

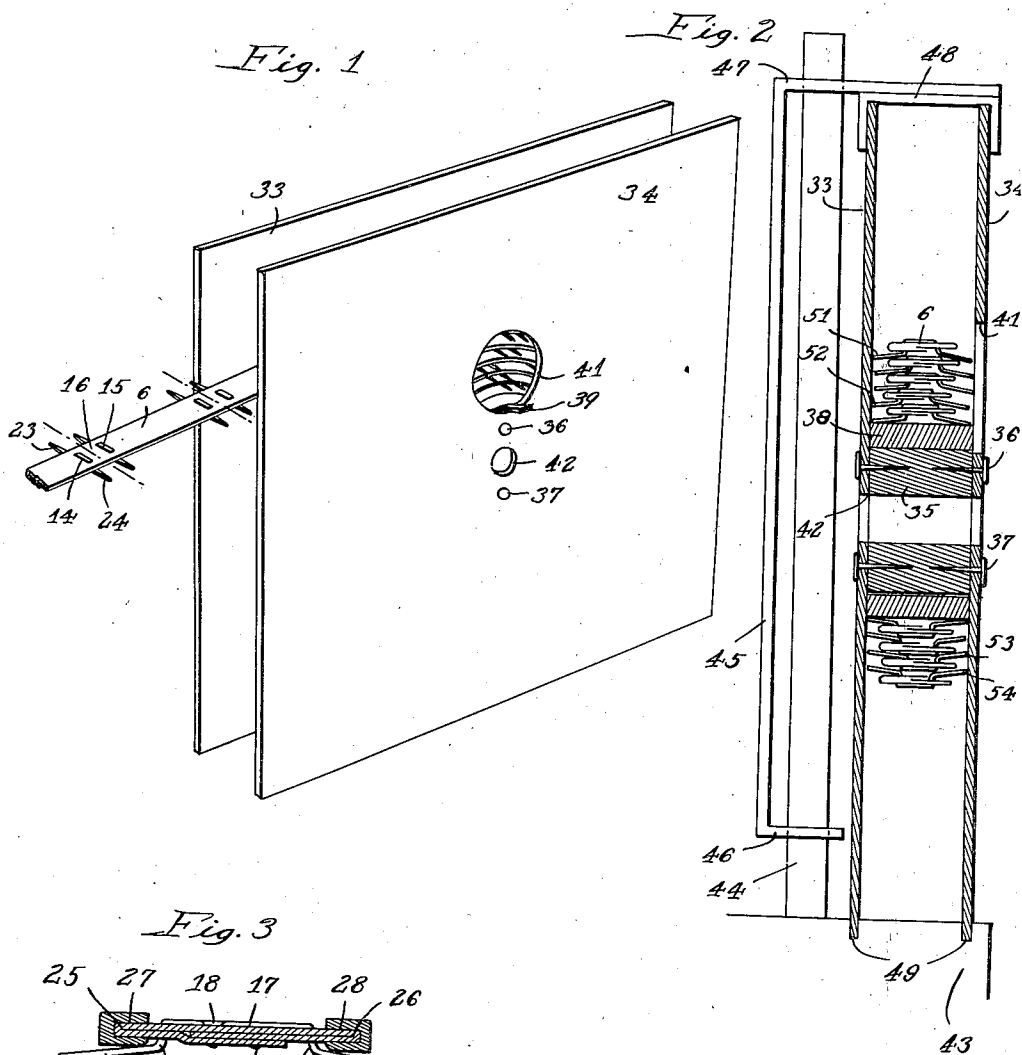
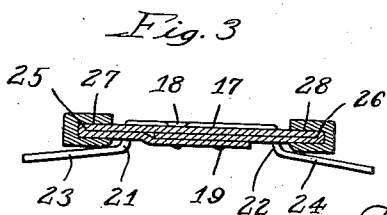
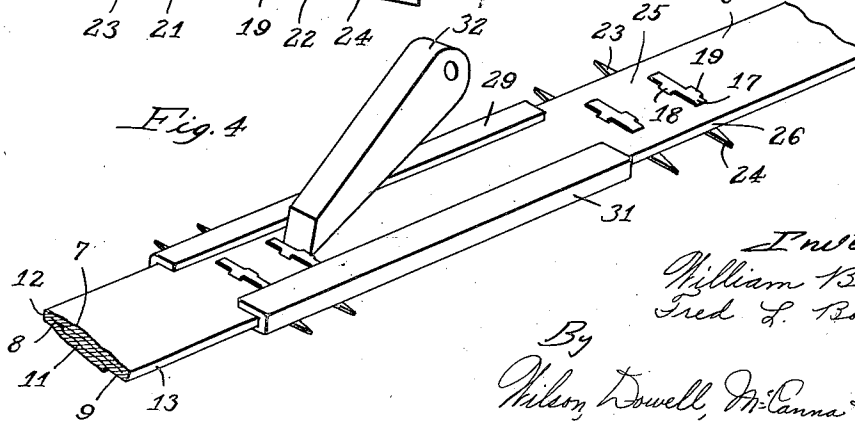
July 6, 1937.

W. BORCHERT ET AL

2,085,783

TAG PACKAGE

Filed Nov. 6, 1933



Inventor.
William Borchert &
Fred L. Borchert

By
Wilson, Dowell, McConna & McIntire
Attys

UNITED STATES PATENT OFFICE

2,085,783

TAG PACKAGE

William Borchert and Fred L. Borchert, Rockford, Ill., assignors to The Tagit Company, Rockford, Ill., a corporation of Illinois

Application November 6, 1933, Serial No. 696,794

1 Claim. (Cl. 206—59)

This invention relates to tags and has special reference to an article of manufacture in the form of a strip adapted to be severed at intervals for the purpose of producing individual tags held in a package for transporting and using the same.

Heretofore, it has been customary to provide tags, such as laundry tags, in the form of individual tags which were loosely packed in some sort of box or other container. In the manufacture, packing and use of these tags, it was necessary to give individual attention to each tag. Thus the tags had to be counted by hand and applied by a hand operation, since, to the best of our knowledge, automatic mechanism for this purpose has not been available. Furthermore, the structure and shape characteristics of the tags of the prior art were such that automatic means could not be found for satisfactorily packaging, counting, and applying them. Proper feeding and affixing of the conventional tag, even when produced in strip form becomes highly difficult because of the bending of the staple points by the feeding operations when these are employed as abutments.

An object of the invention is to provide a tag package adapted to hold the tags in strip form in a manner to prevent damage or distortion of the tag prongs.

We have also aimed to provide a tag package arranged to carry the tags in strip form and in a manner such that the tags and package cooperate in dispensing the tags at the proper rate.

Another object of the invention is to provide a tag package for tags in strip form having a hub and a sleeve on the hub for carrying the tags in spool form for rotation with respect to the package during the dispensing thereof.

A still further object is to provide a tag package shaped to be held against movement upon reception in a dispensing device and having a hub and a sleeve on the hub for carrying the tags in spool form for rotation with respect to the package, the sides of the package being in such proximity to the tags as to have a braking effect on the spool to prevent the overrunning of the spool under the feeding impulse.

Another object of the invention is the provision of an improved container adapted to serve in manufacturing, transporting and feeding the tags in strip form.

Other objects and attendant advantages will become apparent to those skilled in the art from the following description and the accompanying drawing in which—

Figure 1 is a vertical perspective showing of the tag strip and tag package;

Fig. 2 is a vertical section through the tag package showing a portion of a tag strip in roll form;

Fig. 3 is a vertical section through the tag strip and tag guides; and

Fig. 4 is a fragmentary view of the tag strip positioned in the guides showing the manner in which the strip is fed through the guides.

This is a continuation in part of our copending application Serial No. 545,823, filed June 20, 1931, entitled Tag structure.

The tag package herein claimed and the tag structure per se claimed in the above-mentioned application are so closely related that we find it advisable to briefly discuss herein the tag structure. Referring to the drawing, 6 designates a strip of material suitable for use in tags, in this instance consisting of cloth fabric having an upper layer 7 and lower layers 8 and 9 overlapped, as shown at 11, to provide substantially parallel side edges 12 and 13. Pairs of staples 14 and 15 are positioned in the strip 6 at spaced intervals along the strip, the distance between the pairs being substantially the desired length of the tag. The staples of each pair are spaced, as shown at 16, to permit the severance of the strip between the two staples to produce tags having staples at opposite ends.

Each of the staples consists of a flat top portion 17 positioned upon the top of the strip and secured thereto by means of a pair of fingers 18 and 19 integral with opposite sides of the portion 17 and passing through the strip 6. The lower end of the fingers are bent over to clamp the staple to the strip and to secure the various layers of the strip together. The prongs of the staple are integral with the portion 17 and project at right angles thereto through the strip near opposite edges thereof at points spaced from the edges. The points 23 and 24 of the prongs are bent at about right angles to the portions 21 and 22 to lie substantially parallel with the lower surface of the strip 6 and in spaced relation thereto, as shown in Fig. 3. When the tags are applied the staple points 23 and 24 are moved from the position shown in Fig. 3 to a coplanar position beneath the central part of the tag so as to clamp the fabric of the material to which they are applied between the tag strip and the points in the area between the portions 21 and 22 of the staples.

The tag structure described provides continuous edge portions 25 and 26 on the strip 6 which may be received in the grooves 27 and 28 of guide bars 29 and 31 of a suitable feeding mechanism,

the space between the edges 25 and 26 and the points 23 and 24, respectively, being such as to permit the edges 25 and 26 of the strip to be received in the grooves 27 and 28 and to move longitudinally therein without interference from the staples. The head portion 17 of the staples, resting on the upper side of the table, serve as abutments to be engaged by a pawl 32 of suitable feeding mechanism, movement of the pawl acting to feed the strip through the guide bars 29 and 31. The continuous free edges of the strip thus provide uninterrupted portions running the full length of the strip which are employed as portions for guiding the strip into the affixing mechanism and for holding the strip while being fed by the pawl. By this means the strip may be held against edgewise movement so that it will be fed straight, and against sidewise movement resulting from the contact of the feeding pawl.

Thus, because of the shape and position of the staples the tags may be made in the form of a continuous strip which may be satisfactorily automatically fed to suitable severing and affixing mechanism. By this means the individual handling of each tag and the affixing of the tags through hand operations may be eliminated. Furthermore, because of the particular shape of the staples the tags may be packed much more advantageously and protected during storage and shipment, by rolling the strip in a roll such as shown in Fig. 2, or in other packing form.

Referring now to Figs. 1 and 2, wherein the present invention is illustrated, the tag package consists of rectangular side pieces 33 and 34 of cardboard or the like secured at their centers to a hub 35 of wood or other suitable material by means of tacks 36 or 37 or other devices. A sleeve 38 is positioned upon the hub 35 for free rotation thereon, the sleeve being slightly larger than the hub so that a wedge 39 or other device may be inserted between the hub and the sleeve to prevent the sleeve from rotating with respect to the hub. A circular opening 41 is provided in the side 34 to permit the insertion and removal of the wedge 39 as desired and also to permit access to the outer surface of the sleeve 38, as will presently be described. An opening 42 is axially positioned in the hub 35 and in the sides 33 and 34 for the insertion of a shaft of suitable winding mechanism.

In the manufacture of the tags the package is secured to the shaft of winding mechanism through the opening 42, and the wedge 39 is inserted between the hub 35 and the sleeve 38. The end of the strip 6 is then secured to the sleeve 38 by means of gum tape or otherwise. The strip 6 is then wound on the package, as shown in Fig. 2, directly from the tag manufacturing machinery. In some instances we have found it advisable to wind the tag strip upon the package before the side 33 is secured to the hub in order to insure that the points 23 and 24 of the staples will not be in any way damaged or bent by the winding operation but with suitable mechanism the winding may be accomplished without this precaution. When the desired amount of tag strip 6 has been wound upon the package the strip is severed and the end secured as, for example, by the use of gummed tape. If not already in place, the side 33 is then secured to the hub 35, and the wedge 39 may be removed if desired. In this condition the tags are ready for shipment.

It will be seen that by packaging the tags in

this manner a large number of tags may be shipped in relatively limited space. The sides 33 and 34 serve to protect the staple points 23 and 24 against bending thereby assuring the satisfactory operation of the tag when affixed by the user through the use of tag affixing mechanism. The package further protects the strip from being soiled during shipment and storage.

The tag package is further arranged to function in tag affixing mechanism because of the shape of the sides 33 and 34 and the rotatable sleeve 38. The tag affixing mechanism may be provided with a package receiving member into which the packages may be positioned so that the rectangular sides 33 and 34 serve to support the tag package therein by contact of the rectangular sides with the container. One such arrangement is shown in Fig. 2 wherein the numeral 43 designates a portion of the affixing mechanism within which is secured a rod 44 arranged to support a package rack for both longitudinal and rotative movement. The rack consists of a U-shaped bracket 45 arranged to loosely receive the rod 44 through openings in its ends 46 and 47. The end 47 carries a channel member 48 of substantially the width of the tag package. The portion 43 is provided with grooves 49 adapted to receive one edge of the tag package while the channel member 48 receives the opposite edges of the tag package. Thus, to insert the tag package in the affixing mechanism, the member 45 is moved upward on the rod 44 and the package is inserted into the grooves 49. Thereupon the member 45 is released allowing the channel member 48 to drop over the upper edge of the tag package. In this way, the package is secured firmly in place for the dispensing of the tags, and at the same time may be easily removed or replaced. The sleeve 38 being free to rotate on the hub 35, the end of the tag strip 6 may be loosened and positioned in the tag affixing mechanism whereupon the sleeve 38 will rotate in response to the movement of the pawl 32 to feed the tags from the stationary package.

An important function of the tag package during the dispensing operations, in addition to rotation of the sleeve 38, is to retard or brake the rotation of this sleeve so that the movement of the sleeve will be solely responsive to movement of the pawl 32. Viewing Fig. 2, it will be noted that the prongs 51 and 52 on one side of the tag strip contact the side 33 of the package, whereas the prongs 53 and 54 on the other side of the tag strip contact the opposite side 34 of the tag package. It will be seen that the tags being rolled into a spool between the sides 33 and 34 of the package, there will be this contact between the prongs and the sides throughout the radius of the spool. Consequently when the end of the strip is moved by the pawl 32, this contact of the prongs and the side walls of the package will produce a drag which brakes the movement of the sleeve 38 and spool. It should be noted that in rapid operation of the affixing mechanism, the pawl 32 will start and stop in a relatively rapid manner so that if the sleeve 38 and spool could rotate freely, this jerking effect of the pawl would cause the spool to spin and unwind the spool, that is, it would overrun the remainder of the feeding mechanism. It will, therefore, be noted that instead of providing devices in the tag affixing mechanism for positively controlling this rate of feed from the spool, we have caused the tag package itself to serve

this function and to act as its own governor in the tag dispensing operations.

Thus, the tag package serves as the tag receiving receptacle of the tag manufacturing mechanism, serves as a transportation container, and serves in the dispensing of the tags in the tag affixing mechanism, all of which results from the particular manner in which the package is formed and from the shape characteristics of the various portions thereof. However, the essential functions of the package are two-fold. It serves as a container for the tags during the manufacture, the transportation and the use of the tags, and it serves as a medium for the protection of the shape characteristics of the tag staples. In automatically affixed tags the latter is a matter of serious consideration. When the tags are to be affixed by tag affixing mechanism it is essential that the tags be relatively accurate duplicates of each other in order to insure uniform results from the affixing mechanism. For this reason if the staple points are bent out of shape—a thing which may occur very easily—the operation of the tag affixing mechanism is apt to be inaccurate so that the tag will be improperly affixed to the material to which it is to be applied, or possibly, will not be affixed at all. For this reason, it is of paramount importance to protect the tags, not only during their manufacture and their use, but during their transportation, since only slight forces applied to the outer ends of the points 23 and 24

will serve to so distort the tag as to render the action of the affixing mechanism erratic.

While we have thus described and illustrated a specific embodiment of our invention we are aware that numerous alterations and changes may be made therein without materially departing from the spirit of the invention and the scope of the appended claim, in which—

We claim:

A laundry tag reel adapted to serve in the packing, shipping, and discharging of laundry tags comprising a hub, a rotatable sleeve on said hub adapted for the reception of a strip of tag material having longitudinally spaced staples therein provided with laterally projecting prongs, rolled on said sleeve, said sleeve being shaped for the reception of releasable wedge means for securing said sleeve to said hub to cause said strip to be rolled on said sleeve through rotation of said hub, and boards on opposite ends of said hub in spaced relation for the reception of said roll of tags, one of said boards having an opening for the insertion and removal of said wedge means, said boards having peripheral shape characteristics for cooperation with tag affixing mechanism to prevent rotation of the reel when positioned therein, and being of greater size than the roll, to prevent contact with said roll, protect the prongs from being bent, prevent change in the space between said prongs and said strip, and prevent soiling of said strip.

WILLIAM BORCHERT.
FRED L. BORCHERT.