I. LEFEBVRE.

SHEET METAL CASK.

APPLICATION FILED JAN. 18, 1907.

1,017,427.

Patented Feb. 13, 1912.

Fig. 3

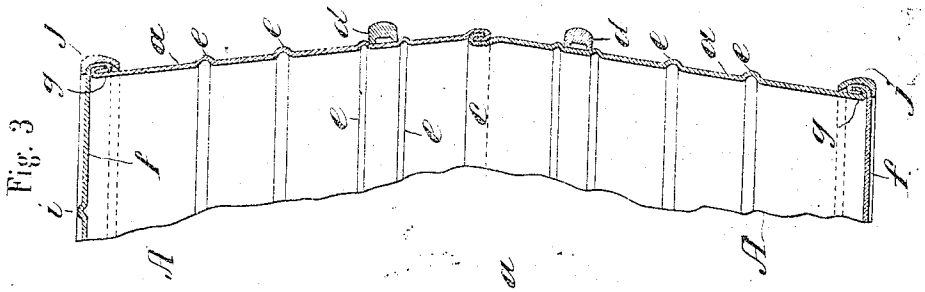


Fig. 4

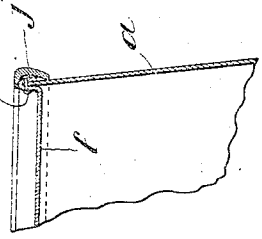


Fig. 2

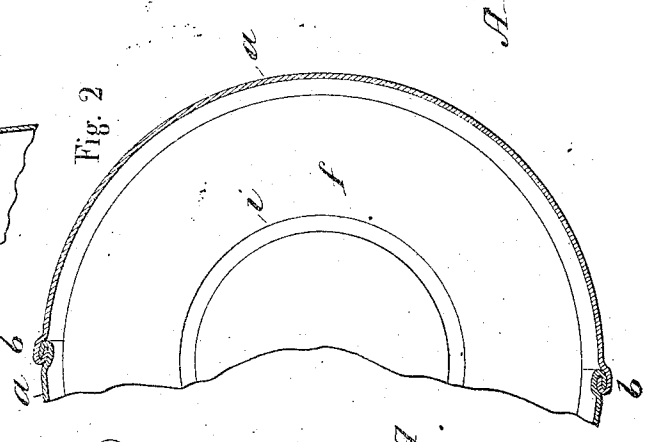
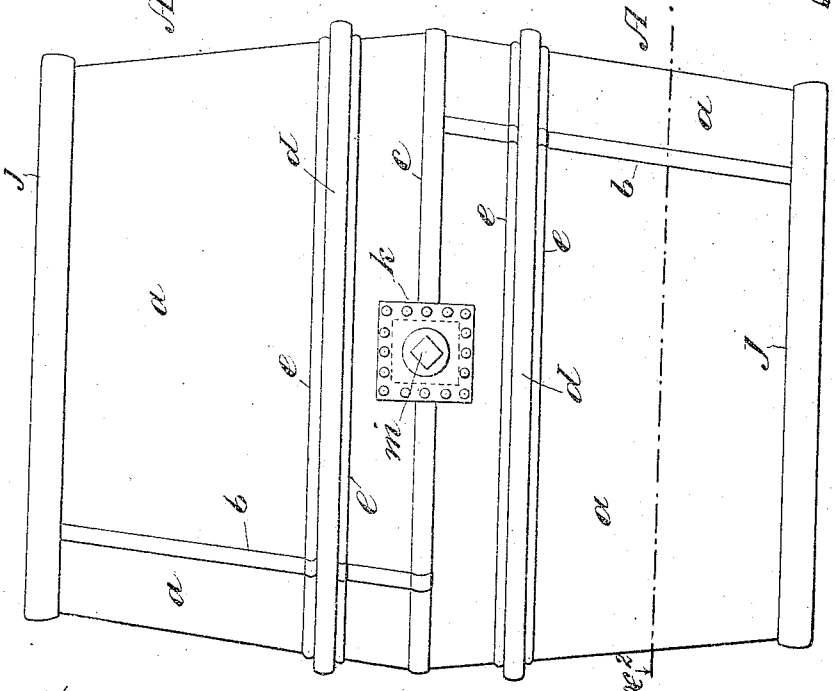


Fig. 1



Witnesses:

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ISIDORE LEFEBVRE, OF AUBERVILLIERS, FRANCE.

SHEET-METAL CASK.

1,017,427. Specification of Letters Patent. Patented Feb. 13, 1912.

Application filed January 18, 1907. Serial No. 352,991.

To all whom it may concern:

Be it known that I, ISIDORE LEFEBVRE, a citizen of the French Republic, residing in Aubervilliers, Seine, France, have invented certain new and useful Improvements in Sheet-Metal Casks, of which the following is a specification.

This invention relates to certain improvements in sheet metal casks, and has for its object to provide a device of this character of a simple and comparatively inexpensive nature which shall be capable of convenient manufacture and which shall present the advantages and general appearance of the ordinary wooden barrel or cask while being at the same time possessed of great strength and durability.

The invention consists, in part, in a cask or barrel formed from tapered sheet metal end sections having their larger ends fitted together and provided with overlapping edge portions which are bent or interlocked with each other to produce a seam extended around the bilge of the improved cask and which forms an effective attachment between the said sections.

The invention also contemplates certain novel features of the construction and combination and arrangements of the several parts of the improved cask, whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings which serve to illustrate my invention: Figure 1 is a side elevation of the improved cask or barrel embodying my improvements; Fig. 2 is a partial section taken transversely through the barrel. Fig. 3 is a fragmentary section taken lengthwise through the improved cask or barrel, and Fig. 4 is a partial view, similar to Fig. 3, but showing a modified formation of the chime.

The improved cask or barrel may be formed from sheet metal of any kind, but I prefer to employ sheet iron or steel in its construction, and where these are employed the sheets may be either black or coated. As will be hereinafter explained, the cask or barrel is formed from two tapered end sections, and each such section is herein shown as formed from two metal sheets *a*, *a*, connected together at their edge portions by means of seams *b* extended lengthwise along the sides of the barrel or cask, but if desired each end section may be formed from a single sheet of metal. This formation of the improved cask or barrel from sheet metal with edges seamed together lengthwise of the barrel side, insures uniformity of strength such as is desirable in barrels of this character.

The tapered end sections A, A, which are herein shown as made in the form of conic frusta, have their larger ends adjoining each other, the edge portions of the sheet metal sections at said adjoining ends being overlapped and bent or interlocked in flush engagement with each other in such a manner as to produce an annular seam *c* extended around the bilge of the cask or barrel, and which, being formed from a plurality of tightly compressed plies or thicknesses of metal, not only affords a tight and secure connection between the sections to hold them together and prevent leakage of the contents, but also, being located at the bilge of the barrel or cask, whereon same rests and is adapted to be rolled, affords an effective reinforce at this point to prevent damage and receive the wear which is imposed upon the cask or barrel during use. In order to further strengthen and protect the bilge of the improved cask or barrel against damage and wear I provide hoops *d*, *d* extended around the same at opposite sides of the central seam . These hoops *d*, *d* are, as herein shown, formed from comparatively heavy metal, and are arranged to project sufficiently beyond the bilge to permit the barrel when rolled, to rest upon the said hoops, whereby a great portion of the wear which would otherwise be imposed upon the sheet metal sections A, A, and which might tend to open the seam at *c*, is imposed upon the said hoops *d*, *d*. For retaining the said hoops upon the bilge, the sheet metal sections are corrugated at opposite sides of each such hoop, as clearly shown at *e*, *e* on the drawings. Such corrugations tend to stiffen the sheet metal structure and may be duplicated at desired points in the sections, as shown in Fig. 3.

As herein shown, the hoops *d*, *d* are made V-shape in cross section, their wings or flanged side portions d^1 being inwardly turned for contact with the side of the cask or barrel, while their convex surfaces d^2 are

outermost for contact upon the surface over which the barrel is rolled. By this construction, a considerable extent of projection of the said hoops *d*, *d* may be secured, such as will be sufficient to support the bilge of the barrel out of contact with the supporting surface without requiring an excessive weight of metal in the hoops such as would be needful were the hoops made solid.

f, *f* represent the heads of the cask or barrel, herein shown as formed also from sheet metal, corrugated as seen at *i* in Figs. 2 and 3, and these may be seamed to the chimes at the smaller ends of the sections A, as shown at *g* in Fig. 3, or may be flanged around their edges and held to said chimes by rivets as shown at *h* in Fig. 4. At each chime of the barrel is arranged another metal hoop or reinforce *j*, herein shown as formed from comparatively thick metal with inturned edge portions j^1. These hoops or reinforces are arranged to overlap the seams or joints between the heads *f*, and the chimes, in such a way as to prevent wear and protect the seams or joints between the parts, and said hoops are held in place upon the chimes, by the engagement of their inwardly directed edge portions j^1, and j^1 at opposite sides of the seams or joints of the heads with said chimes, the said seams or joints being so formed as to project from the surface of the barrel sufficiently far to permit of such engagement. The said hoops may conveniently be applied to the seams or joints by heating and shrinkage.

k represents a metal plate held by rivets or otherwise at the bilge of the improved cask or barrel and provided with an aperture at which the same may be filled or emptied, and *m* represents a bung or stopper for closing said aperture in a well known way.

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

1. A sheet metal cask or barrel comprising a body formed of sheet metal, heads for the body formed of sheet metal, said heads being jointed to the chimes of the body and a metal hoop having inturned edge portions to overlap the joints between the heads and the chimes to reinforce and protect such joints.

2. A sheet metal cask or barrel comprising a body formed of sheet metal, corrugated heads for the body formed of sheet metal, said heads being jointed to the chimes of the body and a metal hoop having inturned edge portions to overlap the joints between the heads and the chimes to reinforce and protect such joints.

In witness whereof I have hereunto signed my name this 3 day of January 1907, in the presence of two subscribing witnesses.

ISIDORE LEFEBVRE.

Witnesses:

ALBERT MAULVAULT,

HANSON C. COXE.