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J. M. HOTHERSALL

2,109,484

CAN COVER

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Fig 1

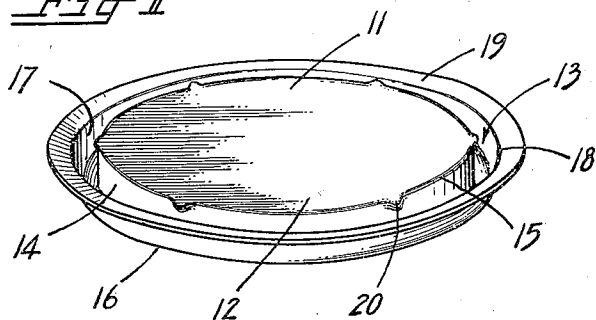


Fig. 2

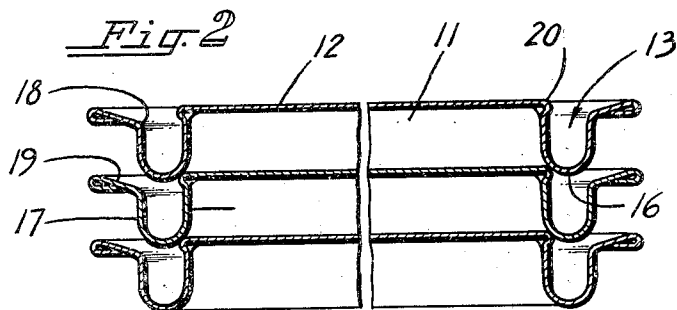
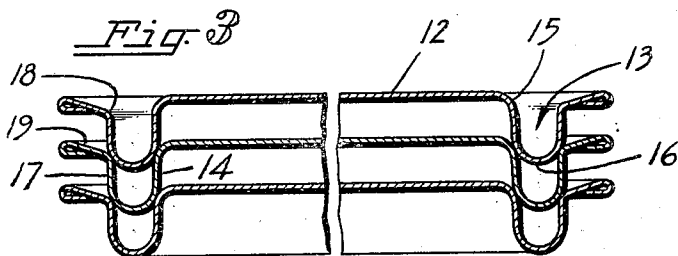


Fig. 3



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CAN COVER

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1 Claim. (Cl. 220—97)

The present invention relates to improvements in friction can cover plugs, and has more particular reference to the formation of the plugs to prevent their tight nesting and sticking together when the plugs are arranged in stacked formation.

Heretofore difficulty has been experienced in the removal of friction plugs from a stack of plugs arranged for example in a magazine of a can closing machine or the like where such removal has been made for feeding into other parts of the machine, this being by reason of their sticking or wedging together. Even ordinary pressure on the covers due to packing, transportation or the like, while they were in stacked formation, was sufficient to cause the contacting surfaces of the annular channels of the plugs to wedge together and cause sticking. The present invention eliminates the possibility of the plugs sticking together by preventing close engagement of extended surfaces sufficient to frictionally stick together.

An object of the present invention is the provision of a friction plug having knob-like protuberances formed in a channel wall so that they engage the surface of a similar plug when the plugs are arranged in stacked formation, these protuberances preventing deep nesting, sticking and wedging together of the plugs while permitting easy removal of individual plugs from the stack.

A further object of the invention is the provision of friction plugs formed with protuberances for point instead of line contact when in stacked formation so that even extraordinary pressures on the plugs great enough to deform parts of them result in a mere crushing of the protuberances without permitting sticking together so that even the deformed plugs may be readily separated.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a perspective view of a friction plug embodying the present invention;

Fig. 2 is an enlarged sectional view of three of the plugs in stacked formation and showing their non-sticking relation; and

Fig. 3 is an enlarged sectional view of three plugs not embodying the present invention shown in stacked formation to indicate the liability of sticking together.

The drawing shows a preferred embodiment of

the invention as a friction plug 11 having a central panel 12 bounded by an annular channel 13 formed by an inner wall 14 extending downwardly from the rounded peripheral edge 15 of the panel 12. The bottom of the channel is rounded into a bottom wall 16 from which an outer channel wall 17 extends upwardly and merges into an inner rounded edge 18 of an outwardly extending flange 19. The flange 19 may be curled, hemmed or turned under at its outer periphery if desired.

Knob-like protuberances 20 (six being shown in Fig. 1) are formed in each plug and these engage a part of an adjoining plug when the plugs are stacked. This holds the channel walls out of engagement thus preventing the tight wedging or sticking together of the stacked plugs. Such a wedging action is possible with plugs not having protuberances or the like as is shown in Fig. 3.

Each protuberance 20 extends into the annular channel 13 and may be formed adjacent the panel edge 15 as shown, in which event the bottom channel wall 16 of the plug above rests upon the protuberances which gives point contact as contradistinguished from line contact of the nesting plugs. Fig. 2 clearly shows such engagement.

Pressure applied to either end of the stack of plugs having the protuberances 20, as shown in Fig. 2, if excessive results merely in a distortion of the protuberances and even in such an extreme case deep nesting and any consequent wedging or sticking together of the plugs is entirely eliminated.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

A friction plug comprising a central panel terminating at its outer part in a substantially vertical wall curved outwardly at its lower portion to merge into an outer substantially vertical wall providing a channel therebetween, said panel being formed at its edge with spaced protuberances bent outward above and slightly overhanging the channel, to engage the outwardly curved portion of a superimposed similar plug, whereby to prevent tight nesting of said plugs when stacked.

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