(No Model.)

C. W. GLOVER.

HATTER'S KETTLE.

No. 265,798. Patented Oct. 10, 1882.

Fig. 5

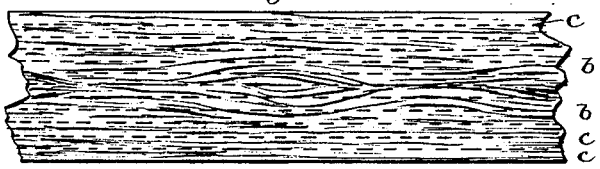


Fig. 1

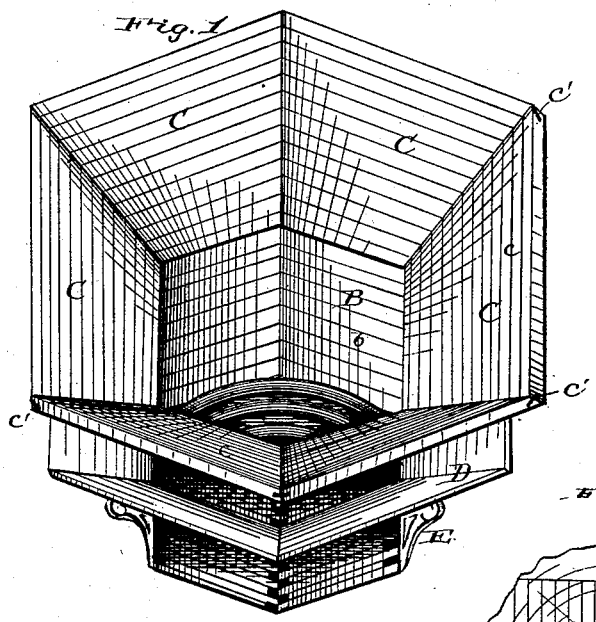


Fig. 3

Fig. 4

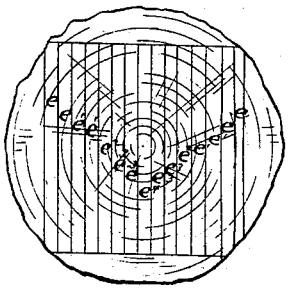
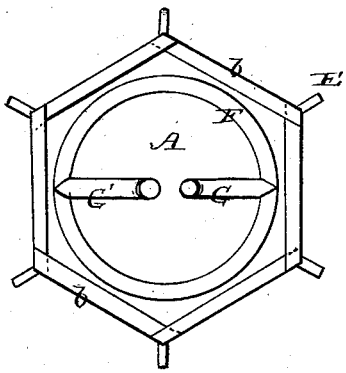


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

CARLOS W. GLOVER, OF BOSTON, MASSACHUSETTS.

HATTER'S KETTLE.

SPECIFICATION forming part of Letters Patent No. 265,798, dated October 10, 1882.

Application filed August 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, CARLOS W. GLOVER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Hatters' Kettles, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a perspective view of my improved kettle. Fig. 2 is a horizontal section of the lower part of the same. Fig. 3 represents one of the strips or cants of which the kettle is composed. Fig. 4 is an end view of the saw-log, illustrating the relative position of boards as they are usually sawed; and Fig. 5 represents the surface of an ordinary board of plank.

Three serious objections are found in operating hatters' kettles as they are at present constructed—that is, with the body of upright staves bound together with hoops, like a barrel, and with the rim or flange made in sections, each section consisting of a single board of suitable width. The first of these defects is owing to the fact that nearly or quite all boards lack uniformity in the grain—that is, the grain at the central part of the board does not run in the same direction as that near the edges, from the fact that the wood is formed in consecutive rings. This irregularity in the grain is illustrated in Fig. 5, which represents a board cut from near the center of the log, as at e^2, Fig. 4. It will be found in practice that if each section or segment of the kettle be made of a single piece of board (the flange being wide enough to require the entire width of the board) it (the flange) will, after being used a short time, become so rough in the center as to seriously impair its value, the constant swelling and drying causing the wood to blister and splinter. Again, it is known that there is a marked difference in the amount of expansion and contraction which is produced by wetting and drying in the different boards cut from the same log, this difference being determined by their position relative to the center or heart of the log. Therefore, even with the exercise of great care in the selection of boards for the construction of kettles, their unequal swelling and shrinking result in detaching the parts of the flange from each other and from the body of the kettle to such an extent that they soon leak badly, particularly at the point where the flange joins the body of the kettle. Again, owing to this and other difficulties in keeping the kettles tight, the liquid, which generally contains more or less acid, soon corrodes the hoops and renders them worthless, which necessitates their being replaced at great expense of time and money, as when the hoops are replaced the shelving which surrounds the kettle below the flange must be removed and then replaced. All of these recited objections I propose to remedy by making both the body and the flange of the kettle of narrow strips of wood, as I will now proceed to explain.

In the drawings, A represents the bottom, which may be made of boards or planks of the usual width when preferred. The body is composed of cants *b*, having both ends beveled, as plainly shown in Figs. 2 and 3. The pieces of which the bottom A is composed may be either tongued and grooved or otherwise put together so as to be water-tight. The sides of the body B and the flange C are made of cants *b* and *c*, in form substantially as shown in Fig. 3. These cants are made by cutting boards into strips on the dotted lines in Fig. 5. By preference I cut these strips of the same width as the board or plank is thick, thus making them square in cross-section; but this may not be essential. After cutting the strips I assort them, using those which are taken from the center of the board, and cut them into suitable lengths, with such bevel at each end as will adapt them, when laid in the shape of a hexagon, to form close joints. I then nail one thickness of them firmly to the bottom, under the arrangement shown in full lines, Fig. 2. I then nail on a second course, with their ends breaking the joints of the first course, as shown in dotted lines, Fig. 2, proceeding in similar manner until the desired height is attained. The flange C is made of cants *c*, nailed together in the same manner and of substantially the same shape as those employed for the body B, except that their length increases as the flange grows larger, and their ends are all grooved to receive binding-pieces *c'* at each corner. As there is no friction by rubbing upon the body B, it may be made of cants cut from the central part of the board, as indicated in Fig. 5; but I prefer to make the flange entirely from

the outer or edge strips, in order to insure that they shall remain smooth under the friction and repeated wetting and drying to which they are subjected.

By an examination of Fig. 4 it will be seen that in order to insure that the entire flange shall be made of wood in which the grain runs in the same direction it will be necessary to turn the strips cut from the center of the boards or planks *e e* one-quarter of the way around and then place adjoining them strips cut from the edges of the planks e^2 e^2. By such an arrangement a flange may be constructed all the sections of which will swell and shrink with a great uniformity and with much less liability of leakage at the point of contact with each other or with the body B than there would be if a part of the sections were made from one of the boards *e* and the other from the board marked e^3; but the most important improvement in the flange is the smooth surface, which is maintained under friction and alternate wetting and drying at the central part of the flange, where the rubbing and other manipulations of the hat-bodies are effected.

D is the shelf, arranged below the flange and supported upon the bracket E or otherwise.

F represents a worm or coil, provided with induction and eduction pipes G G′ for heating the liquid within the kettle. Of course any desired kind of heater may be employed.

Under my construction the overlapping and joint-breaking cants *b* form a body which is sufficiently strong to enable me to dispense entirely with the use of hoops, and therefore avoid not only the expense of them in first building the kettles, but also the cost, both in time and money, of the frequent renewals which are necessary with those in present use. As the grain of my cants *b* runs horizontally around the kettle, it furnishes a much firmer support for the nails or screws used in securing the flange in position than can be provided by the ordinary construction; and as there is more regularity in the shrinking and swelling of the flange it is not so readily detached from the body as in the old style of kettles.

I do not wish to be limited to the exact dimensions of the strips nor the arrangement of the grain of the cants that I have herein set forth, as some variation may be made and yet many of the advantages incident to my construction be retained; and it is apparent that the body A B or the flange C C might be advantageously used in connection with the corresponding part of an ordinary kettle.

What I claim is—

1. The body B of a hatter's kettle, formed of a bottom, A, and cants or strips *b*, having their ends arranged to break joints, substantially as set forth.

2. The flange C, composed of strips *c*, having a uniformity of grain, substantially as set forth.

3. A hatter's kettle composed of the body A B and flange C, formed of narrow strips or cants of wood, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CARLOS W. GLOVER.

Witnesses:

EDWIN W. BROWN,

WM. S. BELLOWS.