July 7, 1925. 1,545,316

R. HALLER

BREAD WRAPPING AND SEALING MACHINE

Filed April 21, 1923 3 Sheets-Sheet 1

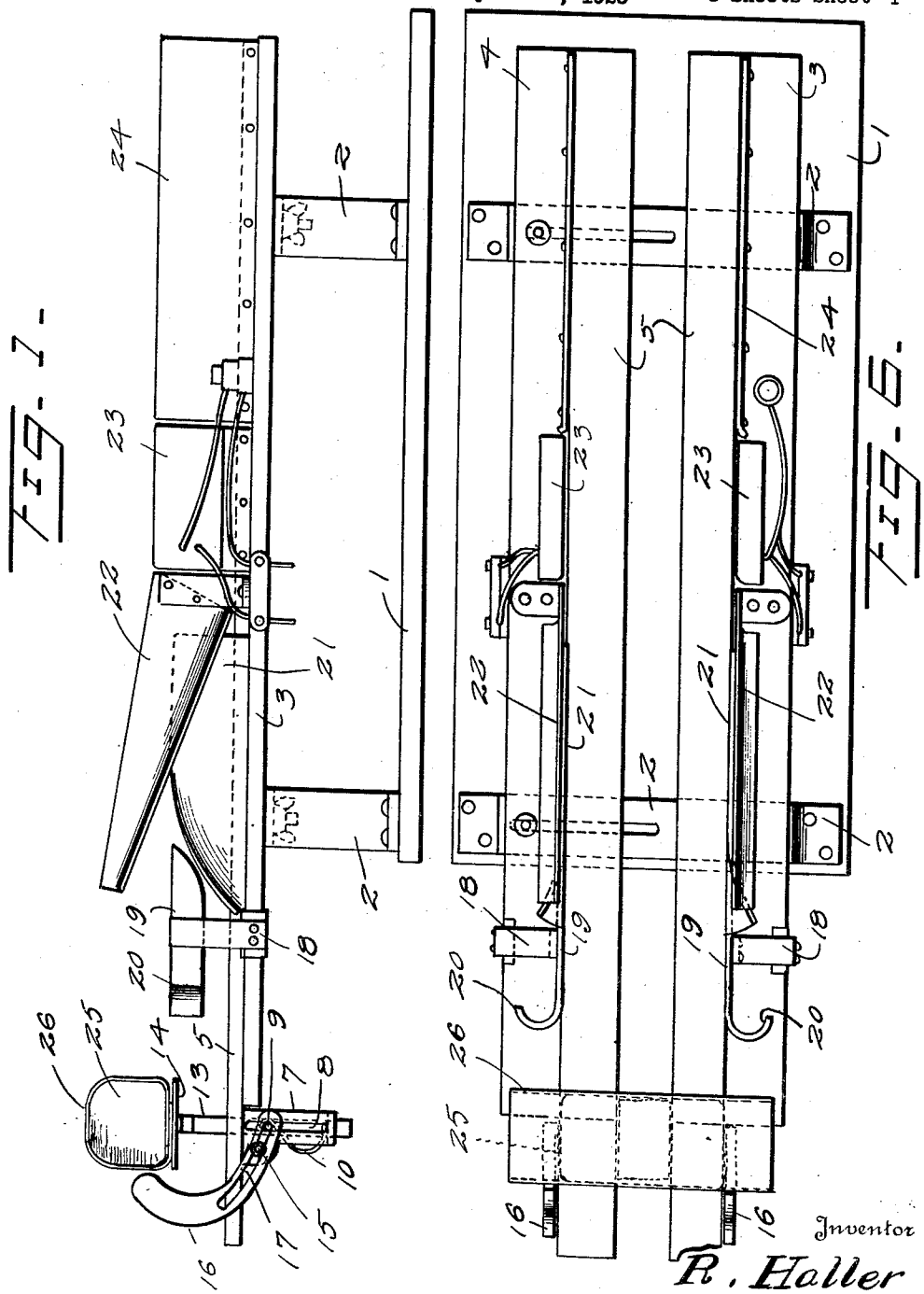


Fig. 7.

Fig. 6.

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Fig. 2.

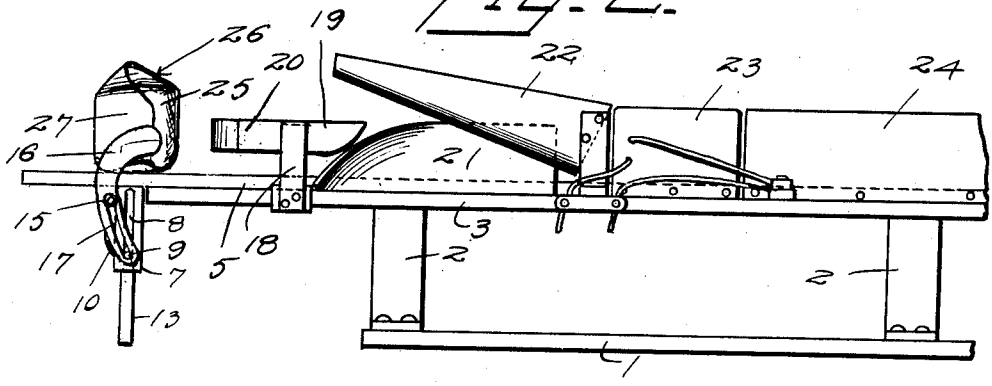


Fig. 3.

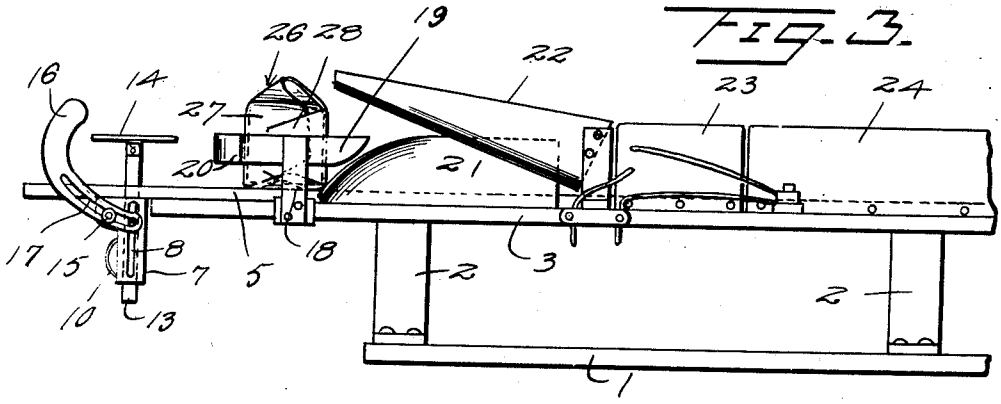


Fig. 4.

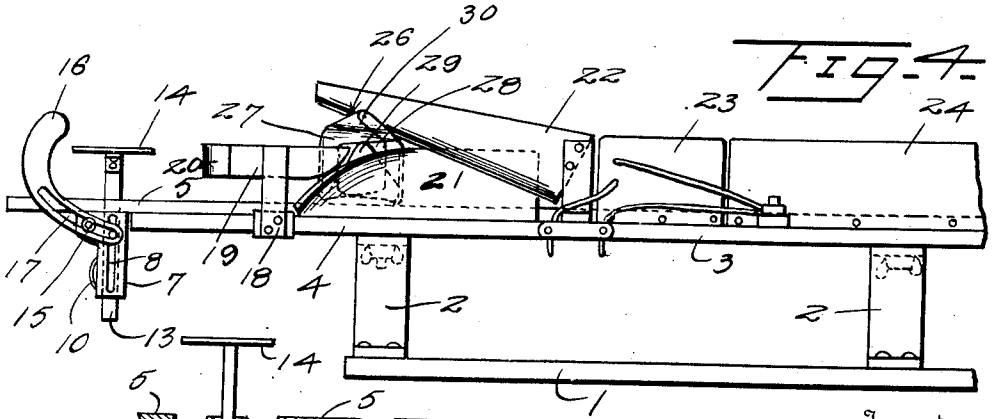
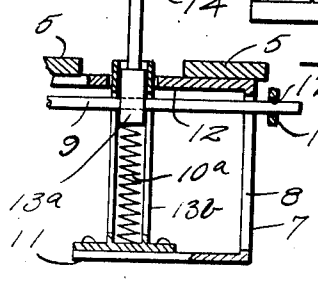


Fig. 10.



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Fig. 5.

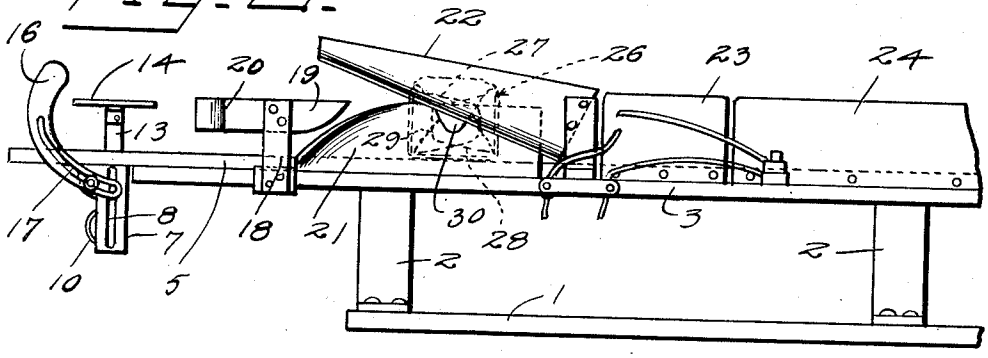


Fig. 7.

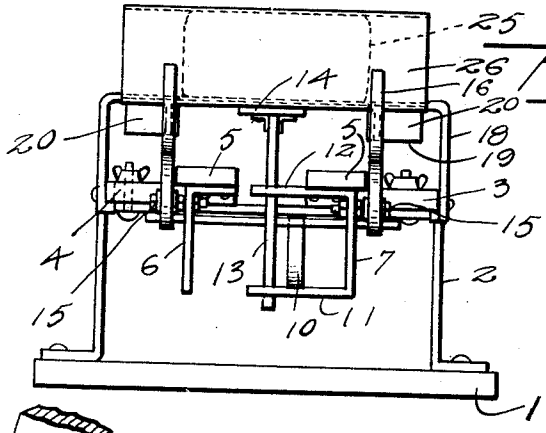


Fig. 8.

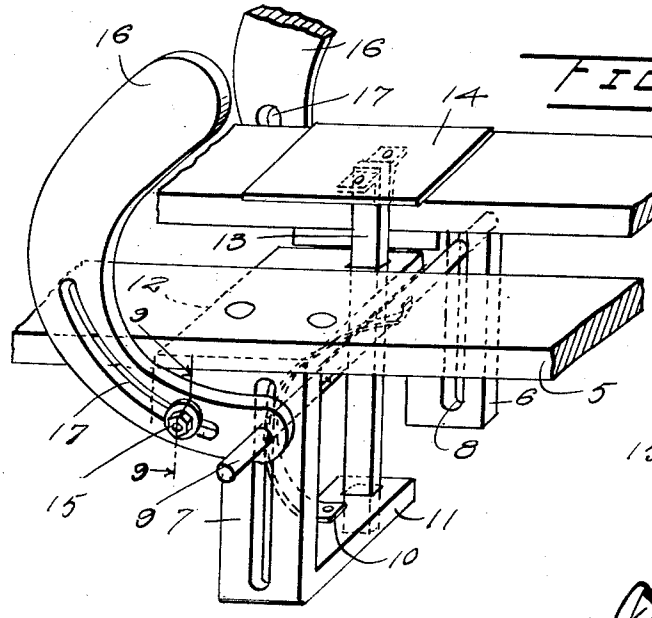
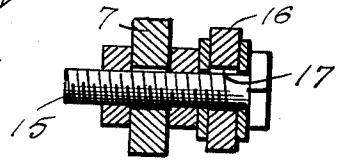


Fig. 9.



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UNITED STATES PATENT OFFICE.

RAY HALLER, OF JASPER, INDIANA.

BREAD WRAPPING AND SEALING MACHINE.

Application filed April 21, 1923. Serial No. 633,689.

To all whom it may concern:

Be it known that I, RAY HALLER, a citizen of the United States, residing at Jasper, in the county of Dubois and State of Indiana, have invented certain new and useful Improvements in Bread Wrapping and Sealing 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.

The present invention has relation to a machine for folding the ends of a wrapper after the same has been placed about a loaf of bread and sealing the folds to prevent loosening of the wrapper or the entrance therein of dust or other foreign matter and to prevent loss of moisture and the drying of the loaf.

Other objects and advantages will be apparent and suggests themselves as the nature of the invention is understood.

While the drawings illustrate an embodiment of the invention it is to be understood that in adapting the same to meet different conditions and requirements, various changes in the form, proportion and minor details of construction may be resorted to without departing from the nature of the invention.

Referring to the accompanying drawings forming a part of the application:

Figure 1 is a side elevation of a bread wrapping and sealing machine embodying the invention, showing the loaf with the wrapper placed thereabout mounted upon the plate preliminary to folding the ends of the wrapper,

Figure 2 is a side view with the plate depressed and the first or rear flap folded,

Figure 3 is a similar view with the second or front flap folded,

Figure 4 shows the third flap or the bottom flap folded,

Figure 5 shows the final step with the top flap folded and preliminary to sealing the flap,

Figure 6 is a top plan view,

Figure 7 an end view,

Figure 8 a detail view in perspective showing more clearly the pivoted folder for forming the first lap and the parts associated therewith,

Figure 9 is a detail sectional view taken on a vertical plane indicated by the line 9—9 of Figure 8, and

Figure 10 is a sectional view of a modified form of supporting means for the depressible article receiving seat.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawings by like reference characters.

The frame of the machine comprises a bed 1, arch supports 2 mounted upon the bed 1 and attached thereto in any preferred way and a base comprising boards 3 and 4, the board 3 being rigidly attached to the supports 2 and the board 4 having adjustable connection with said supports for lateral movement, whereby to adapt the machine for different sized loaves.

The folding mechanism is located at one end of the frame and the sealing mechanism at the opposite end thereof. Ways or table members 5 are mounted upon the base and support the loaves of bread or other article to be wrapped. Brackets 6 and 7 are secured to the rear ends of the ways 5 and depend therefrom, each having a vertical slot 8 for the reception of a rod 9 which is normally held elevated by means of a spring 10. The bracket 7 has an inner extension 11 at its lower end and a corresponding extension 12 at its upper end and these extensions are provided at their inner ends with openings in vertical alinement to receive a stem 13 which is provided at its upper end with a plate 14 constituting a seat to receive the loaf of bread or other article to be wrapped. The rod 9 passes through the stem 13 and moves vertically therewith and is directed in its vertical movement by means of the slots 8. Stud bolts 15 or analogous elements are applied to the upper ends of the brackets 6 and 7 and are disposed outwardly and pivotally and slidably support folders 16 which, in the operation of the machine, form the first or rear flap in the folding of the ends of the wrapper about the loaf of bread or other article. The folder 16 consists of flat arms of elbow shape, the lower member of each of the arms being provided with a longitudinal slot 17 to receive a stud bolt 15 upon which the folder is pivotally and slidably mounted. The rod 9 passes through the lower ends of the folders 16. Upon depressing the rod 9, the folders 16 receive a combined pivotal and sliding movement which results in the formation of the first or rear fold at the ends of the wrapper which has previously been placed about the

loaf of bread or other article to be wrapped.

Other brackets 18 are attached to the ways 5 and support folders 19 which form the second or front flap in the folding of the wrapper. Each of the folders 19 consists of a strip having an end portion 20 curved laterally, said strips being disposed with their straight ends in parallel relation and their curved ends 20 facing outwardly, whereby to engage the forward ends of the wrapper and fold the same rearwardly, whereby to form the front flap. The folders 19 are disposed forwardly of the folders 16.

Other folders 21 and 22 are arranged forwardly of the folders 19 and are attached to the ways 5, the folders 21 being disposed below and inwardly of the folders 22. Each of the folders 21 and 22 consists of an elongated plate, the upper rear edge of each of the plates 21 being curved outwardly and the lower edges of the plate 22 being similarly curved outwardly and downwardly. The folders 21 form the third or bottom flap and the folders 22 form the fourth or top flap.

The sealing mechanism comprises heaters 23 and coolers 24, each partaking of the nature of a plate. The plates 23 are adapted to be electrically heated and in the operation of sealing the wrapper melt the wax applied thereto, whereby the sealing is effected, the plates 24 serving to confine the folds until the wax cools sufficiently to prevent loosening of the folds. The sealing mechanism is likewise attached to the ways 5 so as to be relatively adjustable therewith when adapting the machine to the particular size of loaf or article to be wrapped.

In practice the loaf of bread 25 or other article partly enveloped by the wrapper 26 is placed upon the seat 14 and pressed downward, thereby depressing the seat 14 and operating the folders 16 which form the first or rear flaps 27. The article is now moved forwardly upon the ways 5 and between the folders 19, which form the second or front flaps 28. A continued forward movement of the article results in the formation of the third or bottom flap 29 and immediately thereafter the fourth or top flap 30. The article is now moved forwardly between the heaters 23 which melt the wax applied to the wrapper and seal the same in a manner well understood. As the loaf passes between the plates 24, the folded flaps cool and the wax securing the same sets, thereby completing the sealing. The succeeding loaves effect a delivery of the loaves from between the cooling plates 24. It will thus be understood that the operation may be readily and expeditiously performed since the loaf partly enveloped by the wrapper is placed upon the seat 14 and moved downwardly and forwardly, the ends of the wrapper being automatically folded and sealed without requiring any especial care on the part of the attendant other than applying the wrapper to the loaf and placing the latter upon the seat 14 and pressing it downwardly and forwardly.

In the modification shown in Figure 10 the article receiving seat 14 has its stem provided with an enlargement 13^a which is slidable in a tubular guide 13^b having slots in opposite sides for the passage of the rod 9 which operates the folders 16. A helical spring 10^a is located within the guide 13^b and yieldably supports the seat 14. These parts operate in substantially the same manner as herein described.

What is claimed is:

1. A wrapping machine having a table, a plate normally projected above the table, a bracket below the table provided with a vertically elongated slot, a stem carrying said plate, a rod movable with said stem and disposed in said slot, and folder members, said folder members being engageable with the article supported on the plate and being operable by said rod.

2. A wrapping machine having a table, a plate normally projected above the table, a bracket below the table provided with a vertically elongated slot, a stem carrying said plate, a rod movable with said stem and disposed in said slot, and folder members, said folder members being engageable with the article supported on the plate and being operable by said rod, said bracket having lateral extensions, and said stem being slidably mounted through slots in said extensions.

3. A wrapping machine having a table, a plate normally projected above the table, a bracket below the table provided with a vertically elongated slot, a stem carrying said plate, a rod movable with said stem and disposed in said slot, folder members, said folder members being engageable with the article supported on the plate and being operable by said rod, said bracket having lateral extensions, and said stem being slidably mounted through slots in said extensions, one of said folder members having an elongated slot, and means extending from the bracket into the last mentioned slot to guide the movement of the folder members.

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

RAY HALLER.

Witnesses:
ELENOR GOSMAN,
LEO C. JAHN.