

No. 756,900.

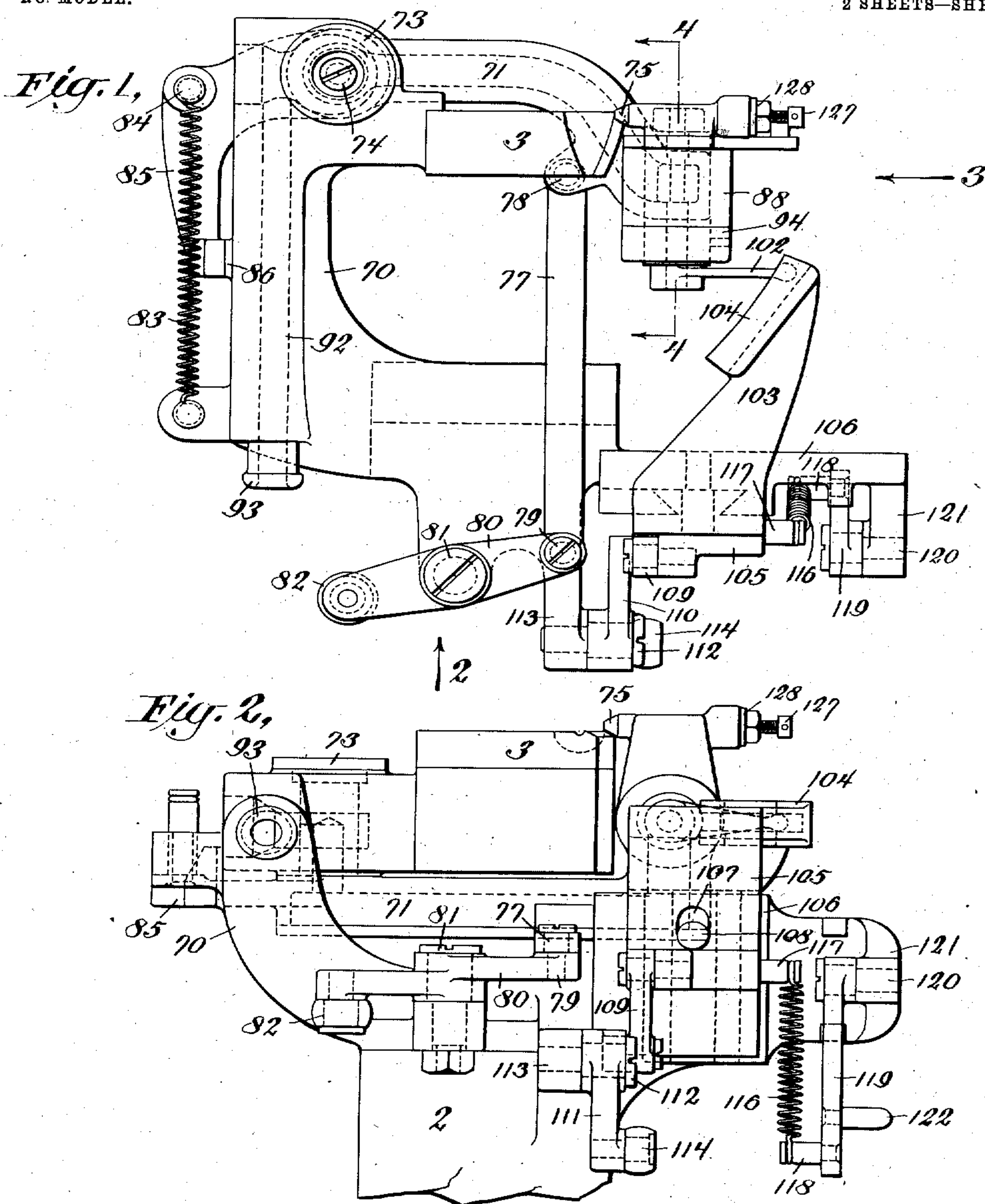
PATENTED APR. 12, 1904.

A. SHEDLOCK.
ADHESIVE SUPPLYING MECHANISM.

APPLICATION FILED SEPT. 10, 1902.

NO. MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

A. White
W. J. Kennedy

INVENTOR

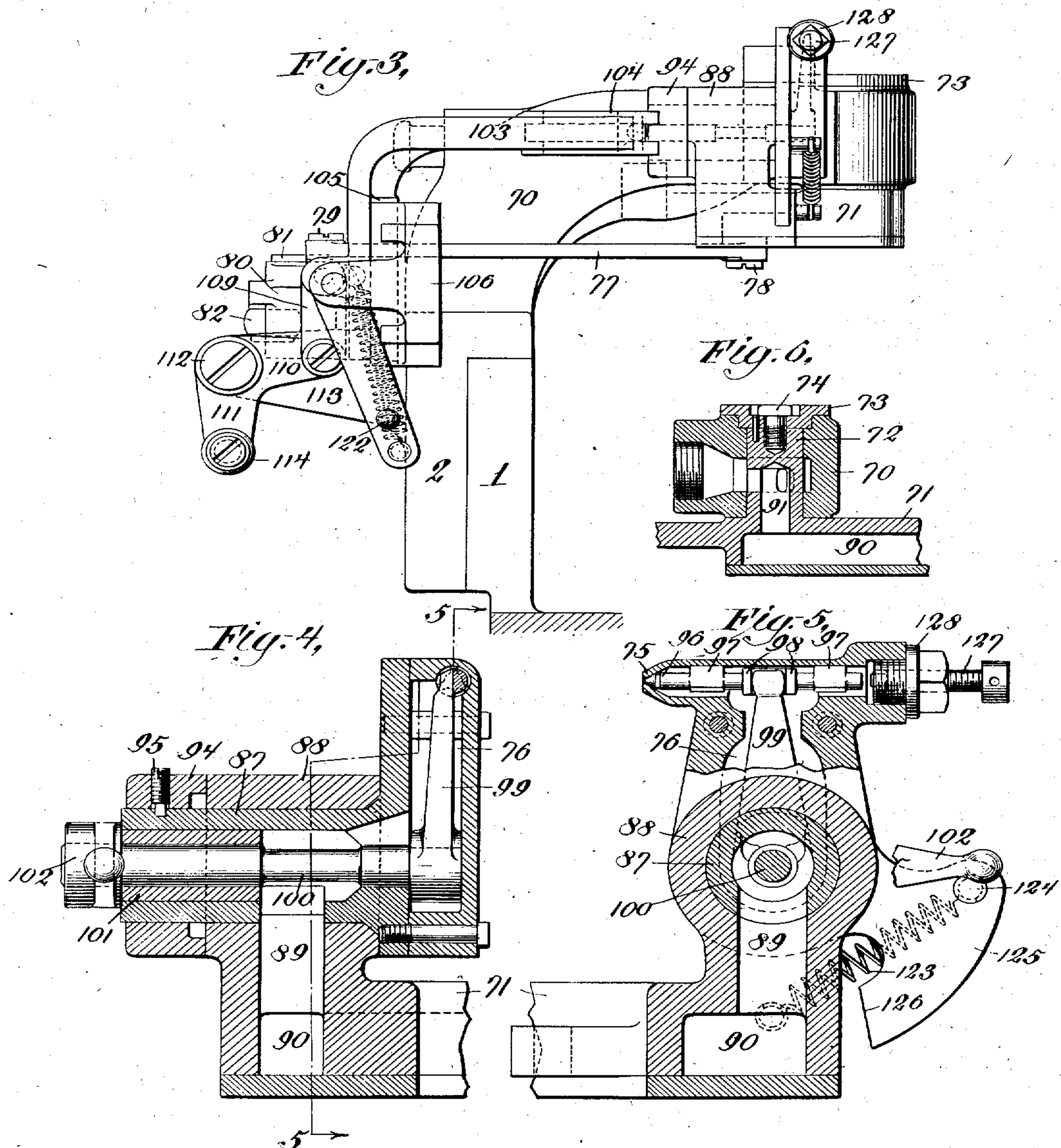
Alfred Shedlock
by Philipps. Brown. Rice & Kennedy
ATTORNEYS

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2 SHEETS—SHEET 2.



WITNESSES:
A. White
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INVENTOR
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UNITED STATES PATENT OFFICE.

ALFRED SHEDLOCK, OF JERSEY CITY, NEW JERSEY.

ADHESIVE-SUPPLYING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 756,900, dated April 12, 1904.

Application filed September 10, 1902. Serial No. 122,778. (No model.)

To all whom it may concern:

Be it known that I, ALFRED SHEDLOCK, a citizen of the United States, residing at Jersey City, county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Adhesive-Supplying Mechanisms, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention relates to certain improvements in adhesive-supplying mechanism, and more particularly to mechanism which supplies the adhesive for retaining inclosing wrappers in position—such, for instance, as the
15 wrappers of cigars.

The adhesive-supplying devices now ordinarily employed in cigar-machines may be divided generally into two classes. In the first of these classes the end of the wrapper before
20 it is wound about the bunch passes over the mouth of a fountain or well, the adhesive being smeared upon the wrapper as it moves across the mouth of the well. In the second class of constructions, which is more generally
25 employed with machines which make cigars with one end closed, the adhesive is supplied to the wrapper as it is wound on the bunch by devices which deposit a quantity of adhesive at a single point, the adhesive being distributed over the surface to which it is to be
30 applied by the pressure on the wrapper. In this second class of devices the adhesive is liable to be supplied in a larger quantity than is necessary, and, furthermore, it is difficult to
35 control the spreading action. It is of course obvious that in spreading the adhesive it should be caused to move toward the extreme tip of the bunch, so as to be always beneath the wrapper. In the practical operation of
40 the devices referred to, however, the adhesive is liable to spread in both directions, thus smearing the outside of the wrapper and causing the interior of the tip-forming devices to become sticky and foul. In an application of
45 Oluf Tyberg, filed August 27, 1901, and serially numbered 73,410, and in an application of Oluf Tyberg and Joseph G. C. Mantle, serially numbered 76,383, also filed September

24, 1901, herewith, constructions are shown in which the difficulty referred to is avoided by
50 applying the adhesive at separated points along the bunch as the wrapper is wound about the same, the adhesive in the particular constructions shown in said applications issuing from a plurality of orifices in the walls of the header.
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One of the objects of the present invention is to produce an improved adhesive-supplying mechanism in which the adhesive-supplying device is given a movement lengthwise of the
60 header, so as to apply the paste as needed along the bunch.

A further object of the invention is to produce an improved adhesive-supplying mechanism in which the adhesive-supplying device is caused to move toward and away from the
65 header and the article to be wrapped in order to apply the adhesive at separated points on the bunch.

A further object of the invention is to produce an improved adhesive-supplying mechanism in which the adhesive-supplying device is caused to move lengthwise of the article to
70 be wrapped and also toward and away from it, so that the adhesive is applied at separated points and along the article to be wrapped.
75

With these and other objects in view the invention consists in certain constructions and in certain parts, improvements, and combinations, as will be hereinafter fully described and then specifically pointed out in the claims
80 hereunto appended.

In the accompanying drawings, in which like characters of reference indicate the same parts, Figure 1 is a plan view of the improved adhesive-applying device, said device being
85 illustrated in connection with the tip former or header of a cigar-machine. Fig. 2 is a side elevation of the construction shown in Fig. 1, the position of the observer being indicated by the arrow 2 in said figure. Fig. 3
90 is a front elevation of the construction shown in Fig. 1, the position of the observer being indicated by the arrow 3 in said figure. Fig. 4 is a sectional elevation on the line 4 4 of Fig. 1. Fig. 5 is a section on the line 5 5 of Fig. 1. Fig. 6 is a detail sectional elevation illus-
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trating the construction by which the swinging arm is pivoted.

Referring to the drawings, 1 indicates a part of the frame of a cigar-machine, said frame serving to support a bracket 2, which may be secured thereto in any desired manner. In the construction shown this bracket serves to support a frame 70. In that embodiment of the invention which has been selected to illustrate the invention the adhesive-supplying device is intended to be used in connection with a header of a cigar-machine. In the construction shown the lower header-block, which is marked 3, is mounted on the frame 70.

In the preferred form of the present construction the adhesive-supplying device is given a movement lengthwise of the article to be wrapped. The construction of this adhesive-supplying device and the means by which it is mounted and operated may be varied within wide limits. As shown, there is provided a movable arm 71, which is preferably a pivoted arm. This arm may be mounted in any desired manner. As shown, it is provided with an upwardly-extending boss, which is made hollow for reasons which will be hereinafter stated, this boss being marked 72. This boss is mounted in a bearing in the frame 70 (see Fig. 6) and is held in position therein by means of a washer 73 and a screw 74 or in any other desired manner. The arm 71 serves to support an adhesive-supplying device which may be of any suitable form and which may be mounted on the arm in any suitable manner. As shown, there is provided a supplying-nozzle 75, which is in communication with a chamber 76, which is secured to the arm 71 in a manner to be hereinafter described. This nozzle 75 enters, in the preferred form of the construction, a slot in the header, and as the arm 71 is given its movement the supplying-nozzle travels along the header and along the bunch being wrapped, thus supplying adhesive thereto.

Any suitable means may be employed for giving the arm 71 its movement. As shown, there is connected to the arm a link 77, this link being pivoted to the arm at 78 and being also pivoted at 79 to a lever 80, which is pivoted at 81 to the frame 70. The lever 80 carries a boss or roller 82, which is or may be operated by a suitable cam (not shown) mounted on a cigar-machine. As the lever oscillates it will be seen that the nozzle 75 is caused to travel in the slot of the header. The arm 71 in the construction shown is given its return movement by means of a spring 83, (see Fig. 1,) said spring being connected to a stud 84, mounted on a stop-arm 85, which, as shown, is an extension of the swinging arm 71, said stop-arm 85 being arranged when the arm 71 is at its extreme outward movement to strike a stop 86, mounted on the frame 70.

In the preferred form of the construction the adhesive-supplying nozzle will not only

be arranged to travel lengthwise of the article to be wrapped, but also will be given a movement toward and from it in order to apply the adhesive in separated drops or patches, and means will also be provided for controlling the flow of adhesive from the nozzle. The construction by which the movement of the nozzle toward and away from the article to be wrapped is effected and the construction by which the flow of adhesive is controlled may be varied within wide limits. As shown, the chamber 76 has extending from it (see Fig. 4) a hub 87, said hub entering a suitable bearing formed in a boss 88, extending upward from the arm 71. This hub 87 is preferably made hollow, as shown, and the passage therethrough communicates with a passage 89, formed in the boss. This passage in turn communicates with a passage 90 in the arm 71, said passage 90 in turn communicating with a passage 91, formed in the upwardly-extending hollow boss 72, and this passage 91 communicates with a passage 92, which extends through the frame 70 and terminates, as shown, in a nipple 93. The nipple 93 is or may be connected by a pipe (not shown) to a reservoir which will preferably be arranged to feed the adhesive under pressure through the passages which have just been described into the chamber 76. While the passages which have just been described form a convenient means for getting the adhesive into the chamber 76, it may be introduced into said chamber in any other desired way. The hub 87 may be held in position in the boss 88 in any desired manner. As shown, it is held therein by means of a collar 94, which is or may be secured to the hub by means of a set-screw 95.

In the construction shown the means for controlling the flow of adhesive from the nozzle 95 comprises a valve 96, the stem of which is or may be provided with cut-out guide-blocks 97. The means for operating the valve may be of any suitable description. As shown, the stem is provided with ears 98, between which is located the end of an arm 99, said arm being secured to a rock-shaft 100, which is supported in a bearing in the hub 87 and in a bushing 101, mounted in said hub. As shown, this shaft has connected to it an arm 102. It is apparent that as the arm 102 is rocked the valve 96 will be moved in the nozzle so as to open and close the opening therein. The valve and its operating mechanism will preferably be utilized to effect the movement of the chamber 76 and the nozzle 75 toward the header. The means for operating the arm 102, therefore, will preferably be of such a character that after the valve is closed the movement of the arm is continued so as to turn the chamber 76, the hub 87, which is connected thereto, turning in the bearing 88, so that the nozzle moves toward the header. The means by which the arm 102 is rocked to

produce the movement referred to may be of any suitable description. As shown, there is provided (see Figs. 1 and 3) an arm 103, said arm having a slotted head 104, which head is in constant engagement with the end of the arm 102. This arm 103 is mounted on a slide 105, which moves in dovetailed ways in an extension 106, which is formed on the frame 70, the dovetailed ways being shown in dotted lines in Fig. 1. The slide 105 is preferably provided with a slot 107, in which is located a pin 108, which is secured to the extension 106 and which limits the movement of the slide. While the construction by which the slide is moved may be of any desired form, as shown there is provided a link 109, (see Figs. 2 and 3,) said link being pivoted to one of the arms 110 of a bell-crank lever 110 111, said lever being pivoted at 112 to a projection 113, extending from the bracket 2. The arm 111 of this bell-crank lever carries a roll or boss 114, which is in the path of a suitable cam or any other moving part mounted on the cigar-machine. As the slide moves upward, therefore, it first operates to move the valve 96 forward, thus closing the aperture in the nozzle 75, after which the further movement of the slide swings the chamber 76 forward and throws the nozzle into the slot of the header and against the bunch which is being wrapped, thus depositing a drop or patch of adhesive on the bunch, this drop having been forced outward by the pressure in the chamber 76 or by the movement of the valve or both. After a drop or patch of adhesive has been deposited on the bunch the slide 105 is returned by any suitable mechanism. As shown, this mechanism consists of a spring 116, which is connected to a pin 117 on the slide and to a pin 118 on a swinging lever 119, which is pivoted at 120 to an arm 121 on the extension 106. This lever 119 is provided with a handle 122 for a purpose which will be hereinafter stated. Simultaneously with the return movement of the slide the chamber 76 is also returning, moving away from the header. In the construction shown (see Fig. 5) the return of the chamber 76 is effected by means of a spring 123, which is secured to a pin 124 on an arm 125, which is secured to the side of the chamber 76, from which the hub 87 extends, this arm being so arranged that its lower face 126 forms a stop, and thus limits the movement of the chamber, said face 126 striking against the arm 71. The spring causes the chamber 76 and the nozzle 75 to follow the backward movement of the valve 96 produced by the return of the slide 105, so that the opening in the nozzle 75 remains closed until the face 126 of the stop-arm 125 strikes the arm 71. After the movement of the chamber 76 has been stopped the slide continues its movement, so as to open the valve, the backward movement of the valve being limited in the construction shown by a set-screw 127, which passes through the

center of a plug 128, which closes an opening in the rear end of the nozzle 75.

It will be understood that the arm 80 is operated by its cam between the times when the nozzle 75 and the chamber 76 begin their backward movement and the time when the nozzle 75 is thrown forward into the slot in the header. The adhesive is deposited, therefore, at separated points, which are along the line of the bunch; but since the bunch is rotating in the header it will be understood that the points at which the adhesive is deposited are in a line running spirally around the bunch. When the machine is stopped, the nozzle is in its backward position, in which position in the ordinary operation of the machine the valve 96 is thrown back so that the aperture in the nozzle is open. If, however, this aperture were allowed to remain open when the machine is stopped, a stream of adhesive would issue from the aperture and would gum up the machine. Means are accordingly provided so that the valve may be closed when the chamber 76 is in its backward position. In the construction shown this is effected by means of the lever 119, before described. When this lever is in the position shown in Fig. 3, the spring 116 acts to draw the slide downward so that the valve is open. When, however, this lever is thrown by its handle on its pivot so that its lower end instead of pointing downward, as shown in Fig. 3, points upward, the spring raises the slide 105, and thus causes the valve to close.

The operation of the mechanism will be fully understood from what has been before said, and a detailed description thereof is therefore unnecessary.

While the construction in which the invention is embodied is primarily intended for use with cigar-machines, it is to be understood that it may be used in other relations. While, furthermore, the construction in which the invention is embodied is a preferred one and is effective for the purpose, it is to be understood that changes and modifications may be made therein without departing from the invention. The invention is not, therefore, to be limited to the specific use described nor to the specific construction described, as it may be embodied in other forms of construction.

What is claimed is—

1. The combination with a wrapper-applying means, of an adhesive-supplying device, and means for giving said adhesive-supplying device a movement lengthwise of the wrapper-applying means during the wrapping operation, substantially as described.

2. The combination with a wrapper-applying means, of an adhesive-supplying device, means for giving said adhesive-supplying device a movement lengthwise of the wrapper-applying means during the wrapping operation, and means for giving it a movement toward and away from the wrapper-applying

means, whereby the adhesive is supplied at a plurality of separated points during the wrapping operation, substantially as described.

3. The combination with a cigar-header, of an adhesive-supplying device, and means for giving said device a movement lengthwise of the header during the wrapping operation, substantially as described.

4. The combination with a cigar-header, of an adhesive-supplying device, means for giving said device a movement lengthwise of the header during the wrapping operation, and means for giving it a movement toward and away from the header during the wrapping operation, substantially as described.

5. The combination with a cigar-header having a slot therein, of an adhesive-supplying nozzle, and means for moving the nozzle along the slot during the wrapping operation, substantially as described.

6. The combination with a cigar-header having a slot therein, of an adhesive-supplying nozzle, means for moving the nozzle along the slot during the wrapping operation, and means for moving the nozzle toward and away from the slot during the wrapping operation, substantially as described.

7. The combination with a wrapper-applying means, of an adhesive-supplying nozzle, and means for moving the nozzle lengthwise of the applying means during the wrapping operation, substantially as described.

8. The combination with a wrapper-applying means, of an adhesive-supplying nozzle, means for moving the nozzle lengthwise of the applying means during the wrapping operation, and means for moving the nozzle toward and away from the applying means during the wrapping operation, substantially as described.

9. The combination with a wrapper-applying means, of an adhesive-supplying nozzle, a valve in the nozzle, means for moving the nozzle lengthwise of the applying means during the wrapping operation, and means for opening and closing the valve, substantially as described.

10. The combination with a wrapper-applying means, of an adhesive-supplying nozzle, a valve in the nozzle, means for moving the nozzle lengthwise of the applying means during the wrapping operation, means for moving the nozzle toward and away from the applying means during the wrapping operation, and means for opening and closing the valve, substantially as described.

11. The combination with a cigar-header, of an adhesive-supplying nozzle, a valve in the nozzle, means for moving the nozzle lengthwise of the header during the wrapping operation, and means for opening and closing the valve, substantially as described.

12. The combination with a cigar-header, of an adhesive-supplying nozzle, a valve in the

nozzle, means for moving the nozzle lengthwise of the header during the wrapping operation, means for moving the nozzle toward and away from the header during the wrapping operation, and means for opening and closing the valve, substantially as described.

13. The combination with a cigar-header having a slot, of an adhesive-supplying nozzle, a valve in the nozzle, means for moving the nozzle along the slot in the header during the wrapping operation, and means for opening and closing the valve, substantially as described.

14. The combination with a cigar-header having a slot, of an adhesive-supplying nozzle, a valve in the nozzle, means for moving the nozzle along the slot in the header during the wrapping operation, means for moving the nozzle toward and away from the slot during the wrapping operation, and means for opening and closing the valve, substantially as described.

15. The combination with a wrapper-applying means, of a swinging arm, an adhesive-supplying nozzle mounted on said arm, and means for swinging the arm to cause the nozzle to move lengthwise of the applying means, substantially as described.

16. The combination with a wrapper-applying means, of a swinging arm, an adhesive-supplying nozzle pivoted on said arm, means for swinging the arm to cause the nozzle to move lengthwise of the applying means, and means for rocking the nozzle toward and away from the applying means, substantially as described.

17. The combination with a wrapper-applying means, of a swinging arm, an adhesive-supplying nozzle mounted on said arm, a valve for controlling the opening in said nozzle, means for swinging the arm to cause the nozzle to travel lengthwise of the wrapper-applying means, and means for operating the valve, substantially as described.

18. The combination with a wrapper-applying means, of a swinging arm, an adhesive-supplying nozzle pivoted on said arm, a valve for controlling the opening in said nozzle, means for swinging the arm to cause the nozzle to travel lengthwise of the wrapper-applying means, means for rocking the nozzle toward and away from the applying means, and means for operating the valve, substantially as described.

19. The combination with a cigar-header having a slot, of a swinging arm, an adhesive-supplying nozzle mounted on said arm, and means for swinging the arm to cause the nozzle to move along the slot in the header, substantially as described.

20. The combination with a cigar-header having a slot, of a swinging arm, an adhesive-supplying nozzle pivoted on said arm, means for swinging the arm to cause the nozzle to

move along the slot in the header, and means for rocking the nozzle toward and away from the slot, substantially as described.

21. The combination with a cigar-header having a slot, of a swinging arm, an adhesive-supplying nozzle mounted on said arm, a valve for controlling the opening in said nozzle, means for swinging the arm to cause the nozzle to move along the slot in the header, and means for operating the valve, substantially as described.

22. The combination with a cigar-header having a slot, of a swinging arm, an adhesive-supplying nozzle pivoted on said arm, a valve for controlling the opening in said nozzle, means for swinging the arm to cause the nozzle to move along the slot, means for rocking the nozzle toward and away from the slot, and means for operating the valve, substantially as described.

23. The combination with a cigar-header, of a pivoted chamber, an adhesive-supplying nozzle in communication with said chamber, a valve in the nozzle, actuating means for the valve, said means operating after the nozzle has been closed to rock the chamber on its pivot toward the header, and means for rocking the chamber away from the header, substantially as described.

24. The combination with a slotted cigar-header, of a movable arm, a chamber pivoted on said arm, an adhesive-supplying nozzle in communication with the chamber, means for moving the arm to cause the nozzle to move along the slot in the header, a valve in the nozzle, actuating means for the valve, said means operating after the nozzle has been closed to

rock the chamber on its pivot toward the header, and means for rocking the chamber away from the header, substantially as described.

25. The combination with a cigar-header, of a pivoted chamber, an adhesive-supplying nozzle in communication therewith, a valve in the nozzle, a rock-arm for operating the valve, a shaft to which said arm is connected, a slide for rocking said arm, and means for giving the slide a movement first to close the valve and then to rock the chamber toward the header, and means for returning the chamber, substantially as described.

26. The combination with a movable arm, of a slotted cigar-header, an adhesive-containing chamber pivoted on the arm, an adhesive-supplying nozzle communicating with the chamber, means for swinging the arm to cause the nozzle to travel along the slot in the header, a valve located in the nozzle, an arm for operating the valve, a shaft on which said arm is carried, an arm projecting from the shaft, a grooved slide with which said arm engages, means for moving the slide, said slide acting first to close the valve and then to rock the chamber on its pivot, and means for giving the chamber a backward movement as the slide returns, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ALFRED SHEDLOCK.

Witnesses:

DAVID GRANT,
SYDNEY I. PRESCOTT.

Correction in Letters Patent No. 756,900.

It is hereby certified that Letters Patent No. 756,900, granted April 12, 1904, upon the application of Alfred Shedlock, of Jersey City, New Jersey, for an improvement in "Adhesive-Supplying Mechanism," was erroneously issued to said "Shedlock" as owner of said invention; whereas the said Letters Patent should have been issued to *The American Tobacco Company, of New York, N. Y.*, a corporation of New Jersey, as owner of the entire interest in said invention, as shown by the assignments of record in this office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 16th day of August, A. D., 1904.

[SEAL.]

E. B. MOORE,

Acting Commissioner of Patents.

move along the slot in the header, and means for rocking the nozzle toward and away from the slot, substantially as described.

21. The combination with a cigar-header having a slot, of a swinging arm, an adhesive-supplying nozzle mounted on said arm, a valve for controlling the opening in said nozzle, means for swinging the arm to cause the nozzle to move along the slot in the header, and means for operating the valve, substantially as described.

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24. The combination with a slotted cigar-header, of a movable arm, a chamber pivoted on said arm, an adhesive-supplying nozzle in communication with the chamber, means for moving the arm to cause the nozzle to move along the slot in the header, a valve in the nozzle, actuating means for the valve, said means operating after the nozzle has been closed to

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