

O. R. EMMRICH.

BARREL.

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924,649.

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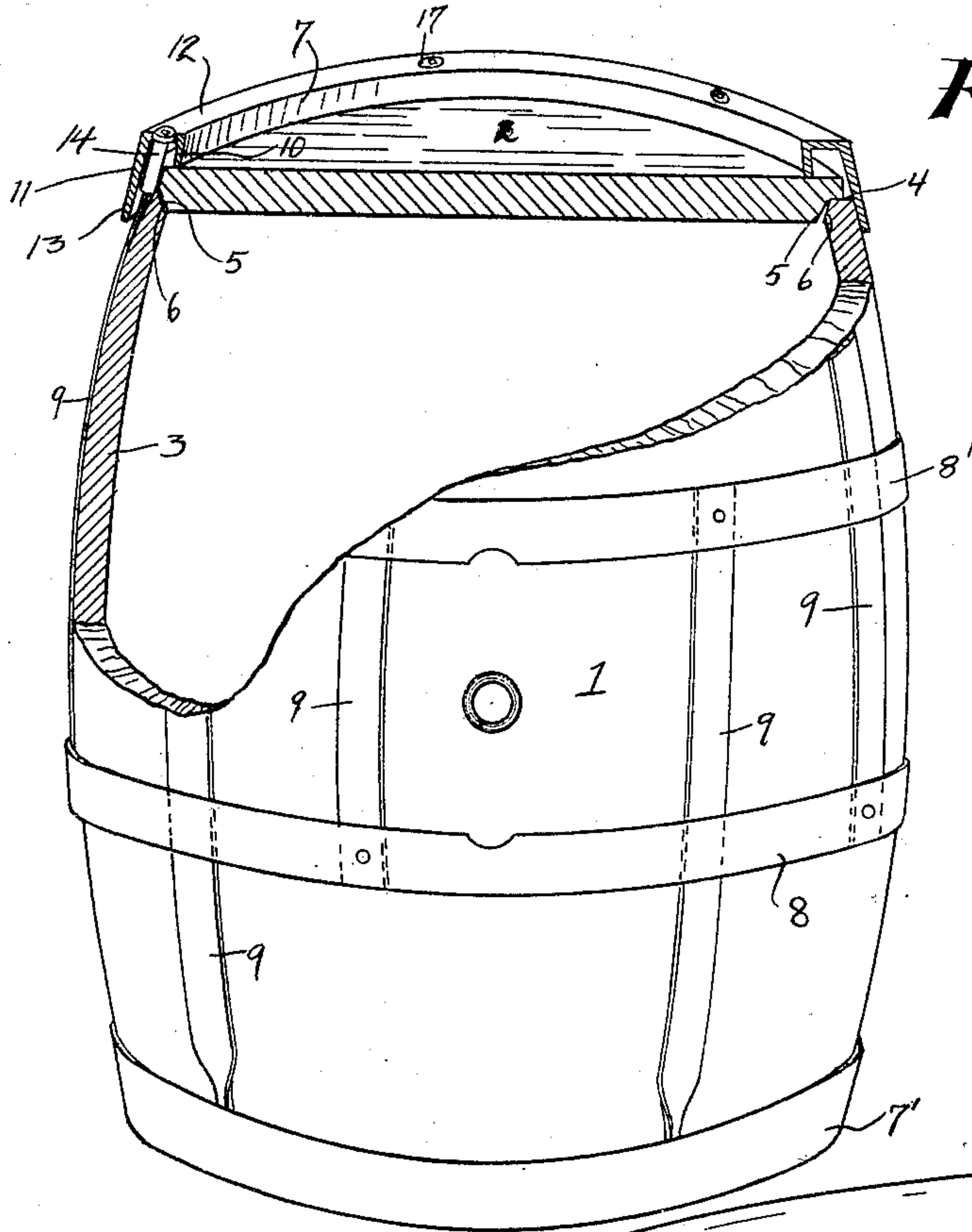


Fig. 1.

Fig. 3.

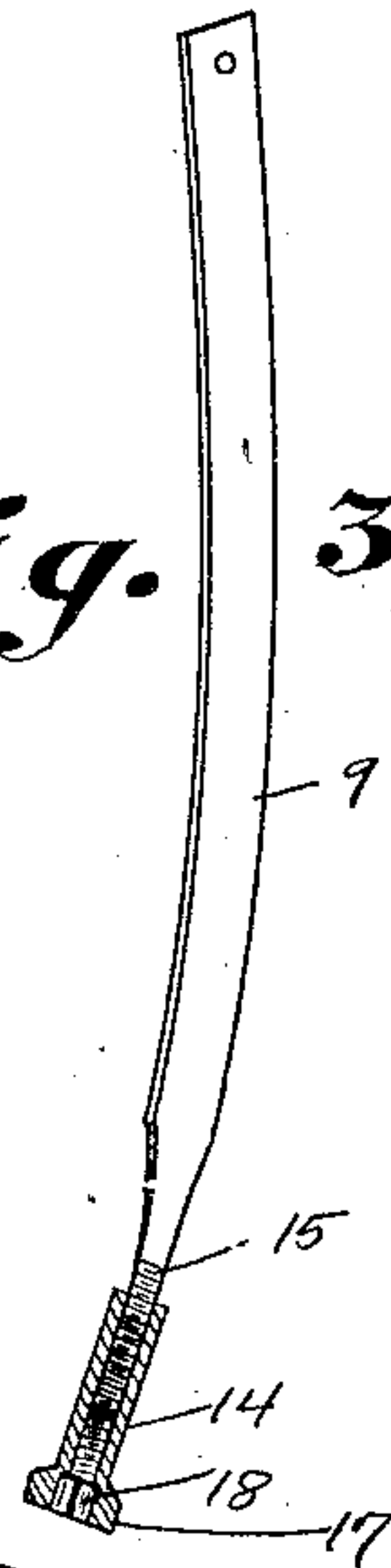
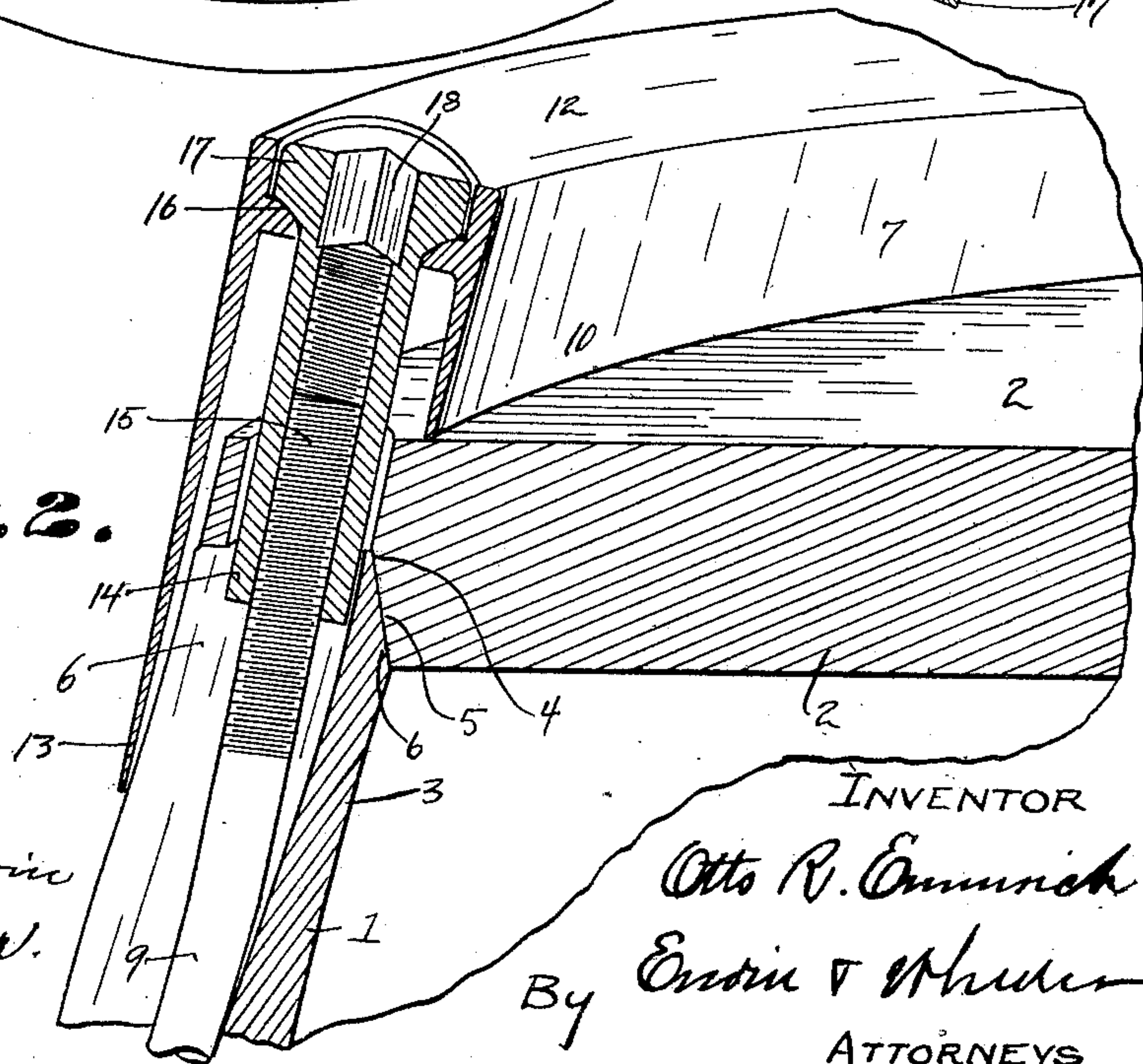


Fig. 2.



WITNESSES:

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OTTO R. EMMRICH, OF WEST BEND, WISCONSIN.

BARREL.

No. 924,649.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OTTO R. EMMRICH, a citizen of the United States, residing at West Bend, county of Washington, and State of Wisconsin, have invented new and useful Improvements in Barrels, of which the following is a specification.

My invention relates to improvements in barrels.

It is a well known fact that the chime groove formed in the upper ends of the staves of barrels for the reception of the periphery of the heads is usually one of the weakest points in a barrel for the reason that the ends of the staves thus grooved are liable to be broken by rough handling of the barrel, also that the hoops, as ordinarily attached are liable to become loose and detached from the barrel.

The object of my invention is, among other things, to provide a barrel in which the chime groove and all that part of the stave heretofore extending past the chime and head are dispensed with, and the heads are secured in place directly against the respective ends of the staves by a metallic collar, while the hoops and collar are adapted to be drawn into place by screw threaded connecting members, when such parts cooperate to hold each other in place and prevent the possibility of said hoops becoming accidentally lost or loosened.

My invention is further explained by reference to the accompanying drawings, in which—

Figure 1 is a side view of a barrel, part in section, provided with my improved head and hoop retaining mechanism; Fig. 2 is a detail showing an enlarged vertical section of one of the head and collar retaining members in connection with a portion of the barrel shown in perspective; and Fig. 3 is a perspective view of one of the hoop retaining members removed from the barrel.

Like parts are identified by the same reference characters throughout the several views.

1 is a barrel and 2 is a barrel head which extends across and rests upon the upper ends of the barrel staves 3. The head 2 is preferably provided with an annular notch or recess 4, whereby the annular beveled edge 5 of the head is adapted to extend inwardly past the respective ends of the staves and the respective ends of the staves are preferably tapered outwardly forming a bev-

eled surface 6 which conforms to the beveled surface 5 of the head, whereby as the respective heads are drawn toward each other, the beveled surface 5 is adapted to impinge against the beveled surface 6 and thereby form a liquid tight joint between the heads and staves of the barrel. The heads are thus securely retained in place against the ends of the staves by the cooperative action of the annular collars 7 and 7', hoops 8 and 8', and vertical connecting members 9. The annular collars 7 and 7' are U shaped in cross section, comprising the inner vertical member 10, the outer vertical member 11 and horizontal connecting member 12. The inner vertical member 10 is adapted to rest against the exterior surface of the head, while the exterior vertical member 11 extends down past the chime and forms the chime hoop member 13, by which the upper ends of the staves are retained in place against the heads.

The upper annular collar 7 is connected by said vertical member 9 with the lower hoop 8, while the lower annular collar 7' is connected with the upper hoop 8', said hoops 8 and 8' being respectively located upon the respective sides of the bilge central portion of the barrel, whereby when the nuts 14 on the vertical connecting members 9 are turned down, the respective hoops will be drawn inwardly toward the center or larger portion of the barrel and thereby tightened, while the respective annular collars 7 and 7' will in like manner be simultaneously drawn more firmly against the heads and sides of the barrel, whereby the heads will be forced into liquid tight contact with the ends of the staves and whereby the respective ends of the staves will be forced inwardly against the respective beveled edges 5 of the heads.

It will be understood that the respective free ends of the vertical members 9 are provided with screw threaded bearings 15 for the reception of the nuts 14, and the respective collars 7 and 7' are provided with inwardly converging apertures 16 for the respective heads 17 of said nuts, while the heads 17 are respectively provided with rectangular apertures 18 for the reception of a rectangular wrench by which they are turned. Thus it will be obvious that when all the cooperating parts are in place, the respective hoops 8 and 8' and annular collars 7 and 7' will be drawn toward each other and into close contact with the heads and staves of the barrel by turning said nuts 14 down-

ward upon said vertical connecting members 9.

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

1. In a barrel, the combination of an annular series of staves, heads extending across and secured against the respective ends of said series of staves, an annular collar inclosing the respective ends of the staves and extending inwardly past the periphery of and adapted to bear against the outer surfaces of said heads, stave retaining hoops located between the respective annular collars and the central bilge portion of said staves and two sets of transversely arranged hoop and collar retaining members respectively provided with screw threaded connections at one end with one of said collars and with rigid connections at their opposite ends with the respective hoops, located upon the opposite side from said collars and the central bilge portion of said staves, whereby as the respective sets of transverse members are put under tension by said screw threaded connections, the respective collars and hoops connected with such sets will be drawn toward each other and the staves and heads of the barrel thereby drawn and retained in liquid tight connection with each other.

2. In a barrel, the combination of an annular series of staves, two heads respectively provided with annular recesses for the reception of the respective ends of said series of staves, an annular collar inclosing the respective ends of the staves and extending inwardly past the periphery of and adapted to bear against the outer surfaces of said heads, stave retaining hoops located between the respective annular collars and the central bilge portion of said staves and two sets of transversely arranged hoop and collar retaining members respectively provided with screw threaded connections at one end with one of said collars and with rigid connections at their opposite ends with the respective hoops, located upon the opposite side from said collars and the central bilge portion of said staves, whereby as the respective sets of

transverse members are put under tension by said screw threaded connections, the respective collars and hoops connected with such sets will be drawn toward each other and the staves and heads of the barrel thereby drawn and retained in liquid tight connection with each other.

3. In a barrel, the combination of an annular series of staves, two heads respectively provided with annular recesses for the reception of the respective ends of said series of staves, an annular collar inclosing the respective ends of the staves and extending inwardly past the periphery of and adapted to bear against the outer surfaces of said heads, said collars being respectively provided with a plurality of vertical apertures having inwardly converging bearings for the reception of a plurality of screw threaded nuts, a plurality of nuts located in said vertical apertures provided with rectangular bearings for the reception of a wrench by which they are adapted to be turned, stave retaining hoops located between the respective annular collars and the central bilge portion of said staves and two sets of transversely arranged hoop and collar retaining members respectively provided with screw threaded bearings for the reception of said nuts, said hoop and collar retaining members being connected at one end with one of said collars and rigidly connected at their opposite ends with the respective hoops which are located upon the opposite side from said collars and the central bilge portion of said staves, whereby, as said nuts are turned down on said hoop and collar retaining members, the respective collars and hoops connected with such member will be drawn toward each other and the staves and heads of the barrel thereby brought into liquid tight contact with each other.

In testimony whereof I affix my signature in the presence of two witnesses.

OTTO R. EMMRICH.

Witnesses:

JAS. B. ERWIN,
O. R. ERWIN.