(No Model.)

T. G. STEVENS & J. BAKER.

CASK.

No. 518,537. Patented Apr. 17, 1894.

Fig. 3.

Fig. 4.

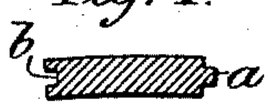


Fig. 5.

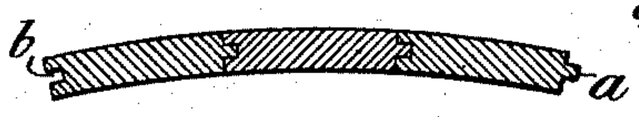


Fig. 8.

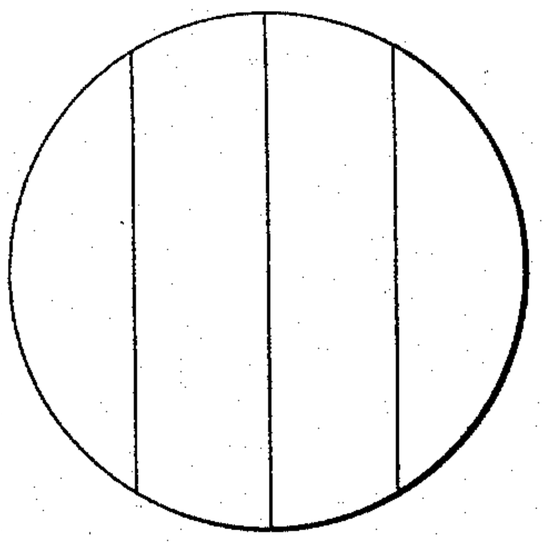


Fig. 1. *Fig. 2.*

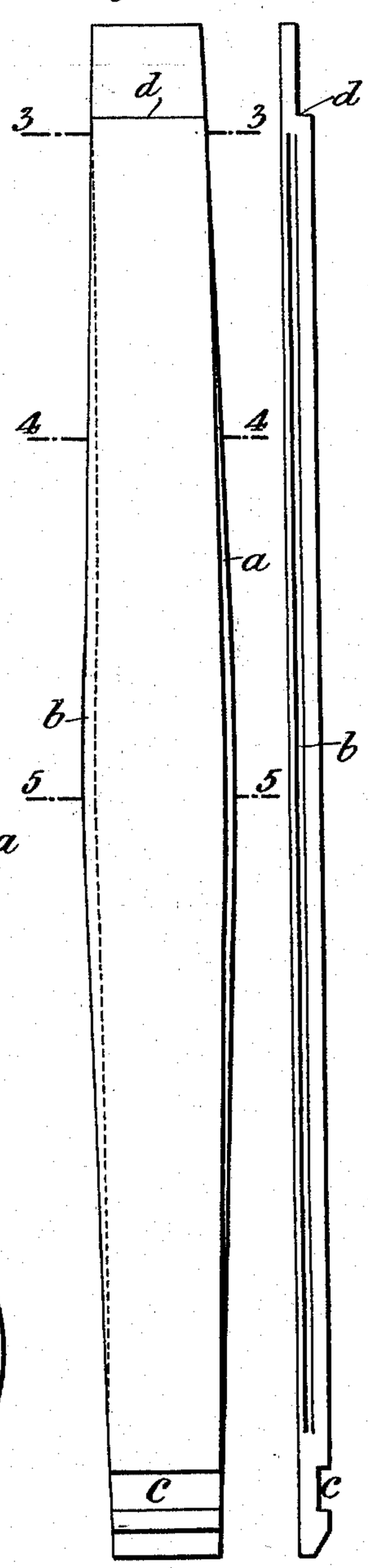


Fig. 7.

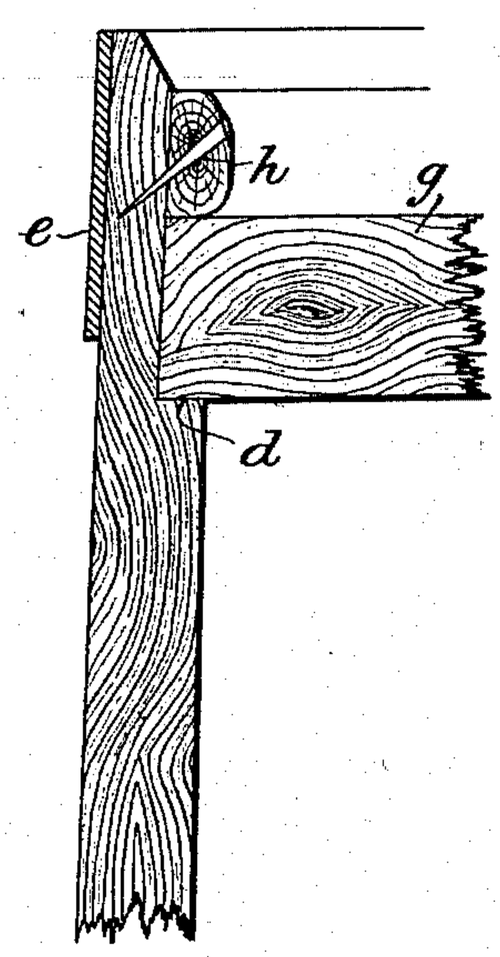
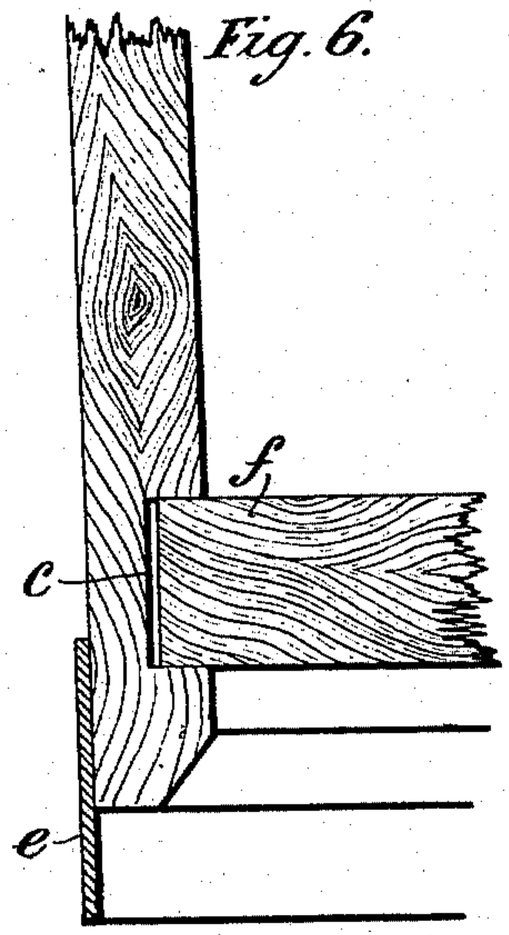


Fig. 6.



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UNITED STATES PATENT OFFICE.

THOMAS GEORGE STEVENS, OF SWANSCOMBE, AND JOSEPH BAKER, OF GREENHITHE, ASSIGNORS TO THE STEVENS CASK AND BARREL COMPANY, LIMITED, OF LONDON, ENGLAND.

CASK.

SPECIFICATION forming part of Letters Patent No. 518,537, dated April 17, 1894.

Application filed November 2, 1893. Serial No. 489,846. (No model.) Patented in England October 3, 1892, No. 17,607.

To all whom it may concern:

Be it known that we, THOMAS GEORGE STEVENS, engineer, residing at Esther Villa, Swanscombe, and JOSEPH BAKER, engineer and cooper, residing at 6 Sunset View, Knockhall Chase, Greenhithe, Kent, England, subjects of the Queen of Great Britain, have invented certain new and useful Improvements in Casks, (for which we have received Letters Patent in Great Britain, No. 17,607, dated October 3, 1892,) of which the following is a specification.

In making casks or barrels we employ staves which are tongued and grooved so as to interlock the one with the other. This interlocking we employ to keep the staves in place and to form tight joints over the central part or bulge of the cask but we do not cause the interlocking to extend to the ends of the cask, for here the hoops are amply sufficient to keep the staves in place and the presence of tongues upon the staves would give rise to much difficulty in closing the cask. When making casks in this manner we are enabled to dispense with some of the hoops usually employed; consequently we provide only one hoop at each end of the cask. To put on these hoops we employ a machine in which by right and left hand screws two bands are simultaneously tightened around the cask one on either side of the middle or bulge of the cask. This is done while the cask stands on end and when the hoop for one end has been put on, by a movement around an axis, the cask is inverted and stood upon its other end, in which position it receives the other end hoop. We use iron hoops somewhat deeper than usual and when the cask is first closed we leave the hoops projecting beyond the ends of the staves. When the cask is packed the hoops are driven home flush with the ends of the staves which renders the cask tight to hold dry goods notwithstanding any shrinkage which may have taken place while the cask has remained in store. At the open end of the cask which when the cask has been packed receives the head a ledge is formed for the head to rest on, each stave having a shoulder to support the head. When the head is in place a wooden hoop is applied in contact with the head and it is nailed to the projecting ends of the staves. In this way the head is easily and securely fixed.

In the drawings annexed Figure 1 is an elevation and shows the inner side of one of the staves. Fig. 2 is an edge view of the same. Figs. 3, 4 and 5 are transverse sections taken respectively on the lines 3, 3, 4, 4 and 5, 5 in Fig. 1. In Fig. 5 two other staves are also shown in the relative positions they occupy in the finished cask. Fig. 6 is a section showing full size a portion of the lower end of the cask in the state in which the cask would be kept in store and before the bottom hoop has been driven home. Fig. 7 is a section showing full size a portion of the upper end of the cask with the end hoop driven home after packing. Fig. 8 shows to a reduced scale a section of the head of the cask, and Fig. 9 shows on a reduced scale a plan of the head of the cask.

In Figs. 1 to 5 *a* is the tongue on one side of the stave, it gradually decreases and dies away as the ends of the stave are approached. *b* is the corresponding groove on the other side of the stave. *c* is the groove to receive the bottom. *d* is the shoulder upon which the head of the cask is to rest. The stave has the taper requisite to give the desired bulge in the middle of the cask.

In Figs. 6 and 7 *e e* are the end hoops and these are the only hoops which the cask needs. These hoops are broader than usual so that when the cask is first made they may be left projecting somewhat beyond the ends of the staves. When the cask is packed the hoops are readily driven home by blows with a mallet and so any shrinkage which may have taken place is taken up and the cask made tight. In place of using iron hoops we may employ broad wooden hoops. *f* is a portion of the bottom of the cask and *g* is part of the head. The head rests upon the shoulder *d*. The wooden hoop *h* is put in over the head and is fastened by nails as is shown.

What we claim is—

1. A cask or barrel formed of staves having

on one edge a tongue tapering toward and disappearing altogether at the ends, and a groove on the other edge corresponding to the tongue.

2. A cask or barrel formed of staves, each having on one edge a tongue tapering toward and disappearing altogether at the ends, and a groove on the other edge corresponding to the tongue, the staves being confined at the ends with broad hoops which project beyond the staves until finally driven home.

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