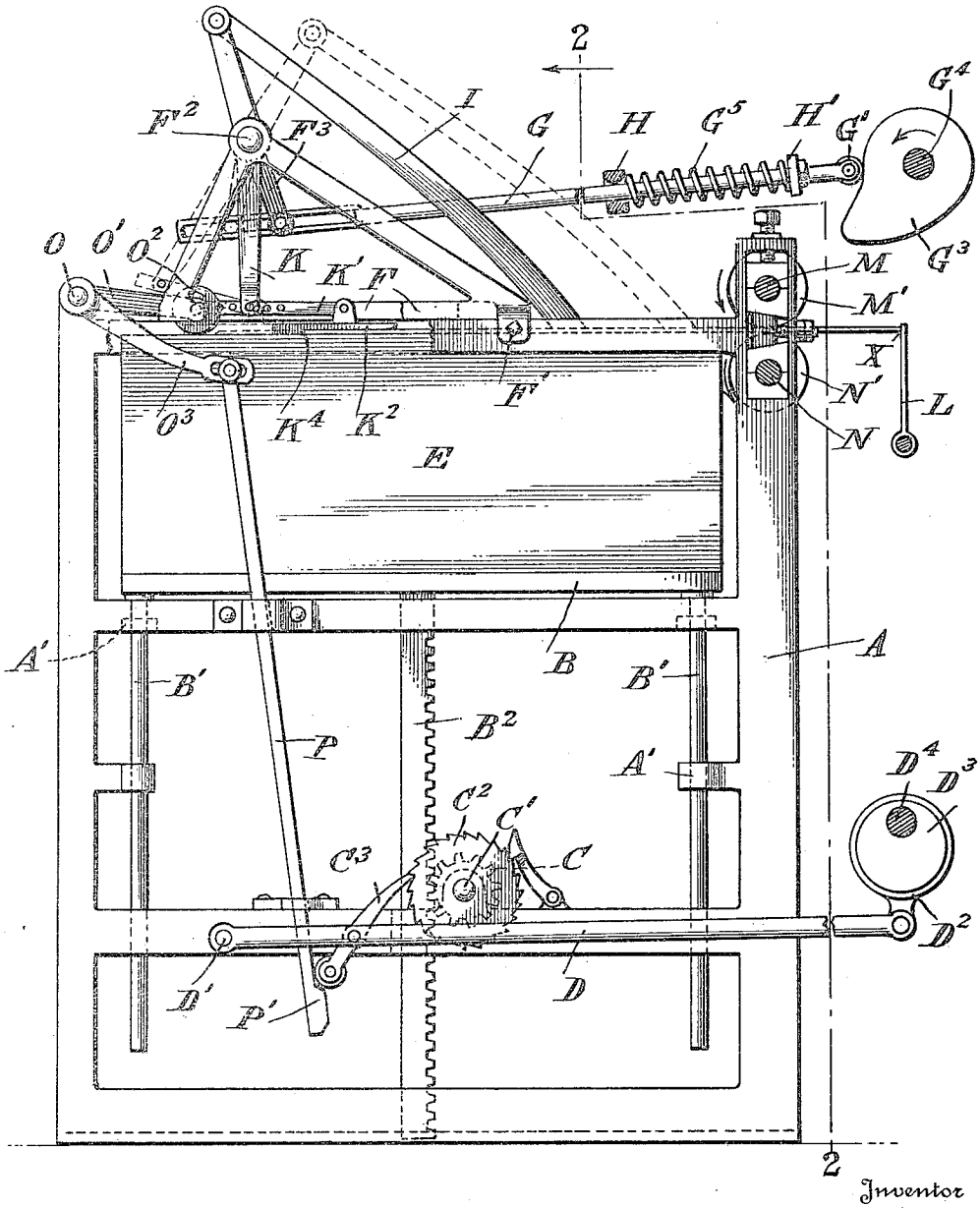
A. P. GREENE.

PAPER FEEDING MACHINE.

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1,213,626. Patented Jan. 23, 1917.



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ALVIN P. GREENE, OF WATERTOWN, NEW YORK.

PAPER-FEEDING MACHINE.

1,213,626. Specification of Letters Patent. Patented Jan. 23, 1917.

Application filed February 23, 1916. Serial No. 79,987.

To all whom it may concern:

Be it known that I, ALVIN P. GREENE, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Paper-Feeding Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in automatic paper feeding machines adapted for automatically feeding a single sheet of paper or card of paper or other material to bag machines and printing presses.

An object of the invention is to provide a machine which will automatically present a stack of paper or cards to a selecting mechanism which will automatically select and feed a single sheet of paper or card to a bag machine or printing press.

My invention comprises various details of construction, combinations and arrangements of parts which will be hereinafter fully described, shown in the accompanying drawing and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which I have shown a side elevation of the machine embodying the features of my invention.

Reference now being had to the details of the drawings by letter, A designates the frame of the machine, and B is an elevating platform having guide rods B′ mounted in suitable guides A′ projecting from the frame. The elevator B is provided with racks B^2 extending downwardly from the underside thereof and are engaged by pinions C fixed on the shaft C′ mounted in bearings on the frame, one end of the shaft C′ having fixed thereto a ratchet wheel C^2 engaged by a pawl C^3 carried by a lever D which has one end pivotally mounted on the frame, as at D′, and the other end of said lever D is pivotally fastened to an eccentric strap D^2 of an eccentric D^3, mounted on a shaft D^4 of a bag machine or printing press (not shown), thereby obtaining power for operating the elevator.

E designates a stack of paper, paper bags or cards placed upon the elevator B to be fed upward through the medium of the pawl C^3, ratchet C^2, pinions C and racks B^2, to the selecting mechanism, comprising a frame F adjustably secured as at F′ to the frame A. Said frame carries a horizontally disposed shaft F^2 having a crank F^3 at one end to which is pivotally connected one end of a rod G, the opposite end of which carries an antifriction roller G′ adapted to contact with a cam G^3 mounted on a shaft G^4 of a bag machine. Said roller is held in engagement with the cam by means of a spring G^5 interposed between a fixed arm H and an adjustable washer H′ on the rod G. The object of the cam G^3 and rod G is to impart a back and forth movement to the pusher arms I, and adjustable puller arms K secured on the shaft F^2. Said puller plates may be adjusted to and from each other to accommodate articles of different widths.

It will be seen upon reference to the drawing that links K′ are adjustably connected to the lower ends of the arms K and have pivoted to their free ends the pusher plates K^2 provided on their under faces with shoulders K^4 adapted to engage the rear edge of the uppermost sheet or card of the stack E, said sheet having been fed forward one step by the pusher arms I.

In the initial step, the pusher arms I push the topmost sheet forward far enough for the shoulders K^4 of the pusher plates K^2, when in their farthest backward position, to engage the rear edge of said sheet and on its forward stroke will feed said sheet forward to the position shown at X in Fig. 1, where the sheet comes in contact with a stop L, the sheet being then in position to be gripped and taken away by the machine to which it is being fed.

At the upper forward end of the frame A, I provide adjustable bearings for two oppositely rotating shafts M and N, the upper shaft M rotating in the same direction of travel as the sheet of paper or other article and has mounted thereon rollers M′ which prevent the same from buckling should a second sheet become started from the stack which would be pushed back by the rollers N′ mounted on the shaft N, rotating toward the stack as shown.

In order that the stack may always be maintained at the proper height for feed-

ing, I have loosely mounted on the rear of the frame A a shaft O to which is secured an arm O′ carrying a roller O^2 adapted to rest upon the stack E. The outer end of the shaft O carries a slotted arm O^3 to which is connected the upper end of a rod P which is mounted in suitable guides and whose lower end has a lug P′ which, as the roller O^2 lowers, releases and permits the pawl C^3 to fall into engagement with the ratchet C^2, the pawl being moved up and down by the continuously revolving eccentric D^3. It will thus be seen that the elevator will be raised to the proper height or until the roller O^2 automatically raises and throws the pawl C^3 out of engagement with the ratchet C^2 by means of the lug P′.

It will thus be noted from the foregoing description that I provide a machine which will automatically maintain a stack of paper, paper bags or cards at a proper predetermined height, and automatically feed a single sheet, card or bag to any receiving mechanism.

What I claim to be new is:—

In a paper feeding machine, the combination with an elevator having a rack bar with a pinion meshing with the latter, a ratchet wheel for rotating the pinion, a pawl for imparting an intermittent movement to the ratchet wheel, a rock shaft with an arm projecting therefrom, a roller upon the latter and positioned in the path of the elevator, a longitudinally movable member, an arm fixed to the rock shaft and to which one end of said member is pivoted, means for guiding the member, the latter having a widened portion near its free end, and an anti-friction wheel on the pawl against which said widened portion is adapted to contact as the elevator reaches its highest limit.

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

ALVIN P. GREENE.

Witnesses:
HENRY H. JUBY,
JOSEPH A. MCCONNELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."