

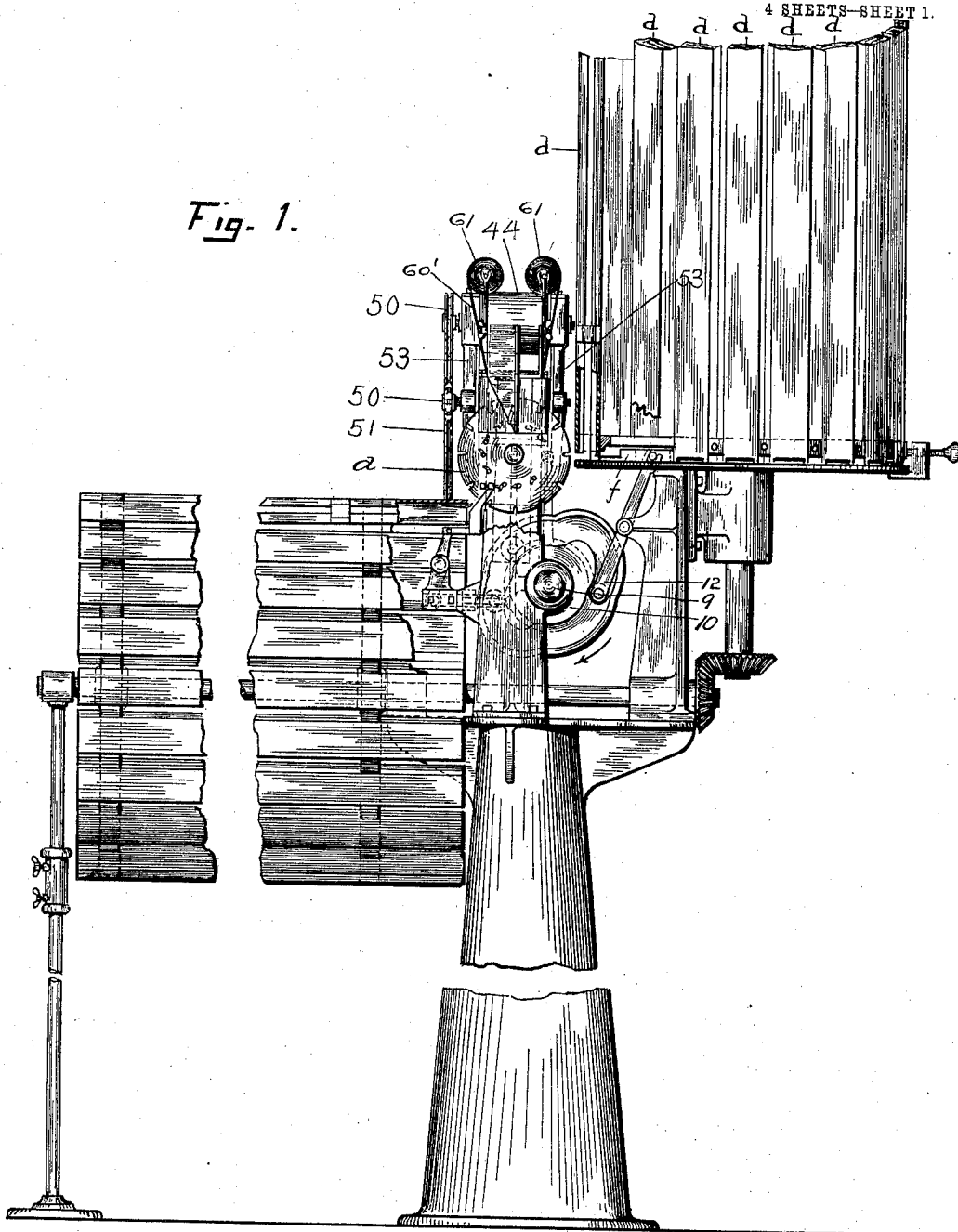
I. R. HUTCHINSON.
MACHINE FOR PRINTING ADDRESSES.
APPLICATION FILED NOV. 30, 1908.

980,642.

Patented Jan. 3, 1911.

4 SHEETS-SHEET 1.

Fig. 1.



WITNESSES

Wm F Drew
M. Regier

INVENTOR

Ira R Hutchinson
by E. E. Osborn

ATTORNEY

I. R. HUTCHINSON.
MACHINE FOR PRINTING ADDRESSES.
APPLICATION FILED NOV. 30, 1908.

980,642.

Patented Jan. 3, 1911.

4 SHEETS—SHEET 2.

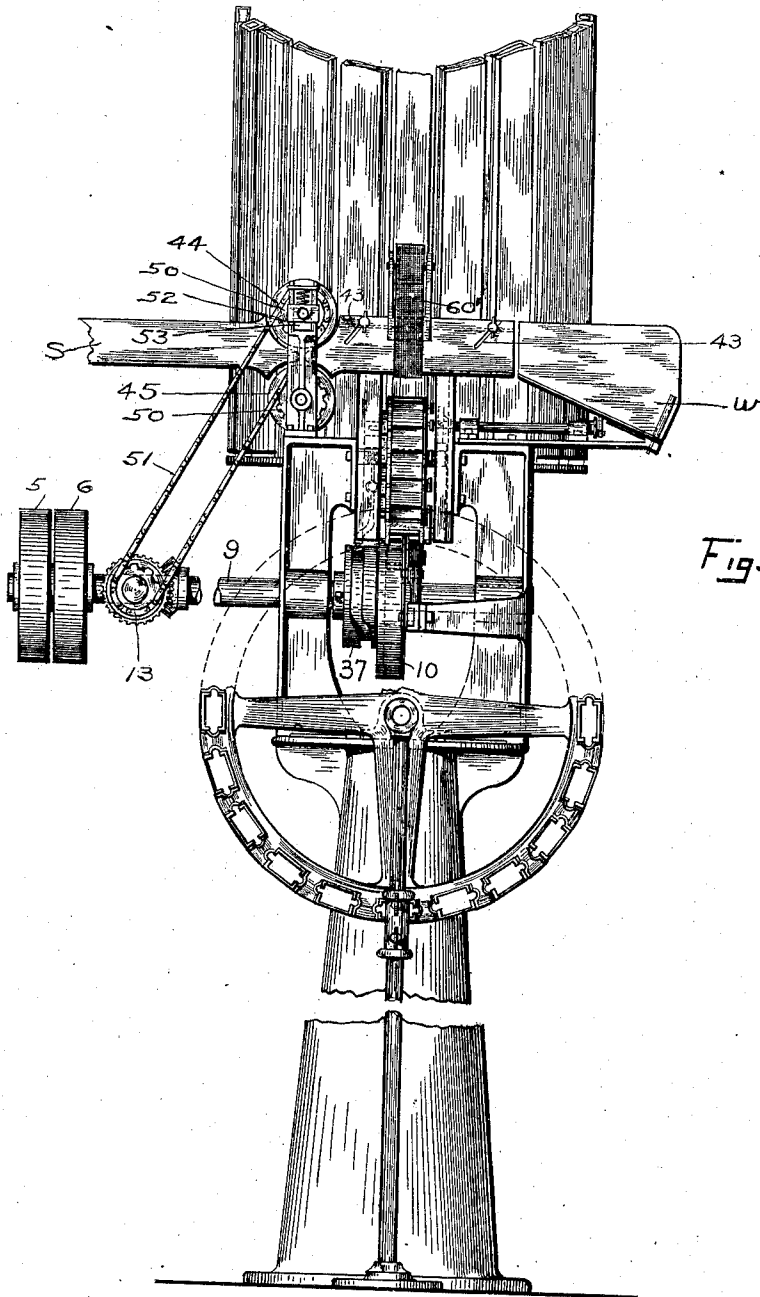


Fig. 2.

WITNESSES

Wm. F. Drew
M. Regnier

INVENTOR

Ira R. Hutchinson
by E. E. Osborn

ATTORNEY

I. R. HUTCHINSON.
MACHINE FOR PRINTING ADDRESSES.
APPLICATION FILED NOV. 30, 1908.

980,642.

Patented Jan. 3, 1911.

4 SHEETS-SHEET 3.

Fig. 7.

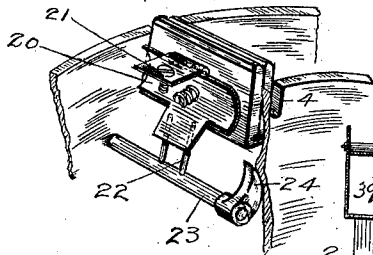


Fig. 9.

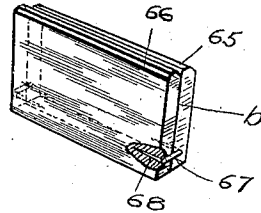


Fig. 3.

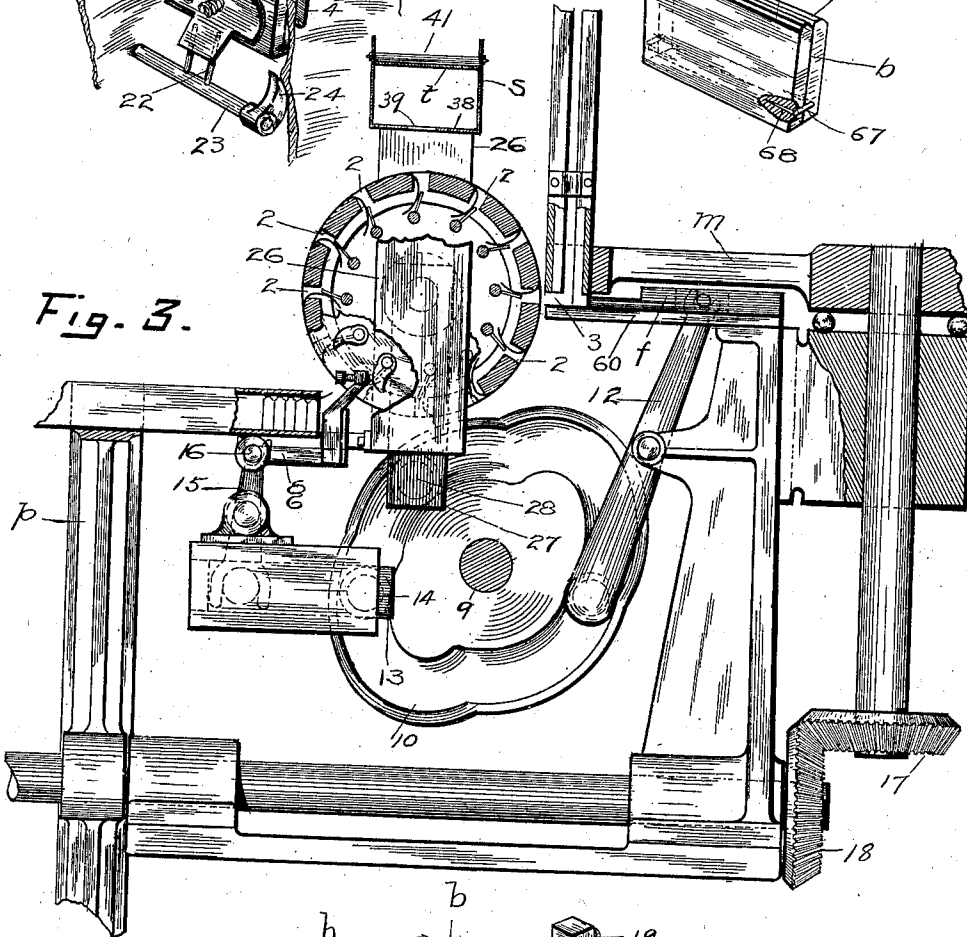
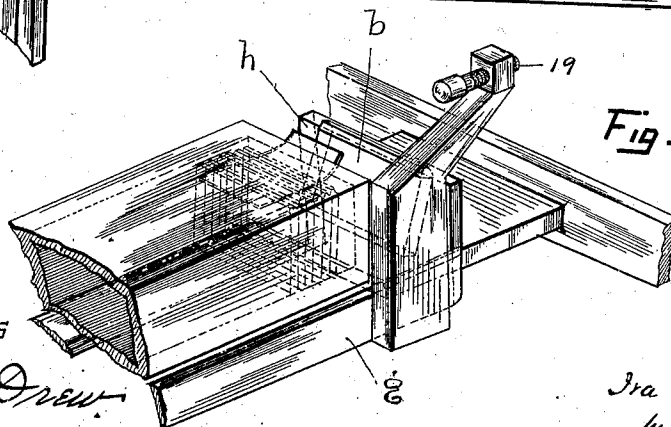


Fig. 8.



WITNESSES

Wm. H. Drew
M. Regnier

INVENTOR
Ira R. Hutchinson
by E. E. Gorman

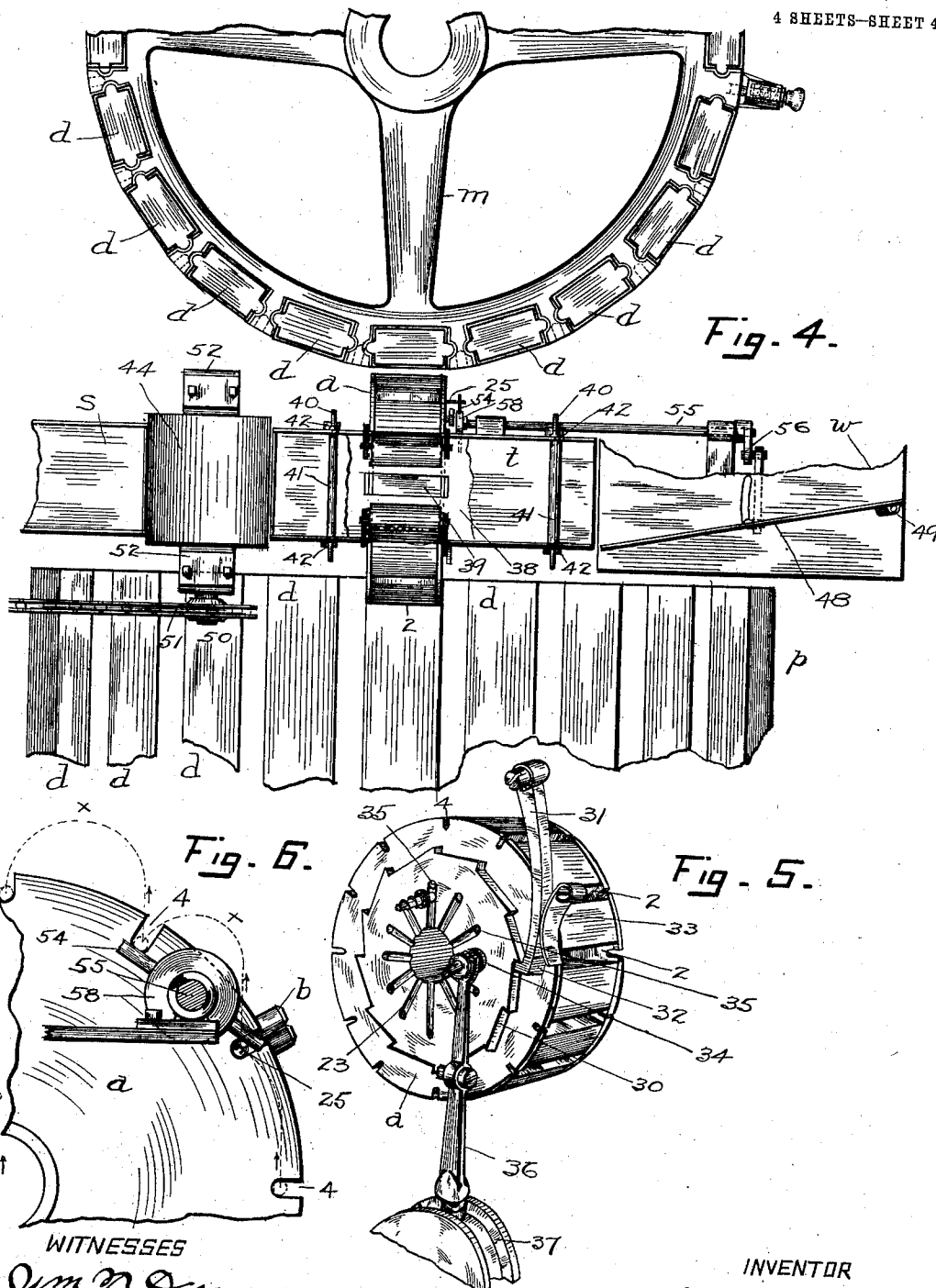
ATTORNEY

I. R. HUTCHINSON.
MACHINE FOR PRINTING ADDRESSES.
APPLICATION FILED NOV. 30, 1908.

980,642.

Patented Jan. 3, 1911.

4 SHEETS—SHEET 4.



WITNESSES
Wm. J. Drew.
M. Regnier.

INVENTOR
Ira R. Hutchinson
by *E. E. Brown*
ATTORNEY

UNITED STATES PATENT OFFICE.

IRA R. HUTCHINSON, OF FRESNO, CALIFORNIA, ASSIGNOR TO HUTCHINSON MAILER MANUFACTURING COMPANY, OF FRESNO, CALIFORNIA, A CORPORATION OF ARIZONA TERRITORY.

MACHINE FOR PRINTING ADDRESSES.

980,642.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed November 30, 1908. Serial No. 465,148.

To all whom it may concern:

Be it known that I, IRA R. HUTCHINSON, a citizen of the United States, and a resident of Fresno, in the county of Fresno and State of California, have invented new and useful Improvements in Machines for Printing Addresses, of which the following is a specification.

This invention relates to improvements made in machines for printing on the envelopes or wrappers of wrapped newspapers, periodicals and other publications the names and addresses of subscribers and others to whom the publications are to be mailed.

The object of the invention is primarily the production of an addressing machine of large capacity, capable of taking the wrapped newspapers from a wrapping machine and addressing them as they are turned out by the wrapping mechanism.

A further object of the invention is to provide means for feeding, handling and operating a large number of individual address-printing slugs or blocks in combination or connection with a feeding and printing mechanism, in any desired sequence or order of names and addresses; whereby the names and addresses may be printed in different groups or arrangement as to the addresses, and any one or more of the addresses may be changed or omitted altogether from any list or group, or the address associated with any particular name may be changed by detaching the address-bearing portion of the slug and fixing another in its place.

A further object of the invention is to provide improved means for separating and sorting the addressed papers according to the different post offices or localities designated in the addresses, whereby they are segregated and arranged in different groups ready for mailing or delivering as they leave the machine.

The invention has as its object further to provide improved address-printing mechanism for the purpose described, in which the names and addresses contained on separate printing-blocks or "slugs" are automatically fed or presented to an intermittently revolving printing-wheel from a number of galleys, and are removed and returned to the galleys in the same order or sequence and in separate groups or series, the number and arrangement of which are

capable of being changed and varied to meet the conditions of the work.

The accompanying drawings represent an addressing machine embodying the said invention for addressing and sorting for the mails wrapped newspapers as fast as they are delivered from a wrapping machine. The said machine is described and referred to as being designed for addressing newspapers that have previously been wrapped either by hand or by machines; but the range of the work will include the addressing of magazines, pamphlets and other publications that have been wrapped for mailing. The capacity of the machine and the rapidity with which it can be operated render it of practical value more particularly in handling papers as they are wrapped by machinery.

Description of the drawings:—Figure 1 is a front-elevation of a machine for addressing and sorting newspapers embodying all the features of my invention; the pedestal-frame of the machine and the rotatable galley-holders being broken away to bring the drawing within the dimensions of the sheet. Fig. 2 is a side-elevation of the machine, taken from the left side of Fig. 1 with parts of the frame and the rotatable galley-holders broken away. Fig. 3 is a side-view partly in longitudinal section, and on an enlarged scale, showing in detail the mechanism for producing the movement of the printing-wheel and the rotatable galley-holders at the required intervals. Fig. 4 is a plan or top-view in detail and on an enlarged scale of the address-printing apparatus and the sorting means; showing also portions of the rotatable galley-holders in their relative position. Fig. 5 is a detail in perspective of the address-printing wheel and the means for rotating it at intervals. Fig. 6 is a side-view on an enlarged scale of a segment of the printing-wheel and the means provided for automatically controlling the movements of the gate by which the material printed upon the machine is directed for delivery. Fig. 7 is a perspective-view in detail of the means provided on each pocket of the printing-wheel to lock the printing-slugs in the pocket. Fig. 8 is a perspective-view in detail of the means employed to stack the printing slugs in the galleys one at a time as the slugs are released and discharged in succession

from the printing-wheel after each printing operation. Fig. 9 is a perspective-view of a name and address printing slug, composed of two separate slugs detachably fastened together, one containing the name and the other the address of the subscriber.

Referring to the drawings the printing-wheel *a* is formed or provided with cavities 2 in its peripheral face, termed pockets, in which are inserted and temporarily fixed the printing-blocks *b* herein termed the slugs. These blocks *b* are contained and stacked in galleys or slug carrying holders *d*, each of which is usually arranged to contain the slugs either of a single group or set, or of two or more groups or series wherein the addresses printed by the slugs are of the same general locality or post office; or the slugs are otherwise associated or grouped for greater convenience in sorting or handling the papers or addressed matter. These galleys or slug-carrying holders *d* are assembled or grouped together in convenient numbers, being preferably arranged in carriers, *m* or *p*. That carrier, *m*, which holds the galleys for delivery to the printing-wheel, is preferably supported upon a vertical shaft; while the carrier, *p*, which holds the galleys while they are receiving the slugs successively from the printing-wheel is mounted upon another shaft which is preferably arranged horizontally and connected by gearing with the shaft on which is mounted the carrier *m*.

From the bottom end of a galley standing in upright position close to the printing-wheel a reciprocating bar *f* termed the feeding slide arranged above a stationary table 60, pushes out the bottom slug in the stack and forces it into a pocket in the wheel *a*, the necessary movement of the feeding slide being effected in time with the movements of the printing-wheel, by means of a grooved cam 10 driven continuously from the shaft 9 and a rocking-lever 12 attached at one end to the feeding-slide, and at the other end engaging the groove on the cam 10. These movements of the wheel and the feeding-slide are properly timed to set the pockets of the wheel in working position in front of the feeding-slide in the periods of rest in the rotations of the wheel and alternately with the perpendicular lifting and dropping movement of the wheel whereby it is caused to make printing-contact with the paper. Another and similar galley-holder on the opposite side of the printing-wheel, designated *p* in the drawings, is arranged and operated in like manner to bring in position at a stacking-device an empty galley to be filled, and to remove the galley when filled and place another empty one in working position in front of the stacking-device. From the same cam also is actuated the stacking device or means provided for re- turning the slugs to a storage galley after

the printing operation, and as embodied in the present machine the stacking device comprises a slide-bar *g* receiving movement intermittently from the cam 10 through reciprocating bars 13 carrying on one end a roller-stud 14 that engages the groove in the cam, and connected to the slide-bar 13 by a rocking-lever 15; the end of the lever 15 being forked to embrace studs 16 on the slide-bars. The slide-bar carrying an upright head or board *h* being thus reciprocated at intervals constitutes the stacking-device; the slugs *b* as they drop from the periphery of the printing-wheel being caught by the head and pressed forward into the open end of the galley.

On the feeding-in side of the printing-wheel the galley-carrier *m* is operated to bring into position a filled galley and hold the same in working relation to the feeding-slide *f* while the slugs are transferred from it to the printing-wheel, and afterward to replace the emptied galley by a filled one as long as the machine continues in operation. On the discharge side of the printing-wheel on the other hand the slugs are dropped from the pockets directly on the stacking slide and in front of the head *h* which thereupon engaging the slugs from behind presses them forward into the open end of the galley *d* presented by the carrier *p*. The stacking-slide and the feeding-slide are actuated in proper time with respect to the movements of the printing-wheel to enter a printing-slug in a pocket 2 during every period of rest following the printing movement of the wheel, and at the same time handle and deposit a slide in a galley or storage-rack on the discharge-side of the wheel. As the two carriers *m*—*p* contain the same number of galleys of equal capacity, they are moved simultaneously in order to place an empty galley at the stacking-device at the same time that a filled one is brought to position at the feeding-in side of the printing-wheel; and the arrangement of the two galley-carriers with their axles at right angles to each other enables them to be connected by bevel-gears 17—18, and one carrier when turned will move the other with a corresponding length of movement when the two gears are of the same size. The movement or rotation of the galley carriers may be effected by hand or through suitable mechanism.

A further novel feature in the printing-wheel of this machine consists in locking or fixing the slugs in the wheel temporarily during the printing operation and while they are being carried over the center to the opposite side, and then releasing each slug at or just before it arrives at the point where it is dropped from the inverted pocket in the rim of the wheel. As embodied in the present machine the locking means com-

prises a yielding plate 20 preferably formed of a strip of spring metal attached to the rim of the wheel by a tongue 21 on the top side, and its lower edge within the pocket resting against or in close relation to stiff pins or projections 22 on a rock-shaft 23 for which bearings are provided in the side of the wheel *a*. A partial rotation of this shaft has the effect to force back the spring-plate which normally is pressing the slug against the back wall or side of the pocket, and such movement of the shaft 23 is produced through the contact of a toe 24 on the end of the shaft with a stop 19 carried by the stacking-slide *g* thereby releasing the slug and allowing it to drop from the pocket. A locking means of this character permits the slug to be quite loosely fitted to the pocket, and ordinarily the weight of the slug will insure its discharge from the rim of the wheel at the moment of its release without the use of an ejecting means such as a spring in the bottom of the pocket, especially when the slug is released by the spring-plate after the pocket has passed below the axis of the wheel.

A novel feature of the invention consists further in the manner of moving the printing wheel perpendicularly to bring the slugs in printing contact with the paper, and of turning the wheel on its axis to set the slugs in rotation in line with the aperture 39 in the bed of the runway. These movements with the proper periods of rest during which the slugs are fed to the wheel on one side and discharged on the other are effected from the continuously revolving shaft 9 through the same cam 10 that actuates the feeding-slide *f* and the stacking device *g*. The upright slide-bars 27 carrying the axle of the printing-wheel being connected with the grooved cam by a roller-stud 28 on the lower end of one bar are caused to move upward with the required length of stroke in every revolution of the cam, and in proper time with the movements of the other parts to make the printing-contact; the groove of the cam being so shaped as to produce not only the perpendicular movements of the wheel, but also the intermittent movements of the slug-feeding and stacking means. The remaining motion of the printing-wheel by which the slugs are set in rotation for giving the impressions on the papers is effected by means of ratchet-teeth 30 on one side of the wheel and a dog 31 with a hook-shaped end 32 pivotally attached to the frame and held to the ratchet teeth by a spring 33 so as to catch and turn the wheel in the downward or return movement of that part in the guides 26 on the frame; but to slip over the ratchet-teeth in the upward movement of the wheel. The extent of the rotary movements of the wheel thus produced each time in the perpendicular

movement is so regulated with reference to the spacing of the pockets in the wheel that a pocket will be set in line with the feeding-slide at the same time that a slug is brought in position to print before the perpendicular movement takes place. As a means of preventing the printing-wheel from turning at all other times, a spring bolt 34 is arranged to engage holes 35 in the side of the wheel and lock it except when it is rotated to change the slugs. A lever 36 engaging the groove of a cam 37 fixed on the shaft 9 and carrying the spring-bolt 34 operates to throw off this lock when the wheel is to be moved. No motion of the wheel on its axle is permitted also while the slugs are being introduced by the feeding-in means.

In connection with this printing-wheel a novel feature of the machine consists further in the means for presenting the wrapped papers and holding them in position while the wheel is being raised to make the printing-contact. This part of the machine comprises a stationary box-like runway *s* of substantially rectangular form in cross-section, having standing sides to confine and guide the paper and a flat bottom 38 in which an opening 39 over the rim of the wheel admits the type-face of the slug in printing contact with the paper. A top-plate *t* supported from the standing sides above the opening 39 holds the paper down in opposition to the upward pressure of the printing-slug against the paper, thereby forming the bed or platen between which and the printing-face of the wheel the paper is caught and receives the impression. This platen in the present form of my invention is a removable plate *t* held in place by long bolts 40 passed through spacing ferrules 41 between the ends of which and the nuts 42 on the screw-threaded ends of the bolts the standing sides of the runway are clamped and the rods tightly held in place across the top of the platen; the standing sides being slotted at 43 to admit the bolts. The platen *t* is thus removable at pleasure, permitting ready access to the inclosed space at any time during the operation of the machine, without disturbing the other parts or affecting their adjustment.

In connection with the runway *s*, the feeding or presenting of the papers to the printing mechanism is effected by a pair of rollers 44—45 revolved continuously from the power driven shaft 9 the motion being imparted preferably through the medium of sprocket-wheels 50, and a link-belt 51 so as to give both rollers a positive motion. The journals of one of the rollers are carried by spring held boxes 52 in slotted standards 53 so as to accommodate papers of varying thickness and insure such an effective grip upon them that they will be brought uniformly to position over the aperture 39 in

the runway, and will follow one after another at the same intervals in which they are introduced in the machine. The runway is of such length that each paper when moved forward by the feeding-rollers 44—45 will push out the previously fed and printed paper. For that purpose the rollers are so situated with reference to the aperture in the runway that the paper being carried forward by the feeding rollers will push the previously fed and addressed paper from the end of the runway into the chute *w* of the sorting-device. This part of the machine is situated at the end of the runway *s* and is actuated from the printing-device in such manner that after all the papers bearing the same post office or having the same destination have been addressed, and before the first paper of the next group or division bearing a different address has passed from the end of the runway, the chute will be changed or shifted, with the effect to discharge and deposit that paper in a different receptacle. The chute remaining in one position until all the papers to be printed with the same address or post office have passed through the printing mechanism, it is automatically charged to a different position, thereby diverting the papers of the next group or division bearing different addresses and causing them to drop into a different receptacle from the one that received the preceding group of papers. As embodied in the present machine this chute *w* is inclined downwardly from the end of the runway so that the papers will slide or be discharged by gravity from the chute, and on its surface a gate 48 movable in an arc from side to side on a pivot 49 at the lower end. The extent of this movement at the higher end is about equal to the width of the runway and on being set over to the right the gate will direct the papers on the chute toward the left; or when set over to the left it will turn them toward the opposite side, thus causing the papers to drop from the right or the left side of the chute into the mail pouches or other receptacles placed under the end of the chute.

The means for changing the position of the gate from one side to the other is of novel character in being actuated and controlled through stops or projections carried by certain of the printing-slugs, and the same consists in a rotatable shaft 55 having on one end a crank-arm 56 to which is connected the gate 48 and on the opposite end in close relation to the side of the printing-wheel a circular head 58 fixed on the shaft and carrying a cross-pin 54 which extends diametrically across the head. The arms of this cross-pin 54 being set in the path of a stop-pin 25 projecting from the side of the printing-wheel, are struck by the stop-pin 25 as the printing-wheel is rotated during

its perpendicular movement, with the effect to turn the shaft 55 a half revolution. The crank-arm 56 on the opposite end of the shaft 55 being thus turned whenever there is a stop-pin in operative position on the printing-wheel to engage and turn the arms of the cross-pin when the wheel turns on its axis, the gate 48 connected with the crank-arm is moved to the right or the left according to the previous position occupied, and the gate is shifted as often as the printing-wheel acts on the shaft. No motion of the gate will take place as long as there is no stop-pin 25 lying under the arm of the cross-pin at the moment that the printing-wheel moves perpendicularly to make contact of the printing-slug with the paper in the runway; but, on the other hand, the gate will be shifted, provided a stop-pin has been arranged on the side of the printing-wheel to strike the outer arm of the cross-pin from beneath as the printing-wheel is lifted and dropped. This operation of the stop-pin on the shaft 55 is illustrated in Fig. 6, wherein the path followed or described by the stop-pin 25 when the lifting and dropping and the rotative movements of the printing-wheel take place is indicated by the curved dotted lines *x—x*. As the printing-wheel there shown turns from right to left, the stop-pin 25 is brought first underneath and in line with the outer arm of the cross-pin 54 on the head; and projecting from the side of the wheel it will strike the cross-pin 54 and carry it around the axis, following the curved dotted line *x—x*, as soon as the printing-wheel is lifted and dropped. It remains therefore only to fix a stop-pin on the printing-wheel in such position that it will strike the cross-pin from beneath and carry that pin around with it in the next perpendicular and rotative movement of the printing-wheel, in order to produce the desired change in the position of the gate. A novel feature in connection with this means of changing the gate from one side to the other in the chute consists in fixing the stop-pin on, or making it a part of a printing-slug, and thus enabling the movements of the gate to be timed, regulated and changed with respect to the order or arrangement of the addresses printed by the machine, simply by placing a stop-carrying slug in the required position in the galley from which it will be fed to and introduced in the printing-wheel at the proper place to actuate the gate.

The side plate or head of the printing-wheel is slotted as seen at 4 Figs. 5 and 6, to admit the stop-pin which will extend beyond the side of the wheel when the slug is inserted in the pocket.

As embodied in the present construction a slug having a stop-pin is placed in the second pocket in the wheel following the printing-

slug which is in line with the opening 39 in the runway and which in the next upward movement of the printing-wheel will print on the paper the last address of the group or lot of papers that have the same destination, or that are to be collected or placed in the same receptacle; so that the gate will be shifted by the following downward movement of the wheel, in which the printing-slug carrying a stop-pin 25 will be brought in contact with the cross-pin 54 on the head 58. The relative position of the slug that carries a stop-pin among the other slugs is governed by the size of the printing-wheel and the number of slug-pockets provided or used in its rim. The advantage of combining such a stop-pin with a movable slug is that it permits the movements of the gate to be timed with relation to the printing-mechanism, so as to properly divide or sort the addressed matter at the required intervals in the operation by a simple change in the position of the stop-carrying slug.

In a printing-mechanism of this character where the matter to be imprinted consists of a subscriber's name and an address associated with the name on the paper, I provide a two part slug comprising one member 65 on which is the type-face for the name, and on the other member 66^a similar face containing the address; and by means of a locking-device such as a staple 67 having prongs 68 embedded in the ends of the slug-members, the two units or members are solidly locked or bound together so as to form a single printing-slug from which either one may be removed and another bearing a different matter may be substituted at will, without discarding the entire slug, when a name or an address is to be changed, or different combinations are to be made.

The fastening employed for uniting the name-carrying member and the address-carrying member together so as to form for the time a single printing-slug is adapted to lock them together and hold them in proper alinement, and at the same time permit the two parts to be separated if necessary; one of these fastenings being applied to each end of the slug, and being also set closely against the flat end so as to let the slug drop into the galley or into the pocket in the printing-wheel without catching on the walls of those parts.

As embodied in the machine herein described these several parts and mechanisms operate on newspapers and other matter wrapped for the mails as follows:—On being entered in the runway and between the feeding-rollers a paper is carried forward and brought in position over the opening 39 in the bed 38 at the moment that the printing-wheel begins to move perpendicularly in its guides, and the paper being caught between the uppermost slug on the printing-

face of the wheel and the fixed platen lying over the opening in the bed, the impression is made on the paper. In this operation the type-face of the slug is inked either by means of an inking-ribbon 60 carried by rollers 61 and interposed between the type-face and the surface on which the impression is to be made, or an inking device of other well known character. After every printing-movement of the wheel its rotation brings a new slug into position in line with the opening in the bed and carries the previously used slug toward the stacking-device on the discharge-side of the wheel, at the same time bringing into position in line with the slug-feeding device an empty pocket in the face of the wheel. As each slug is inserted in its pocket it is clamped and firmly held by the locking-device provided in each pocket. On the opposite side of the wheel the locking-device holding the lowermost slug is thrown off at the same time. The slugs following one another in succession and in the order as arranged in the galleys are being fed in at one side and discharged from the wheel at the opposite side without intermission while the wheel is moving up and down and turning on its axis. As the number of slugs that can be employed with a single wheel is limited only by the size of the movable carriers by which the galleys are brought into position to feed and to receive the slugs, it will be seen that a relatively small number of pockets is required to handle and operate a large number of slugs.

It will be seen by reference to the drawings that the slugs are moved transversely, and not endwise, from the galley into the pockets formed in the printing-wheel. By arranging the opening from the galley through which the slug is delivered so that it sets close opposite the face or peripheral opening into the pocket, the carrier for the galleys and the holder for the slugs during the printing operation can be brought very close to each other so that only a short movement is required to transfer the slug from the galley to the wheel, the advantages of which arrangement are manifest. This disposition of parts is facilitated by disposing the axes about which the carrier for the galleys and the printing-wheel respectively turn, at right angles to each other.

I claim:—

1. In an addressing machine, the combination with a printing wheel having pockets for receiving printing-slugs, of a plurality of slug-holding galleys each having an outlet through which the slugs may be moved one at a time, a feeding device for moving the slugs from the galley to the printing-wheel, and a support for the slug galleys adapted to turn on an axis which is arranged at right angles to the axis of the printing-wheel.

2. In an addressing-machine the combination with printing-means including an intermittently rotated printing-wheel having a plurality of slug-holding pockets, of an intermittently acting slug-feeding device for inserting a printing-slug into a pocket in each interval of rest in the movements of the wheel, means for synchronizing the movements of the printing-wheel and the slug-feeding device whereby the latter feeds when the printing-wheel is at rest and means for feeding the slugs to the slug-inserting means comprising a movable galley-carrier and a plurality of slug-holding galleys thereon, each having an outlet for discharging the slugs in single order.

3. In an addressing-machine the combination with a rotatable printing-wheel having slug-holding pockets in its face, of a slug-feeding device, a galley-carrier movable with reference to the slug-feeding device and the printing-wheel, formed with a plurality of seats open at the ends for slug-holding galleys, a plurality of independent movable slug-holding galleys adapted to be inserted endwise into the seats provided therefor in the galley-carrier, and having outlets for discharging the slugs between the printing-wheel and the slug-feeding device, and means for operating the slug-feeding device.

4. In an addressing machine, the combination of a rotatable printing-wheel provided with means for detachably securing printing-slugs on its peripheral face at intervals apart, means for automatically imparting to the printing-wheel intermittent rotary movements, a plurality of slug-holding galleys in which the slugs are arranged in selected groups, each galley having an outlet for discharge of the slugs in single order, a slug-feeding device operating to place a slug in a pocket in each interval of rest in the movements of the printing-wheel, means for synchronizing the movements of the slug-feeding device and the printing-wheel whereby the former operates to deliver a slug while the wheel is at rest and means for placing the outlets of the galleys in any selected order into operative position with relation to the slug-feeding device.

5. In an addressing machine, the combination of a rotatable printing-wheel provided with pockets for printing-slugs, means for intermittently rotating the wheel, an intermittently acting slug-feeding device on one side of the axis of the wheel adapted to place a slug in a pocket in each interval of rest in the movements of the wheel, a movable galley-carrier containing a plurality of slug-containing galleys in standing position, each galley having an outlet in the bottom for the discharge of the slugs, means for placing any selected one of the galleys in position with relation to the slug-feeding device, a

slug-stacking device on the opposite side of the axis of the wheel and means for placing an empty galley in position with relation to the slug-stacking device to receive the slugs as they are discharged in succession from the printing-wheel.

6. In an addressing-machine the combination of a rotatable printing-wheel having slug-holding pockets in its face a locking-device at each pocket, a stationary bed for presenting for printing-contact with the wheel the matter to be addressed, a slug-feeding device on one side of the axis of the printing-wheel, a slug-stacking device on the opposite side of said axis, a movable galley-carrier on the feeding-in side operating to present slug-holding galleys in position on the feeding-in side of the wheel, a second galley-carrier operating to present empty galleys on the opposite side in position to receive the slugs from the stacking-device; means for intermittently operating the printing-wheel and means for throwing off the locking-devices to release the slugs after they have been carried to the opposite side of the line of printing-contact.

7. The combination of an intermittently rotatable wheel having pockets in its face for slugs, a movable galley-carrier containing a plurality of slug-holding galleys in standing position, each galley having an outlet at the bottom for discharging the slugs in single order, means for inserting the slugs in the pockets of the wheel in the order of their discharge, a second galley-carrier containing empty galleys and adapted to present the galleys in succession in position to receive the slugs from the printing-wheel, and means for transferring to the empty galley so placed the slugs discharged from the printing-wheel.

8. In an addressing machine, a printing-wheel having a plurality of slug-holding pockets, a runway for the matter to be addressed situated over the printing-wheel and having an opening to admit the printing face of the wheel, means for alternately raising and lowering the printing-wheel into and out of operative position at said opening, means for intermittently rotating the wheel, a slug-feeding device on the ascending side of the said wheel for inserting the slugs in the pockets, a movable galley-carrier having slug-containing galleys at spaced intervals apart, a movable galley-carrier on the descending side of the wheel containing empty galleys and means operating to transfer to the empty galleys the slugs discharged from the pockets of the wheel.

9. In an addressing machine, the combination with printing-means in which a rotatable carrier containing inserted printing-slugs is brought in printing-contact with the matter to be addressed by alternately raising and lowering the said carrier, of means for

locking the inserted printing-slug in said carrier in advance of the line of printing-contact, a movable galley-carrier, a plurality of slug-holding galleys thereon, means for feeding the slugs from the galleys to the rotatable carrier, means for releasing the locked slugs after their printing-contact with the addressed matter and means for rotating the said carrier.

10 10. In an addressing-machine, a runway for the matter to be addressed, means for moving the said matter along the runway, a printing-means comprising a rotatable printing-slug carrier and a stationary platen arranged on opposite sides of the path traversed by the matter to be addressed, an inclined chute at the end of the runway, a laterally movable gate in the chute and means for moving the gate from one side to the other of the chute actuated from the printing-means.

11. In an addressing-machine, a stationary runway having an opening in the bottom, means for moving the matter to be addressed along the runway, a printing-means including a rotatable wheel having pockets in its face for printing-slugs and means for projecting the face of the wheel through the opening in the runway to bring the slugs in printing-contact with the matter in the runway, in combination with a slug-feeding device and a movable galley-carrier having

means for supporting a plurality of slug-holding galleys in a standing position and adapted to place any selected one of the galleys in position at the slug-feeding device.

12. The combination with the rotatable printing-wheel provided with slug-holding pockets, of the rotatable galley-carrier for supporting galleys in a standing position, removable slug-holding galleys having outlets at the bottom for the slugs, a stationary table beneath the outlet ends of the galleys and a reciprocating slug-feeding device between the said table and the outlet ends of the galleys.

13. The combination with a rotatable printing-wheel provided with means for detachably fixing printing-slugs on its periphery at spaced intervals apart, a slug-feeding means operating to insert slugs in the slug-fixing means on the ascending side of the rotatable wheel, a slug-stacking device on the descending side of said wheel, a rotatable galley-carrier for presenting the printing-slugs to the slug-feeding means in predetermined groups, and a second carrier on the descending side of the printing wheel adapted to present empty slug-galleys in position to coact with the stacking-device.

IRA R. HUTCHINSON.

Witnesses:

S. M. KALQUEST,
D. A. CASLIEU.