(No Model.)

R. C. BOEKLER.

BARREL HEAD AND FASTENING.

No. 374,446. Patented Dec. 6, 1887.

Fig. 1.

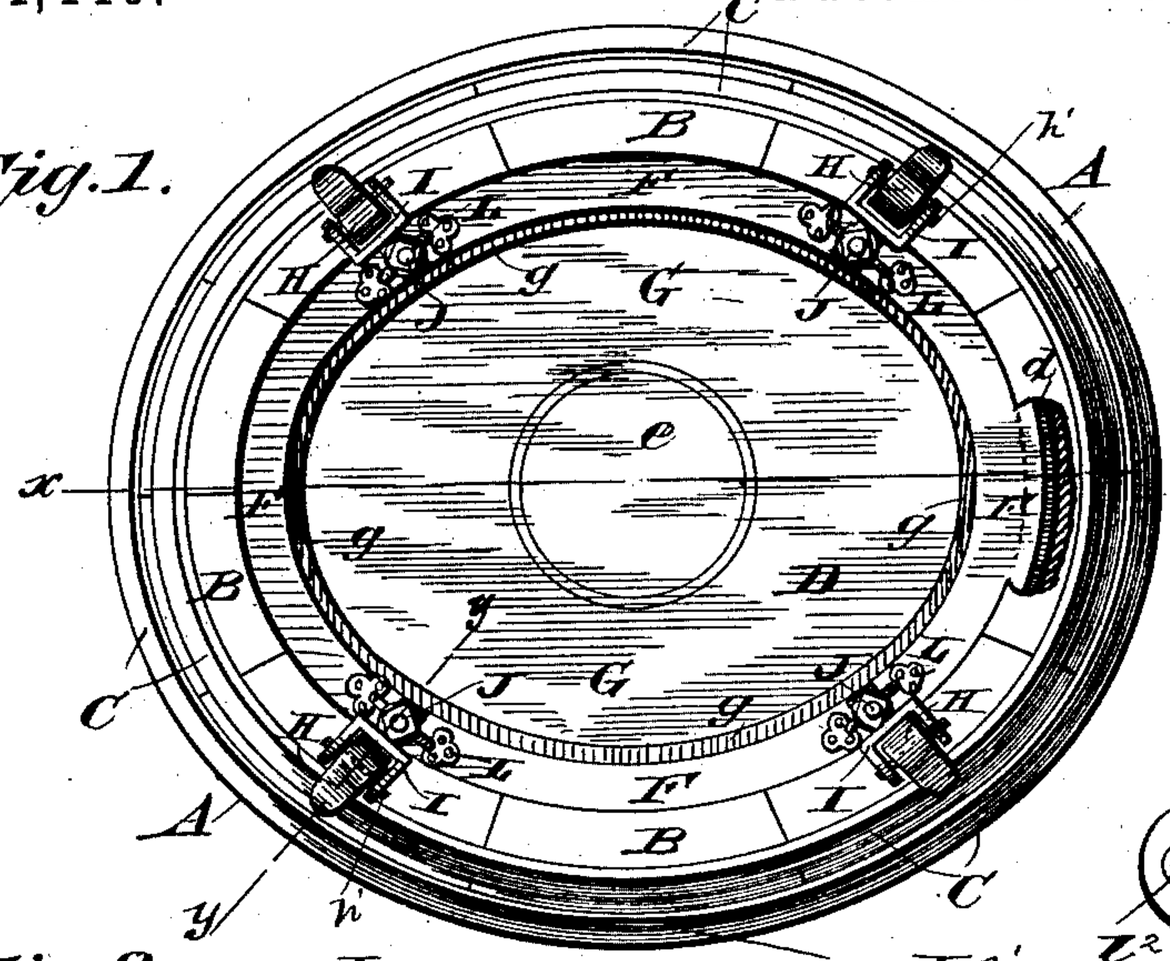


Fig. 2.

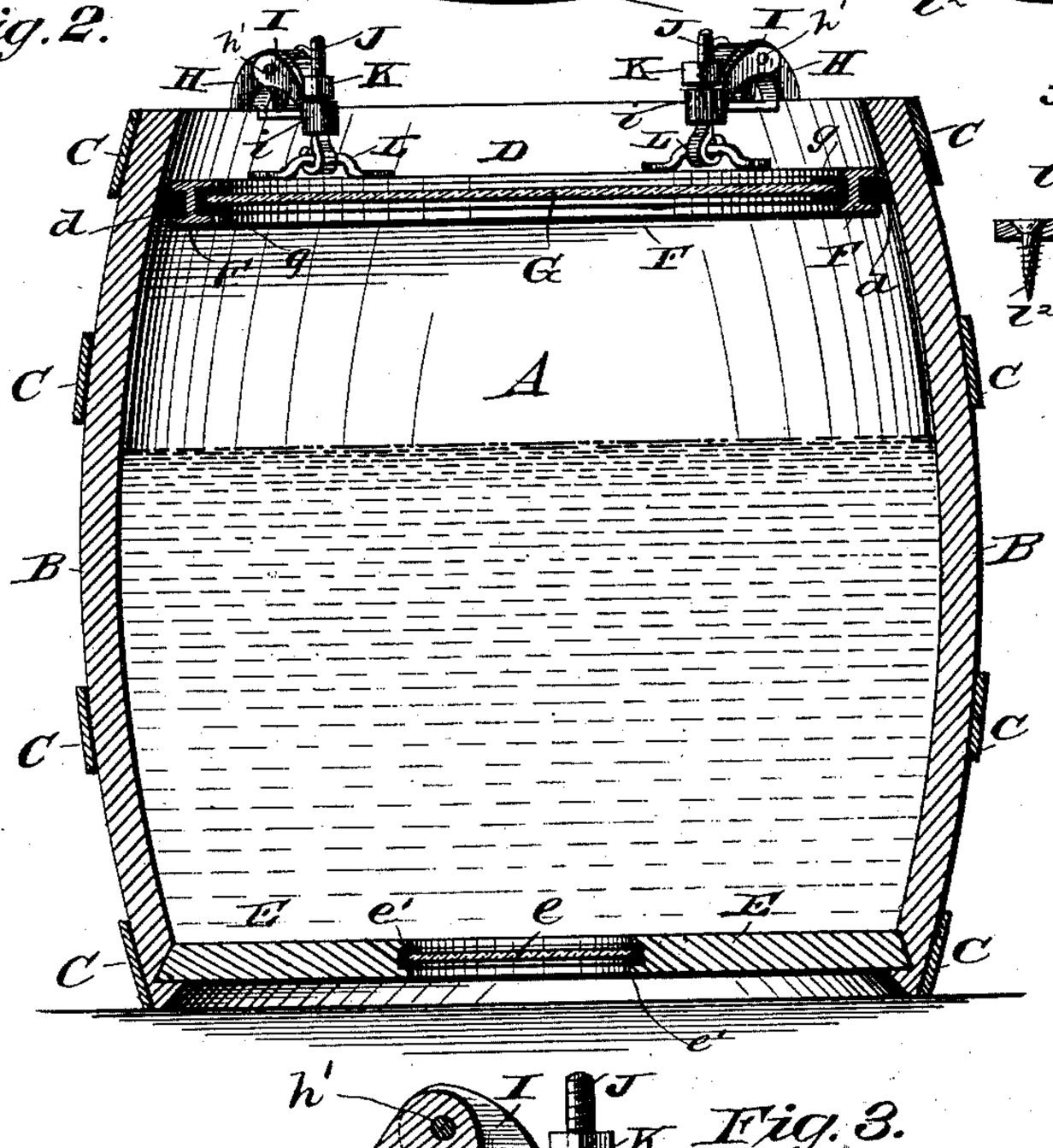


Fig. 4.

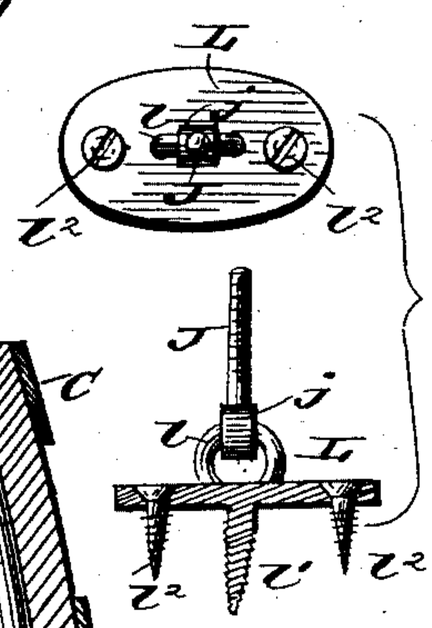
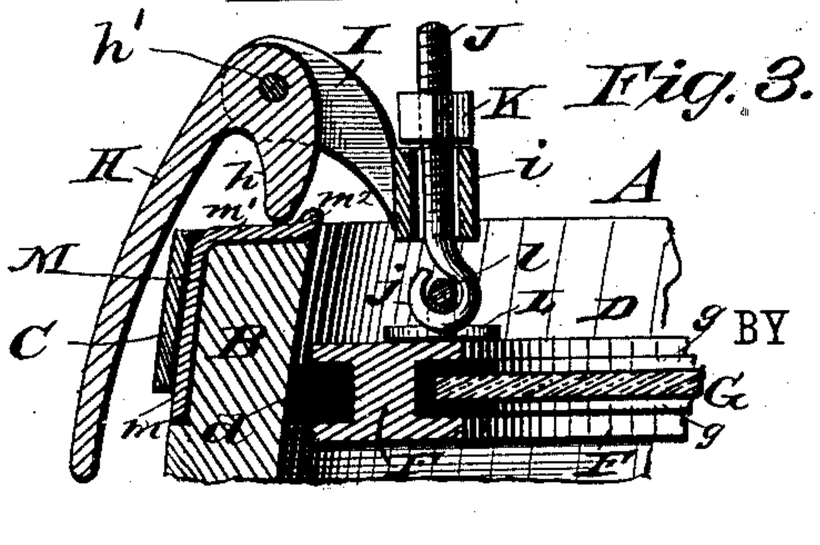


Fig. 3.



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BARREL-HEAD AND FASTENING.

SPECIFICATION forming part of Letters Patent No. 374,446, dated December 6, 1887.

Application filed September 13, 1887. Serial No. 249,573. (No model.)

To all whom it may concern:

Be it known that I, ROBERT CONRAD BOEKLER, of Mankato, in county of Blue Earth and State of Minnesota, have invented a new and useful Improvement in Barrel-Heads and Fastenings, of which the following is a full, clear, and exact description.

My invention relates to removable heads for barrels and fastenings therefor, and has for its object to provide a simple, inexpensive, and efficient barrel-head and fastening, which may readily be locked air and fluid tight in the barrel, which barrel has a smooth inner face where the head fits it, so as not to interfere with the handling or removal of its contents and allow quick and thorough cleaning.

The invention consists in certain novel features of construction and combinations of parts of the barrel-head and fastenings, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a barrel provided with my improved head and fastenings and partly broken away and in section. Fig. 2 is a vertical section of the barrel, taken on the line *x x*, Fig. 1. Fig. 3 is an enlarged detail transverse section taken on the line *y y*, Fig. 1; and Fig. 4 presents detail views in plan and sectional side elevation of a modified form of plate for holding the cam clamp to the barrel-head.

The barrel or keg A is built up of staves B, hooped at C, in the usual or any approved way, and is made in oval form in transverse section. The barrel-staves B are preferably made a little thicker than usual at the end next the removable head D of the barrel, to allow the inner face of the staves to be dressed off all around by a shaping-cutter, so as to present a truly curved and smooth surface on which the packing *d* of the head D fits closely, as hereinafter more fully explained. The other or fixed head E of the barrel is fitted in a croze cut in the usual way in the staves, and is provided with a glass or transparent plate, *e*, of any desired size, and fitted to a groove made for it in the head, a rubber or other packing, *e'*, being preferably interposed at the joint of the plate with the head, as shown most clearly in Fig. 2 of the drawings.

The removable barrel-head D, to which my invention specially relates, is made with an outside frame or rim, F, of wood or metal, which has the general oval form of the inside of the barrel, and is made a little smaller than the opening of the barrel where it is to fit, to allow the packing *d* of the head to be fitted in a groove in the outside edge of the frame to bear onto the dressed staves, and at its inner edge the comparatively narrow frame F is grooved all around to receive a glass or other transparent plate, G, with an interposed packing, as clearly shown in Fig. 3 of the drawings.

When the frame F is made of wood, I prefer to shape it from a strip of hard wood, grooved at opposite edges to receive the packings *d g*, and then steam it and bend it around a templet or former to give it the necessary shape to fit the barrel. The joint of the steamed and bent strip may be secured in any approved way.

The head D is held to the barrel by two or more cam-lever clamping devices, according to the size of barrel. The drawings show four of these cam-lever clamps on a barrel of considerable size. These clamps are made alike, and comprise a lever, H, having a cam-head, *h*, and pivoted at *h'* to a link, I, which has at its inner end an eye, *i*, through which passes loosely the threaded end of an eyebolt, J, on which a nut, K, is fitted above the eye. The loop or bent head or eye *j* of the bolt J incloses a cross-bar or staple, *l*, of a fastening-plate, L, which is screwed or otherwise fastened at both ends to the upper face of the barrel-head frame F. A modified and in some instances a preferred form of the fastening-plate, L, is shown in Fig. 4 of the drawings, which shows it provided with a central screw, *l'*, immediately below the staple *l*, which receives the eye of the bolt J, and when this screw *l'* is turned fully into the frame F additional screws, *l²*, will be screwed through holes made in the plate into the barrel-head frame, as will readily be understood.

As the toe of the cam-lever head *h* would be liable to indent the end wood of the barrel-stave, I let flush into the stave next the head-clamp an angular metal plate, M, the outer

part, *m*, of which is confined by the adjacent barrel-hoop C, and the top *m'* of the plate on which the cam-lever bears is provided at its extremity with a transverse upwardly-projecting lip or lug, m^2, forming a stop to the head of the lever, all as most clearly shown in Fig. 3 of the drawings.

To apply the head D to the barrel, two opposite cam-levers, H, will serve as handles by which to hold the head and slip it edgewise into the barrel, and when the head is drawn up as snugly as possible by the hands across the open end of the barrel, the cam-levers H will be rested by their heads *h'* upon the plates M, and will be turned down into positions indicated in Figs. 1, 2, and 3 of the drawings, which will draw the packing *d* of the head or the margin of the head, should it have no packing, snugly to the inside of the barrel. By adjusting the nuts K on the screws J any requisite purchase may be given the levers to assure their effective operation in drawing the head D very tightly to place. When the barrel or keg is to be used for shipping purposes, the levers H will be held down to place by staples or other locking devices attached to the outside of the barrel. The cam-levers may be quickly turned upward from their locking positions to allow removal of the barrel-head.

It is obvious that the above described fastening is very simple, cheap, and effective, and that it will hold the removable head to the barrel with an air and liquid tight joint, and there is no metal necessarily exposed to rust or corrode when the barrel is used for pickling purposes, and when the head is removed there is no flange, groove, or rabbet left in the barrel to hinder the free handling or discharge of its contents, or to interfere with a quick and thorough cleaning of the barrel.

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

1. The combination, with a barrel, of a removable head fitted to its inner face and cam-levers connected to the head and adapted to bear on the barrel-staves to lock the head in the barrel, substantially as herein set forth.

2. The combination, with a barrel, of a removable head provided with an edge packing and fitted to the inner face of the barrel, and cam-levers connected to the head and adapted to bear on the barrel-staves to lock the head in the barrel, substantially as herein set forth.

3. The combination, with a barrel, of a removable head fitted to its inner face, cam-levers connected to the head, and metal plates fixed to the barrel-staves to receive the thrust of the levers in locking the head to the barrel, substantially as herein set forth.

4. The combination, with a barrel, of a removable head fitted to its inner face, cam-levers connected to the head, and metal plates M, having angular form and fitted by their parts *m* beneath the barrel-hoop, and having parts *m'* receiving the thrust of the cam-levers and provided with stops m^2, substantially as herein set forth.

5. The combination, with a barrel, of a removable head fitted to its inner face, screws J, held to the head, nuts K on said screws, links I, held to the screws inside of the nuts, and cam-levers H, pivoted to the links and adapted to bear on the staves of the barrel to lock the head thereto, substantially as herein set forth.

6. The combination, with a barrel, of a removable head fitted to its inner face, plates L, held to the head, screws J, hung on the plates, nuts K on said screws, links I, held to the screws inside of the nuts, and cam-levers H, pivoted to the links and adapted to bear on the staves of the barrel to lock the head thereto, substantially as herein set forth.

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