H. M. SMITH.

Barrel-Head.

No. 165,766. Patented July 20, 1875.

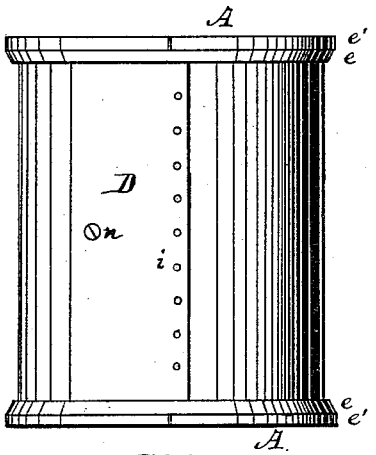

FIG. 1.

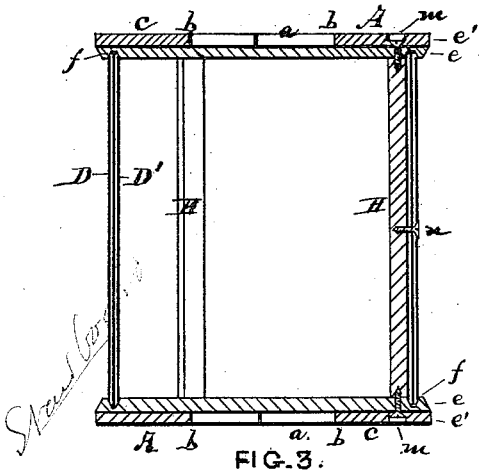

FIG. 3.

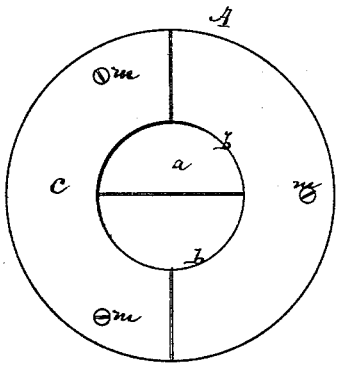

FIG. 2.

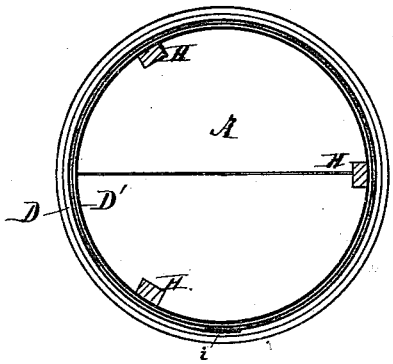

FIG. 4.

Witnesses:

Franklin Lester

Henry L. Smith

Inventor:

Horatio M. Smith
by Munday & Evarts
his Attorneys

UNITED STATES PATENT OFFICE.

HORATIO M. SMITH, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN BARREL-HEADS.

Specification forming part of Letters Patent No. **165,766**, dated July 20, 1875; application filed April 1, 1875.

To all whom it may concern:

Be it known that I, HORATIO M. SMITH, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Barrel-Heads, of which the following is a specification:

This invention relates to that class of barrels of which the sides are made of paper, straw-board, or similar flexible sheets secured to rigid heads.

The invention consists in providing the solid heads with a central cavity upon the outer surface, which extends partly through the material whereof the head is made, lessening its weight, and serving as a grasp by reason of its shoulder for the cant-hook, the fingers, or the hoisting-grapple in handling the barrel. The especial advantage of this construction lies in the fact that a grasp may be thus obtained with greater ease than can be had in the case of the surface groove commonly employed, and also that the head is stronger than where the usual groove near the periphery is adopted, because at this point—the point of attachment to the sides—the head is already commonly weakened by an under groove or shoulder to receive the edges of the sides.

In the accompanying drawing, which forms a part of this specification, Figure 1 is a side elevation of my improved barrel. Fig. 2 is a top view of the same. Fig. 3 is a vertical section, and Fig. 4 a horizontal section, of the same.

Like letters of reference made use of in the several figures indicate like parts wherever used.

In the said drawing, A A are the heads of the barrel, made, preferably, of wood, and constructed with the central exterior circular cavity *a*, forming at all sides a shoulder, *b*, between which and the outer edge of the head is a broad strong margin, *c*, of uncut wood, forming an ample protection, and a large uncut and unweakened field or place for the attachment to the sides. This cavity will receive the grapple or cant-hook to rest against the shoulder *b*. The barrel may be grasped with the ends of the fingers resting against this shoulder, while the knuckles lie flat upon the surface of the cavity, which cannot be done where the common groove is employed, as is usual in heads of this class. Each head is shown in the drawing as being composed of two layers of wood, though, of course, so far as my invention is concerned, the head may be solid of a single piece. There is a first or inner layer, *e*, and a second or outer layer, *e'*. These layers are placed with the grain at right angles, or nearly so, one layer to the other, and the two layers fastened, preferably glued, together. In this case the cavity *a* above mentioned may be easily produced by sawing a circular aperture in the outer layer *e'*; the inner layer will then form its bottom; or, if preferred, it may be turned in the lathe wholly in the outer layer. The under surface of each head near the periphery is cut with the circular groove *f*, of a wedge shape in cross-section, as shown clearly at Fig. 3 of the drawing. These grooves receive the sides, composed of several thicknesses of paper or straw-board, or its equivalent, cut into sheets of a proper size, the outer one, D, being large enough to lap at its junction to receive rivets or tacks *i*, the inner ones, D', being only large enough to come into the cylindrical form nicely without lapping, care being taken in setting the barrel up to have the joints break, as shown at Fig. 4. Running from head to head within the barrel, and setting close against the sides, are the wooden tie-rods H, preferably three in number. Screws *m*, passing through the heads at each end, enter these tie-rods and bind the heads in place firmly down upon the side sheets, causing the edges of said sheets to enter the wedge-grooves, and to form a close compressed joint. Other screws *n* are set through the sheets at the sides into the tie-rods laterally to serve as a hold-fast when one of the heads is removed. Either head may be easily and quickly removed without affecting the integrity of the barrel by simply removing the screws *m* belonging to the head it is desired to remove, for the purpose of examining the contents of the barrel. By placing a seal over the heads of the screws *m* the barrel may be effectually sealed against opening for the purpose of tampering with its contents without detection. Each round or layer D' is a separate sheet, and the whole barrel, excepting only the outer sheet D, may

be taken down for shipment flat without injury, and if care is used the outer sheet may be also used again.

I am well aware wooden heads for paper or flexible-sided barrels have heretofore been made with an annular groove on the outer surface to serve in lieu of a chine. Such, however, is not any part of my invention, and I disclaim all such.

Having thus fully described the construction and operation of my invention, that which I claim as new, and desire to secure by Letters Patent, is—

The rigid or wooden head for barrels with flexible sides, made with the exterior central circular cavity *a*, forming the unobstructed shoulder *b*, substantially as and for the purpose specified.

HORATIO M. SMITH.

Witnesses:

JOHN W. MUNDAY,

EDW. S. EVARTS.