

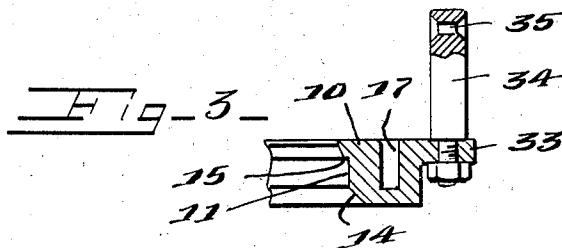
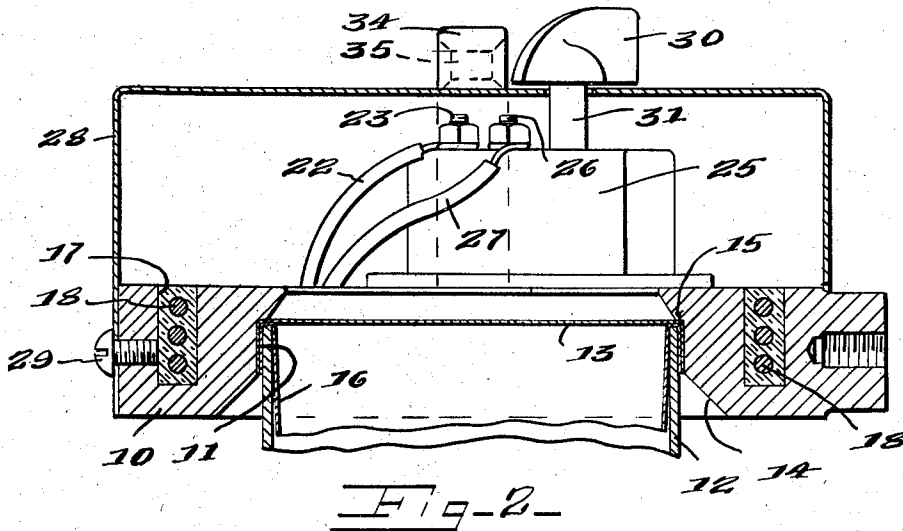
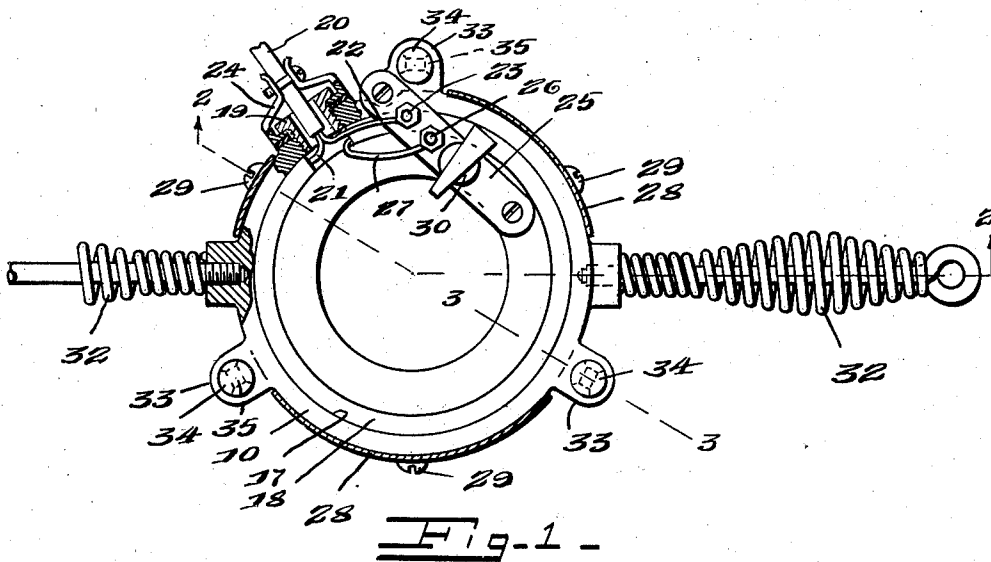
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CONTAINER CLOSURE SEALING TOOL

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CONTAINER CLOSURE SEALING TOOL

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1 Claim. (Cl. 219—21)

This invention relates to a tool for heat sealing closures to containers. The tool is particularly intended for heat sealing closures in the nature of a thin, flexible, disk, which may be formed of material such as Cellophane or Pliofilm, to the tops of containers. The casing of the container is formed of fibrous material such as paper-board, and a liner may be employed to make the container impervious. Containers of this construction are used extensively for the packaging of numerous food products.

I have heretofore devised a machine for automatically applying and sealing closures to this type of container. However, such machines are costly for a small packing plant, or for a plant that has comparatively short packaging runs.

This invention has as an object a simple, compact and particularly economical tool which is bodily movable and hand manipulated and which functions efficiently to heat seal the closure disks to containers.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawing in which like characters designate corresponding parts in all the views.

Figure 1 is a top plan view, with parts shown in section, of a tool embodying my invention.

Figure 2 is a sectional view taken on line 2—2, Figure 1.

Figure 3 is a fragmentary, sectional view taken on line 3—3, Figure 1.

The tool consists of a main body member 10 provided with an aperture 11 to receive the top portion of a container 12 with a closure disk 13 positioned thereon. The lower or outer end of the aperture 11 is chamfered as at 14 to a diameter substantially complementary to the diameter of the closure disk 13 previous to its application to the container, and the body is formed with an annular ledge 15 arranged to engage the top edge of the container 12 when the tool is positioned on the container.

The closure disk 13 is usually of thin, transparent, flexible, material, such as Cellophane or Pliofilm, and the container is usually provided with a liner bag 16 of the same material with the open end of the bag extending over the top edge of the container 12 and downwardly a short distance on the outer surface thereof. However, it will be apparent that the tool is suitable for the application and heat sealing of thin, flexible disks formed of any material which is sealable

directly to the overfolded portion of the liner bag 16, or to the container 12 either directly or in conjunction with the use of a thermoplastic.

The body 10 is preferably of annular formation and formed of heat transferring material such as aluminum. The body is provided with a circular recess 17 arranged concentric with the aperture 11 and in which is mounted an electric heating element 18. The body is also provided with an aperture extending radially outward from the recess 17 and threaded internally to receive a bushing 19 through which the electric cord 20 extends, one wire 21 of the cord being connected to one end of the heating element 18, and the other wire 22 extending to a binding post 23. The bushing 19 also serves to secure a cable or cord grip 24 to the body.

The binding post 23 is mounted upon a heat regulating member or thermostat 25, and the opposite end of the heating element 18 is connected to the binding post 26 thereof, as by wire 27. The top of the body, including the thermostat 25, is encased by a cover 28 detachably secured to the body as by screws 29. The thermostat 25 is adjustable to regulate the heat generated by the element 18 by means of the manipulation of a knob 30 secured to a stem 31 extending through the top of the cover 28.

After the container has been filled, the disk 13 is laid across the top of the container and the tool moved bodily downwardly, or axially toward the top of the container. Upon the chamfered surface 14 engaging the peripheral margin of the disk, the same is folded about the top of the container, and the diameter of the recess 11 is such as to snugly press the folded margin of the closure disk against the side wall of the container. Due to the fact that the body 10 is heated, the sealing of the disk to the container is effected instantly. This bodily manipulation is accomplished by means of one or more handles 32 extending radially from the body.

The body is also formed with a plurality of radially extending projections 33 in which are mounted studs 34 extending upwardly and provided with holes or apertures 35. The purpose of the studs 34 is to permit the tool to be suspended over containers assembled on the operator's bench by means of a spring, whereby it is only necessary for the operator to grasp the handles 32 and manipulate the tool for the application of closure disks to several containers arranged on the bench.

This tool has proven to be particularly economical and efficient in the application of closure

disks to containers in relatively small quantities where the cost of an automatic machine would be prohibitive.

What I claim is:

A bodily movable hand manipulated tool for heat sealing thin flexible closures to the tops of containers comprising an annular body member formed with an aperture to receive the top of the container, the outer end of said aperture being chamfered to a diameter substantially comple-

5 mental to the diameter of the closure disk, and said body being formed with an inwardly extending annular shoulder for engagement with the top of the container, heater means for heating said body, means carried by the body for regulating the heat generated by said heater means, and a pair of handles secured to the body for manual manipulation of the tool axially relative to the container.

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