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BREAD WRAPPER SEALER

Filed June 19, 1922

2 Sheets-Sheet 1

Fig. 1.

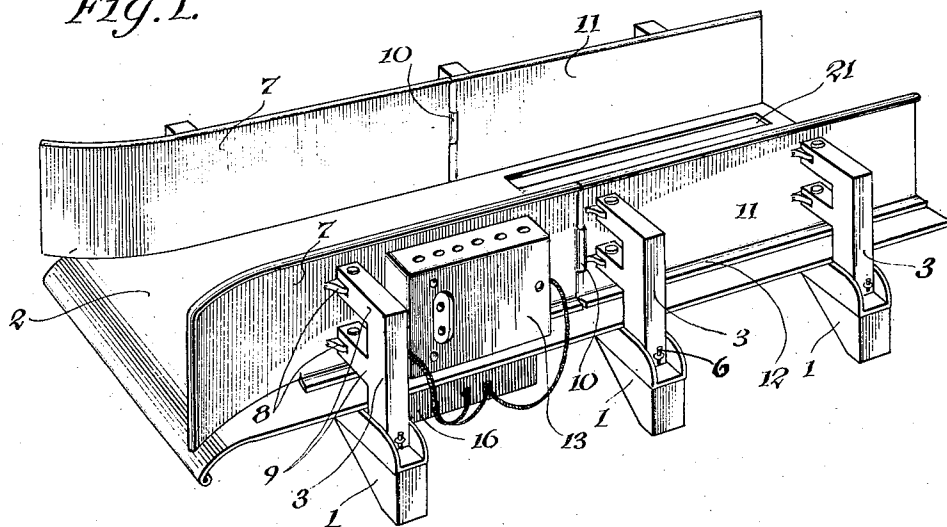
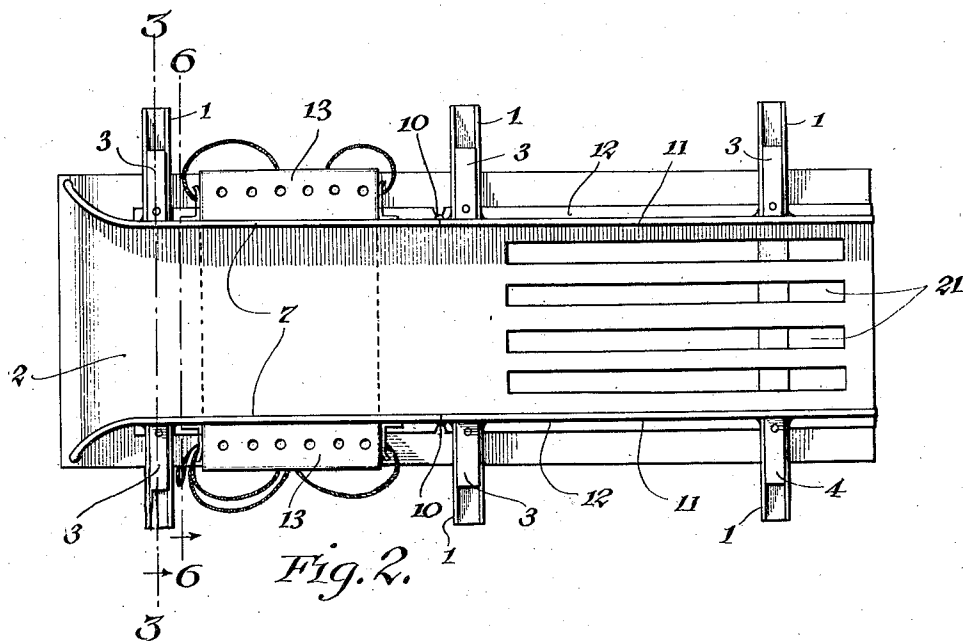


Fig. 2.

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BREAD-WRAPPER SEALER.

Application filed June 19, 1922. Serial No. 569,515.

To all whom it may concern:

Be it known that I, ERNEST L. GALLEA, a citizen of the United States and a resident of Redwood Falls, in the county of Redwood and State of Minnesota, have invented certain new and useful Improvements in Bread-Wrapper Sealers, of which the following is a full, clear, and exact description.

It is a common practice to seal bread in paper wrappers, and this is done by inclosing the commodity in a wrapper of especially prepared waxed paper, and then by the application of heat to the overlapping flaps at the ends and along the bottom of the loaf the package is sealed and rendered practically air-tight; and one of the objects of this invention is to provide an improved machine of this character which will seal the wrappers with ease and rapidity.

Another object of this invention is to provide a machine of this character in which the opposing members are automatically maintained against the ends of the loaf at the proper pressure, whether long or short loaves are being wrapped; the construction being such that this may be accomplished without any tendency to wrench or distort parts of the machine.

A further object of the invention is to provide a machine of this nature which is extremely light in weight; this being an essential feature of the invention, owing to the fact that a large percentage of the work is performed by female employees.

Still another advantage of the invention resides in the provision of a machine of this type which is composed of very few parts which are substantially built, durable, and easy to clean, thereby affording an inexpensive and sanitary device.

Another object of the invention is to provide a machine of this character which will take any size loaf of bread and seal the same without the necessity of making any adjustments whatever.

Further objects and advantages of the invention will appear as the description proceeds.

One particular form of the invention will now be described, it being understood that those skilled in the art may make many changes and modifications without departing from the spirit of the invention as defined in the appended claims; and the draw-

ings forming part of this application are, therefore, to be considered merely as illustrative and not in any limiting sense.

In the drawings:

Figure 1 is a perspective view of the complete apparatus.

Figure 2 is a plan view thereof.

Figure 3 is a vertical transverse sectional view taken on line 3—3 of Figure 2, parts being in elevation and parts being broken away to more clearly show the construction.

Figure 4 is a detail view, showing the preferred manner of mounting the end heating units.

Figure 5 is a detail view of the under side of the apparatus, showing the preferred manner of mounting the bottom heating unit; and

Figure 6 is a vertical transverse sectional view taken on line 6—6 of Figure 2.

Referring to the drawings more in detail, numeral 1 indicates the main supporting frames which extend transversely beneath the table 2 and are rigidly attached thereto; the frames being turned downwardly at right angles at each end, thereby forming supporting legs which are part of the frames. These frames are made hollow and are open at the ends; and the portions of the frame which extend outwardly beyond the table are cut away at the top.

Hollow brackets 3 have relatively long, hollow arms 4 slidably mounted in the frames, the cut out portions of the frames permitting the brackets to move inwardly until they rest against the edges of table 2, and outwardly any desired distance to accommodate long loaves, the frames acting as guides and supports for the arms. A coil spring 5 is housed in each pair of hollow co-operating arms 4 and extends from one upstanding bracket to the opposite bracket, and is secured to these sliding brackets by means of a piece of stiff wire 6, or by other suitable means. By this construction the brackets are normally held inwardly against the table by a resilient pressure, but are permitted to slide outwardly the desired distance in accordance with the size of loaves being sealed. Further, by this arrangement the appearance of the machine is improved, for the springs are not exposed to view, and the apparatus is rendered more sanitary because of the fact that the springs are housed

in such manner that they cannot collect dust, etc.

In the preferred embodiment of the invention three sets of slidable brackets are employed, and these brackets carry oppositely arranged vertical plates adapted to move inwardly or outwardly as conditions demand. Each of these vertical plates is preferably composed of two sections, the front section 7 being outwardly flared and having upper and lower lugs 8, 8 which are received in the two inwardly extending arms 9, 9 of the front set of brackets and are attached thereto by means of cotter pins or the like. The front sections 7, 7 are, in the preferred construction, pivotally attached at 10, 10 to the rear sections 11, 11 of the vertical plates. The rear sections are attached to the brackets in the same manner as the front sections, except that each of the rear sections is attached to two brackets instead of one. Both sections of the vertical plates are preferably provided with short outwardly extending flanges 12.

In order that the wax or paraffin in the wrapper may be melted, it is necessary that heat be applied to the forward portion of the table and vertical plates, and the means by which this is accomplished will now be described.

Electrical heating units 13, 13 are mounted on the front sections 7, 7 and these electric heaters are preferably mica units, having the usual resistance elements and asbestos fillers. The sections 7, 7 are provided with resilient fingers 14, 14 which are adapted to receive lugs or buttons 15, 15 provided on the containers of the heating units, whereby the heating units may be instantly snapped into place or removed therefrom, thus permitting inspection when necessary, and also rendering the apparatus more sanitary, in that all parts may be easily and thoroughly cleansed.

Another electrical heating unit, which is preferably of the resistance coil type, is indicated by numeral 16. This unit extends entirely across the bottom of plate 2 and is detachably connected thereto. The specific means for detachably mounting the heating unit on the plate 2 consists of a small bracket 17 mounted on the plate and adapted to receive a lip 18 provided on the heating unit, while a similar lip on the opposite end of the heating unit is received in a sliding latch 19. By an inspection of Figures 5 and 6 it will be apparent that it is only necessary to withdraw the sliding latch, thereby releasing the lip 18 and permitting the heating unit to be removed.

All three of the heating units are wired together and the usual plug 20 is provided for opening and closing the circuit.

The cooling portion of the plate 2 is slotted, as indicated by numeral 21, thereby

permitting a circulation of air to aid in quickly cooling the wrapper after heat has been applied.

The operation of the apparatus is as follows:

The operator stands near the receiving end of the device, wraps a loaf of bread in a waxed paper wrapper, inserts it between the opposed upright members, and presses it slightly forward until it rests over the heat unit 16 and between the heat units 13, 13. He then leaves the loaf at that point while he wraps another and inserts it between the plates, pushing it forward along the table against the first loaf until the second loaf rests between the heat applying units. This provides a continuously operating device, since one loaf is made to force the next loaf forward toward the delivery end of the machine, where they may be gathered and disposed of as desired. While the wrapper remains between and over the heat-applying units the heat partially melts the wax, and when the wrapped loaf has been moved along into the cooling space the wax sets very rapidly. It is very desirable that the wax should set rapidly; and there are two features of construction in the present invention which greatly assist in accomplishing this desirable result. In the first place, the cooling portion of the table is slotted, thereby permitting a free circulation of air, with a consequent cooling action on the wrapper. In the second place, the upright opposing plates adjacent the colling and delivery end are not integral with the opposing heat-applying plates at the receiving end, and hence the flow of heat from the receiving sections to the cooling sections is obstructed; so that the delivery sections of the opposing plates have the function of holding the wrappers in position while setting, but they do not act to retard the cooling, as is the case when the heat-applying portions and the delivery portions of the opposing plates are integral.

As previously indicated, the machine is adapted to seal loaves of varying length. To accomplish this function the oppositely disposed upright plates are normally forced inwardly against the edges of the table by springs; and when a loaf is introduced the upright plates are forced outwardly to a certain extent, depending on the length of the loaf. If the front and rear portions of the upright plates were integral, then it would be apparent that the rear portions of the machine would be subjected to a rather severe wrenching strain when the front portions of the upright plates were forced outwardly; but by hingedly connecting the front and rear sections any tendency to wrench or distort parts of the machine is entirely eliminated.

From the foregoing description it will be

apparent that the apparatus is extremely neat in appearance, light in weight, simple in construction, effective in operation; and that by housing certain parts of the apparatus, and by rendering other parts quickly removable, an unusually sanitary device is provided.

In accordance with the patent statutes, what is now thought to be the best embodiment of the invention has been described, but it is not to be understood as limiting the scope of the invention, as many changes and modifications may be made without departing from the spirit of the invention; and all such I aim to include in the scope of the appended claims:

What I claim as new and desire to secure by Letters Patent is:

1. In an apparatus of the character described, a table, upright oppositely disposed plates movably mounted on said table, heating units associated with the table and plates, other upright oppositely disposed plates movably mounted on said table and extending rearwardly from the first mentioned plates, the two plates being detachably connected.

2. In an apparatus of the character described, a table, upright oppositely disposed plates movably mounted on said table, heating units associated with the table and plates, other upright oppositely disposed plates movably mounted on said table and extending rearwardly from the first mentioned plates, the two plates being hingedly connected.

3. In an apparatus of the character described, a table, a heating unit detachably mounted on the under side of said table, oppositely disposed upright plates movably mounted on said table, heating units detachably mounted on said plates, other upright oppositely disposed plates movably mounted on said table and hingedly connected to the first mentioned plates, the rear portion of said table being provided with openings to permit the free circulation of air.

4. In an apparatus of the character described, a plurality of frames, a table mounted thereon, heat-applying means associated with the table, oppositely disposed arms slidably mounted in said frames, springs mounted in said frames and tending to draw the arms inwardly, brackets carried by the arms, oppositely disposed plates carried by said brackets, and heat-applying means associated with the plates.

5. In an apparatus of the character described, a plurality of hollow frames, a table mounted on said frames, oppositely disposed hollow arms slidably mounted in said frames, springs housed in the frames

and normally forcing the arms inwardly, brackets carried by the arms, oppositely disposed plates carried by the brackets, and heating units carried by the plates.

6. In an apparatus of the character described, a plurality of frames, a table mounted on said frames, oppositely disposed arms mounted in said frames, springs tending to cause said arms to approach each other, brackets carried by said arms, oppositely disposed plates pivotally mounted on the forward pair of brackets, oppositely disposed plates pivotally mounted on another pair of brackets in rear of the first mentioned brackets, the front and rear plates being hingedly connected, and heating units carried by the front plates.

7. An apparatus of the character described, including three frames, a table mounted on said frames, a pair of oppositely disposed arms mounted in each of said frames, springs tending to cause said arms to approach each other, brackets carried by said arms, oppositely disposed plates pivotally mounted on the front pair of brackets, heating units mounted on said plates, oppositely disposed plates extending rearwardly from the first mentioned plates, each of said rear plates being pivotally attached to two of the brackets, and the front and rear plates being hingedly connected.

8. An apparatus of the character described, including a table, an electrical heating unit detachably mounted on the under side of said table, oppositely disposed plates movably mounted on the table, electrical heating units detachably mounted on said plates, the three heating units being wired together.

9. An apparatus of the character described, including a table, a heat-applying unit detachably mounted on the under side of said table, oppositely disposed plates movably mounted on said table, resilient fingers provided on the outer side of said plates, and heat-applying units detachably secured to the plates by said resilient fingers.

10. An apparatus of the character described, including a table, a bracket mounted on the under side of said table, a heat-applying unit, a lip formed on one end of the container for the heat-applying unit and adapted to be received in the bracket, a sliding latch mounted on the under side of the table, a lip formed on the other end of the container and adapted to be engaged or disengaged by said latch, oppositely disposed plates movably mounted on the table, and heat-applying units detachably mounted on the plates.

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