

(No Model.)

H. MILLER.
SHEET METAL CAN.

No. 368,348.

Patented Aug. 16, 1887.

Fig. 1.

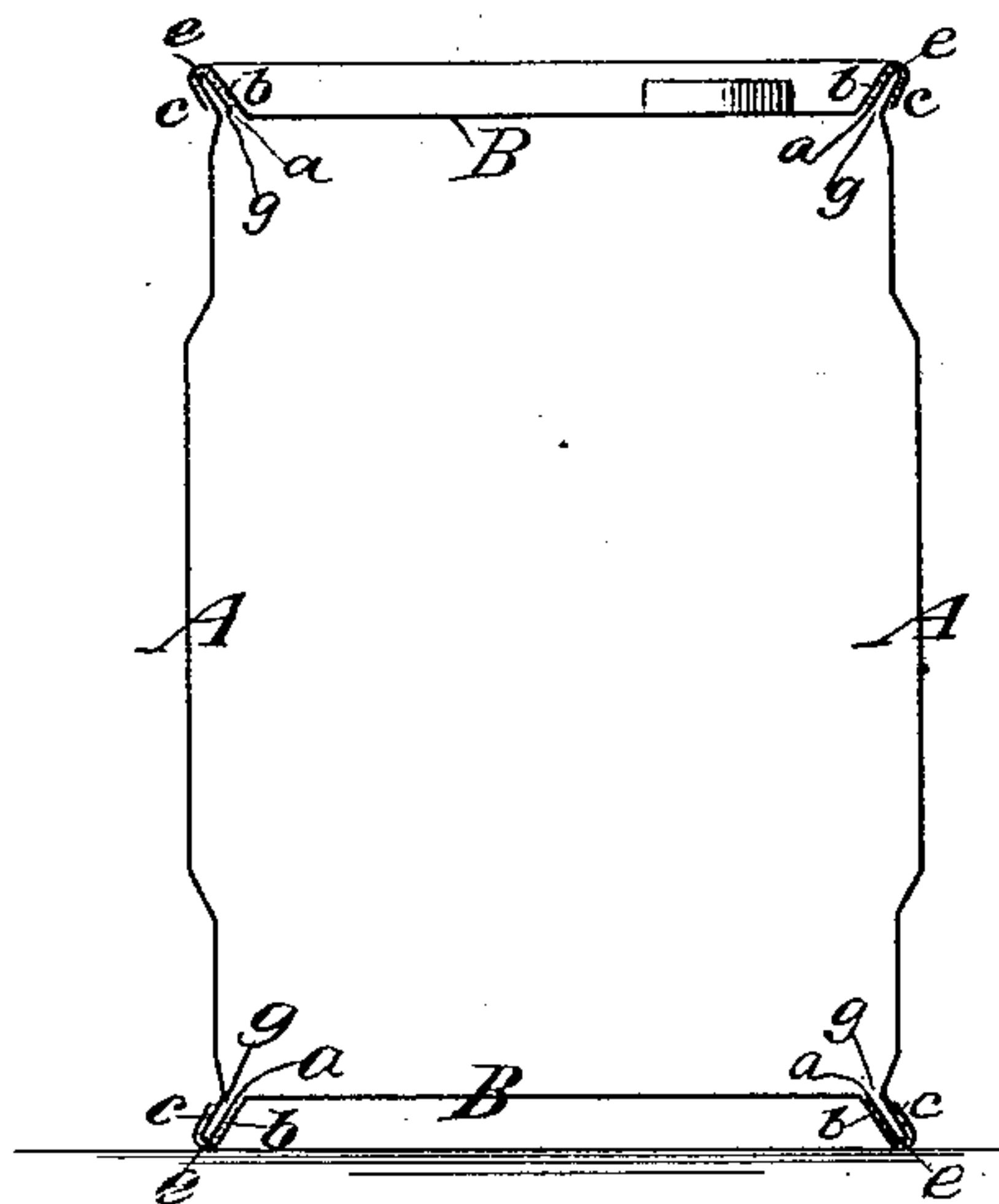


Fig. 2.

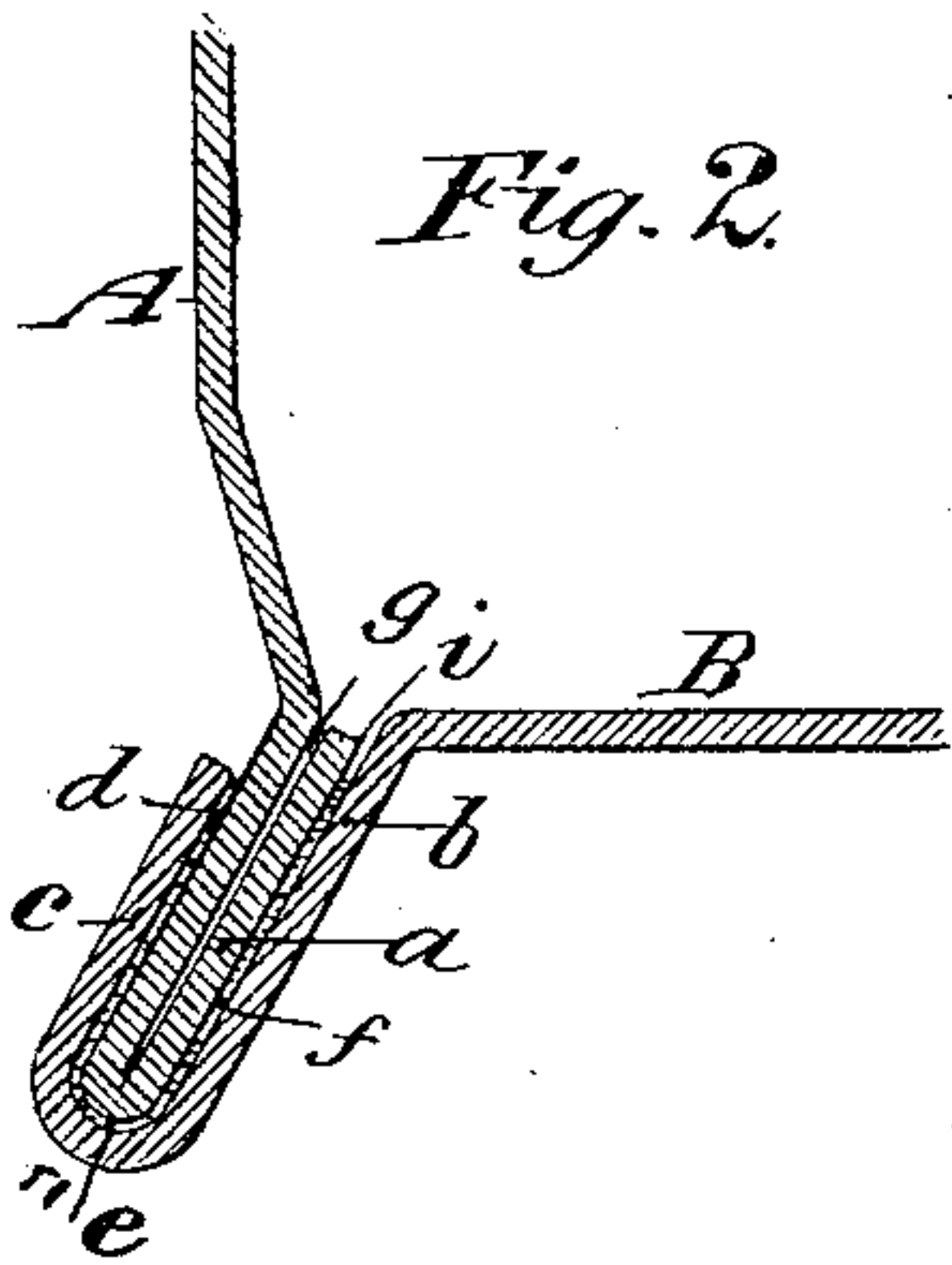


Fig. 2.*

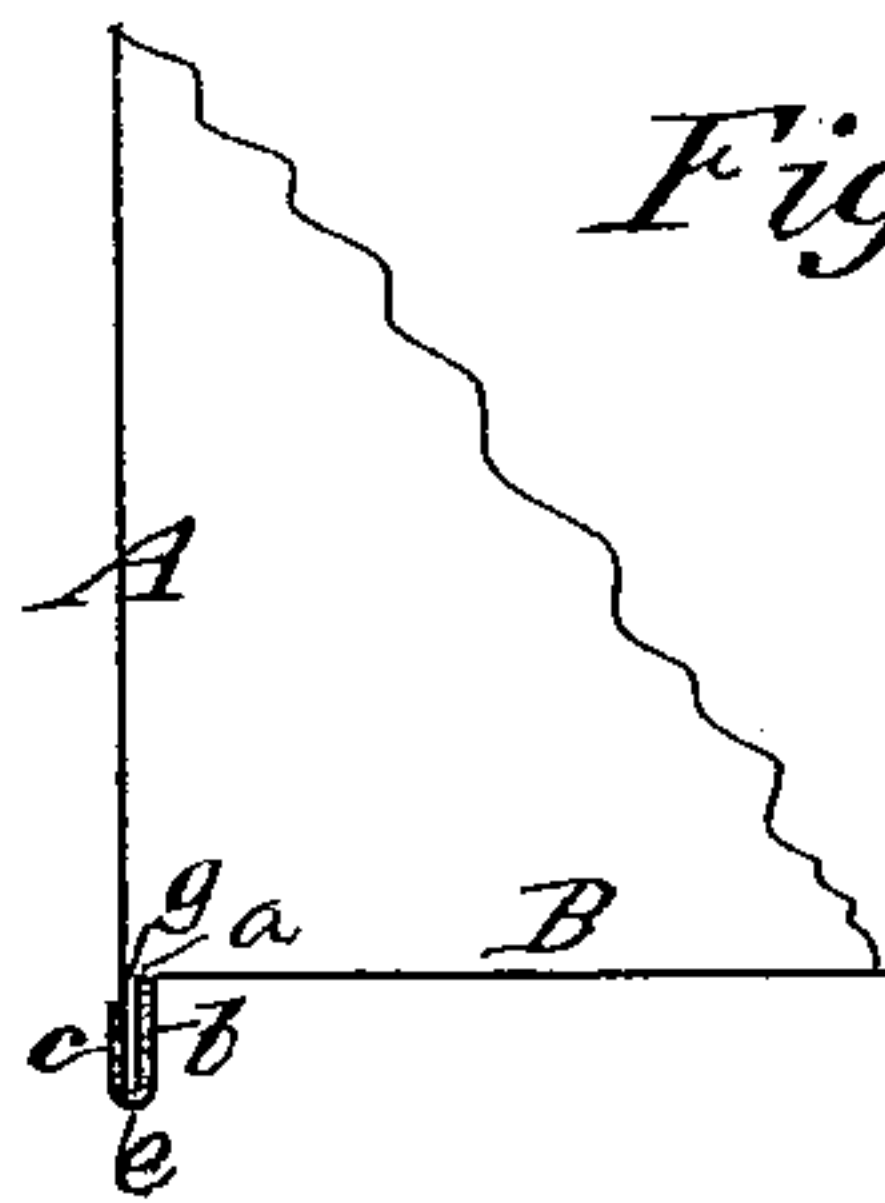


Fig. 3.

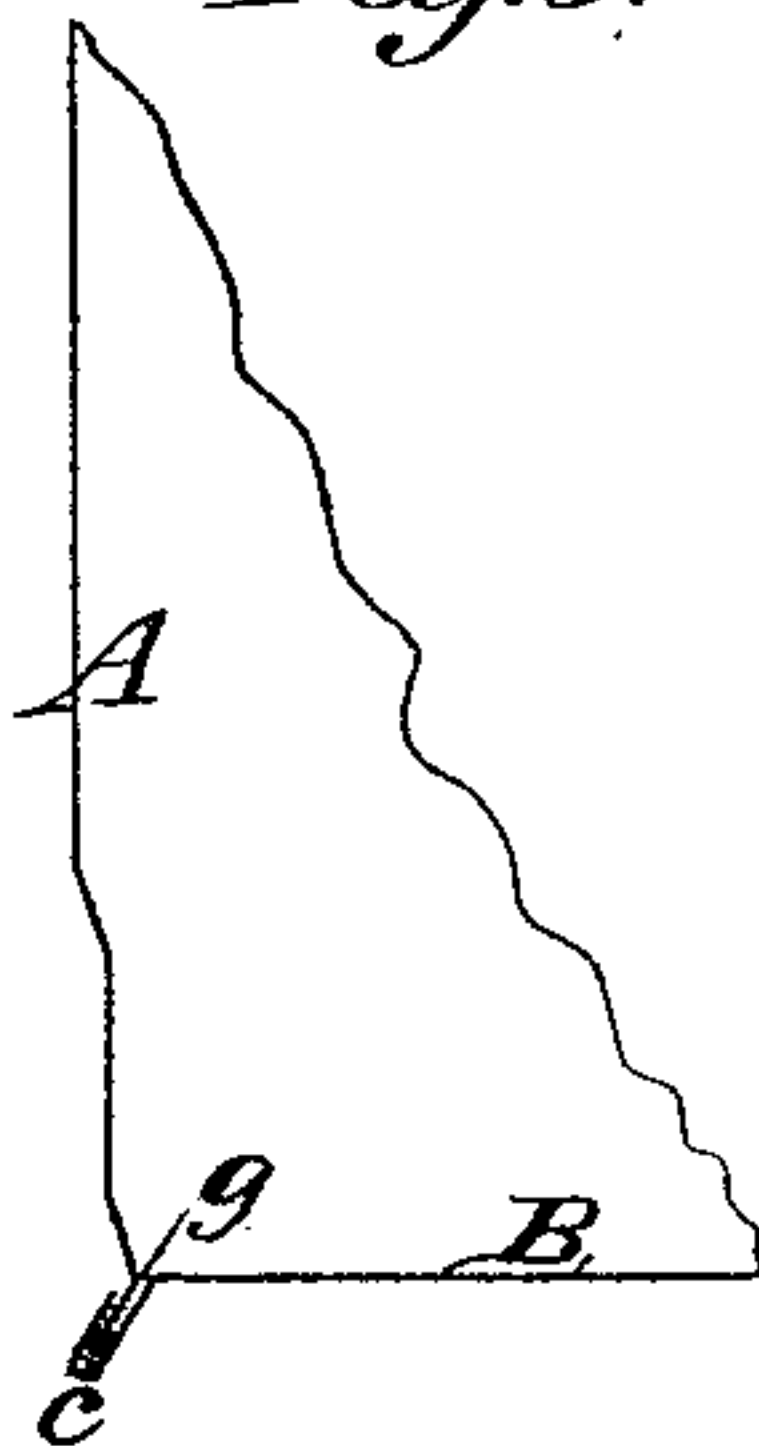


Fig. 4.

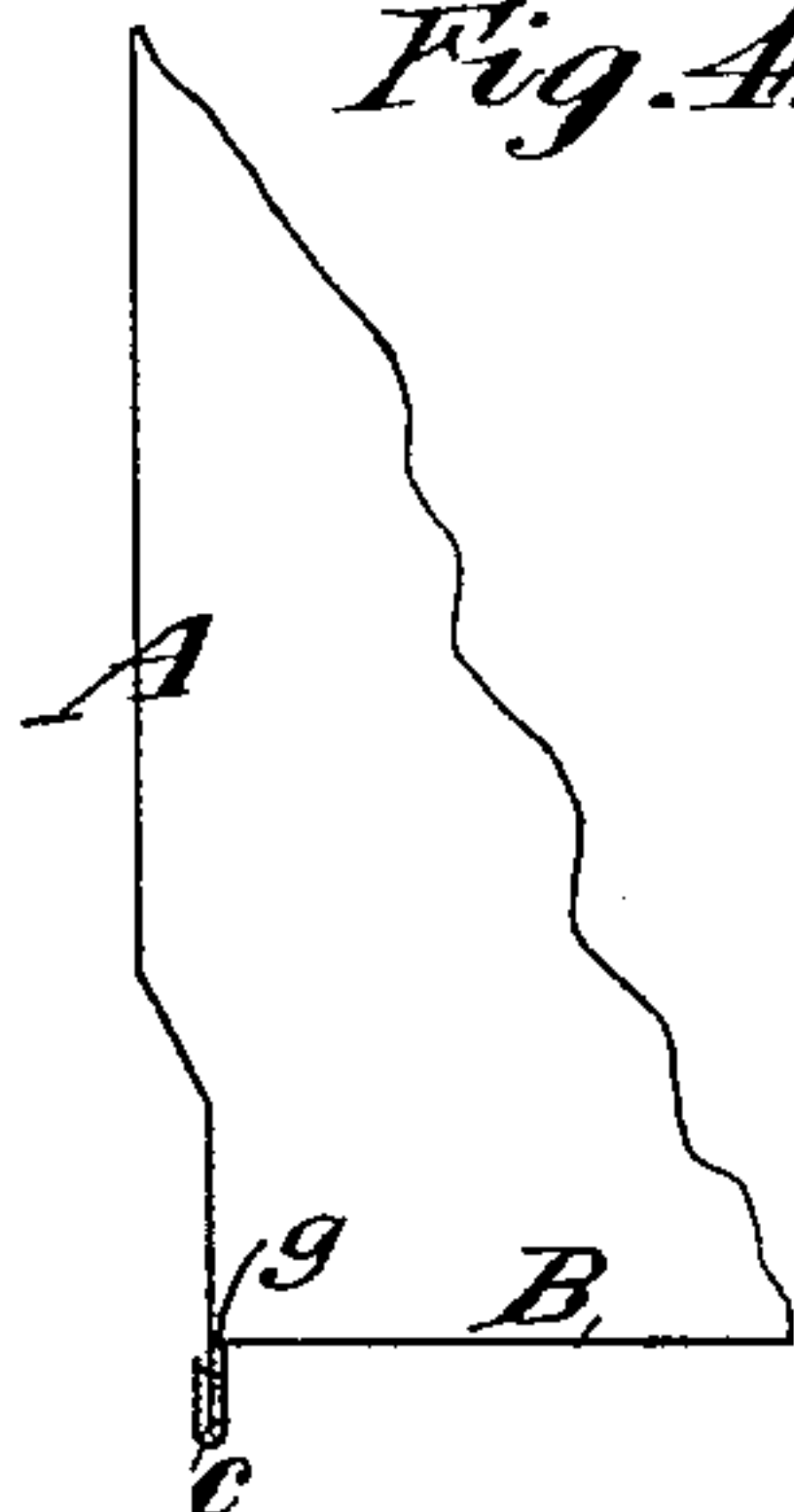


Fig. 5.

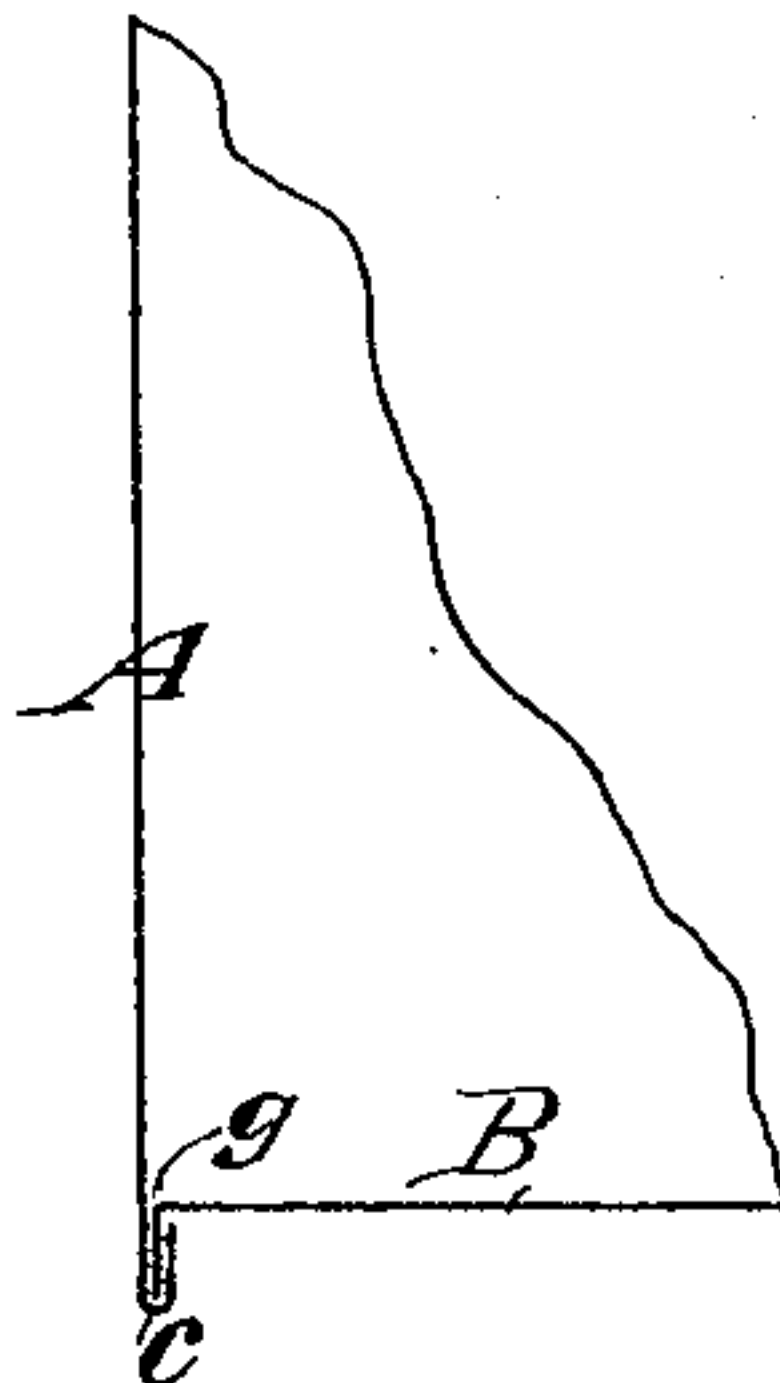
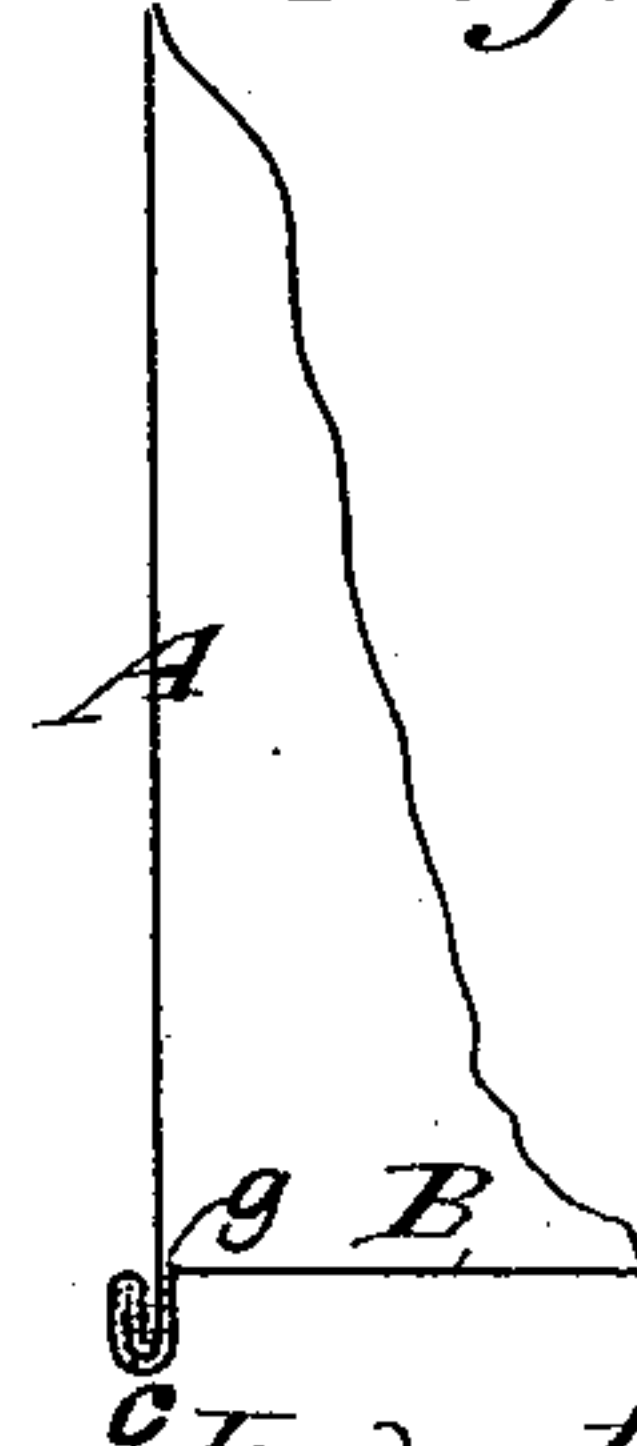


Fig. 6.



Witnesses.

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HERMAN MILLER, OF NEW YORK, N. Y.

SHEET-METAL CAN.

SPECIFICATION forming part of Letters Patent No. 368,348, dated August 16, 1887.

Application filed June 30, 1887. Serial No. 242,945. (No model.)

To all whom it may concern:

Be it known that I, HERMAN MILLER, of the city and county of New York, in the State of New York, have invented a new and useful
5 Improvement in Sheet-Metal Cans and other Vessels, of which the following is a specification.

This invention is more especially intended for cans for the holding and transportation of refined petroleum; and its object is particularly to obtain a joint which is better capable
10 of resisting the tendency to tear apart the joints between the sides and heads of such vessels, which results from the expansion of such oil when exposed to an atmospheric temperature
15 higher than that which the oil had at the time of filling the can.

The invention consists in a joint for such vessels of novel construction, or, in other words, in a novel combination of the plates of which
20 the sides and heads of such vessels are composed, forming a joint by which the said object is attained.

In the accompanying drawings, Figure 1 is a vertical section of a can having the joints
25 between the sides and edges constructed according to my invention. Fig. 2 is a vertical section, on a greatly enlarged scale, of a part of one side and a part of the bottom or lower head of the can. Fig. 2* is a view corresponding with Fig. 2, but on the same scale as
30 Fig. 1, illustrating a modification of my joint. Figs. 3, 4, 5, and 6 are views showing portions of the side plates and bottom plates of several cans of different kinds, illustrating the prior
35 state of the art.

Similar letters of reference designate corresponding parts in all the figures.

A designates the side plates of the can, and B the heads thereof. The side plates, A, have
40 their upper and lower marginal portions, which unite with the heads B, folded or doubled inward, as shown at *a* in Fig. 2. The heads are represented as having their marginal portions turned outward, as shown at *b* in Fig. 2, and
45 folded backward, as shown at *c* in said figure, the edge of the backwardly-folded part *c* being presented outside the joint. The plates being thus folded, and the folded margin of the plate A being placed within the folded marginal
50 portion of the plate B, the parts may be soldered together by dipping into molten sol-

der in the manner commonly practiced in the soldering of joints of sheet-metal vessels for like purposes, and the melted solder easily
passes through the spaces left between the outer
55 lap, *e*, of the head B and the contiguous portion of the fold of the plate A, and passes the bend of the fold of the plate A and into the spaces *f* between the inner ply, *a*, of the fold of the plate A and the portion *b* of the fold of
60 the head B, there being no obstacle to the passage of the solder by the bends of the plates A and B at the point *e*, because the tinned surface of the plate A is there preserved.

Any tendency of the joint to break at the
65 bend of the folds of the plates is resisted by a double thickness of metal, not only on both of the sides of the bend *e*, but on both sides of that opening *g* of the joint which is presented toward the interior of the body of the can, the
70 said thicknesses being united by solder at *d* and *f*.

One peculiarity of this joint is that the edge of the plate A which forms the inner fold of the joint is presented toward the interior of the
75 can, while in all the other examples represented in Figs. 3, 4, 5, and 6, and in all other cans known to me in which there is a lap-joint, the edge of the plate which forms the inner portion of the joint is presented in an outward direc-
80 tion. Owing to this peculiarity of my joint, and to the feature, hereinabove described, of there being a double thickness of metal on both sides of the only opening, *g*, presented toward the interior of the can, the joints cannot give
85 way through the breakage of the metal at the bend *e* without breaking two thicknesses of metal, while in all the examples represented in Figs. 3, 4, 5, and 6, and in all the joints known to me, there is only one thickness at the point
90 *e* which has to be broken in order to destroy the joint. This strengthening of the joint by the folding in of the marginal portion *a* is obtained without any extra expense of metal, as compared with the joints represented in Figs.
95 3 and 4. It is well known that the tin plates as they come to the market have very uneven edges, and the plates forming the sides *a* of the can for that reason have to be trimmed to make them present a perfectly straight edge. I simply
100 utilize the portion usually removed by trimming, and thereby wasted, and make it

useful to re-enforce and strengthen the joint. Moreover, there is another advantage which results from thus turning in instead of removing the margin by cutting away, for the solder
5 does not so freely pass the cut raw iron edge of the plate at the point *e* of the joint so readily as it passes the edge of the bend where the tin is preserved. Therefore I obtain a more perfect soldering of the part *b* of the head B with
10 the adjacent part of the plate A than can be obtained when the margin of the tin-plate is cut away and wasted. There is still another advantage resulting from thus retaining the edge of the plate, as in the process of manu-
15 facturing tin plates there is often a considerable quantity of the tin left in the form of a selvage on the edge of the plate, and in the process of dipping the joint for the purpose of soldering it the tin so left on the edge of the
20 plate at *i* is fused and utilized in soldering the parts *a b* together.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A joint for two plates of a sheet-metal ves-

sel, in which the plate which forms the inner 25 portion of the joint has its margin folded inward and the plate which forms the outer portion of the joint has its margin folded to present its edge outward, and in which the inner fold lies within and is soldered to the outer one 30 with its edge within the vessel or toward the interior thereof, substantially as herein described.

2. The combination, in a sheet-metal vessel, of a plate having its margin folded or doubled 35 inward and a plate having its marginal portion turned outward and folded backward, and receiving between and having soldered within its outwardly-turned and backwardly-folded parts the inwardly-folded or doubled margin 40 of the first-named plate, whereby a double lap is formed on both sides of the joint, substantially as herein described.

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Witnesses:

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