

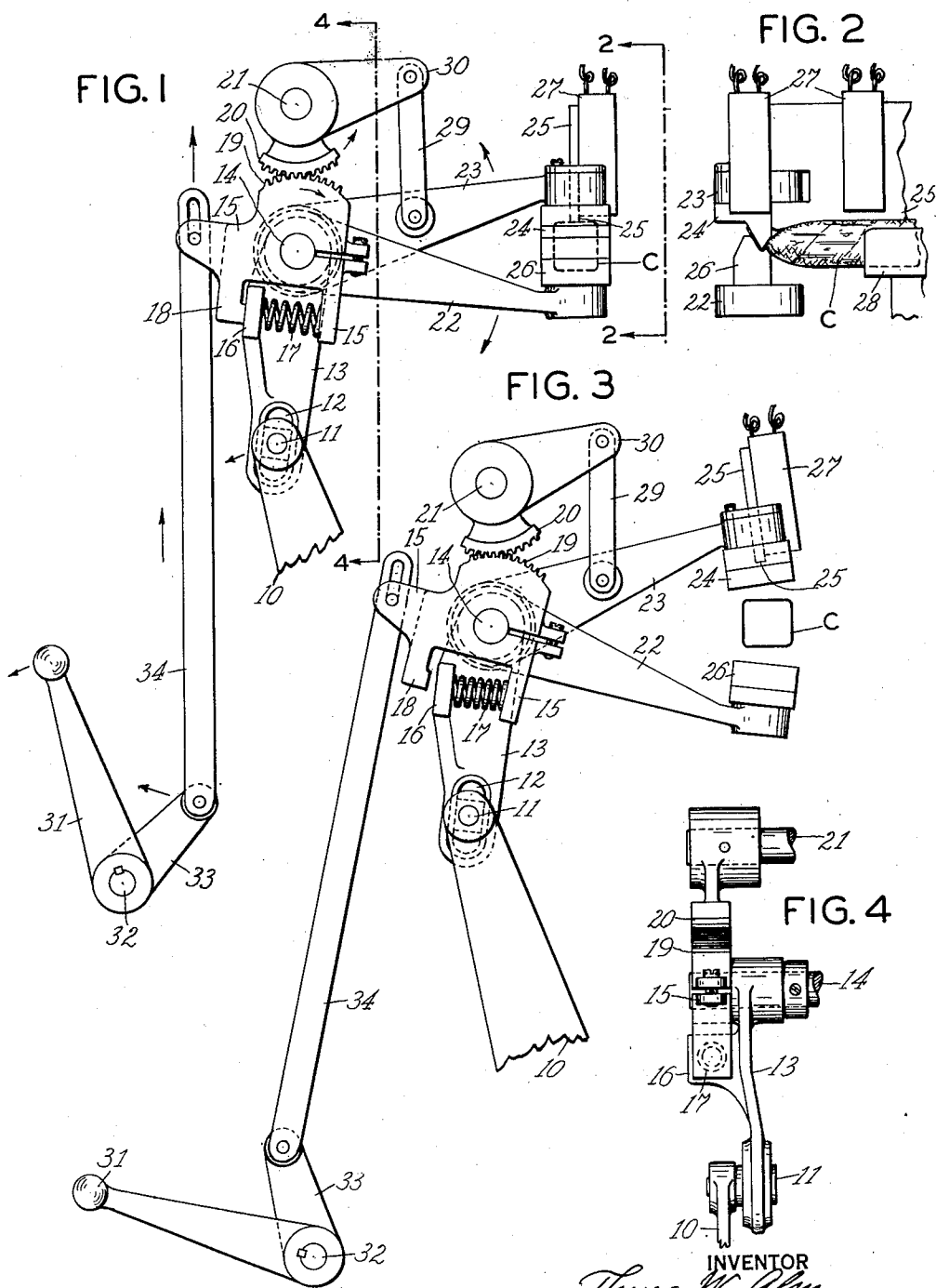
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SCORCH PREVENTING DEVICE FOR HEAT SEAL WRAPPING MACHINES

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SCORCH PREVENTING DEVICE FOR HEAT-SEAL WRAPPING MACHINES

Application filed February 6, 1931. Serial No. 514,045.

This invention relates to a scorch preventing device for wrapping machines using cellophane, wax paper, or similar wrapping material where the sealing of the wrapper is performed by applying heat to the folded seams by means of electrical heating units. Its main object is to provide means to prevent burning or scorching of the wrapping material and of the article being wrapped in case the machine is stopped in a position where the heat sealers are in contact with the wrapping material.

This object is achieved by connecting the operating lever of the main driving clutch of the wrapping machine with the sealing mechanism in such a manner that in case the clutch is disengaged and the machine stopped, the sealing units are moved away from the wrapping material and article, regardless of the position in which the machine may be stopped, as in case of an emergency, thereby making scorching impossible. With this and other objects not specifically mentioned in view, the invention consists in certain constructions and combinations which will be hereinafter fully described and then specifically set forth in the claims hereunto appended.

In the accompanying drawing, which illustrates the application of this invention to a cigar enveloping machine such as described in the application of T. W. Alm et al, Serial No. 460,262, filed June 10, 1930:

Fig. 1 is a side view of the heating and sealing units of a cigar cellophaning machine in operation, showing the sealing units closed and in contact with a wrapped cigar;

Fig. 2 is a front view of the sealing units, taken on line 2—2 of Fig. 1;

Fig. 3 is a side view of the heated sealing units, as opened by the operation of the clutch lever on stopping the machine with the sealing units in contact; and

Fig. 4 is an end view of the operating levers of the heat sealing mechanism, taken on line 4—4 of Fig. 1.

In carrying the invention into effect there is provided a scorch preventing device for heat-seal wrapping machines, having a pair of heat sealing units, means for normally

moving said units in and out of operative position, and means for relatively separating said units when the machine is stopped. In the best forms of construction contemplated, the means for normally moving the units in and out of operative position includes a pair of carrying arms for the sealing units and a gear bracket fixed to one of the arms and meshing with a segmental gear connected to the other arm, and a swinging arm for turning said gear bracket to move said arms in and out of operative position. In the preferred form of construction, the means for relatively separating the sealing units when the machine is stopped includes the operating lever of the drive clutch of the machine, and operative connections between said lever and said gear bracket, whereby the sealing units will be separated when the machine is stopped with the sealing units in closed position. These various means and parts may be widely varied in construction within the scope of the claims for the particular device selected to illustrate the invention is but one of many possible concrete embodiments of the same. The invention, therefore, is not to be restricted to the specific construction shown and described.

Referring to the drawing, the sealing units of the cigar cellophaning machine are actuated by the cam-operated lever 10 having stud 11 engaging in slot 12 of swinging arm 13, loosely mounted on shaft 14. Arm 13 receives swinging motion from cam lever 10. To shaft 14 is clamped gear bracket 15 having a finger 18 held in engagement with the outstanding lug 16 of arm 13 by means of spring 17 interposed between a depending lug on the gear bracket 15 and the lug 16. Gear bracket 15 is also equipped with a gear segment 19 operating a segmental gear 20 fixedly mounted on shaft 21. To shaft 14 is fixedly attached the sealing unit carrying arm 22 and loosely mounted on it is sealing unit carrying arm 23, the latter carrying the male heat sealing die 24 and the top sealing plate 25 while the former carries the female heat sealing die 26. The male die 24 and top sealing plate 25 are electrically heated by means of heating units 27.

The enveloped cigar C is held by a suitable holder 28 which forms a part of a rotary turret, not shown. The female die 26 is operated through the arm 22 from shaft 14, while male die 24 and top sealing plate 25 are operated through arm 23 from link 29 pivoted to lever 30 mounted on shaft 21 and actuated from segmental gear 20. Shaft 14 is actuated from gear bracket 15 by the swinging motion of arm 13 which through spring 17 causes the sealing units to close, the spring 17 acting as a cushion, thereby assuring a longer life to the sealing mechanism. On the backward swing of arm 13, lug 16 of arm 13 transmits the motion to finger 18 of gear bracket 15 and causes the sealing units to disengage and open.

In the above described manner, the sealing units normally close and open when the machine is in operation. In order to stop the machine for any emergency, the operating lever 31 of the main drive clutch of well known construction is swung downwardly, thereby through shaft 32 disengaging the clutch. To shaft 32 is attached lever 33 which through connecting rod 34 actuates gear bracket 15 by means of a lost motion connection such as a pin on the gear bracket 15 in a slot in the rod 34, as shown. When the operating lever 31 is moved downwardly, the lever 33 will move the rod 34 to engage the lower end of its slot with the pin on the gear bracket 15 and turn the bracket sufficiently to cause the opening of the sealing units if they are closed. If the sealing units are open, their position will not be changed by the operation of lever 31. The swinging motion of the arm 13 is stopped when the clutch is disengaged and the spring 17 will be compressed by the turning of the bracket 15 through the operation of the lever 31 as described above. By reversing clutch lever 31 for restarting the machine, gear bracket 15 will be returned to its original position by expansion of the spring 17.

What is claimed is:

1. In a scorch preventing device for heat-seal wrapping machines, the combination with a pair of heat sealing units, of means for normally moving said units in and out of operative position, and mechanism for relatively separating said units when the machine is stopped; to prevent scorching of the wrapping material, said heat sealing units including a female heat sealing die and a male heat sealing die cooperating therewith to seal the end of a wrapper overhanging the end of the article which it encloses.

2. In a scorch preventing device for heat-seal wrapping machines, the combination with a pair of heat sealing units, of means for normally moving said units in and out of operative position, and mechanism for relatively separating said units when the machine is stopped to prevent scorching of the

wrapping material, said means including a rotatable shaft, an arm fixed to said shaft and arranged to carry one of said units, an arm loosely mounted on said shaft and arranged to carry the other of said units, a swinging arm loosely mounted on said shaft and provided with an outstanding lug, a gear bracket clamped to said shaft and provided with a finger, a gear segment and a depending lug, a spring interposed between said lugs and adapted to press said finger against said outstanding lug, and a segmental gear meshing with said gear segment and connected to said loosely mounted sealing unit carrying arm, whereby oscillation of said swinging arm will move said units in and out of operative position.

3. In a scorch preventing device for heat-seal wrapping machines, the combination with a pair of heat sealing units, of means for normally moving said units in and out of operative position, and mechanism for relatively separating said units when the machine is stopped to prevent scorching of the wrapping material, said mechanism including the operating lever of the main drive clutch of the machine, a rotatable shaft, sealing unit carrying arms on said shaft, and operative connections between said lever and arms for relatively separating said arms when said lever is operated to disengage the clutch, whereby the sealing units are separated regardless of the position in which the machine may be stopped.

4. In a scorch preventing device for heat-seal wrapping machine, the combination with a pair of heat sealing units, of means for normally moving said units in and out of operative position, and mechanism for relatively separating said units when the machine is stopped to prevent scorching of the wrapping material, said mechanism being inoperative when the sealing units are out of operative position.

5. In a scorch preventing device for heat seal wrapping machines, the combination with a heat sealing unit, of means including a yielding connection for moving said unit into and out of operative position, mechanism for stopping the wrapping machine, and means operated by said stopping mechanism for forcing said unit out of operative position against the action of said yielding connection when the machine is stopped with the unit in operative position.

In testimony whereof, I have signed my name to this specification.

THURE W. ALM.