No. 870,619. PATENTED NOV. 12, 1907.

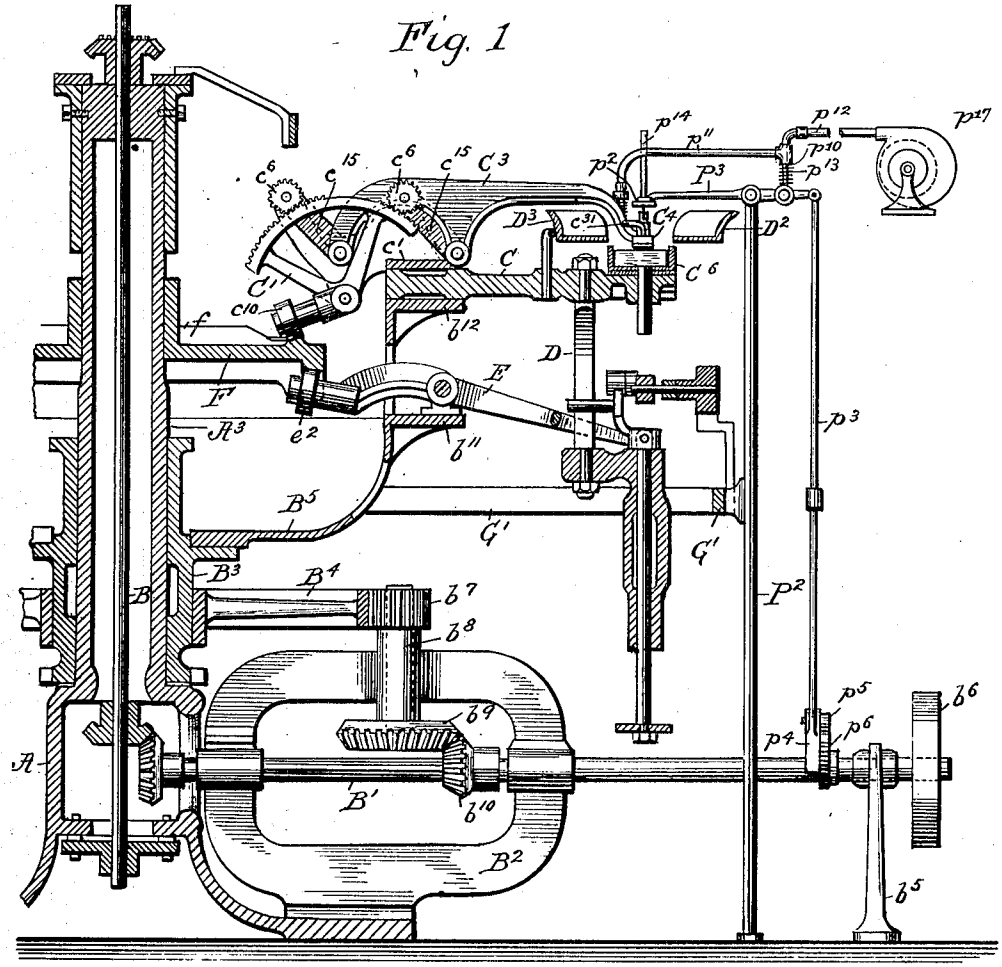
E. FIDELL.

LABEL AND STAMP APPLYING MACHINE.

APPLICATION FILED MAY 11, 1906.

3 SHEETS—SHEET 1.

Fig. 1



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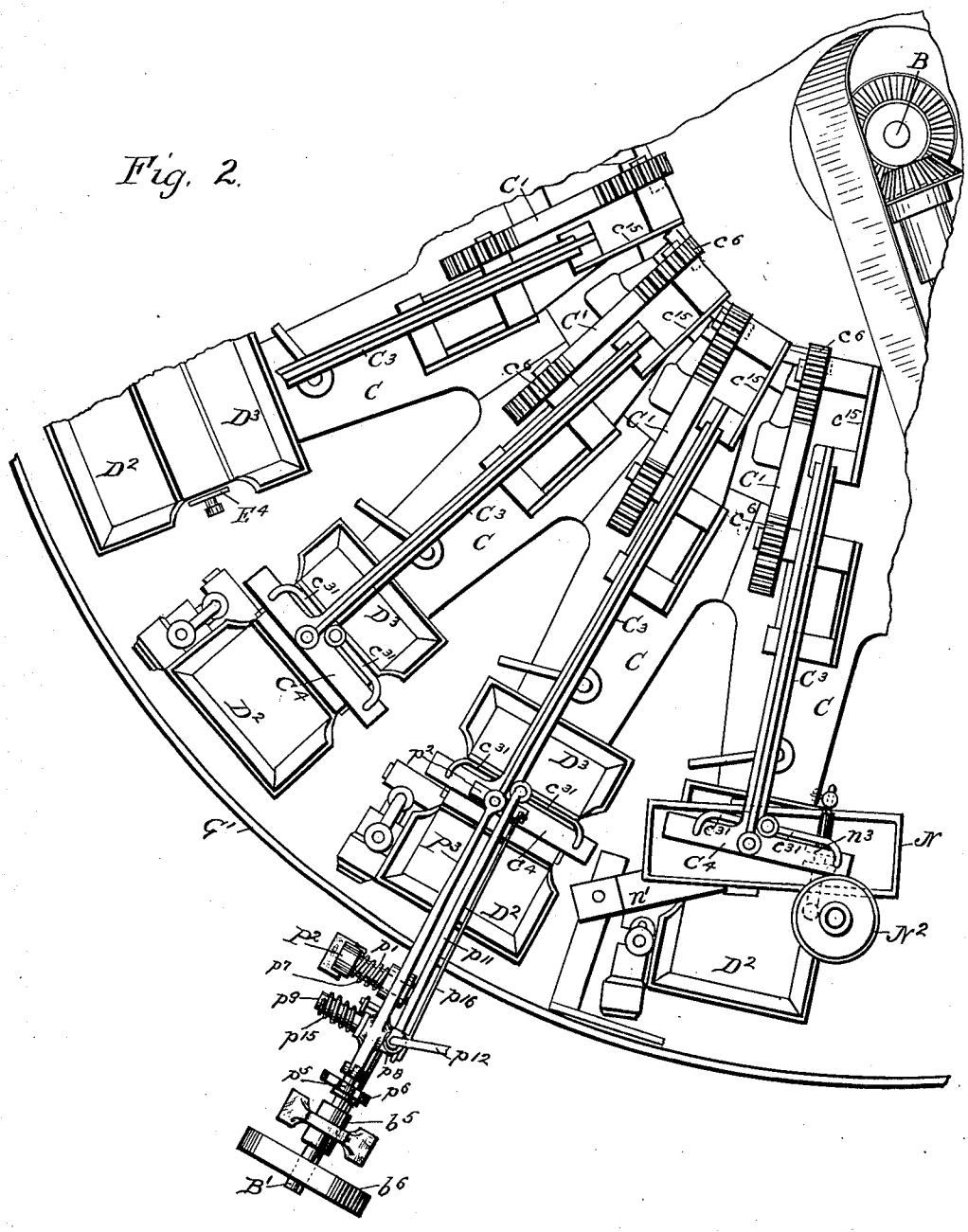
8 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

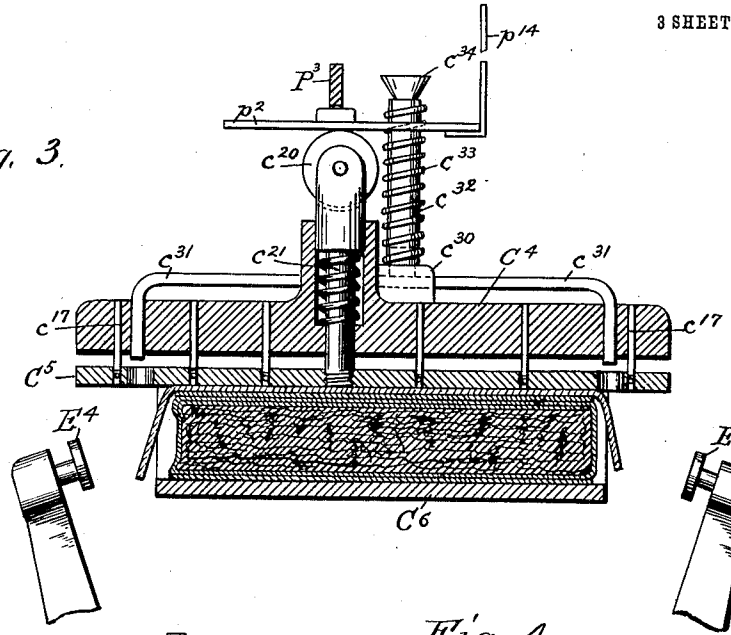
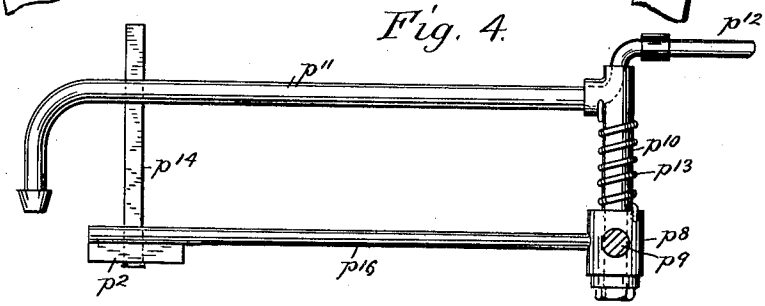


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWIN FIDELL, OF JERSEY CITY, NEW JERSEY.

LABEL AND STAMP APPLYING MACHINE.

No. 870,619. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed May 11, 1906. Serial No. 316,277.

To all whom it may concern:

Be it known that I, EDWIN FIDELL, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Label and Stamp Applying Machines, of which the following is a specification.

This invention relates to improvements in machines for applying labels and revenue stamps to packages, preferably small rectangular packets of tobacco, and it consists in a simplified means for securing the stamp to the label or wrapper. It is particularly adapted to the class of machines disclosed in a patent granted to me on October 16, 1906, for improvements in wrapping machines, and bearing No. 833,451, and to which patent reference may be had for a full understanding of the construction and operation of the several coacting parts in the complete machine, comprehending a feeding mechanism for automatically feeding previously prepared packets, a series of continually advancing packet-holders, each provided with a pair of grippers adapted to grasp a packet from the feeding mechanism, a pair of folding jaws arranged with each packet holder to receive and support a label and to coöperate with the grippers to fold the label about the packet, a stamp feeding and detaching mechanism, a stamp pasting device, a stamp affixing device for pressing the pasted stamp upon the previously wrapped packet, and a means for the removal and delivery of the wrapped and stamped packets.

The particular construction and arrangement of the stamp affixing device, in which the present invention resides, is clearly shown in the accompanying drawings, in which

Figure 1 is a sectional elevation of the machine; Fig. 2, an enlarged plan view, and Figs. 3 and 4, enlarged detail views.

Similar characters of reference pertain to like parts throughout the several views.

The essential parts of the machine are mounted upon the hollow standard A, to the base of which is secured an oval shaped support B^2, having bearing in which is mounted the horizontal driving shaft B^1, the latter being provided with an additional outer bearing b^5 and a suitable driving pulley b^6.

Rotatably mounted upon the standard A is a sleeve B^3, designed to be rotated from the driving shaft B^1 through the medium of the gear wheels B^4, b^7, b^9 and b^{10}, the intermediate wheels b^7 and b^9 being secured to a short vertical stub-shaft, journaled in the bearing b^8. Upon the sleeve B^3 and rotating therewith, is fixedly secured a bowl shaped carrier B^5, formed with annular flanges b^{11} and b^{12}.

A series of radially disposed horizontal carrier-arms C are fixedly mounted upon the upper flange b^{12} of the bowl shaped carrier, and to each of the arms are secured a corresponding series of certain portions of the packet-operating devices, including a packet holder C^6, fixed upon the outer end of the arm, a vertically movable stamp-head C^4, a pair of label-folding jaws D^2 and D^3, and a pair of grippers E^4, the latter shown in Fig. 3.

The stamp-head C^4, formed on the outer end of the bar C^3, is pivotally mounted on a pair of parallel swinging arms c^{15}, which in turn is journaled in the bracket c^1, fixed upon the radial arm C. The parallel arms c^{15} operate to raise and lower the stamp-head through the medium of the pinions c^6, fixed upon the journal-ends, the pinions in turn intermeshing with the sector-shaped gear C^1, the latter in turn being pivotally carried by one of the extending members of the bracket c^1, and having an integral arm on which is mounted a roller c^{10}, adapted to engage a cam f, formed on the stationary disk F, fixedly secured to the standard A; the cam being suitably arranged upon the disk to give at the proper time the necessary vertical movement of the stamp-head as it constantly advances in a circular path about the standard A.

The stamp-head C^4, shown in enlarged detail sectional view in Fig. 3, is provided with a plurality of fixed pins c^{17}, having projecting ends extending through perforations in a stripper-plate C^5 and adapted to engage and normally hold a stamp. The stripper-plate is movably dependent from the stamp-head by the stem c^{21}, one end of which being arranged to pass through a chambered perforation in the head is secured to the stripper-plate and the opposite end of the stem is formed with a bifurcation in which is journaled a roller c^{20}, adapted to be contacted by a presser-plate p^2. A compression spring disposed within the chambered perforation of the stamp-head and encircling the stem, normally retains the stripper-plate in contact with the head, in which position the stamp-engaging ends of the pins extend below the plate.

Mounted upon the stamp-head C^4 is an upwardly projecting air-connection c^{30}, having two branch pipes c^{31} leading therefrom and provided with terminals projecting slightly below the lower surface of the head and in alinement with enlarged perforations extending through the stripper-plate. Secured to the air-connection c^{30} is a vertically and laterally yielding air inlet, composed of a resilient inner tube c^{32} exteriorly reinforced by a retractile spring c^{33}, the inner tube being fixedly secured at its lower end to the air connection and at its upper end provided with a flaring metallic mouth-piece c^{34}.

Supported from the floor and stayed by the rail G′, is a stationary upright leg P^2, on the upper end of which is secured an overhanging stud p', pivotally carrying a double ended lever P^3, to the inner end of which is fixed the presser-plate p^2 and to the outer end the pivotally connected and downwardly-extending actuating-rod p^3, the latter having a lower forked end p^4,

engaging the shaft B^1. A roller p^5, rotatably mounted upon a pin secured to the forked end of the actuating-rod, contacts a cam p^6, fixed on the shaft B^1, which, by the rotation of said shaft elevates the outer end of lever P^3 and depresses the inner end carrying the presser-plate p^2, the latter contacting the roller for operating the presser-plate, as previously referred to. A torsional spring p^7, encircling the stud p^1 and having its ends respectively engaging the stationary leg P^2 and the loosely mounted lever P^3, normally tends to urge the roller p^5 in contact with the cam p^6, to elevate the presser-plate p^2 for retracting the stripper-plate C^5.

Carried by the arm P^3, intermediate of its outer end and pivotal support, is a head p^8 having a stem p^9, extending through said arm and pivotally mounted therein. A perforation in the head p^8 loosely receives the lower end of a vertical post p^{10}, the upper end of which has affixed thereto an inwardly extending horizontal tubular arm p^{11}, provided with a downwardly extending elbow terminating in a tapering end; the arm communicating through the post with a flexible tube p^{12}, leading from a convenient source of air supply, indicated by the blower p^{17}. Surrounding the post is a torsional spring p^{13}, having its opposite ends engaging the head p^8 and the arm p^{11} to normally retain the latter in engagement with a vertical stop p^{14}, fixed to the presser-plate p^2. Encircling the stem p^9 of the head p^8 is a torsional spring p^{15}, the opposite ends of which are fixed to the lever P^3 and the end of the stem p^9, to normally depress the tubular arm p^{11}, carried by the head p^8; the downward movement of the tubular arm being limited by a stop-rod p^{16}, secured at one end to the head p^8 while its opposite end contacts the presser-plate p^2.

N indicates a paste-box carried upon a swinging support n^1, and mounted upon the paste-box is a guide-roller N^2, and a paste-roller n^3 (the latter shown in dotted lines,) the construction and operation of this pasting device being more fully shown and described in the former application previously referred to.

In the operation of the present invention, each of the continuously advancing packet-holders C^6, carrying a label-enfolded packet, and the accompanying stamp-head C^4 with its pasted stamp having advanced to the vicinity of the stamp-affixing device, the cam p^6 on the shaft B^1 depresses the presser-plate C^5, removing the stamp from the pins c^{17} and affixing said stamp upon the packet. As the presser-plate is forced downward to affix the stamp, the tubular arm p^{11}, carrying a current of air, engages the flaring mouth-piece c^{34}, of air connection c^{30}, secured to the stamp-head C^4, permitting the air to flow through the branch pipes c^{31}, to cause the stamp to be more effectually removed from the head and at the same time forcing the free overhanging stamp-ends downward against the adjacent packet-ends, in which position the cam-operated grippers E^4 are appropriately timed to engage and affix said pasted stamp-ends to the packet-ends. The lever P^3 and the tubular arm p^{11} are normally held in fixed relation with each other and are jointly adapted to oscillate about the overhanging stud p^1. As the inner ends of the lever and tubular arm are depressed, the latter engages the mouth-piece c^{34}, thereby checking its downward movement, while the continued movement of the former tends to separate the presser-plate p^2 from the stop-rod p^{16}, bringing the tension of spring p^{15} to bear upon the temporary air connection formed through the mouth-piece to make a uniformly yielding contact therewith. This contact continues somewhat during the advancement of the stamp-head, in order to insure the complete depression of the stamp-ends. This advancement of the stamp-head during the air connection causes the tubular arm p^{11} to swing within the head p^8, forcing said arm away from the vertical stop p^{14}, and increasing the tension on spring p^{13}. As the grippers E^4 engage the stamp-ends, the inner end of the lever P^3 with its attached pressure-plate p^2 is raised, which motion engages the stop-rod p^{16} to elevate and disengage the tubular arm p^{11} from the mouth-piece; said arm being then retracted to its normal position against the vertical stop p^{14} by the recoil of spring p^{13}.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In means of the character described, the combination with a packet-holder, of a stamp-carrying head, means for applying paste to the stamp-back, means for affixing the stamps to one side of the packet, means for directing a blast of air against the extended stamp-ends, and means for affixing the stamp-ends to the packet-ends.

2. In means of the character described, the combination with a movable stamp-head adapted to support a stamp and affix the same to a packet, said stamp having ends extending over the packet ends, of air connections arranged upon the stamp-head and terminating above the stamp-extensions, and means for supplying a blast of air to said connections.

3. In means of the character described, the combination with a movable stamp-head adapted to support a stamp and affix the same to a packet, said stamp having ends extending over the packet ends, of air connections arranged upon the stamp-head and terminating above the stamp-extensions, means for supplying a blast of air to said connections to deflect the stamp-extensions, and means for affixing the deflected stamp-extensions to the packet ends.

4. In means of the character described, the combination with a continuously-movable stamp-head adapted to support a stamp and affix the same to a packet, said stamp having ends extending over the packet-ends, of an air connection arranged upon the stamp-head and having branches terminating above the stamp-extensions, a stationary air-supplying means adjacent to the movable air connection, and yielding means between the stationary air supplying means and the movable connection whereby a blast of air is directed against the stamp-extensions.

5. In means of the character described, the combination with a movable stamp-head adapted to support a stamp and affix the same to a packet, said stamp having ends extending over the packet ends, of an air connection arranged upon the stamp-head and having branches terminating above the stamp-extensions, a stationary support adjacent to the movable air connection, a tubular arm yieldingly mounted upon the stationary support and adapted to periodically engage the movable air-connection, and means for supplying a blast of air to said tubular arm.

6. In means of the character described, the combination with a continuously-movable packet-holder, of a stamp-carrying head movable therewith, means for applying paste to the stamp-back, a stipper-plate yieldingly mounted upon the stamp-head, means carried by a stationary support and adapted to engage the stripper-plate to detach the stamp from the head and means for supplying a blast of air to project the stamp upon the packet.

7. In means of the character described, the combination with a continuously movable packet-holder, of a stamp-carrying head movable therewith, means for applying paste to the stamp-back, a stripper-plate yieldingly mounted upon the stamp-head, a stationary support, an arm pivoted to said stationary support and engaging the stripper-plate, and means for actuating said arm to detach the stamp from the head and affix it to the packet.

8. In means of the character described, a movable packet-holder adapted to support a label-enfolded packet, a stamp-holder movable therewith and means for supplying a blast of air to detach the stamp from said holder and project it upon the packet.

9. In means of the character described, a packet-holder adapted to support a label-enfolded packet and arranged for continuous advancement, a stamp-holder movable therewith, and means for supplying a blast of air to detach the stamp from said holder and project it upon the packet.

10. In means of the character described, a packet-holder adapted to support a label-enfolded packet, a stamp-holder co-acting therewith, stripping devices combined with said holder and means for actuating said devices, means for applying paste to the stamp-back, and means supplementary to the stripping devices for supplying a blast of air to affix the stamp to the label-enfolded packet.

11. In means of the character described, a packet-holder, a stamp-holder co-acting therewith, stripping devices combined with said holder, means for actuating said devices, and means for supplying a blast of air to project the stamp upon the packet.

12. A machine comprising means for supporting a packet, means for holding a stamp, stripping devices combined with said last named means, means for actuating said devices, and fluid means under pressure adapted to disengage said stamp and project the same on a packet.

Signed at New York city in the county of New York and State of New York.

EDWIN FIDELL.

Witnesses:
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FRANK L. SEAVER.