BARREL AND BARREL HEAD THEREFOR

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1 Claim. (Cl. 217—76)

This invention relates particularly to tobacco hogheads yet in its broadest respect it applies to the construction of barrels generally and heads for the same including means for reinforcing the staves and the periphery of the heads whereby each of these parts are strengthened at the points most subjected to wear and injury in the packing of the barrels and in their transportation.

Our invention also has for its object to provide in conjunction with knockdown barrels and their heads, in which the staves and heads are made comparatively thin and preferably of wood laminations, reinforcing elements for the respective parts which cooperate to strengthen the completed barrel structure and to secure the heads in the two ends thereof against the outward force exerted by the contained material during the handling of a loaded barrel in which it is both rolled and unpended repeatedly.

More specifically, with respect to the staves our invention provides an end hoop enclosing their ends and having internal projections for securing the circular heads and with respect to the heads it comprehends an edge reinforcement and stiffener which cooperates with said projections.

To these and other ends our invention comprises further improvements and advantages as will be further described in the accompanying specification, the novel features thereof being set forth in the appended claim.

In the drawings:

Figure 1 is a perspective view of the upper end of a tobacco hoghead and illustrates a barrel and a head thereof embodying the features of our invention and showing the manner in which the head is brought into position to secure the contents.

Figure 2 is a plan view illustrating one of the sections of a knockdown barrel in which the staves are connected by end hoops embodying our invention.

Figure 3 is an end view of Fig. 2.

Figure 4 is a plan view of a barrel head showing the reinforcing binding thereon.

Figure 5 is a vertical cross section taken on the line 5—5 of Fig. 4.

Figure 6 is a vertical cross sectional view similar to Figs. 3 and 5 and including the end of a stave to show the reinforcement thereon and the manner in which it cooperates with the head binding to hold the latter within the barrel.

Figure 7 is a plan view of a barrel head illustrating a modification of the elements for reinforcing it.

Figure 8 is a vertical cross section taken on the line 8—8 of Fig. 7.

Figure 9 is a view corresponding to Fig. 6 but showing the head of Fig. 7 in conjunction with the stave reinforcement.

Figure 10 is a cross sectional view as would be seen if taken through the edge of a barrel head and showing another modification of the channel used for reinforcing the edge of a head.

Similar reference numerals, in the several figures, indicate similar parts.

In the manufacture of knockdown tobacco hogheads it is customary to make the body of two half portions, such as shown in Fig. 2, 15, the sets of staves comprising such portions being connected together by hoop sections. The latter are provided at their opposite ends with hinge members 16, and 17 the eyes of which are united by pintles 18 to secure the barrel body in circular form.

In carrying out our present invention we provide a special hoop and liner construction for connecting the ends of the staves 15 comprising channel members having the outer continuous bands or hoop portions 19, the spaced top portions 20 which extend over the end of each stave and the inner leaves on which are formed angular offsets 21 which extend into the completed barrel for the purpose of forming shoulders or stops with which the barrel heads engage to hold them firmly in place. This channel construction of the end hoops by extending over the ends of the staves not only prevents them from becoming chipped or broken but in a large measure serves to exclude the entrance of moisture to the several laminations of the wood.

The barrel heads are circular wooden pieces and it will be realized that in sawing them in this shape that the grain of the wood in some places is substantially parallel to cords of the periphery while at others it extends transversely to other cords, assuming that such heads are constructed of boards of a single thickness. However, as it is preferable to make the heads of laminated material it will be seen that the thin pieces of such components, which are superposed with the grain of the respective layers laid cross wise to each other present a more serious problem with respect to the periphery of these discs so that one or another of such layers may be broken or chipped quite readily, due to their thinness, at any point on the circumference of a head.

In order to overcome the possibility of injury to a barrel head from careless handling, as well as to strengthen it, and to provide a head that
may be quickly inserted in place and will also add strength to the barrel body we have designed a special peripheral reinforcement to cooperate with the aforedescribed hoop and liner shoulders on the barrel staves. In carrying out this feature of our invention we provide metal channel sections equal to one half of the diameter of a barrel head, as indicated by A and B in Fig. 4, wherein such a head is designated by 22. These reinforcements are made by rolling, or otherwise forming a strip of flat metal into a curved channel to provide a circumferential section 24 and two side wings 24—each which embrace the inner and outer sides of the head. These pieces are secured in position by suitable fastenings as indicated by 26 which may be rivets or staples penetrating both of the wings. These parts so far described are illustrated in the enlarged cross sectional view Fig. 10.

Our invention further comprehends the provision of a stiffener rib on the exterior face of the barrel head in the form of an abutment which also cooperates with the inwardly extending projections or shoulders 21 on the staves. This stiffening rib, indicated by 27, is formed by turning an outwardly extending flange on the wing 28.

Figures 7, 8 and 9 illustrate a modification of the invention. Therein the barrel head is indicated by 30 and the edge reinforcement comprises two semi-circular angle pieces each having the peripheral edge facing 31 carrying a wing 32 which lies against the inner face of the head. On the outer face of the head there are a series of narrow segmental plates 33 each carrying a short outwardly extending flange 34. These separate parts are assembled as shown and suitable fastening devices 35 extend through the wings 32 and plates 33.

In the assembly of a barrel of the knockdown construction described the body sections are first shaped into a generally cylindrical form and secured together by inserting the pintles 18 into the eyes of the hinge members 16—17 on the meeting ends of the hoops. The bottom head is then inserted in place against the inwardly extending shoulders on the lower ends of the staves. Thereafter the barrel may be packed and in the case of a tobacco hoghead, in which the head may approximate a thousand pounds, the tobacco is compressed under hydraulic pressure sufficient to position its upper surface well within the top of the barrel. The modus operandi of then inserting the upper barrel head is to release the upper ends of the staves by withdrawing the fastening pintles of the top hoop thus permitting some of the staves to be sprung outwardly sufficiently to enable the top head to be slid crosswise in a canted position in which, while it extends fully across the barrel, lies partly within and partly without the barrel. The succeeding operation is the point at which a barrel head is most liable to be damaged and emphasizes the importance of our present invention since chipping or breaking the edges of the wood is most liable to occur as a result of forcing the canted part of the periphery downwardly beyond the inwardly extending projections 21 on the staves.

Our improved features of construction have enabled us to originate the idea of "walking in" the top head as it is now possible for an operator to mount the barrel and while using his weight to hold the head depressed he can move around thereon. In doing so some of the staves will yield under the pressure of the metal bindings A—B on the inclined surfaces of the individual projections which they engage. Where this is not a free movement under the operator's weight alone he can trip separate staves successively by using a prying bar 35 as shown in Fig. 1. The head being thus seated will be locked against outward movement by the series of abutments on the staves and the latter will be secured by drawing the ends of the hoop sections together and again inserting the pintles 18.

We claim:
A reinforcement for the edge of a circular barrel head comprising a plurality of curved angle pieces each having a portion fitting and in close contact with the circumference of the head and a wing portion embracing the margin of the lower face of the head, a plurality of segmental wing plates fitted on the margin of the outer face of the head, fastening devices passing through said wings and head and a stiffening flange extending outwardly from each of the segmental plates.

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