No. 885,104. PATENTED APR. 21, 1908.

J. J. SULLIVAN.

PASTING AND FEEDING MACHINE.

APPLICATION FILED MAY 1, 1907.

Fig. 1.

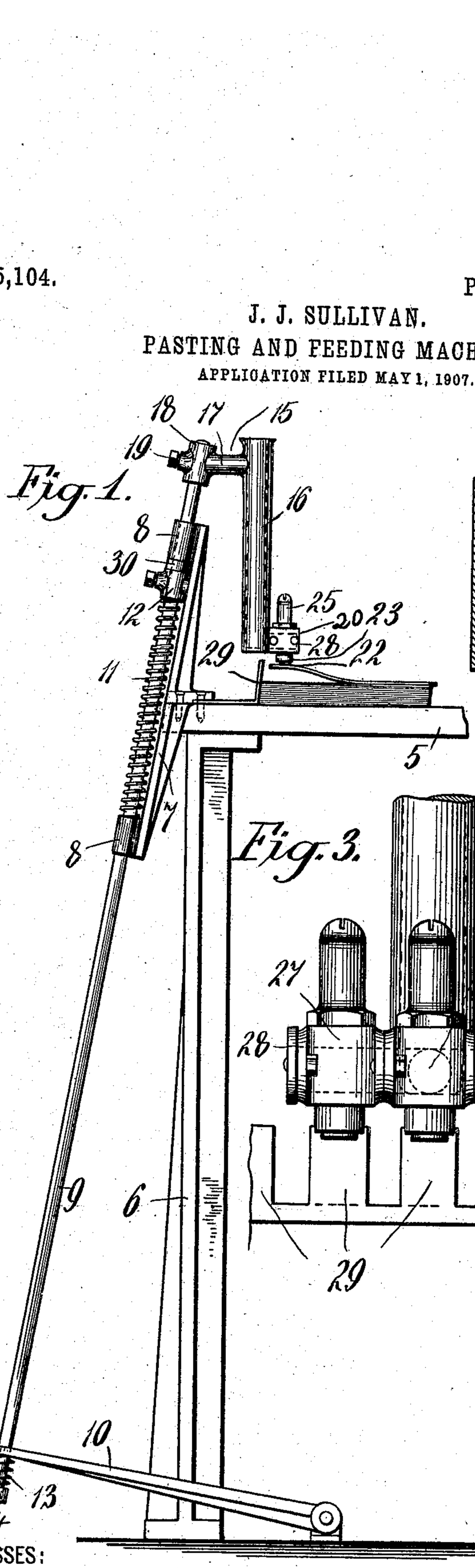


Fig. 2.

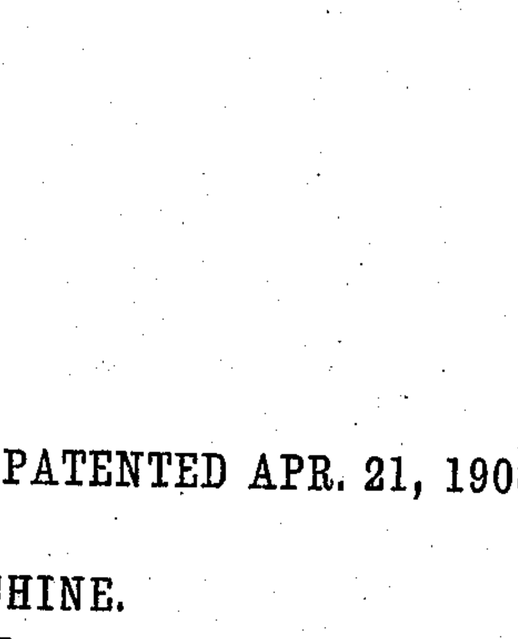
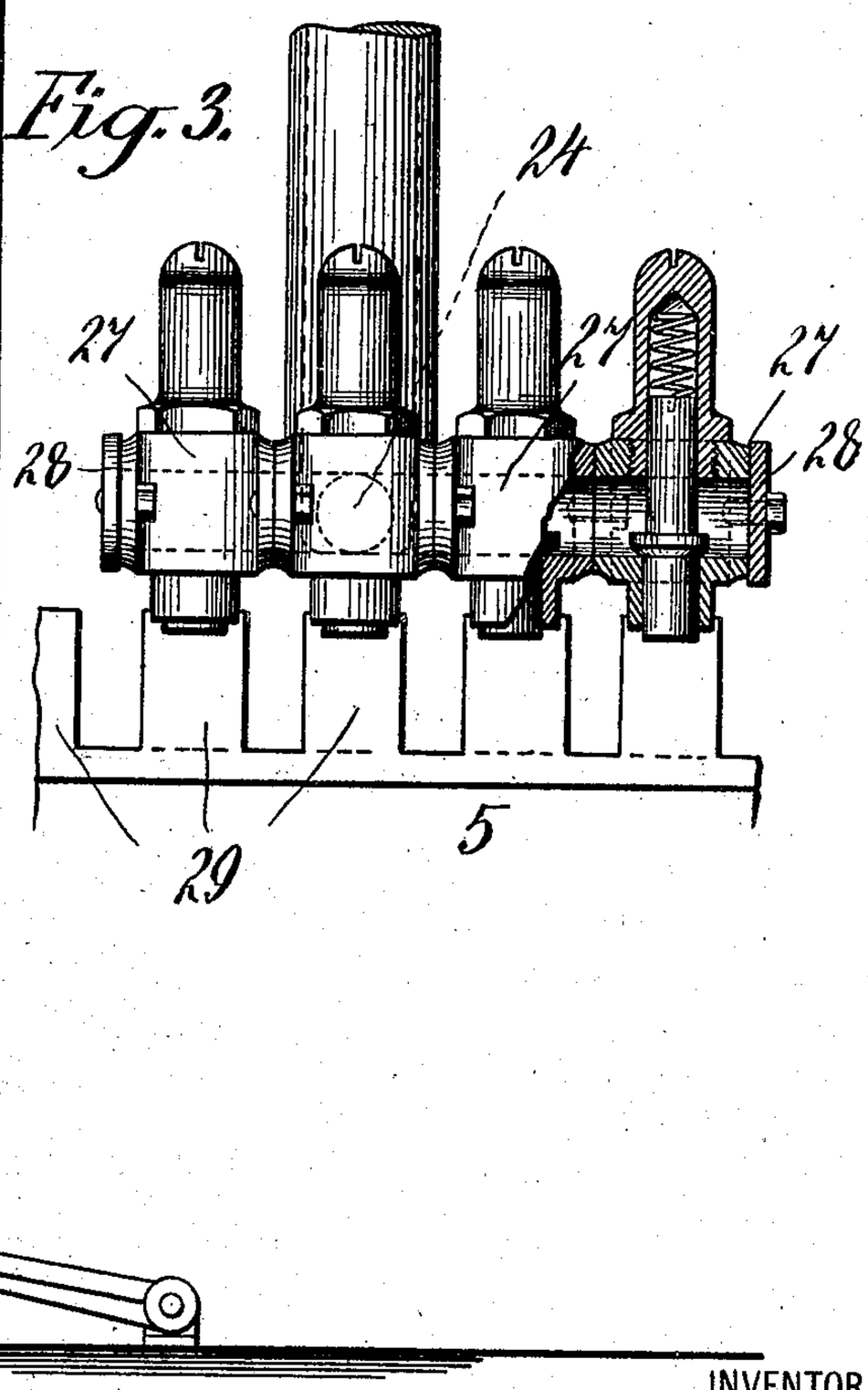


Fig. 3.



WITNESSES:

Geo. A. Klimek

L. Hauerstein

INVENTOR

James J. Sullivan

BY

Chapin & Raymond

HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES J. SULLIVAN, OF LONG ISLAND CITY, NEW YORK.

PASTING AND FEEDING MACHINE.

No. 885,104. Specification of Letters Patent. Patented April 21, 1908.

Application filed May 1, 1907. Serial No. 371,296.

To all whom it may concern:

Be it known that I, JAMES J. SULLIVAN, a citizen of the United States of America, and a resident of Long Island City, county of Queens, and State of New York, have invented certain new and useful Improvements in Pasting and Feeding Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

In wrapping small articles by hand it is usual to provide a pile of wrappers, or labels, as they are often called, the operator picking these labels one at a time from the top of the pile, to apply a small quantity of paste to one edge thereof and to then wrap an article with the label, finally securing the label in position by applying pressure to the pasted portion. To apply paste by hand necessitates the use of both hands, the label being held by one hand, and the brush or other device for applying paste being held by the other. As both hands are required for wrapping the article it then becomes necessary for the operator to lift up and put down the paste brush or other device between every operation. The result is that much time is expended in thus applying the paste and some time is also lost in separating the topmost label from a pile, owing to the well known tendency of thin sheets to adhere together, due largely to the fact that the air is practically excluded from between them.

It is the main object of my invention to provide a simple and efficient semi-automatic means for applying paste or other adhesive material successively to labels, wrappers, or the like, and for separating the labels, one at a time, from the pile in which they are contained, so as to present them thus separated or partially separated for handling.

To this end my invention consists in certain novel details of construction and combination of parts as will be pointed out hereinafter, and in order that my invention may be fully understood I will describe in detail an embodiment thereof such as is illustrated in the accompanying drawings, and will then point out the novel features in claims.

In the drawings: Figure 1 is a view in side elevation of an apparatus or machine constituting such an embodiment. Fig. 2 is a detail view in central longitudinal section and on an enlarged scale, through the lower end of the paste reservoir and paste applying means. Fig. 3 is a detail front view of the same, a portion thereof being shown in vertical section, together with a front view of a portion of a guide employed in connection therewith.

The frame work of the machine comprises a table 5 suitably supported by legs 6, one of which is shown in the drawings, and a bracket 7 which carries the bearings 8 for an operating rod 9. The operating rod 9 is arranged to slide longitudinally in said bearings and is connected at its lower end with a treadle 10 by which it may be depressed, a spring 11 surrounding the said rod 9, and bearing at one end against one of the bearings 8 and at the other end against a collar 12 secured fast upon the said rod 9, forming yielding means against which the said rod is depressed and by which it is lifted when the treadle 10 is released. A spring 13 is shown between the treadle 10 and a collar 14, fast upon the extreme end of the rod 9, to take up excess of movement of the treadle 10 and preventing shock.

Secured to the upper end of the rod 9 is a paste holder or reservoir 15. This paste holder or reservoir comprises a tube 16, an arm 17, and a collar 18, said collar fitted to the rod 9 and secured thereto by a set screw 19; and a lower head 20. The lower head 20 incloses a chamber in open communication with the interior of the tubular portion 16 and forms a support for a valve 21. The said valve is provided with a lower stem 22 which fits loosely in a pendent sleeve 23 projecting downwardly from the head 20 and with an upper stem 24 which is fitted to slide in a bonnet 25 removably secured to the head 20. A spring 26 is disposed between the upper end of the bonnet 26 and the top of the stem 24 and by which the valve 21 is normally held down to its seat. When this said valve is down to its seat the lower end of the stem 22 projects a little bit beyond the lower end of the sleeve 23, as is shown in the drawings. In addition to the head 20, which has just been described and which forms substantially a part of the paste holder or reservoir, I provide a number of similar heads 27—27, which are adapted to be added indefinitely to the device by being secured laterally to each other and to the main head 20. In Fig. 3 I have shown two such heads as secured to the main head 20 upon one side thereof, and one such head as secured thereto upon the other side thereof. These

said heads have open sides so that the interior chambers thereof are arranged in open communication with each other when they are so connected, and in order to close the outer side of the end heads caps 28 are provided which are removably secured in place, such caps adapted to close the main head 20 if such main head only is employed, or to close the outer sides of the end heads where a number of heads are employed, as is shown in Fig. 3. Each of the heads carries a valve 21 with a stem 22 precisely similar to the valve and stem described in connection with the main head 20.

A pile of labels, wrappers, or the like, are disposed upon the table 5 beneath the head or heads which constitutes the paste applying means of the device, such labels, wrappers, or the like, being preferably positioned by a gage 29, the up-rising portion of which is conveniently disposed at an oblique angle with respect to the surface of the table 5.

The operation is as follows: A pile of labels having been placed in position upon the table, the treadle 10 will be depressed by the operator until further downward movement of the paste reservoir is opposed by the paste applying means coming in contact with the topmost label of the pile. The valve stem or stems 22 will be slightly lifted, opening the valve or valves 21, so as to allow a small quantity of paste to be discharged. The stem or stems 22 from previous operations will already have been charged with a small quantity of paste, whereby when they are brought in contact with the label, a small quantity of paste will be applied. When pressure upon the treadle 10 is released and the reservoir is allowed to move up under the influence of the spring 11 the topmost label will also be lifted due to the adhesion of the paste between the label and the paste applying means. The rear end of the label will be lifted as is shown in Fig. 1 of the drawings, separating or partially separating the same from the pile of labels and admitting air to pass in between the said topmost label and the labels beneath it, so that it will be free to be handled, and may be quickly removed without fear of removing more than one label at a time.

It will be noted that in the apparatus shown in the drawings the bearings 8—8 are arranged at an oblique angle so that the path of movement of the paste applying means will be an oblique one. The effect of this will be to carry the topmost label slightly forward with respect to the labels beneath it, so that the front edge thereof will be caused to project beyond the pile of labels below it. This will very largely facilitate the handling of the topmost label as it will practically entirely free the label from the pile.

It will be seen that by the employment of such a machine an operator will have both hands free all the time for wrapping articles. A label to which paste has already been applied by the operation of the treadle may be removed with one hand while the other hand is free to pick up an article to be wrapped and place it upon the wrapper. Both hands may now be used for effecting the wrapping and immediately the wrapping is completed both hands will be free to seize another label and pick up another article. The treadle movement may be effected while the wrapping operation of a preceding article is being carried out so that upon the completion of a wrapping operation a fresh label will always be ready to hand. It will be readily understood that a large amount of time may be saved in the employment of such a machine over the applying of paste by hand and the separating by hand of a label from a pile. It may be noted that the throw of the treadle is arranged to be sufficient to move the reservoir to a position to pick up the various labels as the height of the pile successively diminishes. When a full pile is arranged upon the table the excess of movement will readily be taken up by the spring 13 and at every operation the spring 13 will take up shock which might occur otherwise upon a too violent application of pressure to the treadle. A rubber or leather washer 30 may be provided between the collar 12 and the bearing member 8 to take up shock in the return movement of the reservoir.

The machine is adapted for various widths of label, by the mere employment of a greater or less number of paste applying heads. A single head may be employed where the label is very narrow and a larger number as the width of the label increases. By merely supplying additional heads any width of label may be properly taken care of.

It will be understood, of course, that I employ the term "paste" herein in the generic sense, such term including any adhesive material employed for the purposes of the foregoing.

What I claim is:

1. Apparatus of the class described comprising a table, a bracket supported thereby having bearings arranged at an angle oblique to the table, an operating rod mounted to slide in said bearings, a spring for opposing downward movement of the said rod, a treadle for operating said rod, an overthrow spring between said treadle and said rod, a paste reservoir carried by the upper end of said rod, said paste reservoir provided with a head, and a valve mounted in said head having a stem which projects downwardly therethrough.

2. Apparatus of the class described comprising a reciprocating paste reservoir, said reservoir provided with a laterally projecting head having a chamber in communication therewith, said head having a transverse

opening therethrough from side to side and a vertical opening therethrough from top to bottom, a valve fitted to the opening in the bottom of said head, said valve provided with a downwardly projecting stem which penetrates said opening to the exterior thereof, and having an upper stem, a bonnet fitted to the upper opening in said head and provided with a guide-way for said upper stem, a spring within said bonnet, bearing with yielding pressure upon the upper end of said valve, a plurality of similar heads arranged to be secured side by side to the first said head and to each other, said heads having openings therethrough which register with the side to side opening in the first said head, and caps or closures arranged to be secured to the open sides of the first and the last said heads.

JAMES J. SULLIVAN.

Witnesses.
C. F. CARRINGTON,
L. S. ANDREWS, Jr.