

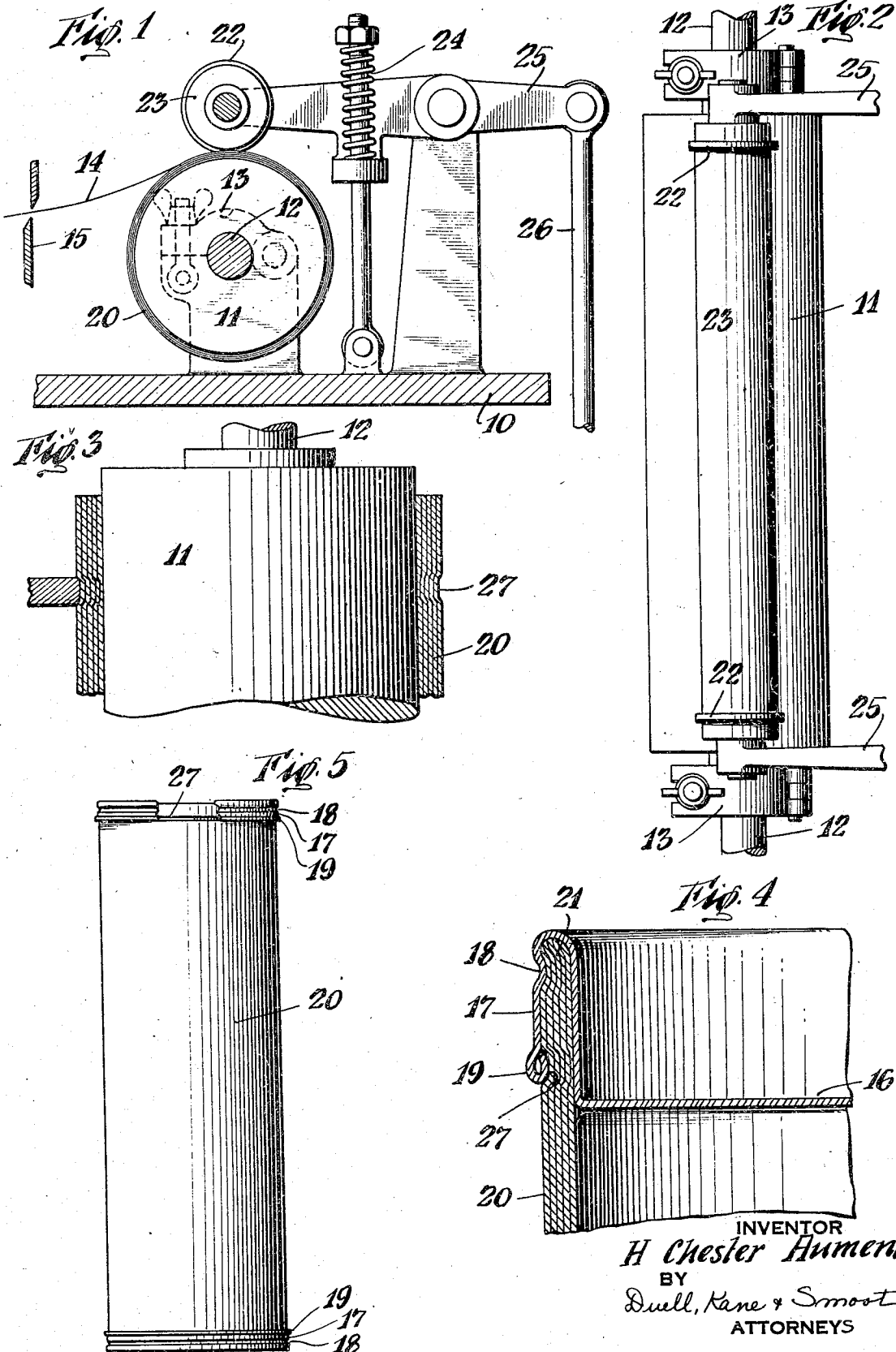
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RECEPTACLE AND METHOD OF FORMING THE SAME

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RECEPTACLE AND METHOD OF FORMING
THE SAME

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1 Claim. (Cl. 93—39.1)

This invention relates to a structurally and functionally improved receptacle as well as a method of forming the same.

It is an object of the invention to furnish a receptacle which will embody a construction such that a permanent interlock will be provided between the body and end wall thereof, such interlock satisfactorily resisting any stripping action to which the receptacle might normally be subjected in usage.

As such, there is provided by the present invention a receptacle, the body of which may be formed of paper or similar material, and the end wall or walls of which may be furnished by metal closures, these closures and side walls furnishing in aggregate a container capable of receiving fluids or other material to be packaged, and maintaining such material in proper condition for substantially indefinite periods of time.

Another object is that of teaching a method whereby a receptacle of this character may be furnished, and which method may be practiced by relatively unskilled persons to provide an article which may be placed upon the market at a nominal figure.

With these and other objects in mind, reference is had to the attached sheet of drawings illustrating one practical embodiment of the invention, and in which:

Fig. 1 is a somewhat diagrammatic side elevation of a forming machine;

Fig. 2 is a fragmentary plan view of the parts as shown in Fig. 1;

Fig. 3 is an enlarged fragmentary view showing the side walls of the receptacle in process of formation;

Fig. 4 is an enlarged sectional view taken through the top of a complete receptacle, and

Fig. 5 is a side elevation of such a complete receptacle with certain of the parts broken away to disclose underlying construction.

Referring primarily to Figs. 1 to 3, the numeral 10 indicates a machine deck upon which a mandrel 11 is rotatably mounted as, for example, by a shaft 12 supported in bearings 13. This mandrel may be of the collapsible type or any other desired construction may be furnished which will allow for a ready stripping of formed material from the body of such mandrel.

According to the present invention a receptacle is to be furnished which comprises a plurality of paper layers. To this end a web 14 extends from a source of supply (not shown) and which web may be periodically severed as, for example, by a shearing mechanism 15. Thus, as-

suming that the shaft 12 and mandrel 11 are power driven, it follows that with the web properly applied to the mandrel, a multi-ply body will be built up on the latter. The paper may, of course, be formed of any convenient stock and be impregnated with any suitable and desired substance. Additionally, a film of material may be applied to the web so that all layers are adhesively or otherwise secured to each other and against any possibility of accidental movement.

I have heretofore proposed to seal the ends of a receptacle such as this by, for example, employing an end member which, in the case of being applied to a tubular receptacle body (as shown in the drawing), should likewise be of circular outline and of a diameter substantially equal to the receptacle end. This end seal may include a wall 16 having an outwardly and inwardly extending flange portion 17 which will thus be generally U-shaped in cross-section. While not essential, it is preferred that this flange portion have its outer arm of a length or height less than the inner arm of such flange portion. Also, while the inner arm should preferably be uninterrupted or plane to have its face lie in intimate contact with the inner face of the receptacle body, the outer arm preferably presents both an inwardly crimped portion 18 as well as a rolled edge 19. Thus, as the crimp is formed or spun into the outer end of the end-seal flange, or as such outer end or arm is folded inwardly against the outer face of the receptacle body, the layers 20 of such body are urged or compressed inwardly as indicated at 21. This will, of course, lock the end seal against withdrawal from the body 20. Likewise, the rolled edge portion 19 will engage the outer surface of the receptacle body to prevent withdrawal of the receptacle from the end seal. In certain instances, and due to severe usage, the intimacy of interlock between the rolled edge or bead 19 and the receptacle wall has been insufficient to prevent all possibility of accidental withdrawal of the end seal.

It is proposed, by means of the present invention, to overcome this objection by associating, for example, with mandrel 11 a pair of indenting rollers or discs 22, which may form a part of a main roller 23. These discs are pressed into intimate contact with the face of the mandrel, for example, by means of a spring 24, which bears against the levers supporting cylinder 23. These levers indicated at 25 may, of course, be deliberately rocked by an actuating rod or rods 26. Also, while cylinder 23 may move in any desired manner, it is preferred that it depend upon the fric-

tional contact between the discs or rollers 22 and the surface of the receptacle.

As a consequence of this construction it will be understood that as the receptacle body is built up upon the mandrel 11 and as shown in Fig. 1, the cylinder or roller 23 will firmly press against the outer face of the outer convolution appearing upon such mandrel. Simultaneously, the roller or discs 22 will exert a crimping or indenting action such that as illustrated in Figs. 3 and 4, a groove 27 will be formed in the outer face of the receptacle. The groove will be in line with the bead 19 when the parts are in proper position. It is therefore obvious that with the bead or rolled edge portion pressed inwardly as indicated in Figs. 4 and 5, it will enter the groove 27 and, in effect, interlock against movement with respect to the receptacle.

Thus, at the time of formation of the latter, a preformed groove is provided and this will function in a manner such that there will be no likelihood of the end seal being displaced, regardless of the amount of abuse to which the receptacle is subjected.

Thus, among others, the several objects of the

invention as afore noted are achieved. Obviously, numerous changes in construction and in the steps of the method might be resorted to without departing from the spirit of the invention as defined by the claim.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

A method of forming a receptacle which includes utilizing a web of material, applying the inner face of such web to a plain and uninterrupted supporting surface, subjecting a narrow area of the outer face of said web to a compressive action whereby to form a groove in such outer face, continuing such compressive action throughout such area while disposing one ply after another upon the initial layer of said web to furnish a tubular receptacle of multiply construction and each ply of which is formed with a grooved area of substantially the same width as those which are formed in adjacent plies, such grooved areas being continuous and nested one within the other in the complete receptacle, and said complete receptacle presenting an ungrooved inner face and an inwardly grooved outer face.

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