

(Model.)

H. MATTULLATH.

PACKAGE FOR HOLDING AND TRANSPORTING LIQUIDS.

No. 249,650.

Patented Nov. 15, 1881.

Fig. 1

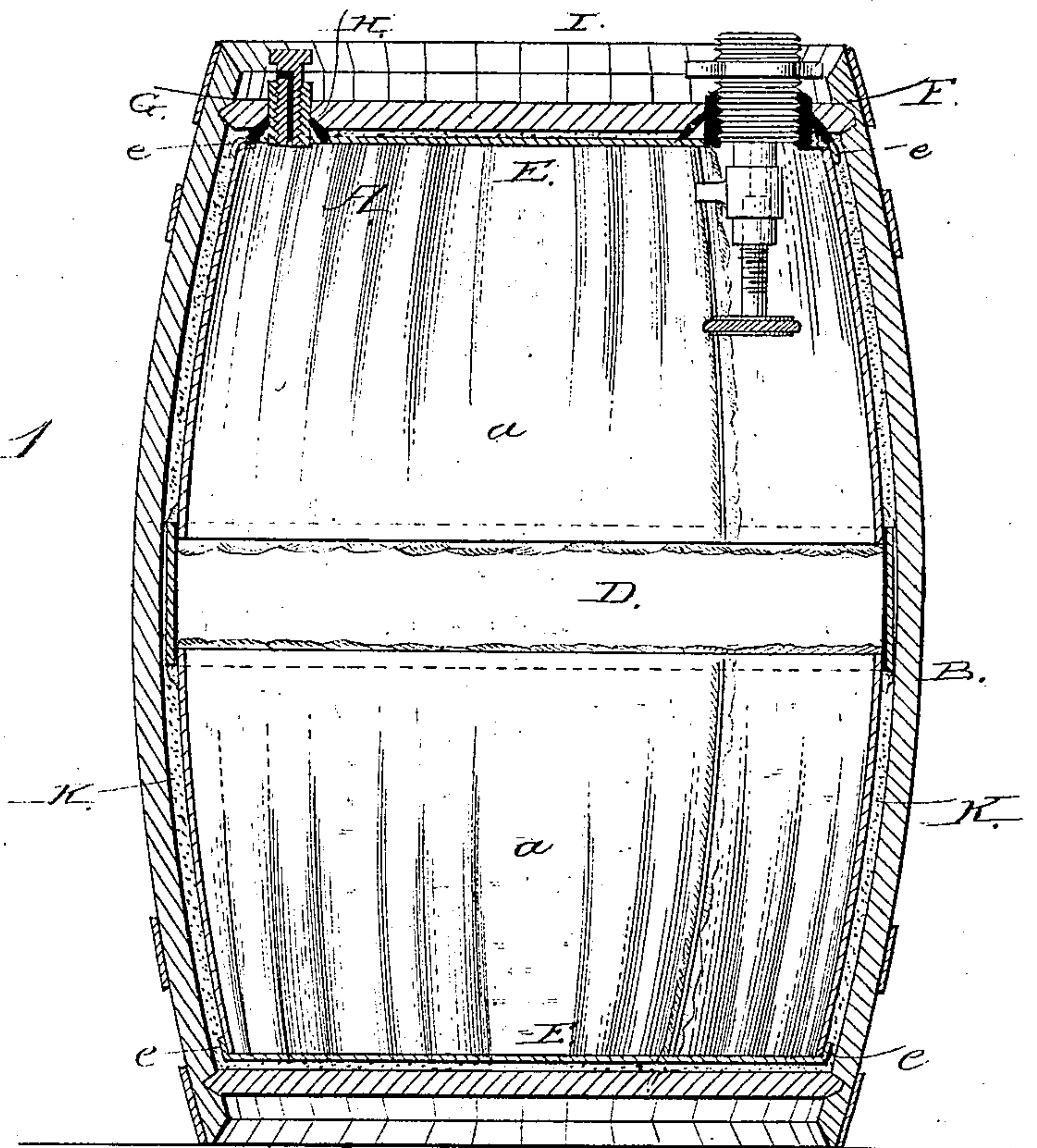


Fig. 2.

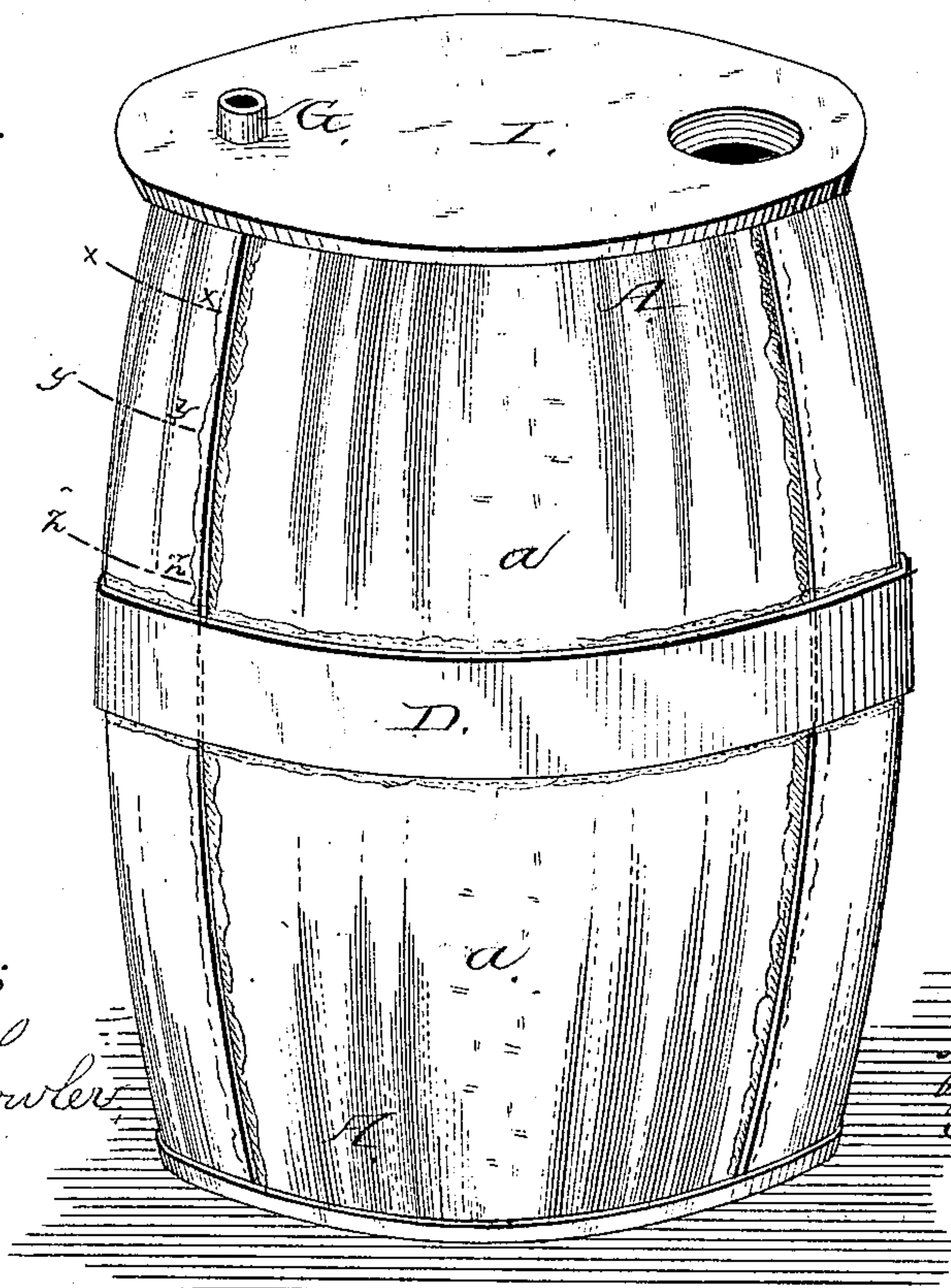
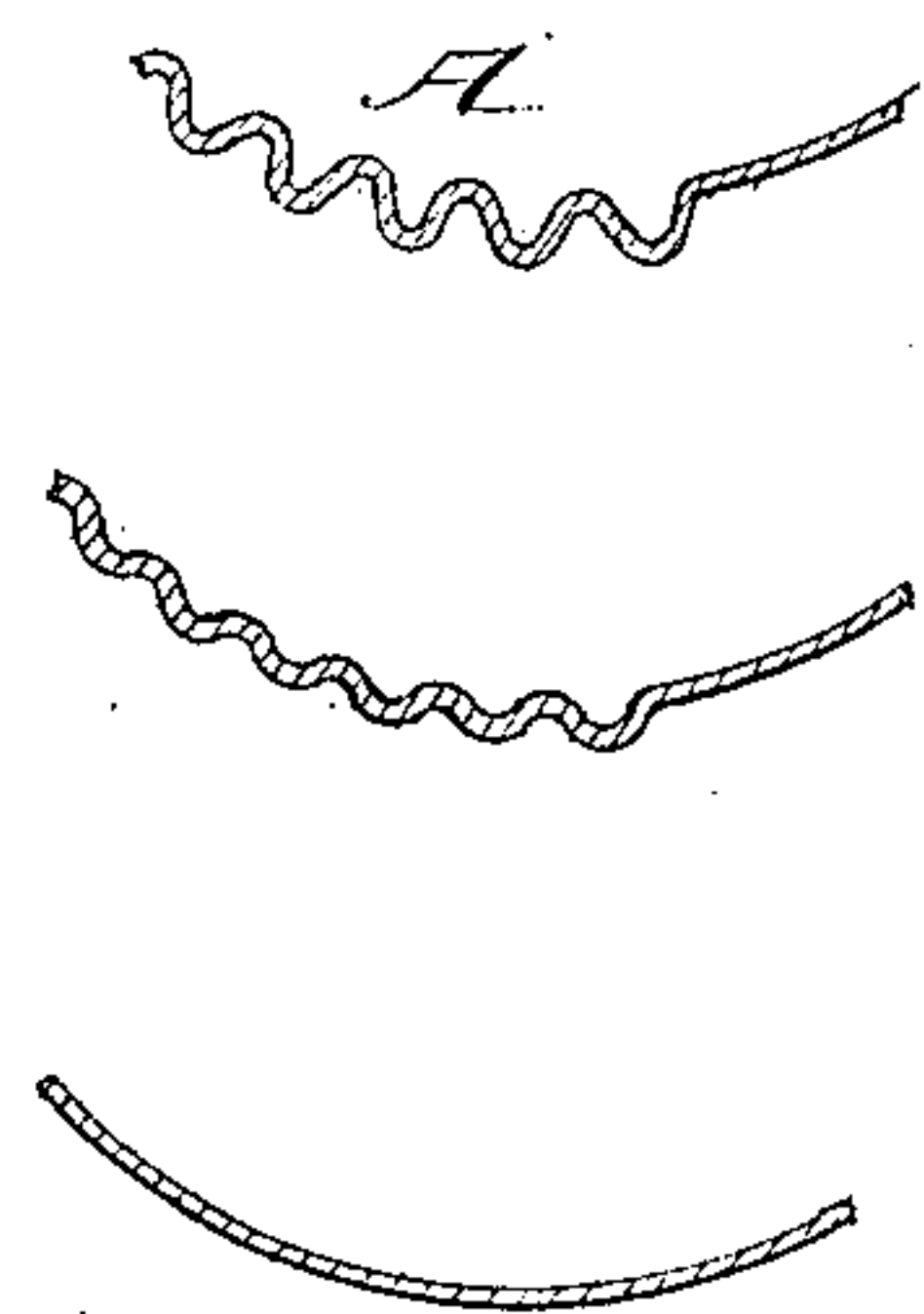


Fig. 3.



Witnesses;

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HUGO MATTULLATH, OF SAN FRANCISCO, CALIFORNIA.

PACKAGE FOR HOLDING AND TRANSPORTING LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 249,650, dated November 15, 1881.

Application filed February 8, 1881. (Model.)

To all whom it may concern:

Be it known that I, HUGO MATTULLATH, of the city and county of San Francisco, State of California, have invented an Improved Package for Holding and Transporting Liquids; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in the construction of compound barrels or packages of that class in which an exterior case of wood is lined with metal, and which are employed for the transportation of liquids; and it consists in the details of construction of a combined wooden and sheet-metal cask, as hereinafter fully described and claimed.

Figure 1 is a vertical section through the package. Fig. 2 is a view of the metallic lining and attached head removed from the wooden barrel. Fig. 3 shows cross-sectional details of the corrugations in the metal lining, taken on the lines *x y z*.

Considerable difficulty is experienced in the construction of casks for the transportation of oils or liquids of a penetrating nature, such as those derived from petroleum, and double wooden vessels, either with or without an intervening filling, have been employed, or wooden vessels having a close-fitting metallic lining variously constructed; but these are all open to some objection.

In order to form my metal cask, I prefer to use tin-plate, which is cut into sheets of suitable shape and size. These sheets are passed through a former or rollers, which corrugate the sheets in grooves which incline from the broad end to the narrow end of the sheet. These grooves or corrugations have little or no depth at the broad end of the sheet, and gradually increase in depth to the narrow end of the sheet, as shown at A. As these corrugations are made from the sides toward the center, there will be a flat triangular portion, *a*, at the center which is not corrugated, and, if desired, similar flat portions may be left at each side, to facilitate the union of the sheets to form the barrel. This form enables me to shape the sheets to the curve or bilge of a solid former of the same shape as the wooden barrel B, for which the tin barrel is designed, but somewhat smaller. The sheets are placed upon the former, each sheet extending nearly or quite to the center of the former. Four of these sheets will usu-

ally be used to form one-half of the barrel, and they are held together by truss-hoops, which fit them exactly to the former, the tapering corrugations and flat portions of the sheet enabling me to accomplish this without difficulty. The sheets are then soldered together, except upon one side, which is marked and left open the entire length, so that the barrel may be removed from the former.

The centrally-meeting ends of the sheets may be soldered directly together, if desired; but I prefer to employ a band, D, of tin, which covers the meeting ends and is soldered to them, so as to hold them together. This band not only strengthens the barrel, but enables me to regulate its length exactly. The barrel is now removed from the former, and the unfinished seam is closed upon a partial former or other suitable device. The heads E have a flange, *e*, which fits over the ends of the barrel, and they are soldered in place. The faucet and vent-tubes F G are then secured to the heads, and they are surrounded by strips H, which form conical braces when soldered upon the head and around the tubes, and thus strengthen and stiffen them. These tubes pass out through the head I of the outer wooden barrel, the staves of which are set up around the inner tin barrel, and with the heads inclose it, leaving a small space between the two. Solder or other material is then run into the space around the faucet and vent-tubes, so as to unite them rigidly with the outer cask. Holes are made in the wooden head I, and the space between the outer and inner casks is filled with an elastic cement, K, which may be made of any material containing the important requisites of insolubility in petroleum product, elasticity, so that it will resist rough usage without crumbling, and a freedom from discoloring properties, which would render the oil unsalable if the inner cask should leak and allow its contents to come in contact with the filling. Among other compounds I have found that one having glue as a basis is one of the best, as it becomes a sufficiently thin liquid by heat, and when cool will harden, so as to form a very solid and at the same time elastic union between the wooden barrel and the tin. This cement will not dissolve in petroleum or coal oil in case of any break in the inner barrel, and will therefore not discolor the contents and

render them unsalable, as any cement containing tarry or other similar or soluble substances would do. It is not brittle, and will therefore not crumble if the cask is subjected to rough
5 usage, and will not form ragged pieces, which might puncture the tin barrel.

I am aware that double wooden vessels have been made with a filling of roofing-cement or one of a tarry nature between them; also, that
10 wooden cylindrical or cask-shaped outer vessels have been lined with a close-fitting metallic lining, and I do not claim these, broadly; but

What I do claim as new, and desire to secure
15 by Letters Patent, is—

1. A metallic cask having its end portions formed of sheets having tapering and gradually-deepening corrugations from the bilge,

where they are united, toward the chines or ends, whereby the proper curvature and shape
20 is produced, and having heads secured to each end, substantially as herein described.

2. A metallic cask having its end portions formed of sheets having tapering and gradually-deepening corrugations from the bilge to
25 the chines or ends, in combination with a central band, to which the end portions are united, and by which the length of the metallic cask is regulated and the whole strengthened, substantially as herein described.
30

In witness whereof I have hereunto set my hand.

HUGO MATTULLATH.

Witnesses:

S. H. NOURSE,
FRANK A. BROOKS.