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BREAD BORING APPARATUS

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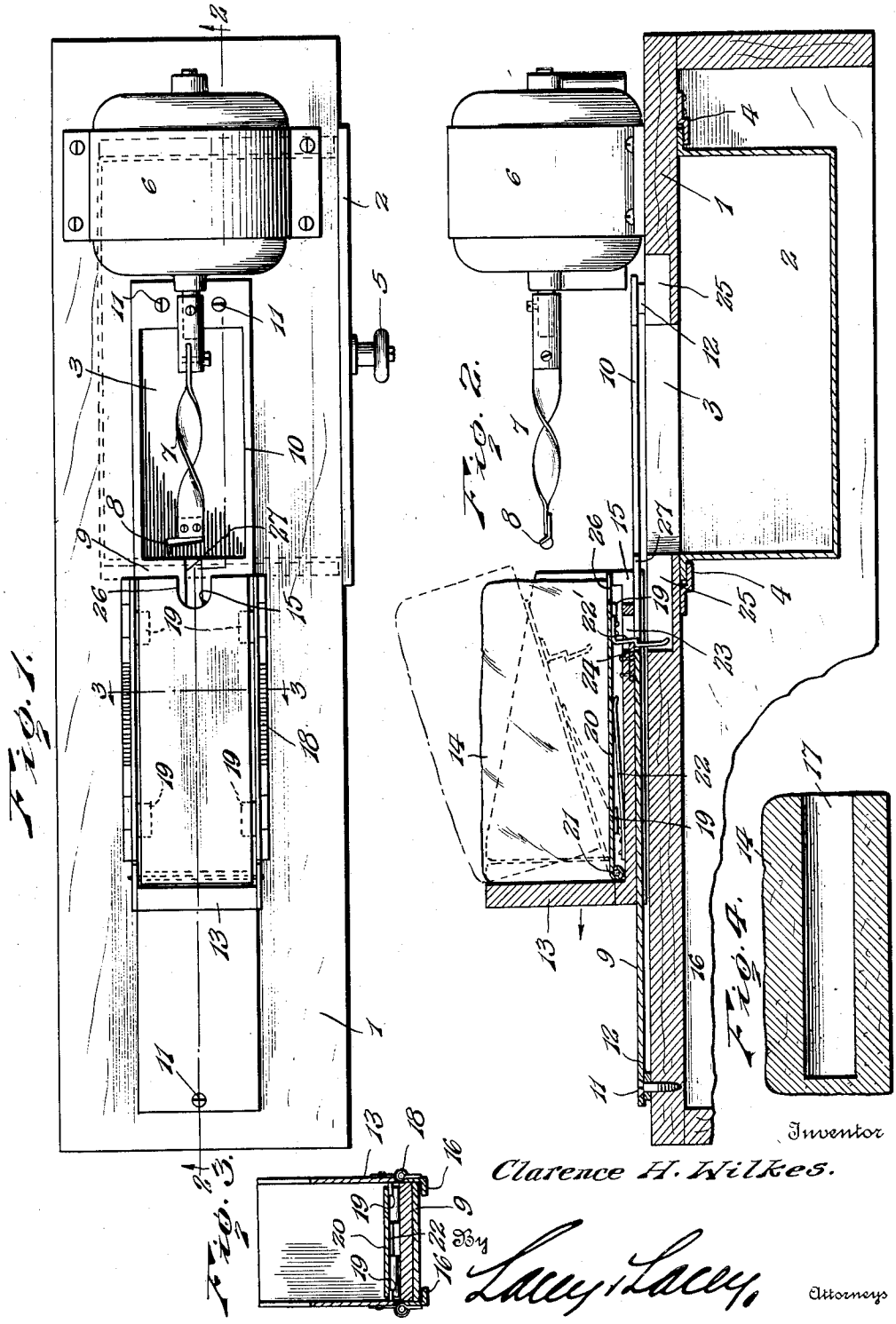


Fig. 1.

Fig. 2.

Fig. 4.

Fig. 3.

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BREAD-BORING APPARATUS

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4 Claims. (Cl. 146—106)

Patrons of roadside sandwich stands and similar eating places have created a demand for sandwiches which consist of a roll or biscuit having an opening bored therein from one end and a sausage or other edible commodity inserted in the opening. The present invention has for its object the provision of a simple, inexpensive and efficient mechanism whereby the desired opening or socket may be readily and rapidy formed in the biscuit or roll without excessive waste and without marring the appearance of the roll. It is also an object of the invention to provide means whereby the bored roll will be delivered from the holder automatically. The invention is illustrated in the accompanying drawing and will be hereinafter fully described, the novel features being defined in the appended claims.

In the drawing,

Figure 1 is a plan view of an apparatus embodying the present invention,

Figure 2 is a longitudinal section on the line 2—2 of Figure 1,

Figure 3 is a transverse section on the line 3—3 of Figure 1.

Figure 4 is a longitudinal section of a roll in which an opening has been made.

In carrying out the present invention, there is provided a base 1 which may be of any preferred dimensions and form and includes a top supported upon any convenient side walls or pedestal, a drawer 2 being accommodated below the base immediately under an opening 3 formed therein. The drawer 2 is slidably mounted upon cleats 4 secured upon the underside of the base and is equipped with a knob 5 or other handle so that it may be readily withdrawn when necessary to discharge its contents. Mounted upon the base 1, at one side of the opening 3, is a small electric motor 6 which may be of any known form and is illustrated in a conventional manner only. An auger 7 is secured upon the end of the motor shaft and is equipped at its end with a reamer or bit 8 which is removably secured to the auger so that bits of different sizes may be interchangeably used, as desired, and a sharp bit may be substituted easily for a bit which has become too dull for further successful use. Upon reference to the drawing, it will be noted that the auger is located directly over the opening 3 in the base and, therefore, crumbs which may be turned from the roll in the boring operation will be caused to drop through the opening and collect in the drawer. Secured upon the base, in alinement with the motor and the auger, is a guide plate 9 having an opening 10 therein which registers with the opening 3 in the base, as shown, said plate 9 being secured upon the base by countersunk fastening screws 11 which pass through spacing blocks 12 whereby the plate will be disposed in spaced relation to the base. A box or holder 13 is slidably mounted upon the plate 9 and is adapted to be pushed to and from the auger when a roll, indicated at 14, is to have an opening formed therein. The bottom and end of the holder are preferably formed of wood and the bottom is provided with a central notch 15 to accommodate the fingers of the operator placing a roll in the holder. The sides of the holder are preferably formed of sheet metal and extend below the bottom, the lower edges of the side walls being turned inwardly to define flanges 16 which engage under the edges of the plate 9, as clearly shown in Figure 3, and thereby retain the holder upon the plate and also guide it in its movements.

As clearly shown in Figure 3, the side walls of the holder are in sections, the lower section being rigidly secured to the edges of the holder bottom and the upper sections being connected to the lower sections by spring hinges 18. On the inner sides of the side walls, immediately adjacent the lower edges thereof, are inwardly projecting lugs 19 which engage a false bottom 20 in the holder. This false bottom is hinged, as shown at 21, to the closed end of the holder, and a spring 22 bears against its under side and tends constantly to swing it upwardly, as indicated by dotted lines in Fig. 2. On the underside of the false bottom, near the free end thereof, is secured a resilient latch 22′ which projects downwardly through an opening 23 in the true bottom and engages a lug or catch 24 to hold the false bottom in its lowered position, recesses 25 being provided in the end walls of the opening 3 to accommodate the latch. The false bottom has a notch 26 in its free end corresponding to the notch 15 in the true bottom, and a notch 27 in the guide plate accommodates the latch.

The operation of the device will now be readily understood. The roll is placed within the holder, which has an open top and end, with one end of the roll abutting the closed rear end of the holder, as clearly shown in Figure 2. The holder, with the roll therein, is then pushed toward the auger which is rotated by the motor in an obvious manner, and the end of the auger will engage the end of the roll at the center thereof so that an opening will be formed in the roll longitudinally thereof, as shown at 17 in Figure 4. The engagement of the sides of the holder with the guiding and supporting plate 9 maintains the

roll in proper alinement with the auger, and the spacer blocks are so arranged that they will not interfere with the movement of the flanges 16. The roll, however, cannot be pushed beyond the side of the motor or the motor casing and, consequently, the opening formed by the auger will not extend entirely through the roll but will leave one end thereof closed, also as shown in Figure 4. All the crumbs which are drawn from the roll by the auger will drop at once into the drawer 2 and, when the drawer has been filled, it may be removed and suitable disposition made of the crumbs. The crumbs will be clean and are generally uniform so that they need not be thrown away but may be utilized in cooking wherever bread crumbs are now employed. The device is very simple and compact, and will make make the openings in the rolls rapidly and of uniform character and of proper diameter to accommodate a sausage or other commodity which may be desired.

By interchangeably using bits 8 of various sizes, the diameter of the openings in the rolls may be varied so as to accommodate commodities of different thicknesses, and the exterior of the roll will be left intact and without any marring of its appearance.

The roll, in the holder, rests on the false bottom between the sides which are held in upright position by the pressure exerted upon the lugs 19 through the false bottom. When the holder recedes from the auger, the false bottom remains in the lowered position until the latch is brought against the end wall of the recess 25, whereupon the impact releases the latch and the spring 22 immediately swings the false bottom upwardly, the upper side sections turning outwardly under the influence of the springs at the hinges 18. It will be noted that lugs 19 are placed close to the hinge 21 so that the outward movement of the sides will be limited although they will free the roll which may be easily removed. When another roll is placed in the holder, reverse movement of the parts will occur so that the roll will be firmly held until after it has been bored and released as described.

Having thus described the invention, I claim:

1. An apparatus for the purpose set forth comprising a support having an opening therein, a power driven auger mounted on the support, a receptacle upon the support below the opening therein, a guide plate secured upon the support in spaced relation thereto and having an opening below the auger and registering with the opening in the support, a bread holder slidably mounted on the plate and movable toward and away from the auger, said bread holder including a false bottom having one end thereof pivotally connected with the holder, and means for elevating the free end of the false bottom to partially eject the bread from the holder after retraction from the auger.

2. An apparatus for the purpose set forth comprising a boring tool, and a roll-holder movable to and from said tool and including a false bottom, swinging sides, means whereby the sides will be held raised when the false bottom is lowered, a latch for holding the false bottom in lowered position, and means for raising the false bottom when the latch is released.

3. An apparatus for the purpose set forth comprising a support having an opening therein, a boring tool mounted on the support at one side of the opening, a holder slidably mounted on the support to move to and from the boring tool, the holder having an upwardly swinging false bottom and hinged sides, yieldable means tending constantly to swing the sides outwardly, yieldable means tending constantly to swing the false bottom upwardly, lugs on the sides engaging under the false bottom whereby the sides will be held raised, and a latch on the false bottom engaging the true bottom of the holder to hold the false bottom lowered, said latch depending into the opening in the support to be released by impact upon the end wall of the opening upon withdrawal of the holder from the boring tool.

4. An apparatus for the purpose set forth comprising a boring tool, a bread holder movable toward and away from the tool, said bread holder including a movable bottom having that end thereof remote from the boring tool pivotally connected with the holder, and means for elevating the free end of the bottom to partially eject the bread from the holder after retraction from the boring tool.

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