Sept. 8, 1953 L. X. GARFUNKEL 2,651,430

PATTY RECEIVING DEVICE

Filed June 1, 1951 2 Sheets-Sheet 1

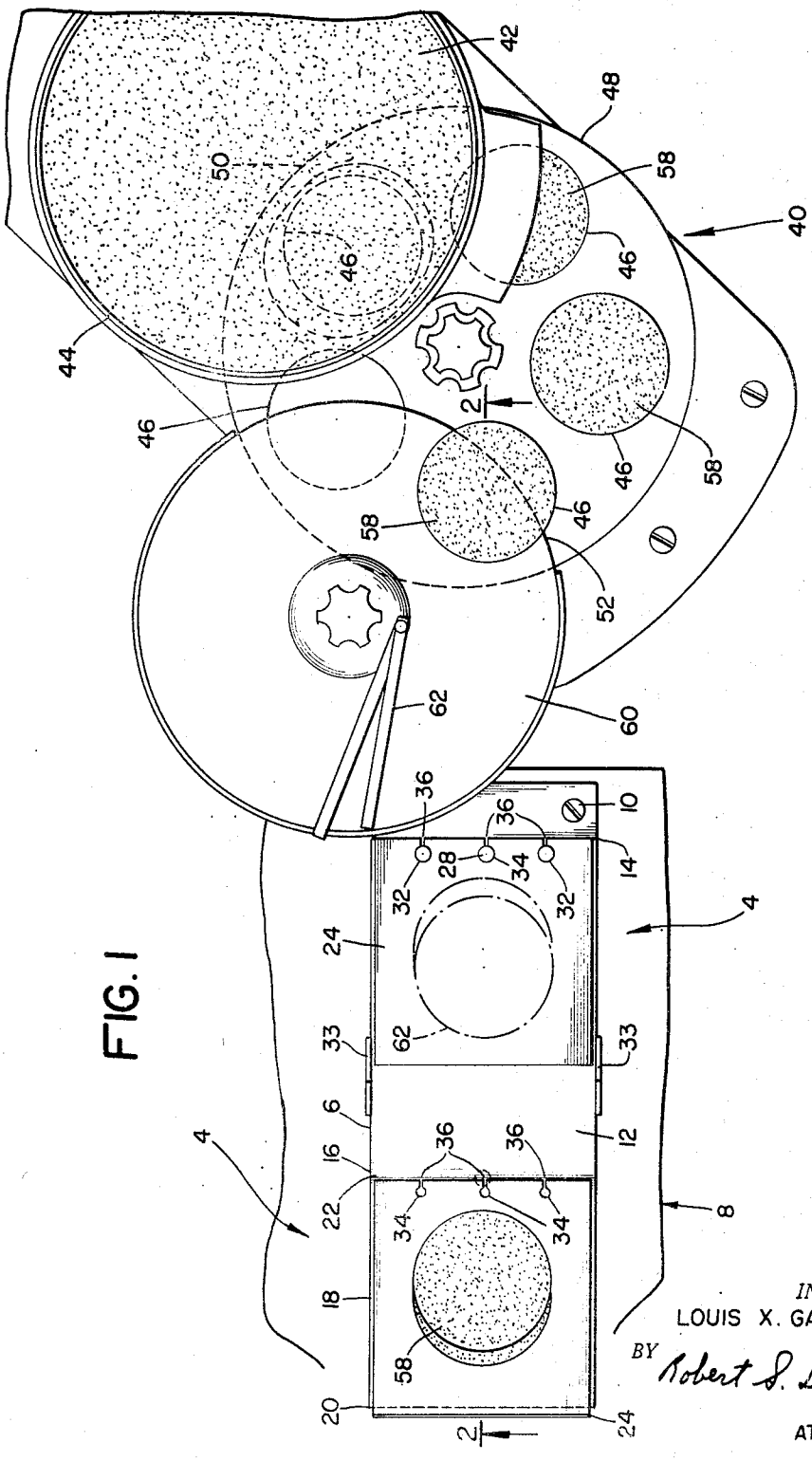


FIG. 1

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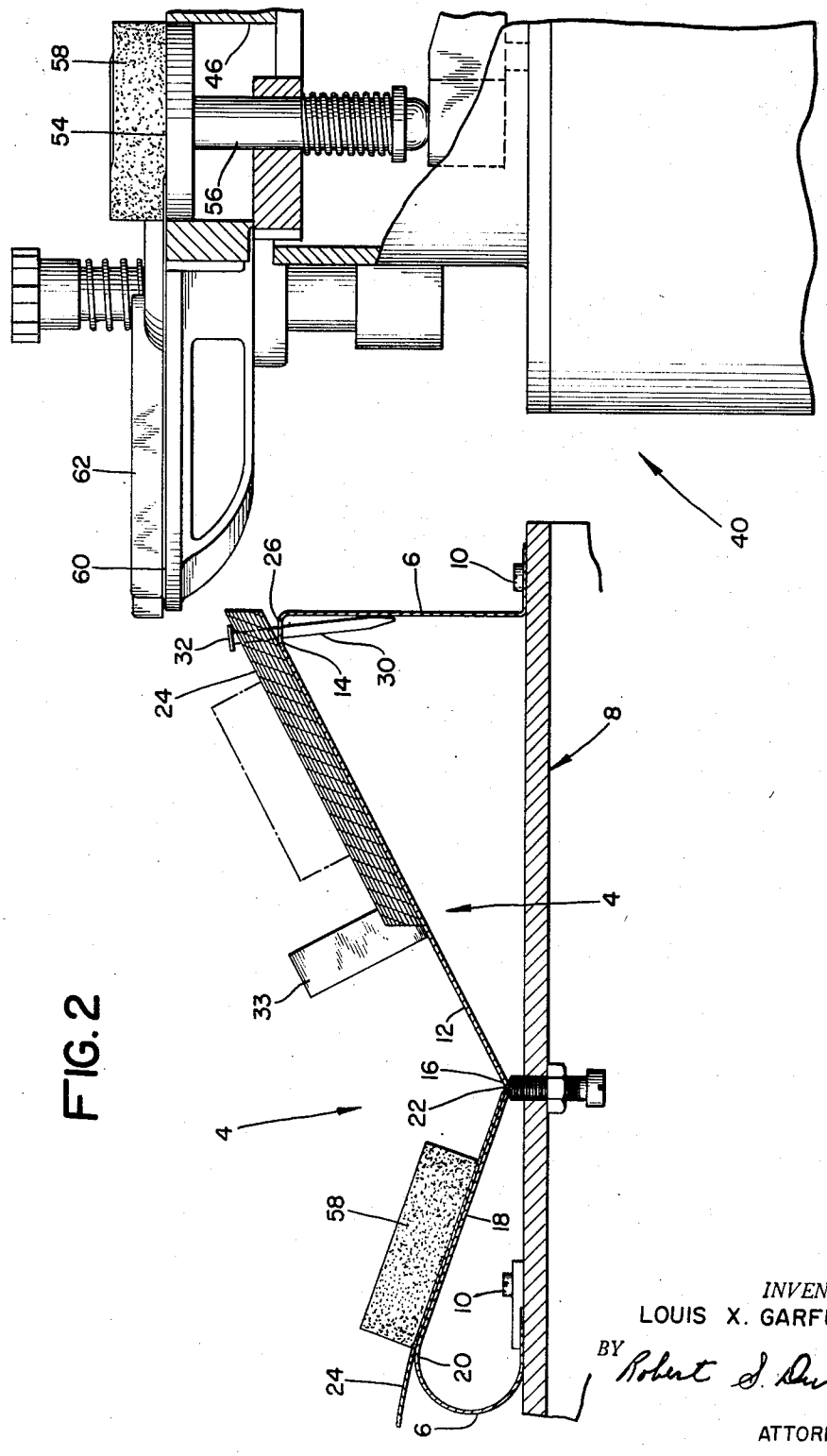


FIG. 2

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PATTY RECEIVING DEVICE

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5 Claims. (Cl. 216—58)

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This invention relates to a device for receiving patties of hamburger or the like, and more particularly pertains to such a device for use in conjunction with an automatic patty-forming machine. Such a machine will deliver patties at a rapid rate, for example 1200 per hour to 3600 per hour (i. e. one every second). The patties in the case of one type of machine known in the art are expelled laterally from the machine at a predetermined ejection point. The patties must then be collected, for storage, for example, rapidly and without damage thereto. It is unsatisfactory to perform this operation manually. Some device is needed to receive the patties and carry them away from the machine. The device of the invention is admirably suited to fill such need.

In the device of the invention, the upper end of an inclined chute is positioned adjacent to the point of the patties' ejection from the machine. A stack of paper or the like is impositively held upon the upper end of the chute, and as each patty is ejected from the machine and falls upon the stack, the topmost wafer is removed by the patty, and the patty and the wafer slide down the chute together, the patty riding upon the wafer. At the bottom of the chute, the patty and its wafer may be easily removed, ready for storage.

It is an important object of the invention to provide a patty-receiving device which is simple and inexpensive of construction.

It is another object to provide such a device which will be of sure operation.

The above and other objects and advantages will appear more clearly from a consideration of the following description taken together with the accompanying drawings in which:

Fig. 1 is a plan view of the patty-receiving device of the invention together with a portion of an associated automatic patty-forming machine; and

Fig. 2 is a sectional view taken along line 2—2 of Fig. 1, in which the illustrated parts of the patty-forming machine are drawn to a larger scale than in Fig. 1.

Like reference numerals denote like parts in the various views.

As illustrated, the patty-receiving device, indicated generally at 4, includes a body portion 6, which is mounted on a table 8, being secured thereto by screws 10.

An important part of the body portion 6 is a main chute 12 in the form of an inclined plane and having upper and lower ends 14 and 16, respectively. A second, or auxiliary chute 18, likewise in the form of an inclined plane, and having upper and lower ends, 20 and 22, respectively, forms a continuation of the chute 12. It will be seen that the lower end 16 of the chute 12 coincides with the lower end 22 of the chute 18.

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The body portion 6 may be formed of any suitable material, such as spring steel, for example.

A stack of wafers 24 which may be of paper, for example, is impositively held in place on the chute 12 and near its upper end by releasable holding means, which in the case of the illustrated embodiment of the invention may be described as follows: A number of holes 28 are cut in a flattened portion 26 of the body 6 along the upper end 14 of the body portion 6. One such hole 28 would be sufficient, but three are provided in the illustrated embodiment. Only one hole 28 is visible in the drawings, for reasons which will appear hereinafter. The wafers 24 are provided with holes 34 near their right-hand edges, corresponding to the holes 28 in the body portion 6. Slots 36 are cut from the holes 34 to the right-hand edges of the wafers 24. A rod 30 having a head 32 on its upper end is inserted into each one or more of the holes 28 and through the corresponding holes 34 in the wafers 24. The heads 32 of the rods 30 are larger in diameter than are the holes 28 and 34, the heads 32 resting upon the top of the stack of wafers 24. In the illustrated device 4, the two outermost holes 28 and 34 in the body portion 6 and in the wafers, respectively, have been selected for the insertion of rods 30, so that the outermost holes 28 (Fig. 1) are covered by the heads 32 of the rods 30, and the corresponding holes 28 and 34 are therefore not visible. The width of the slots 36 is preferably slightly narrower than the diameter of the rods 30.

The construction is such that the wafers 24 will not slide down the chute 12 of their own weight alone. This is principally because of the resistance offered to such sliding by the slots 36 of the holes 34, the slots being less in width than the diameter of the rods 30.

Wafer guides 33, in the form of tabs extending upwardly from both sides of the chute 12 are provided, and may be integral with or rigidly affixed to the chute 12.

To the right of the device 4 there is shown a portion of an automatic patty-forming machine known in the art and indicated generally at 40, the construction and operation of which will be described. The machine 40 is of the type referred to above which will deliver patties laterally at a rate of from about 1200 per hour to

about 3600 per hour, for example. The device of the invention may be typically used in conjunction with such machine, and is well suited to receive patties therefrom and to carry the patties away from the machine.

Prepared food mixture **42** is placed in or dropped into a hopper or container **44** which is held in place by a container base (not shown). A revolving propeller paddle (not shown) pushes the desired amount of food mixture **42** into cylindrical molds **46** to form patties or cakes **58**. The molds **46** are mounted on a revolving turntable **48** which carries the molds **46** from the filling position **50** to the ejecting station **52**. As a mold **46** approaches the ejecting station **52**, the bottom surface of the mold **46**, which is a piston **54**, having a stem **56**, is driven upward until its top is flush with the top of the turntable **48**. Thus, at this point, the patty **58** is at the level of the turntable **48**. At the ejecting station **52** the patty **58** is removed automatically from the piston **54** by a dull-edge revolving knife **60**, the lower surface of which is flush with the top of the turntable **48**. The patty **58** rides up on the knife **60**, which carries the patty **58** against a bar **62**, and the patty is pushed off of the knife **60** by a combination of centrifugal force and the force exerted on the patty **58** by the bar **62**.

The upper end **14** of the chute **12** and the stack of wafers **24** are directly below the point where the patty **58** falls off of the knife **60**.

Thus in operation, when a patty **58** is deposited upon the stack of wafers **24** in a position indicated by dotted lines **62**, the patty adheres to the top wafer, which is then pulled away from the rods **30** by the weight of the patty, and the patty **58** and the top wafer slide down the chute **12** together, the patty riding on top of the wafer. When they arrive at the lower end **16** of the chute **12**, they continue onto the chute **18** and stop at the position indicated. At this time the operator removes the patty and the wafer together, ready for storage or other use.

The force necessary to remove a wafer **24** from its position at the upper end **14** of the chute **12** may be varied by varying the weight and/or the diameter of the rods **30**, and/or by varying the number of rods **30** used and/or by varying the width of the slots **36**. For example, if it is desired to diminish the amount of force necessary to remove a wafer, it is possible to use only one rod instead of two (or more), the one being inserted into the middle holes **28** and **34**.

While I have described my invention as embodied in concrete form in accordance with the provisions of the patent statutes, it should be understood that I do not limit my invention thereto, since various changes and modifications

may be made without departing from the scope of the invention as defined by the accompanying claims.

Having thus described my invention, I claim:

1. A device for receiving a patty of hamburger and the like comprising a body portion including a main chute having an upper end and a lower end, a stack of wafers, and means for releasably holding said stack of wafers upon and near the upper end of said chute, said holding means including a hole in said body portion and a rod having a head inserted in said hole, said device being so constructed and arranged that when said patty is deposited upon the top of said stack, the top wafer will be released from said holding means, and said patty will slide down to the lower end of said chute upon said top wafer.

2. The invention set forth in claim 1 wherein said wafers are provided with slotted holes and said rod is inserted in said holes as well as in the hole in said body portion.

3. The invention set forth in claim 1 wherein said body portion also includes an auxiliary chute which forms a continuation of said main chute.

4. The invention set forth in claim 1 wherein said body portion is provided with a wafer guide.

5. A device for receiving a patty of hamburger and the like comprising a body portion including a main chute having an upper end and a lower end, an auxiliary chute having an upper end and a lower end, means joining the lower end of said auxiliary chute and the lower end of said main chute, so that said auxiliary chute forms a continuation of said main chute, a stack of wafers having slotted holes therein, means for releasably holding said stack of wafers upon and near the upper end of said main chute, said holding means including a hole in said body portion at the upper end of said main chute and a rod having a head at one end thereof and inserted in said slotted holes and in said hole so that said head rests upon the top of said stack, and a wafer guide, said device being so constructed and arranged that when said patty is deposited upon the top of said stack, the top wafer will be released from said holding means, and said patty will slide down to the lower end of said main chute upon said top wafer, and thence onto said auxiliary chute.

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