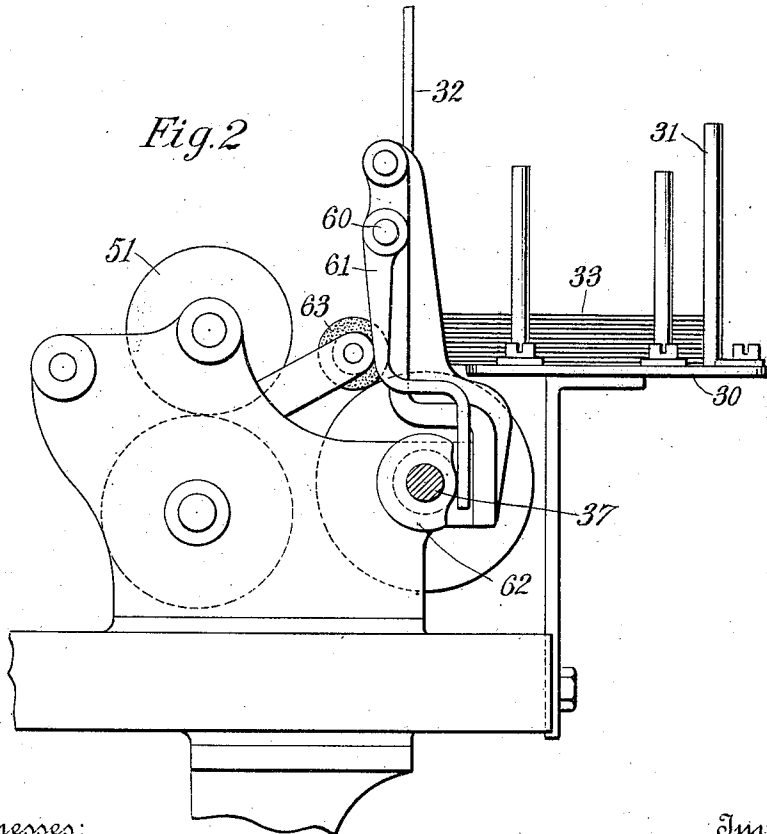
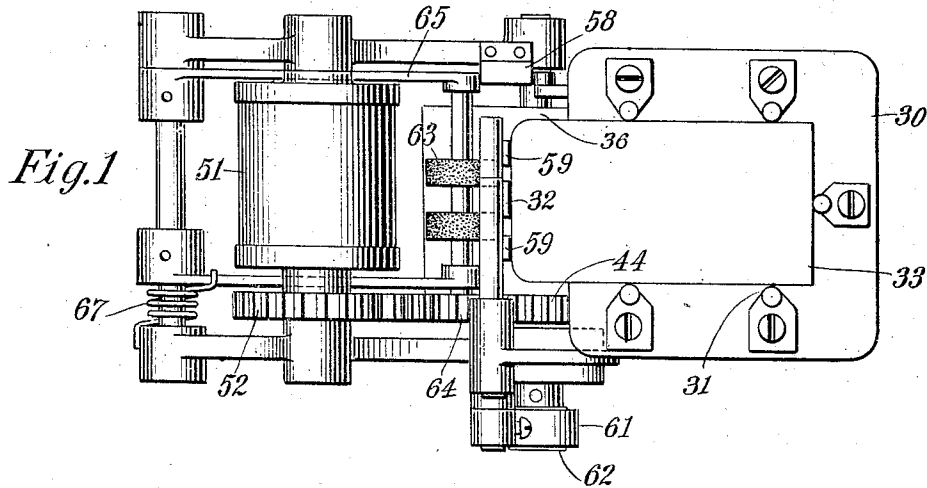


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BAG FEEDING MECHANISM.
APPLICATION FILED AUG. 8, 1910.

978,887.

Patented Dec. 20, 1910.

3 SHEETS—SHEET 1.



Witnesses:
Raphael Ketter
& Blake

Inventor
Guy L. Hoyt
By his Attorney
Robert W. Pearson

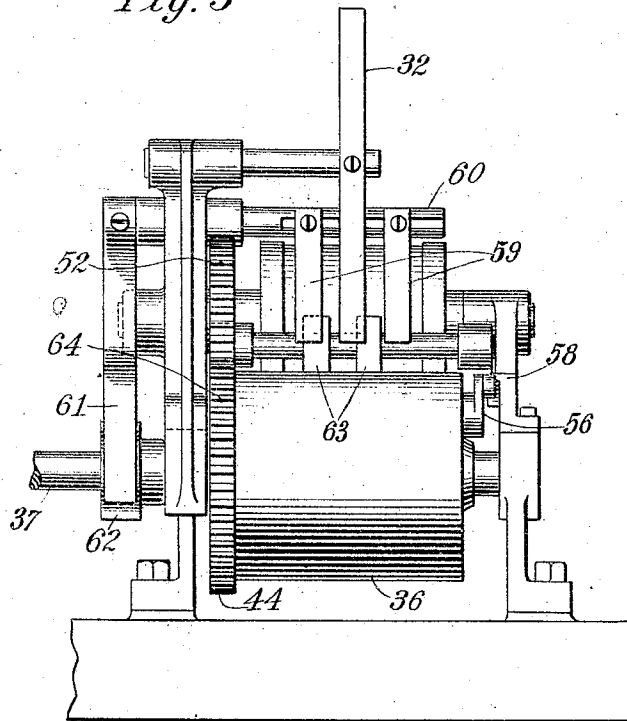
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Fig. 3



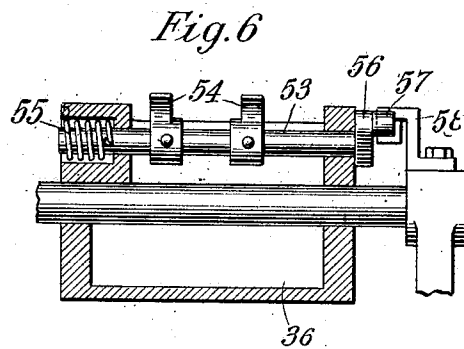
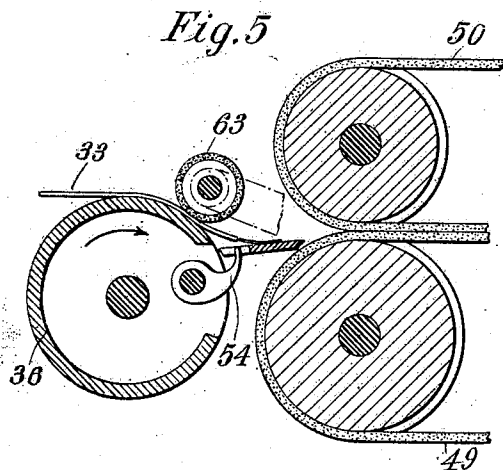
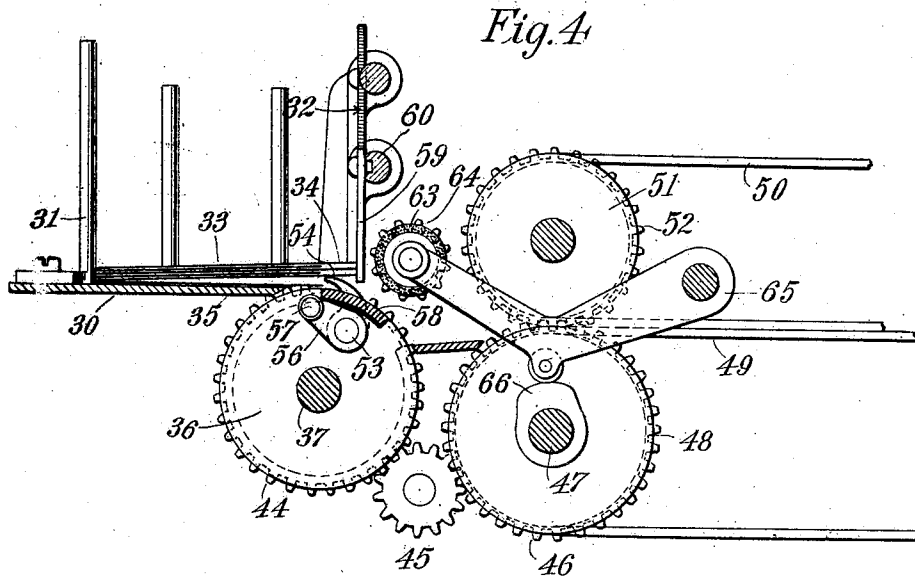
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

GUY L. HOYT, OF NEW YORK, N. Y., ASSIGNOR TO ROBERT GAIR COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

BAG-FEEDING MECHANISM.

978,887.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Original application filed November 12, 1909, Serial No. 527,724. Divided and this application filed August 8, 1910. Serial No. 576,111.

To all whom it may concern:

Be it known that I, GUY L. HOYT, a citizen of the United States, residing at borough of Brooklyn, New York city, in the county of Kings and State of New York, have invented certain new and useful Improvements in Bag-Feeding Mechanism, of which the following is a specification.

This invention relates to means for feeding flat bags or envelops from a stack, and its particular object is to provide a simple and reliable machine having provision for engaging the open or mouth end of the foremost envelop in the stack in order to advance it from the face of the stack. Such means may be combined with devices for loosening the remainder of the stack from the foremost envelop and for continuing the advance movement of the envelop after it has been released by the grasping means.

My invention may be used in conjunction with other machines, such for example as the automatic bag-filling machine shown in my application Serial No. 527,724, filed November 12, 1909, of which this is a division.

Of the accompanying drawings, Figure 1 represents a top plan view of a bag-feeding mechanism constructed according to my invention. Fig. 2 represents a side elevation thereof. Fig. 3 represents a rear elevation without the stack holder. Fig. 4 represents a vertical section on an enlarged scale. Fig. 5 represents a vertical section of the feed roll and related parts, showing a bag partially advanced. Fig. 6 represents an axial section of the feed roll.

In the drawings, 30 represents a platform with vertical guides 31 and a front stop 32 for holding the bags 33 in a vertical pile, their flaps 34 impinging against the stop, and their under lips 35 being presented downwardly.

36 is a feed roll mounted on a shaft 37 which may be rotated by any suitable driving connection, and said shaft carries a gear 44 whereby, through an intermediate pinion 45 and gear 46, is driven the shaft 47 having a pulley 48 which carries the lower one of a pair of conveyer belts 49, 50, the upper belt passing around a pulley 51 having a gear 52 which meshes with the gear 46. These belts furnish a convenient means for

advancing the bags in procession to the bag-filling or other mechanism by which they are further treated, but said conveyer forms no part of the present invention.

Within the feed roll is a shaft 53 carrying a gripper 54 which is retracted in the direction of rotation of the roll by a spring 55, said shaft having at the end of the roll an arm 56 whose stud 57 intermittently engages and is turned backwardly against the tension of spring 55 by a stationary segmental cam 58. This causes a backward oscillation of the gripper 54 at a faster rate than the forward progression of the roll periphery, and the gripper thereby comes up under the flap of the lowermost bag in the stack, causing said flap and its ply to separate from the lower lip, enters the mouth of the bag, clamps the lower lip 35 of the latter against the periphery of the feed roll, thereby drawing the end of the bag down far enough to clear the stop 32 and the kicker 59, hereinafter mentioned, and starts to advance it from under the pile. This succession of outward, rearward and inward movements possessed by the gripper might of course be imparted by means other than those illustrated, which however are preferred on account of their simplicity.

On either side of the single finger forming the stationary stop 32 is mounted a kicker or agitator 59 consisting of a pair of fingers adjustably mounted on a rock shaft 60, at one end of which is an arm 61 engaged by a cam 62 on the shaft of the feed roll, for loosening the remainder of the pack and permitting the lowermost bag to be more readily withdrawn.

After the gripper 54 has advanced the bag a short distance, as represented in Fig. 5, its stud 57 is released by the stationary cam 58, and spring 55 retracts the gripper within the periphery of the feed roll, at about which time a presser roll 63 comes down upon the periphery of the feed roll 36 and meshes its gear 64 with the feed-roll gear 44, whereby the bag is advanced into the throat between the conveyer belts 49, 50. Roll 63 is carried by a rock frame 65 operated by a cam 66 on the lower belt-pulley shaft 47, whereby the reciprocating motion is imparted which allows the presser

roll to avoid the gripper. A spring 67
(Fig. 1) opposes the action of the cam.

I claim,—

1. In a machine for feeding envelop bags,
5 the combination of means for holding the
empty bags horizontally in a stack with
their flaps extended beyond their under lips,
a stop against which the said flaps im-
10 pinge, a feed-roll stationarily mounted un-
der the forward end of the stack and con-
tinuously rotated in a forward direction, a
gripper on said roll having a movement out-
ward from the periphery of the roll to
15 separate the flap ply of the lowermost bag
from its under lip, a succeeding movement
reverse to the direction of rotation of said
roll to enter the mouth of the bag, an in-
ward movement to clamp the lower lip of
20 the bag against the roll periphery and draw
the bag down below the stop, and a return

movement to release the bag, and means for
automatically imparting said movements to
the gripper.

2. In a bag-feeding machine, the combi-
nation of means for supporting the bags 25
horizontally in a stack with their flap sides
up, a stop for engaging the advance edges
of the flaps, a feeder for grasping the under
lip of the lowermost bag to draw it past the
stop, and an oscillating kicker for forcing 30
back the remainder of the stack to loosen the
bag which is being fed.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses, this 5th day of Aug. 1910.

GUY L. HOYT.

Witnesses:

W. J. DUDLEY,

JOHN A. ROSENSTEIN, JR.