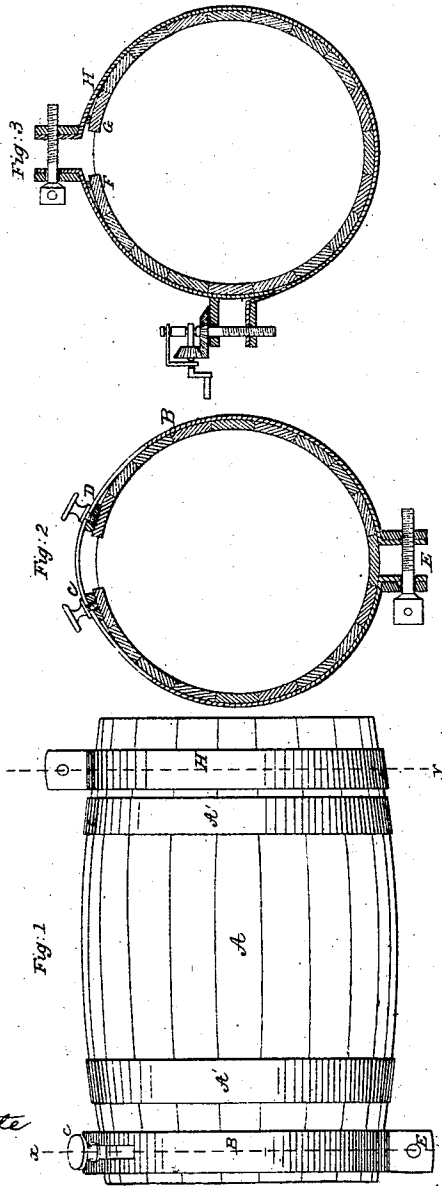


*E. W. Gillman,  
Repairing Barrels.*

*N<sup>o</sup> 79,340.*

*Patented June 30, 1868.*



*Witnesses:  
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# United States Patent Office.

EDMUND W. GILLMAN, OF HUNTER'S POINT, NEW YORK.

Letters Patent No. 79,340, dated June 30, 1868.

## IMPROVEMENT IN MODE OF REPAIRING BARRELS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, EDMUND W. GILLMAN, of Hunter's Point, in the county of Queens, and State of New York, have invented a new and improved Device for Repairing Barrels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to a new and improved method of repairing barrels, hogsheads, tierces, kegs, or other cooper-work vessels used for containing liquids, and which is designed more particularly for putting staves into such vessels without removing the contents, when, from accident or decay, such barrels, &c., are found with one or more broken or decayed staves; and the invention consists in binding the barrel with adjustable metallic bands, and thereby holding such barrel or vessel together, when the hoops are removed therefrom, so tightly that leakage is prevented, and so that the broken or decayed stave or staves may be removed and other sound staves be inserted in place thereof, as will be hereinafter more fully described.

Figure 1 represents an outside view of a barrel with my metallic adjustable bands applied with two of the bilge-hoops remaining.

Figure 2 is a transverse section of fig. 1 through the line *x x*, showing the barrel with one stave out, the band in this figure being more especially intended for replacing broken or decayed staves in empty barrels without taking them down or removing the heads.

Figure 3 represents a transverse section of fig. 1 through the line *y y*, showing the kind of band designed, and used more especially for inserting staves in a full barrel without removing the contents.

Similar letters of reference indicate corresponding parts.

A is the barrel, formed in the ordinary manner.

B is the metallic band, seen in fig. 2.

This band is slotted, so that the gripes C and D may be adjusted to any desired position.

Any stave or staves can be removed and others inserted without taking down the barrel. More than two, or any desired number of the adjustable gripes may be used in the slots of this band.

When properly adjusted for removing a stave, the screw E is turned; and the two parts of the band are drawn together, which operation draws or forces the gripes C and D into the wood, and securely holds the staves in place on the heads after the hoops have been removed.

The arrangement for removing a broken or decayed stave from a full barrel is similar to that already described. In this arrangement a single stave can only be inserted at one time, as the stave to be removed must be the upper one, in order to preserve the contents, as seen in fig. 3.

The lugs F G, on the under side of the band H, penetrate the staves on each side of the decayed or broken one, as seen in the drawing.

When the screw J is turned, it will be seen that the staves in the barrel will be held firmly in place, so that the broken or defective stave may be removed and replaced by a sound one.

Four of these metallic bands, with gripes, lugs, or teeth are usually employed, especially for repairing full barrels, but I do not confine myself to any particular number, nor to any particular number of sections forming the bands, or of the tightening-screws in the bands, the object being, by the use of these metallic bands, to enable a cooper or other person to remove defective staves and supply their places with sound ones without removing the contents of full barrels or taking down empty barrels.

A' represents the bilge-staves on the barrel.

These staves, as well as the others belonging to the barrel, are removed without injury to them in the process of putting on the bands.

The advantages of this device are many and obvious, as staves are frequently broken in handling full barrels, which require the removal of the contents before they can be repaired according to the present usage.

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

The hoop B, slotted to receive the adjustable gripes C D, and provided with lugs adapted to be drawn together by means of the screw E, substantially as and for the purpose set forth.

Witnesses:

SAMUEL SHEA,

EDMUND W. GILLMAN.