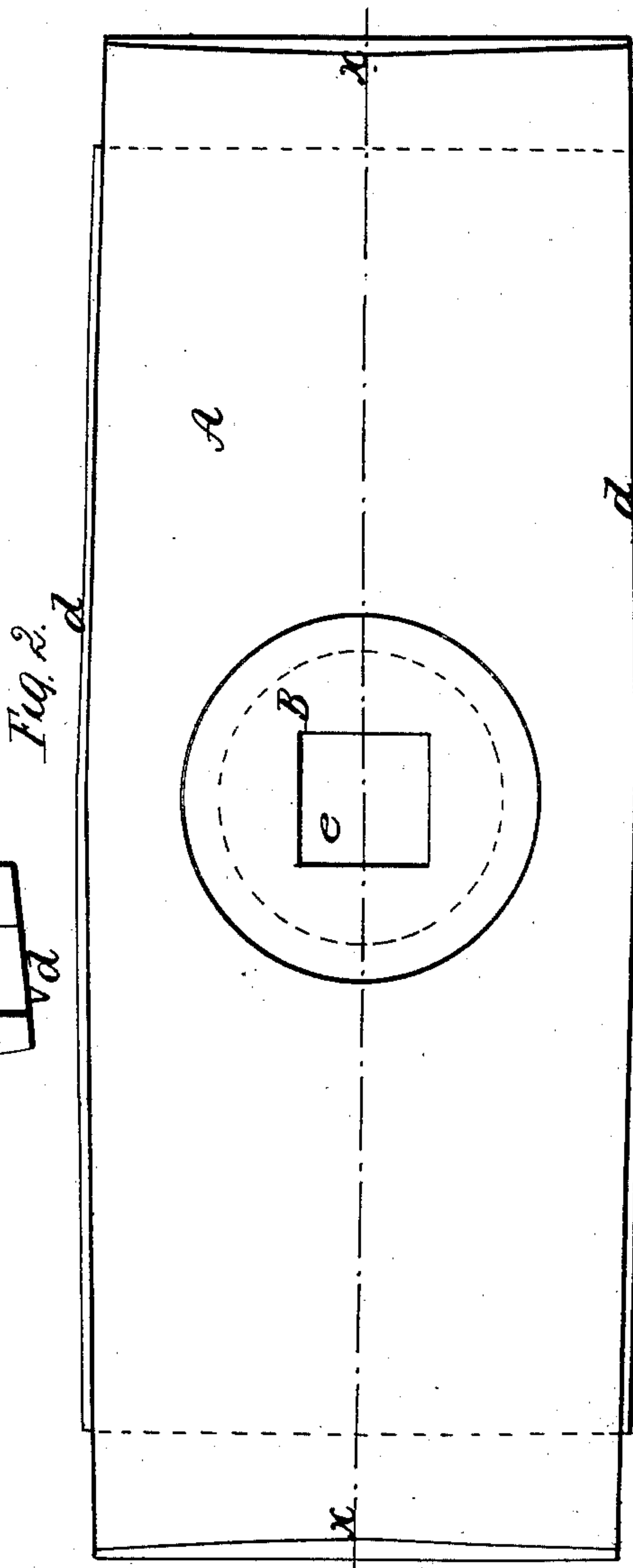
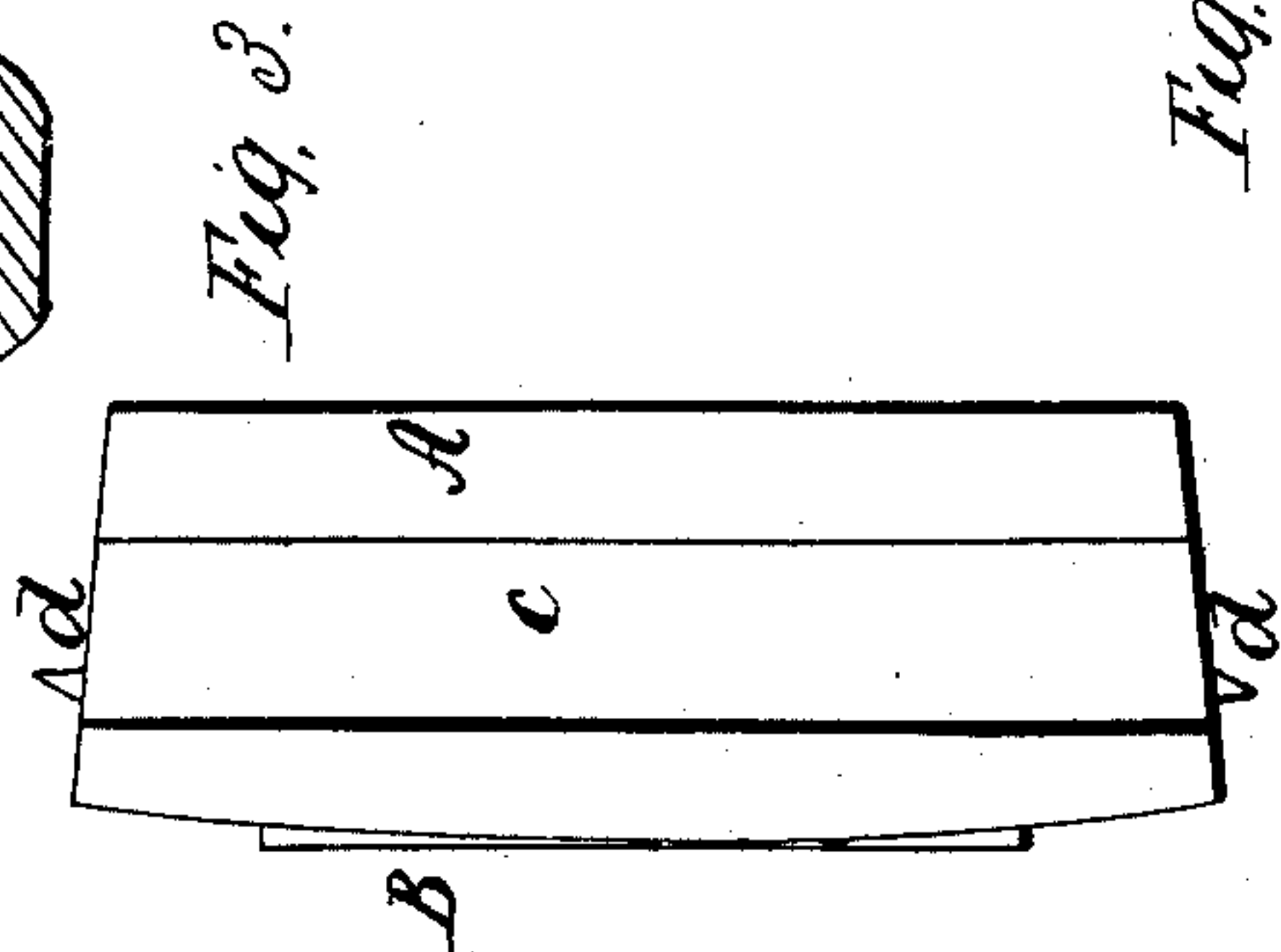
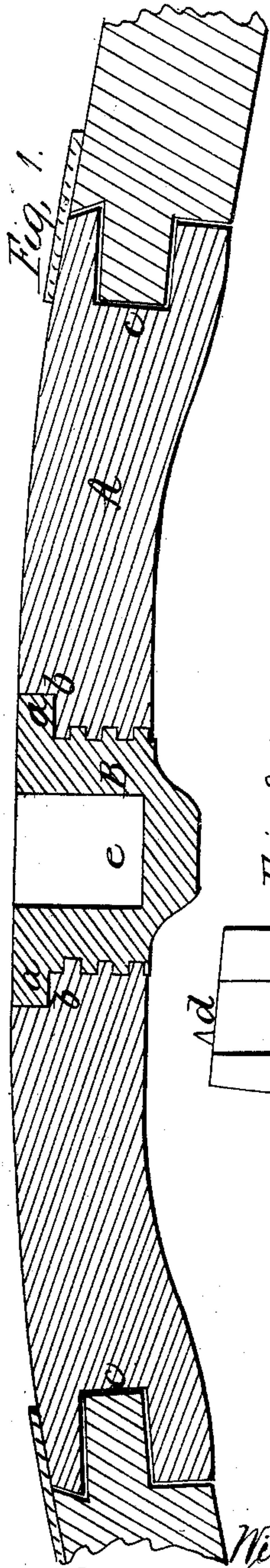


*F. Acker,*

*Bung,*

*No. 45,553,*

*Patented Dec. 20, 1864.*



*Witnesses,*  
*J. W. Coombs*  
*J. W. Reed*

*Inventor, Amos Acker Admx*  
*By Muir & Co atty*

# UNITED STATES PATENT OFFICE.

ANNIE ACKER, OF SAN FRANCISCO, CALIFORNIA, ADMINISTRATRIX OF THE ESTATE OF FREDERICK ACKER, DECEASED.

## IMPROVEMENT IN BUNG-STAVES FOR BARRELS.

Specification forming part of Letters Patent No. 45,553, dated December 20, 1864.

*To all whom it may concern:*

Be it known that I, ANNIE ACKER, of San Francisco, in the county of San Francisco and State of California, and administratrix of FREDERICK ACKER, deceased, who resided in the same place, do hereby declare that FREDERICK ACKER aforesaid did invent certain new and useful Improvements in Casks for Holding Liquids; and I, for the purpose of obtaining Letters Patent therefor, as administratrix, and in trust for the heirs of said FREDERICK ACKER, do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section of the metal portion of a stave and bung pertaining to the same, taken in the line *xx*, Fig. 2; Fig. 2, an external or face view thereof; Fig. 3, an end view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a means employed for preventing the cask being injured by the removal of the bung. The ordinary wooden bung, as is well known, requires to be started or loosened by striking the stave in which it is fitted by means of a mallet or hammer, and this operation, after being repeatedly performed, injures and breaks or splits the stave. To obviate this difficulty is one of the objects of this invention, and to effect such result the whole or a portion of the stave in which the bung is fitted is constructed of metal and fitted between the wooden staves in a firm and substantial manner, as hereinafter set forth.

To enable those skilled in the art to fully understand and construct the invention, I will proceed to describe it.

A, Figs. 2, 3, and 4, represents a metal portion of a stave, in which a screw-bung, B, is fitted, said bung being provided with a shoulder, *a*, which, when the bung is fully screwed

into the bung-hole, bears against a leather or suitable packing, *b*, as shown clearly in Fig. 2. The ends of the metal portion A of the stave have each a groove, *c*, made in them to receive tenons cut or formed on the inner ends of the wooden parts of the stave, as shown clearly in Fig. 2, the ends of the wooden portions of the stave being shown in red. The sides of the metal portion A of the stave may be provided with longitudinal cleats *d*, (see Fig. 3,) to fit into the sides of the adjoining wooden staves and keep the metal portion A firmly in position. The bung B is also constructed of metal, and provided with a square recess, *e*, to receive a key for the purpose of screwing the bung into A and unscrewing it therefrom. (See Fig. 2.) By this means it will be seen that all trouble and difficulty attending the fitting of the bung into the cask and removing it therefrom are avoided. The stave cannot be split or injured in any way, and the metal portion A may be applied to old as well as to new casks. The central hoops of the casks may be made to fit over the joints formed by the junction of the ends of the metal parts A and the wooden parts of the stave. These metal parts A may be of cast-iron, and patterns of different sizes are designed to be made in order to obtain castings of different sizes to suit different-sized casks. A full-length metal stave may be used and applied in the same way as a wooden one, but the metal section is preferable.

Having thus described the invention, what is claimed as new, and for which Letters Patent are desired, is—

The metallic stave or segment of stave A, provided with longitudinal tongues *d d*, and threaded for the reception of a screw plug or bung, B, substantially as herein described.

ANNIE ACKER.

Witnesses:

SELDEN S. WRIGHT,  
P. B. CORNWALL.