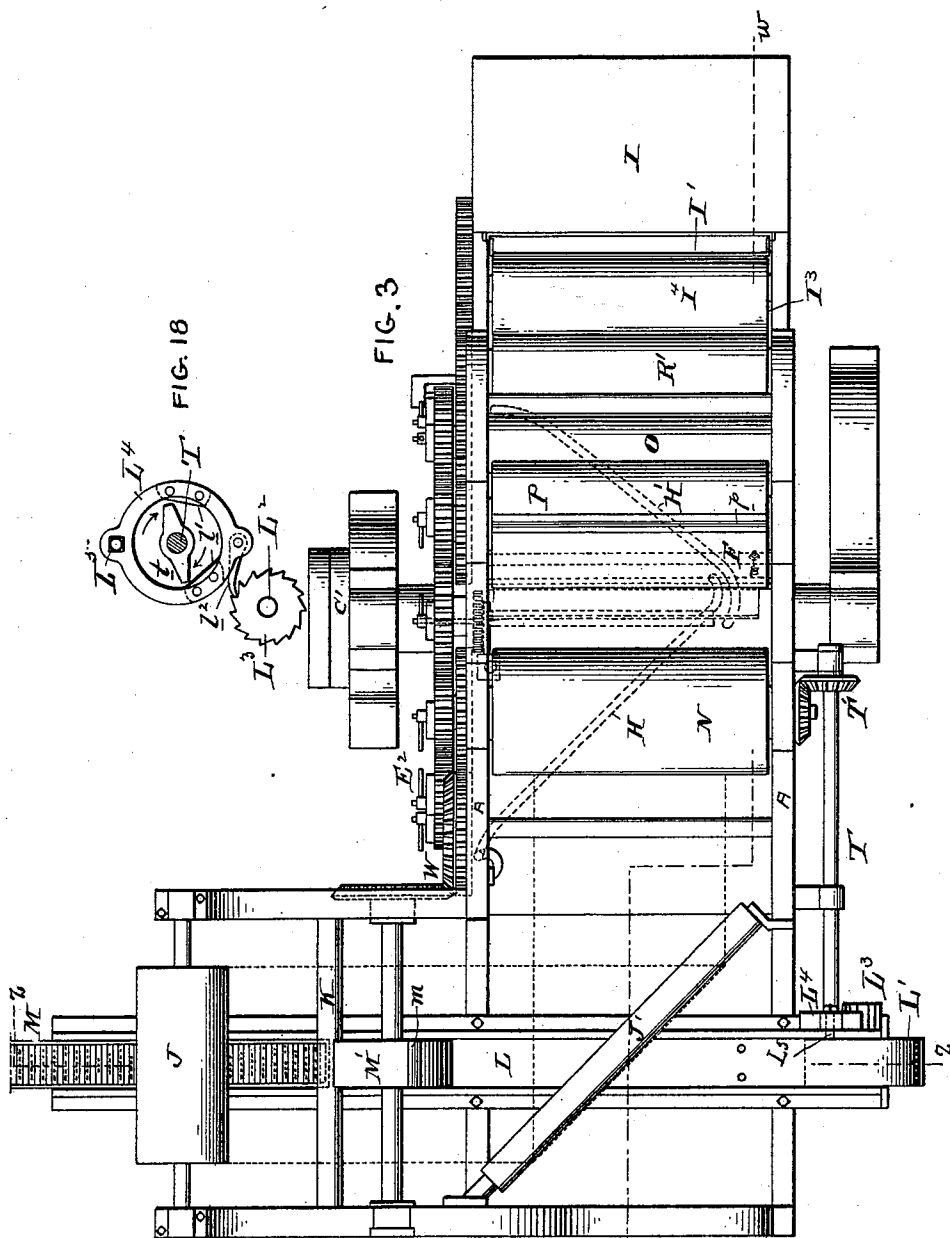
By *Wm. H. Smith*

Attorney.

7 Sheets—Sheet 3.

WRAPPING MACHINE FOR NEWSPAPERS, &c.

Patented Nov. 16, 1897.



Inventor.

N. B. Clark

By John H. H. H. H.

Attorney.

(No Model.)

7 Sheets—Sheet 4.

H. B. CLARK.

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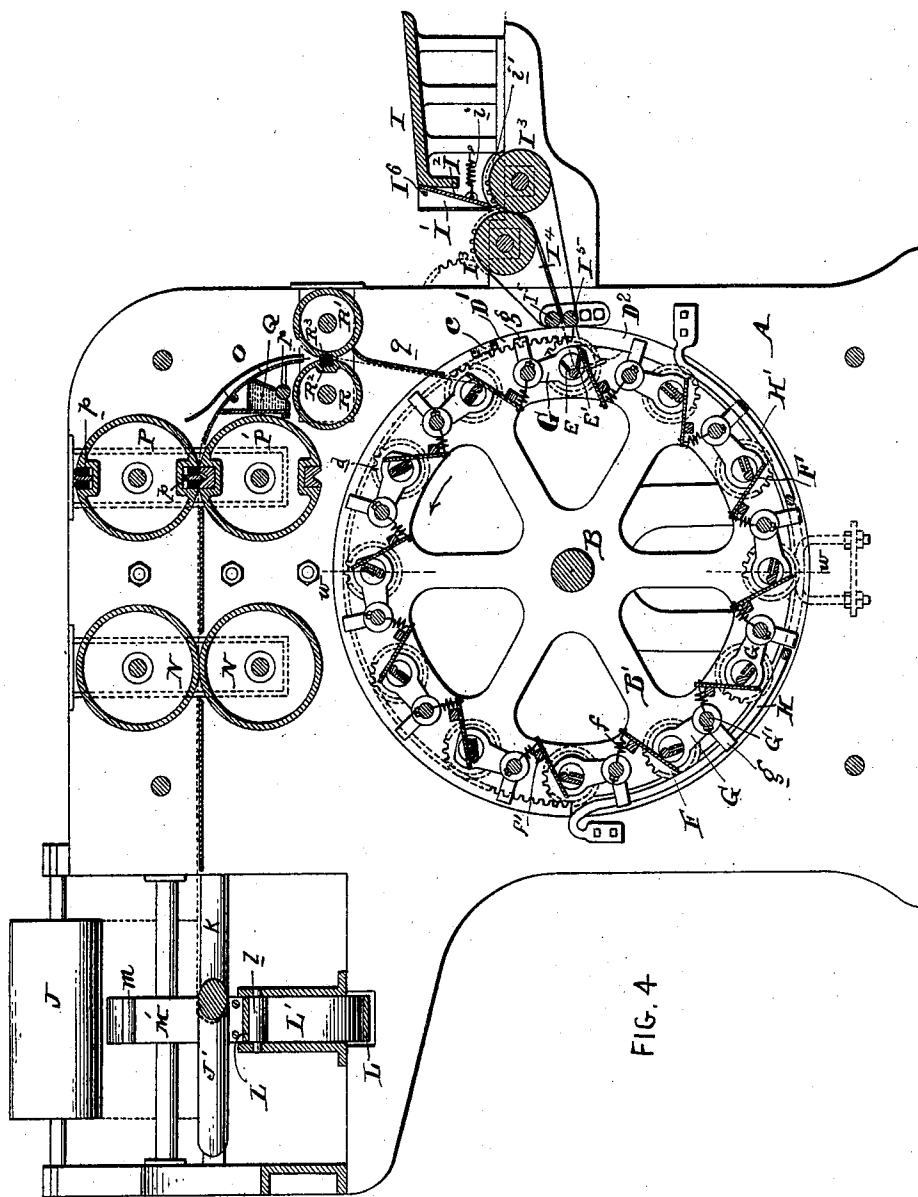


FIG. 4

Witnesses.

Henry Denny
R. M. Kelly.

Inventor:

H. B. Clark

137 J. M. Adams

Attorney.

(No Model.)

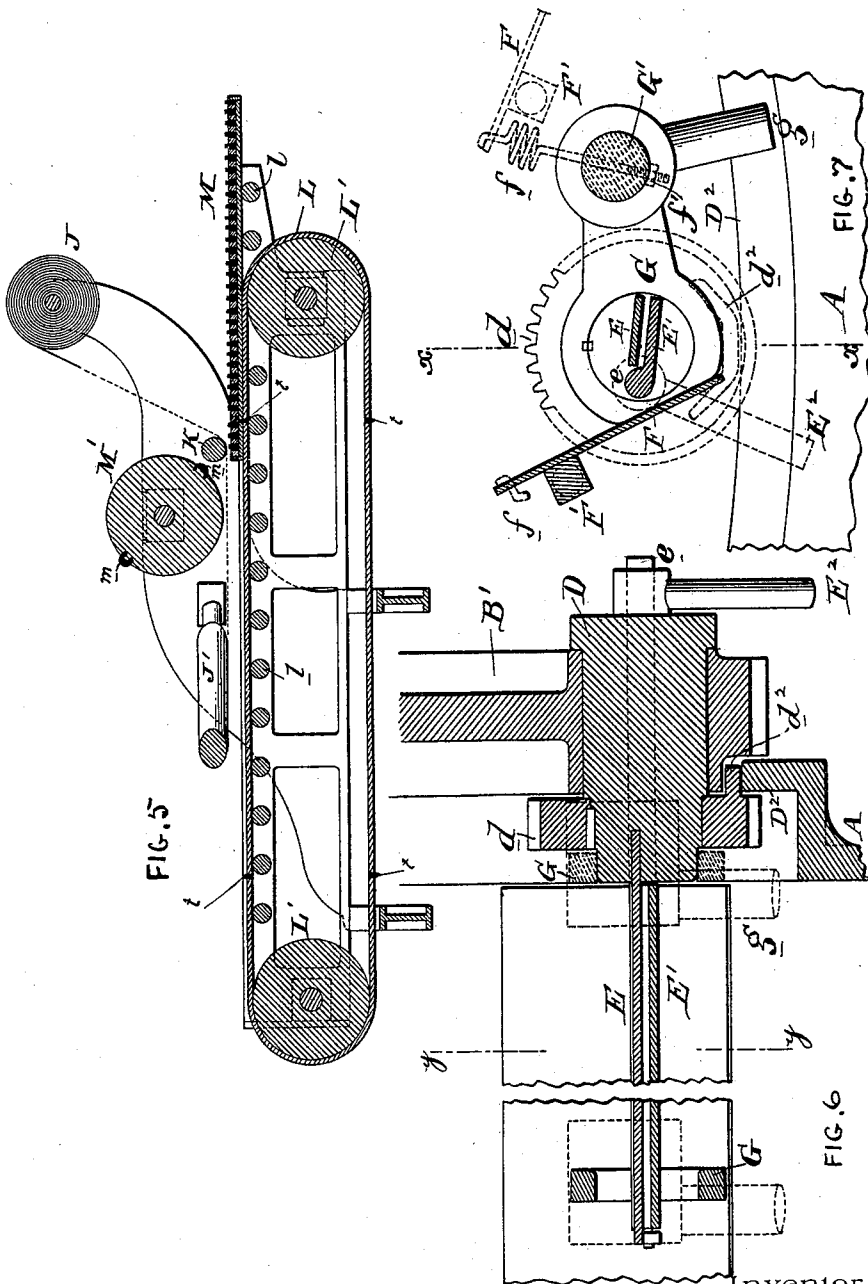
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H. B. CLARK.

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Witnesses.

Henry Denny
R. M. Kelly.

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(No Model.)

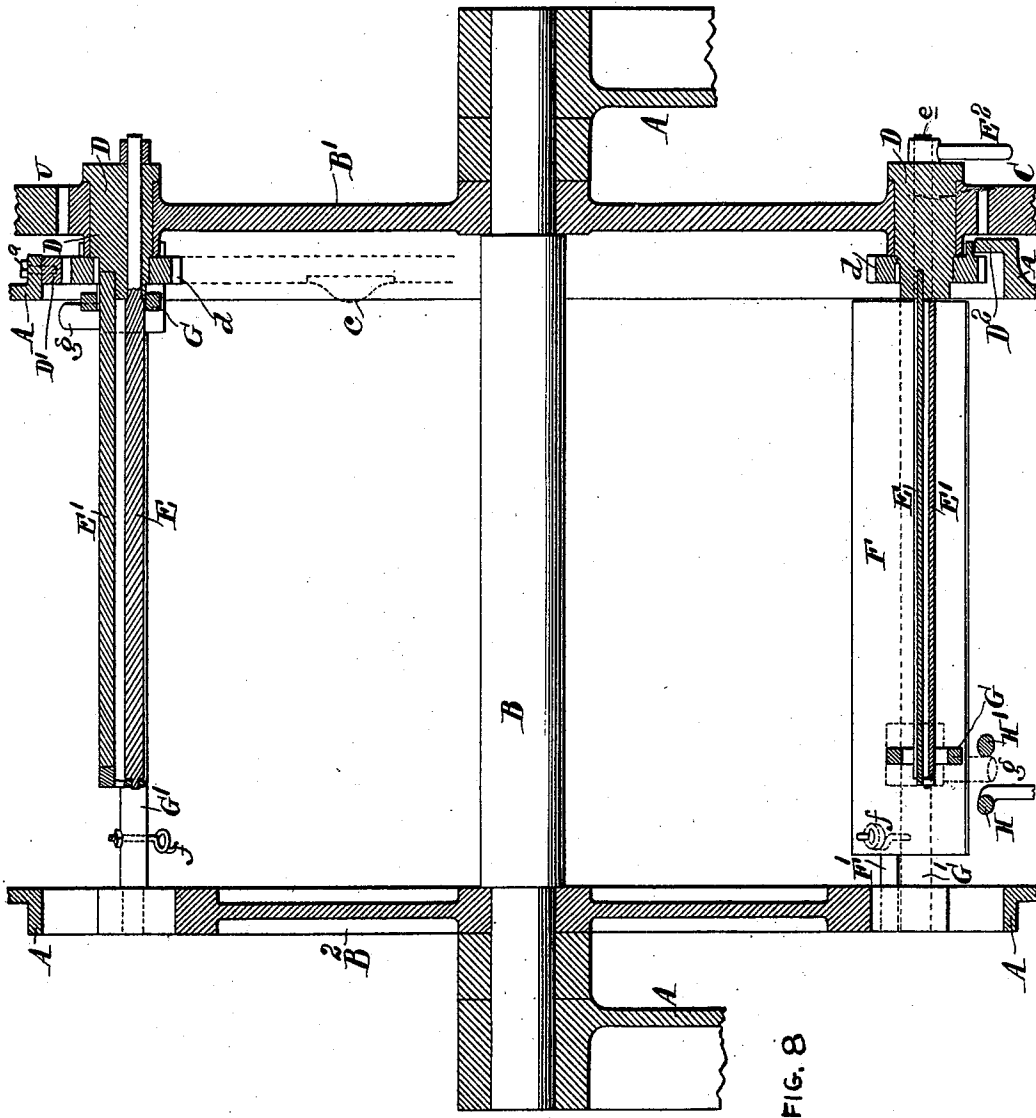
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H. B. CLARK.

WRAPPING MACHINE FOR NEWSPAPERS, &c.

No. 593,959.

Patented Nov. 16, 1897.



Witnesses.

Henry Drury
R. M. Kelly,

Inventor.

H. B. Clark

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(No Model.)

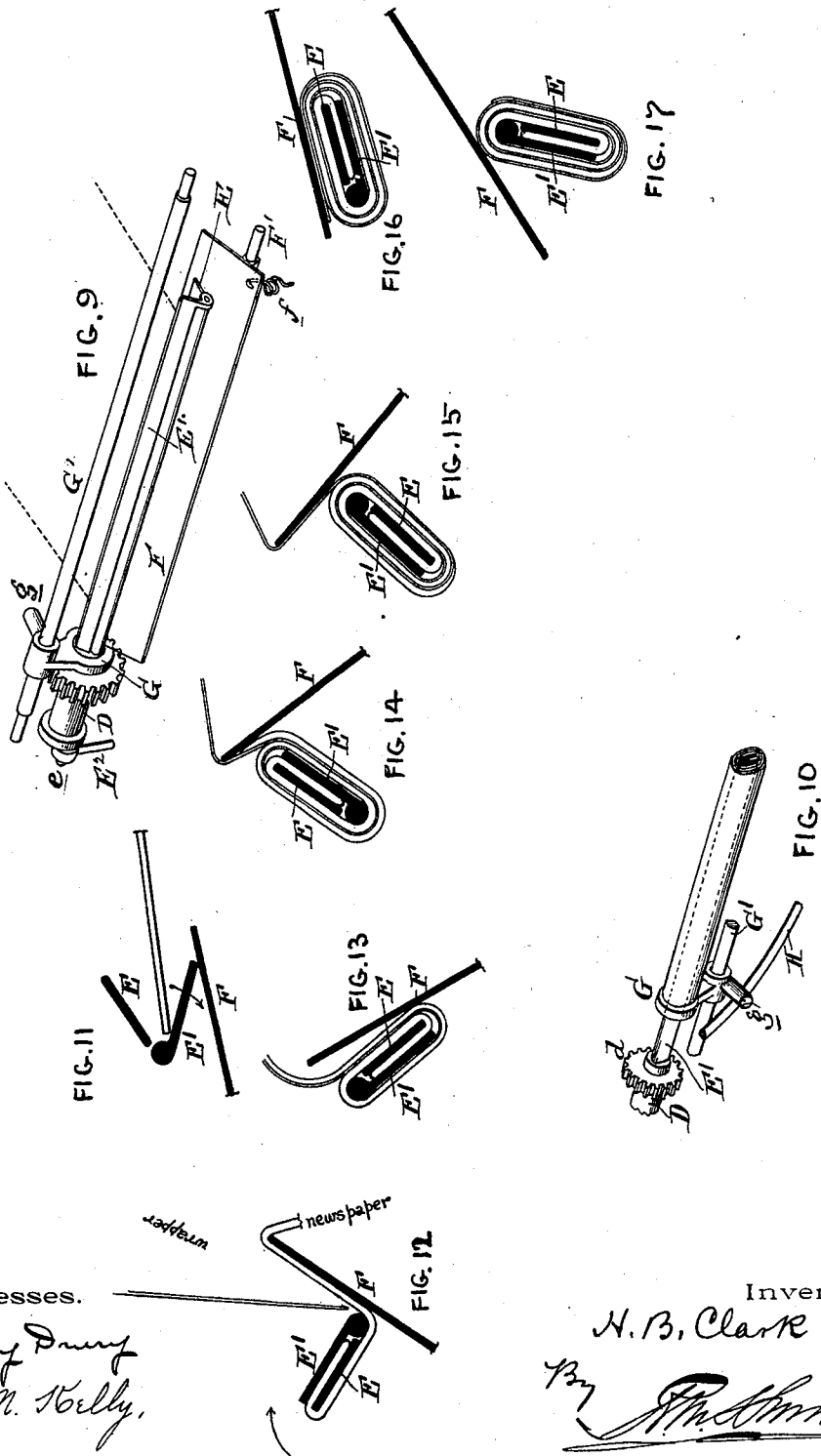
7 Sheets—Sheet 7.

H. B. CLARK.

WRAPPING MACHINE FOR NEWSPAPERS, &c.

No. 593,959.

Patented Nov. 16, 1897.



Witnesses.

Henry Dwyer
R. M. Kelly,

Inventor.

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Attorney.

UNITED STATES PATENT OFFICE.

HARRY BENTON CLARK, OF FLORIN, CALIFORNIA.

WRAPPING-MACHINE FOR NEWSPAPERS, &c.

SPECIFICATION forming part of Letters Patent No. 593,959, dated November 16, 1897.

Application filed July 27, 1896. Serial No. 600,608. (No model.)

To all whom it may concern:

Be it known that I, HARRY BENTON CLARK, of Florin, Sacramento county, California, have invented an Improvement in Wrapping-Machines for Newspapers, &c., of which the following is a specification.

My invention relates to machines for wrapping newspapers, magazines, pamphlets, and the like; and it consists of constructions which are set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to provide means which may automatically and with precision and rapidity fold a newspaper, magazine, pamphlet, or other flexible article and apply thereto a wrapper with or without the name and address upon it, printed or otherwise marked thereon.

In carrying out my invention I embody in the organization of my improved machine the following characteristic features, namely: first, a feeding device of suitable construction for properly delivering the thing to be wrapped to the wrapping devices; second, a feeding device for supplying the wrapper or envelop to the aforesaid wrapping devices; third, wrapping devices which in their organization are adapted to fold an article and apply a wrapper or envelop thereto; fourth, pasting or sealing devices for applying paste or its equivalent to the wrapper for the purpose of sealing it upon the wrapped package; fifth, discharging or ejecting devices for automatically delivering the wrapped package from the wrapping devices, and, sixth, means for printing or otherwise affixing to the wrapper the name and address of the person or party to whom it is desired the wrapped package shall be sent. It is further to be understood that the above-specified characteristic features or elements making up my wrapping-machine are so combined and organized that the proper timing of their movements is secured to obtain the necessary coaction, whereby substantially the following method of operation results:

The thing to be wrapped is delivered to the wrapping devices in a form ready for wrapping, and further folding operation on the rotary wrapping principle is started. At or about this time a wrapper is fed into the cus-

tody of the wrapping devices and caused to rest against the thing being wrapped, and together they are wrapped upon a suitable mandrel. As the free end of the wrapper approaches the wrapping device around which the article is being folded it receives paste for the purpose of sealing it. The wrapper is of such length that it is enabled to make one or more folds with the thing being wrapped and finally overlaps upon itself, so that the pasted end is secured upon the wrapper itself and not upon the article it envelops folded. While this operation is being performed, the mandrel is being conveyed away from the feeding devices, and after it has made a sufficient number of revolutions to cause the complete envelopment by the wrapper the wrapped article is automatically pushed off the mandrel. There being a series of mandrels, they are successively brought into and out of operative position. Thus a series of papers or other articles are simultaneously undergoing a wrapping operation, and at any moment of time will be under different stages of completion.

I would remark that while the wrappers may be delivered to the wrapping devices as separate sheets I prefer to feed said wrappers into the machine in the form of a web from a roll, and after printing the names and addresses upon it at stated intervals in its length cause it to be perforated or severed, so as to be capable of easy detachment into sheets just prior to being applied to the article it is to envelop. Preferably the web is perforated, and is separated into sheets by feeding-rolls, which cause the end of the web to move at a faster speed than perforating-rolls, thus breaking the intended wrapper away at point where perforated from the main part of the web. This also has the advantage of securing the proper interval between the pasted end of one wrapper and the beginning or leading end of the next succeeding wrapper, with the result also of causing the forward edge of the latter to be delayed, so as to be properly received in the next approaching wrapping devices as they come into operative position.

The feeding devices for the articles to be wrapped may be of hand or automatic mechanism, and it is evident that my wrapping-machine may be arranged in connection with

a folding-machine which will fold an article in a form to suit the convenience of the wrapping mechanism, whether said folding-machine is or is not connected with a printing-press, such as a commercial newspaper or magazine press, and the article to be wrapped may be conveyed or delivered directly to the wrapping-machine from said folder with or without the assistance of the feeding attachment here shown.

The preferred form of wrapping devices properly consists, essentially, of a blade fixed to a rotatable support or journal, a pivoted blade journaled in the said support or journal and adapted to move relatively to the fixed blade, like a hinge, means to rotate the rotatable support or journal, a presser device adapted to create a friction upon the thing being wrapped to insure of its being formed closely upon the mandrel, and a stripper or ejecting device adapted to perform the dual function of first locking the pivoted blade relatively to the fixed blade after they have gripped the thing to be wrapped, and then ejecting or stripping the wrapped package from the mandrel in the final operation. In practice I arrange a series of these wrapping devices upon a circular frame or gear, so that while having their own specific motions they also move in a circular or endless orbit, with the object of being brought successively into operative position and thereby increase the capacity of the machine for doing work.

The general construction of my wrapping-machine will be better understood by reference to the accompanying drawings, in which—

Figures 1 and 2 are side elevations of a machine embodying my invention. Fig. 3 is a plan view of same. Fig. 4 is a sectional elevation of same on line *ww* of Fig. 3. Fig. 5 is a sectional elevation on line *zz* of the devices for printing the web with the names and addresses. Fig. 6 is a sectional elevation on line *xx* of Fig. 7, showing details of the wrapping devices. Fig. 7 is a cross-section on line *yy* of Fig. 6. Fig. 8 is a sectional elevation on line *ww* of Fig. 4. Fig. 9 is a perspective view of one of the wrapping devices removed. Fig. 10 is a similar view showing the ejecting operation. Figs. 11 to 17 are cross-sections showing the successive steps in the folding and wrapping operations, and Fig. 18 is a sectional elevation showing the type-bed feeding devices.

A is the main frame and has journaled in it a shaft B, upon which is secured at one end a spur-wheel B' and upon the other end a spider-frame B². These parts are driven by a pinion C and belt-wheel C' or in any other manner best suited to the convenience of the user. In the spur-wheel B', suitably near its periphery, are journaled at intervals in the circumference the rotatable supports or journals D for the wrapping-blades, and these are provided with pinions *d*, which mesh with an internal circular rack D', having a sufficient

number of teeth to give a certain number of revolutions or turns to completely fold and wrap the article. The circular rack D' preferably extends part way around the space occupied by the orbit made by the wrapping devices and is secured to the main frame by bolts *a*, Figs. 1 and 8. In practice I prefer that this rack shall extend about one-half way around, but this is not essential, and I do not confine myself to any particular length or extent of rack. The remaining part of circle not occupied by the rack D' is furnished with a curved guide D², which is located in a plane a little to one side of the rack and adapted to receive the guide-shoes *d*² of the pinions *d* or journals D to hold them against rotation during the operation when rotation of blades is not desired—namely, while the delivering or ejecting operation of the wrapped article takes place. By this it is seen that when the rack is not causing the pinions to rotate the guide and shoes are holding them in fixed relative position with the movement of the spur-wheel frame B' and permits them to be carried around in their designated orbit by said frame. As the wrapping devices are carried around the upper part of the circle or orbit the pinions *d* thereof are under the action of the rack D', thus causing the rotation of the wrapping-blades E E'. The blade E is rigidly secured to the support or journal D, and the other blade E' is pivoted at *e* to said support or journal, so as to operate relatively to the blade E similarly to a hinge. The pivoted part *e* of the blade E' is provided with an arm or lever E² upon the outside of the spur-wheel B', which is adapted to be operated at certain intervals of time by coming into contact with a stationary or fixed cam E³. This operation by the cam is to insure the opening of the wrapping-blades at a time when they are in position to receive the thing to be wrapped, Fig. 1.

As is obvious, when flat plates of the character herein set forth are employed a thin paper or periodical folded or wrapped upon them will be given a flat, as opposed to a cylindrical, form, a matter of considerable practical advantage.

In addition to the function of ejecting the wrapped and sealed package from the mandrel the frame G performs the function of locking the movable blade E' in position relatively to the fixed blade E after they have received and gripped the thing to be wrapped. This locking action is secured by pressure of the arm *g* upon the small cam *c* on the frame A, thus causing the frame G to slide longitudinally upon the blades a sufficient distance for the ring to encircle the wrapping-blades as they are in position when holding the edge of the thing to be wrapped, and this operation causes the blades to maintain a grip upon the article sufficient to prevent of its changing position during the wrapping operation.

Secured between the spur-wheel B' and spider-frame B² and parallel to the wrapping-

blades is a guide-rod G' , upon which is guided an ejecting-frame G , which has an eye or ring portion encircling the wrapping-blades, as is clearly shown in Figs. 7, 9, and 10. This frame G is provided with a pin g , so disposed as to be acted upon by the cam-guides $H H'$, the former being designed to move the ejector-frame in one direction for the purpose of ejecting or delivering the wrapped article or package from the blades and the latter for returning the ejector-frame to its original and normal position. The action of these cam-guides takes place while the wrapping devices are preferably moving in the lower half of their orbit or circle. The action which takes place with respect to one of the wrapping devices also takes place with the whole series of the wrapping devices, but in succession.

In the wrapping operation it is advisable to employ means for causing the article or the thing being wrapped and wrapper to form closely around the wrapping-blades. The means for this purpose which I have shown is a plate F , hinged at F' and oscillated under the action of the blades in rotating, and a suitable spring f , connected at one end to the plate and at the other end to the shaft or guide-rod G' , with provision for adjusting its tension by means of a nut f' . It is clear that the free end of the plate F is movable to or from the wrapping-blades, and its position in operation is governed by the thickness of the article being wrapped, as is fully shown in Figs. 12 to 17. The plate F in operation furnishes constant pressure upon the wrapper and article being wrapped upon the mandrel, so as to make the layers or folds thereof have uniformity and tautness. It is of course evident that this result may be obtained in a variety of ways. For instance, the plate F may have elasticity of itself and thus make it unnecessary to have the spring f . The spring f , however, in the specific construction shown permits of adjustment to obtain any desired variation in the tension of the pressure-plate. The location of the spring when used is immaterial so long as it acts to move the plate or pressure-creating device relatively toward the mandrel.

The wrappers and articles to be wrapped may be fed to the wrapping devices by hand, if desired; but it is preferable to feed the wrapper automatically, at least.

I have shown in the construction of my machine as illustrated in this application an automatic device for feeding a web of paper which is printed with a name and address and then subdivided into separate wrappers and delivered to the wrapping devices, and also a semi-automatic feeding device for delivering the articles to be wrapped to the wrapping devices. Referring to the latter, I represents a table upon which the things to be wrapped are placed. I' is a feeding-hopper into which the articles to be wrapped are successively deposited and is provided with a rear movable

wall I^2 , pivoted at I^6 and adapted to be pulled backward by a spring i to open a passage-way through which the article to be wrapped may pass downward to the bands I^4 and feeding-cylinders I^3 . A cam i' on one of the cylinders I^3 acts upon the pivoted plate I^2 and causes it to swing forward to the fixed wall and close the opening in the bottom of the hopper, as shown. After holding it in that position for a short time it is released, and under the action of the spring i it is pulled back and allows the next article to be wrapped to drop. The action of the cam i' upon the pivoted plate I^2 , constituting the side and bottom of hopper, is of sufficient duration to permit of an article to be wrapped to be placed in the hopper and withheld from the feeding-cylinders until the necessary interval of time has elapsed for them to receive it. Then by the non-action of cam i' spring i causes the plate I^2 to swing backward, releasing and delivering the article to be wrapped into the custody of feeding-cylinders. By the reciprocating action of cam i' and spring i in oscillating the plate I^2 , which serves as a side and bottom for the feeding-receptacle, an accurate intermittent feed is obtained. By this means an interval of time is secured between feeding of successive papers. The feeding tapes or bands I^4 lead close to the orbit of the wrapping devices and pass about rollers I^5 , so as to be capable of feeding the article to be wrapped directly into the wrapping devices, as indicated in dotted lines, Fig. 4. While I prefer the form of feeding as specified, it is evident that the feeding device could materially be changed or modified where the machine is to be used in conjunction with other machines, such as a folding-machine of a printing-press.

The construction for the wrapper-feeding devices is as follows: A roll of paper J is suitably supported in the frame of the machine, and the web of paper leading therefrom is guided under a guide-roller K , thence under an oblique guide-roller J' , which changes its direction of travel, thence between the feeding-rollers $N N$, then between the perforating or cutting cylinders $P P'$, the latter being provided with the cutters or perforators p , then through the curved guide O , thence between the feeding and pasting cylinders $R R'$, and finally over plate q , which directs the wrapper between the wrapper-blades and pressure-plate. (See Fig. 4.)

The pasting devices consist of a paste-vat Q , provided with a paste-roller r , against which the paste-applying pad R^2 comes into contact at each revolution of the cylinder R . The paste-applying device R^2 projects beyond the periphery of the cylinder preferably, so that no paste shall be received upon any other portion of the cylinder, since this part R^2 alone comes into contact with the roller r . The cylinder R' is preferably provided with a depression R^3 in its periphery, into which the device R^2 fits in the operation of applying

paste to the wrapper. By this construction the cylinders R R' act to perform the dual operation of automatically feeding or conveying the wrapper and applying paste to it as the rear end is passing between the rollers. A single revolution of these cylinders R R' is required to deliver and apply paste to one wrapper. The cylinders N, N', P, P', R, and R' are operated by suitable gearing U (shown in Fig. 1) and driven from spur-wheel B', so as to be in proper time therewith. The surface speed of the cylinders R R', I prefer to be somewhat greater than surface speed of the cylinders N N' and P P', the object being to cause the paper sheet to constitute the wrapper after being perforated by P P' to be separated from the web on the line of the perforations. This, furthermore, causes the detached sheet to obtain a lead upon the forward edge of the advancing web to secure the interval between the successive wrappers so desirable to the proper operation of the pasting devices.

The construction for the automatic addressing devices is as follows: L is an endless band passing about the rollers L' and is caused to travel under the web of paper between the rollers K and J', Fig. 5. Small rollers *l* under the band L act as a moving table to reduce friction. M is a type-form, and consists of a suitable chase containing the type or electrotypes of the names and addresses. This chase, which holds the type, rests upon the traveling band L and is by it intermittently fed under the impression-roller M', provided with impression-surfaces *m*. The band is provided with pins *t*, which enter apertures in the chase, thus positively insuring the proper feeding of the chase with the band. The impression-roller M' is operated by the gearing W and U. The web of paper is between the impression-roller and type-form, as shown in Fig. 5. The feeding mechanism for the band L is shown in Figs. 2, 3, and 18, and consists of a ratchet-wheel L³, secured to the shaft L² of one of the rollers L', a pawl *l*² for moving the ratchet-wheel intermittently, a cam-frame L⁴, pivoted at L⁵ and having the cam portions *l*¹ and to which the pawl is hinged, a power-shaft T, operated by gearing T' from cylinder N, and an arm *t*¹, adapted to press against the cam projections *l*¹ and cause an oscillation of the frame L⁴. The cam projections are preferably adjustable to compensate for wear and degree of movement. By this means the ratchet-wheel L³ and its roller L' is intermittently operated, with the resulting step-by-step forward advance of the band L and chase containing type-forms. I prefer that the type of the forms be inked before the chase containing them be put upon the band L, yet one of the simple forms of inking devices having suitable rollers attached to an ink-fountain may be attached to the printing device and automatically apply ink to the type-forms. The driving devices and impression devices are

so timed that a new impression or print is made upon the web of paper at intervals apart corresponding to positions which will be occupied by different sheets when said web is subdivided.

The operation of my wrapping-machine is as follows: First, let it be understood that the wheel B' is in constant rotation, and thus is not only continuously operating the wrapping and ejecting devices, but also, in connection with timed gearing, operates the feeding, perforating, printing, and pasting devices for the wrapper and feeding devices for the things to be wrapped. A newspaper having been inserted in hopper I' is at the proper time automatically released by spring *i* and by cylinders I³ and bands I⁴ conveyed and delivered between the blades E E of the folding-mandrel, Figs. 4, 9, and 11. Simultaneously with the reception of paper by wrapping-blades wheel B' moves forward, bringing gear *d*, which controls the rotary movements of wrapping-blades, into mesh with circular rack D, thus causing the blades to revolve, Figs. 1 and 4. A slight rotation of the blades against pressure-plate F brings them together upon the paper. At this point arm *g* of the ejector G presses against cam *c*, Fig. 4, causing ejector to slip over the blades, locking them, so that their grasp upon the paper will not be materially loosened during the wrapping operation. When the wrapping device has reached a position obtained by three-quarters of a revolution, a wrapper which has been prepared by the printing and perforating devices is fed down by cylinders R R' and, passing over plate *q*, is received between blade E' and the unfolded portion of the paper which is resting upon plate F, Figs. 4 and 12, and as the wrapping-blades complete the first revolution the wrapper will at this point be passing between cylinders R R' and will receive paste from the pasting device R², Fig. 4. Further movement of the wheel B' keeps the wrapping-mandrel in constant rotation, and in wiping, as it does in rotating, against the pressure-plate F the paper and wrapper are folded one within the other around the wrapping-blades until finally the pasted end of the wrapper overlaps upon the wrapper, sealing the package, Fig. 16.

Figs. 11, 12, 13, 14, 15, 16, and 17 illustrate different stages during the wrapping operation by comparative positions occupied by wrapping devices shown in Figs. 2 and 4.

Fig. 17 illustrates the position for ejector to operate and remove the package from the wrapping-blades. When this position is reached, gear *d* ceases to mesh with circular rack D. Thus guide-shoe *d*² on the gear *d* is simultaneously brought to bear upon circular guide D², Fig. 1. This operation is for the purpose of holding the blades so that the wrapped paper may be easily removed and to also guard against any movement of the blades which would interfere with their being in position to receive the next paper. At the

point where wrapping device ceases to rotate arm *g* of the ejector *G* contacts with cam-guide *H*, and in conformity with the forward movement of the wheel *B'* the ejector-arm 5 bears steadily upon cam-guide. Thus the ejector is forced to slide along over the wrapping-blades, pushing off the wrapped package when the removal of the package has been accomplished. The ejector is by force of contact with cam-guide *H'* caused to slide back 10 over the wrapping-blades to its original position, Fig. 6. This unlocks the blades and permits of the action of lever *E*² upon cam *E*³ to open them in position to receive the 15 next paper. Simultaneous with the action of the paper being delivered between the wrapping-blades the guide-shoe *d*² ceases to hold the gear *d* and the gear meshes with circular rack *D*², Fig. 1. The operation which follows this action is as before described, and as 20 each of the twelve wrapping devices is consecutively brought into position, as described, twelve newspapers, magazines, or other periodicals can be wrapped, sealed, addressed, 25 and ejected from the wrapping-blades in one revolution of wheel *B*.

It is evident that the most characteristic feature of my invention is the employment of a carrier or conveyer of suitable construction provided with mandrels or holders by 30 which or upon which the article to be wrapped is wound or wrapped and then by means of suitable means removed or ejected from the mandrels or holders, the object being to receive the article to be wrapped at one place 35 and then convey it to another place for discharge.

I do not confine myself to the details of construction herein set out, as any or all of them 40 may be modified without departing from the principle of my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a wrapping-machine, the combination 45 of a rotating wrapping-mandrel, consisting of two flat plates or jaws relatively hinged on a longitudinal axis, means to move the jaws relatively to receive the thing to be wrapped, means to rotate the wrapping-mandrel, feeding 50 devices for delivering the thing to be wrapped to the jaws of the wrapping-mandrel, feeding devices for supplying a wrapper to the wrapping-mandrel, and ejecting devices, independent of the means for operating the jaws, for ejecting the thing or sealed 55 package from the mandrel.

2. In a wrapping-machine, the combination of a rotating wrapping device, a moving frame or carrier for the wrapping device, means to 60 intermittently rotate the wrapping device, feeding devices for delivering the thing to be wrapped to the wrapping device just prior to its rotation, feeding devices for supplying a wrapper to the wrapping device, pasting devices 65 for applying paste to the wrapper, and ejecting devices for ejecting the wrapped and

sealed article from the wrapping device at times intermediate of its rotation.

3. In a wrapping-machine, the combination of a wrapping device consisting of a core or 70 mandrel, means to intermittently rotate said wrapping device, automatic devices for supplying at definite periods of rest an article to be wrapped to the wrapping device, automatic devices for feeding at definite periods a wrap- 75 per to the wrapping device, and means for discharging the wrapped and sealed article from the core upon which it is wound, said discharge taking place during a period of rest of said core. 80

4. In a wrapping-machine, the combination of a wrapping device consisting of two flat plates having a hinge-like movement about a longitudinal axis, a rotating frame or carrier 85 for the wrapping device to which it is journaled at one end, feeding devices for delivering an article to be wrapped to the wrapping device, automatic feeding devices for delivering to the wrapping device a wrapper, and means for ejecting or discharging the 90 wrapped and sealed article from the wrapping device.

5. In a wrapping-machine, the combination of a series of wrapping devices, formed with jaws, a rotating frame or carrier for the wrapping devices, feeding devices for delivering 95 articles to be wrapped to the wrapping devices, feeding devices for delivering to the wrapping devices wrappers, devices for operating the jaws to receive the articles to be 100 wrapped, pasting devices for applying paste to the wrappers, and means, substantially of the character shown and described, and independent of the devices for operating the jaws, for ejecting or discharging the wrapped 105 and sealed articles from the wrapping devices.

6. In a wrapping-machine, the combination of a series of wrapping devices, means for moving them continuously through a definite orbit, feeding devices for delivering articles to 110 be wrapped to the wrapping devices, feeding devices for delivering to the wrapping devices a wrapper, ejecting-frames, movable longitudinally of the wrapping devices, and cam-guides circumferentially arranged about the 115 orbit of the wrapping devices, for reciprocating the ejecting-frames.

7. In a wrapping-machine, the combination of a rotating wrapping-mandrel, consisting of two flat plates or jaws relatively hinged on a 120 longitudinal axis, means to occasion the opening and closing movement of said jaws, a presser-plate operative in connection with said jaws, means for rotating said mandrel, and means for ejecting an article from said 125 mandrel, substantially as set forth.

8. In a wrapping-machine, the combination of a series of intermittently-rotating wrapping devices, a rotating frame or carrier for the wrapping devices, feeding devices for 130 delivering articles to the wrapping devices before their rotation, feeding devices for deliv-

ering to the wrapping devices wrappers during their rotation, pasting devices for applying paste to the wrappers, an ejecting-frame movable longitudinally of a wrapping device, and cam-guides for reciprocating the ejecting-frame.

9. In a wrapping-machine, the combination of a rotating mandrel, a rotating frame or carrier for the wrapping-mandrel, gearing to rotate the mandrel, a stationary rack for operating said gearing, a cam-shoe moving with the mandrel, a fixed curved guide for the cam-shoe, feeding devices for delivering an article to be wrapped to the wrapping-mandrel, feeding devices for supplying a wrapper to the wrapping-mandrel, and means for ejecting or discharging the wrapped and sealed article from the wrapping-mandrel while it is held fixed with relation to the carrier.

10. In a wrapping-machine, the combination of a wrapping device composed of flat blades, a pressure-plate pivoted so as to freely move to and from the wrapping device as it rotates, a spring acting thereon for creating a pressure upon the thing being wrapped and wrapper in process of wrapping and following the irregular shape of the thing wrapped, means for rotating the wrapping device and moving it through a definite orbit, and feeding devices for delivering to the wrapping device a wrapper.

11. In a wrapping-machine, the combination of a wrapping device, a freely-moving pivoted pressure-plate movable to and from the wrapping device, and a spring acting thereon, movable with the wrapping device for creating a pressure upon the thing being wrapped and wrapper in process of wrapping and following its irregular shape, means for rotating the wrapping device and moving it through a definite orbit, feeding devices for delivering to the wrapping device a wrapper, means for holding the wrapping device against rotation during the ejecting or discharging operation of the wrapped article, and means for ejecting or discharging the wrapped and sealed article from the wrapping device.

12. In a wrapping-machine, the combination of a rotating wrapping-mandrel, a moving frame or carrier for the wrapping-mandrel, gearing to intermittently rotate the wrapping-mandrel, a stationary rack for operating said gearing at intervals of time, feeding devices for delivering to the wrapping-mandrel a wrapper, a spring pressure-plate movable freely to and from the mandrel and moving with the carrier, ejecting devices for ejecting the wrapped and sealed article from the mandrel, and means for holding the mandrel against rotation upon its axis during the ejecting or discharging operation.

13. In a wrapping-machine, the combination of a rotating wrapping device consisting of two flat blades movable relatively to each other upon a longitudinal axis, a continuously-moving frame or carrier for moving the

wrapping device continually through a definite orbit, ejecting devices continuously movable with the carrier for ejecting the wrapped and sealed article from the wrapping device, and means for holding the wrapping device against rotation upon its axis during the ejecting or discharging operation.

14. In a wrapping-machine, the combination of a rotating wrapping device consisting of two flat blades movable relatively to each other upon a longitudinal axis, means for moving the wrapping device continuously through a definite orbit, a pressure device for pressing the thing being wrapped and wrapper during the wrapping operation and movable through the orbit of the wrapping device, ejecting devices for ejecting the wrapped and sealed article from the wrapping device, movable with the wrapping device, and means for holding the wrapping device against rotation upon its axis during the ejecting or discharging operation, and while it is traveling with the wrapping devices.

15. In a wrapping-machine, the combination of a rotating wrapping-mandrel consisting of two flat blades movable relatively to each other to grasp the thing to be wrapped, means for moving the wrapping-mandrel through a definite orbit, an ejecting-frame movable longitudinally of the wrapping-mandrel, means to move the ejecting-frame to lock the mandrel-blades relatively in a closed position, feeding devices for supplying a wrapper to the wrapping-mandrel, cam-guides for reciprocating the ejecting-frame to eject the wrapped article, and means for holding the mandrel against rotation upon its axis during the ejecting or discharging operation.

16. In a wrapping-machine, the combination of a rotating wrapping-mandrel, means for moving the wrapping-mandrel continuously through a definite orbit, gearing to rotate the mandrel, feeding devices for supplying a wrapper to the wrapping-mandrel, an ejecting-frame movable longitudinally of the wrapping-mandrel, cam-guides for reciprocating the ejecting-frame, and means for holding the mandrel against rotation upon its axis during the ejecting or discharging operation.

17. In a wrapping-machine, the combination of a wrapping device having relatively movable jaws hinged on a longitudinal axis, a rotating frame or carrier for the wrapping device, a flat pressure device pivoted loosely, and spring-actuated, for pressing upon the thing being wrapped and wrapper and freely movable to and from the wrapping device, and feeding devices for supplying an article and a wrapper to the wrapping device.

18. In a wrapping-machine, the combination of a wrapping device, means for continuously moving the wrapping device through a definite orbit, means for holding the wrapping device against rotation upon its axis during the ejecting or discharging operation, an ejecting-frame movable longitudinally of the

wrapping device, and a cam-guide for reciprocating the ejecting-frame, arranged immediately outside of the wrapping devices.

19. In a wrapping-machine, the combination of a wrapping device, a moving frame or carrier for the wrapping device, means to intermittently rotate the wrapping device, continuous-feeding devices for supplying a wrapper to the wrapping device, pasting devices for applying paste to the wrapper at intervals, printing devices for printing a name or address directly upon the wrapper-paper, means for holding the wrapping device fixedly to and with reference to the moving frame or carrier, and means for ejecting or discharging the wrapped and sealed article from the wrapping device.

20. In a wrapping-machine, the combination of a wrapping device comprising long flat blades longitudinally hinged, gearing to rotate the wrapping device, a moving frame or carrier for the wrapping device, a stationary rack for operating said gearing at intervals of time, feeding devices for delivering to the wrapping device a wrapper, a cam-shoe on the wrapping device, a fixed guide for the cam-shoe to permit of the wrapping device moving in its orbit but held against independent rotation, and means for ejecting or discharging the wrapped and sealed article from the wrapping device.

21. In a wrapping-machine, the combination of a rotating wrapping device consisting of two flat blades movable relatively to each other upon a longitudinal axis, means for opening the blades of the wrapping device, feeding devices for automatically delivering the thing to be wrapped between the blades of the wrapping device, feeding devices for supplying a wrapper to the wrapping device, means for holding the wrapping device against rotation upon its axis during the ejecting or discharging operation, and a reciprocating ejecting-frame encircling both blades for ejecting the wrapped and sealed articles from the wrapping device.

22. In a wrapping-machine, the combination of a rotating wrapping device consisting of two flat blades movable relatively to each other upon an axis parallel to their length, means for opening the blades of the wrapping device, feeding devices for delivering the thing to be wrapped to the wrapping device, feeding devices for supplying a wrapper to the wrapping device, means for holding the wrapping device against rotation upon its axis during the ejecting or discharging operation, and an ejecting-frame encircling both the wrapping-blades for ejecting the wrapped and sealed article from the wrapping device.

23. In a wrapping-mandrel, the combination of a rotating journal D, carrying a fixed

blade E, and a movable blade E', hinged to the rotating journal upon an axis parallel to the length of the blade, and provided with means for moving it to or from the blade E like a hinge, means to operate the rotating mandrel, means to automatically oscillate the movable blade E', and a longitudinally-movable ejecting-frame inclosing the blade and movable in the direction of the length of the blade.

24. In a wrapping-mandrel, the combination of a rotating journal D, carrying a fixed blade E, and a movable blade E', hinged to the rotating journal upon an axis parallel to the length of the blade, and provided with means for moving it to and from the blade E, like a hinge, and a hinged blade F freely movable to and from the rotating wrapping-blades to follow their irregular shape when rotating.

25. In a wrapping-machine, the combination of a rotating wrapping-mandrel, a pressure device located wholly on one side of the mandrel for pressing upon the thing being wrapped and wrapper, ejecting devices for ejecting the wrapped and sealed article from the mandrel, and cams located wholly upon the other side of the mandrel for operating the ejecting devices.

26. In an addressing device for a wrapping-machine, an endless carrier combined with means to feed it intermittently, a type-chase carried by said carrier, feeding devices for a continuously-moving web of paper, an impression device adapted to be moved in timed relation to the movements of the chase and carrier and to at intervals impart an impression to the web of paper, perforating or cutting devices for subdividing the web into sheets, and connecting devices for making the feeding and perforating devices act in unison with the impression device.

27. In an addressing device for a wrapping-machine, consisting of an endless carrier having short pins, combined with means to feed it intermittently, a type-chase carried by said carrier and having a hole in its bottom for the pins of the carrier, continuous-feeding devices for a web of paper, an impression device adapted to be moved in timed relation to the movements of the chase and carrier and impart intermittent impressions, perforating or cutting devices for subdividing the web into sheets, and connecting devices for making the feeding and perforating devices act in unison with the impression device.

In testimony of which invention I have hereunto set my hand.

HARRY BENTON CLARK.

Witnesses:

R. M. HUNTER,
R. M. KELLY.