

(No Model.)

C. M. CONRADSON.
MOLDER'S FLASK.

No. 471,324.

Patented Mar. 22, 1892.

Fig. 1.

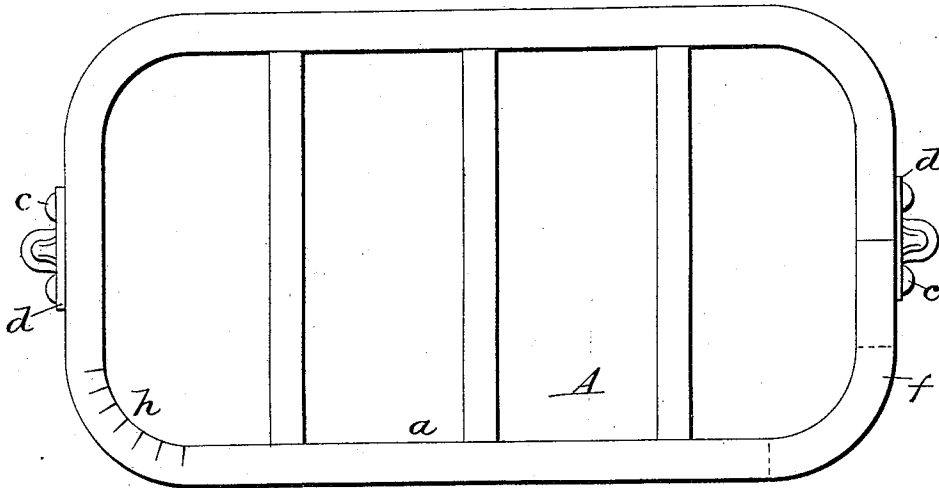


Fig. 2.

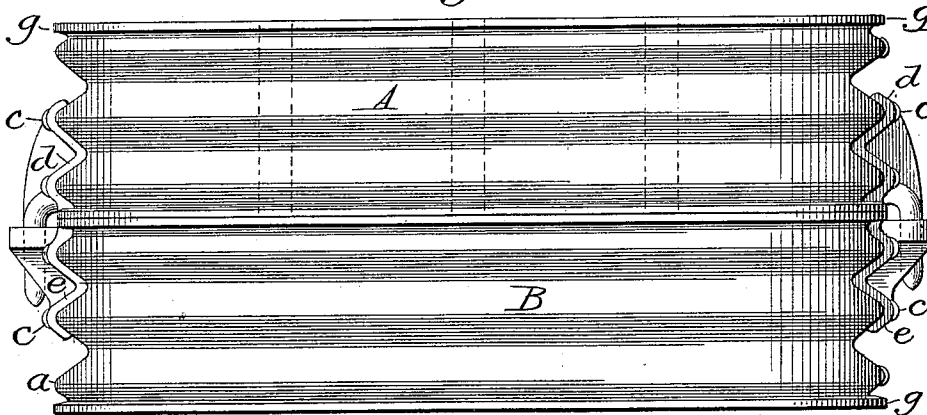


Fig. 4.

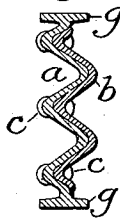


Fig. 3.

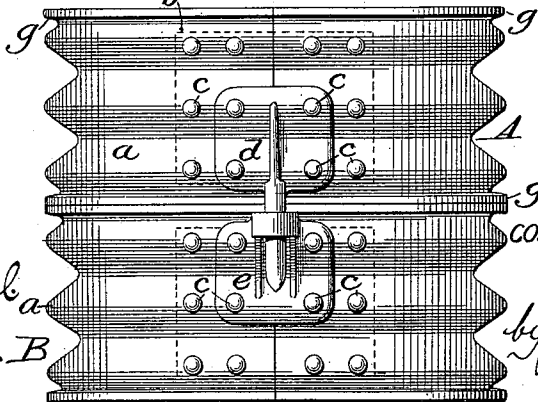


Fig. 5.



Witness:

James F. Duhamel a
Amos H. Dodge. B

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Inventor,

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UNITED STATES PATENT OFFICE.

CONRAD M. CONRADSON, OF MADISON, WISCONSIN.

MOLDER'S FLASK.

SPECIFICATION forming part of Letters Patent No. 471,324, dated March 22, 1892.

Application filed October 1, 1891. Serial No. 407,369. (No model.)

To all whom it may concern:

Be it known that I, CONRAD M. CONRADSON, a citizen of the United States, residing at Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Molders' Flasks, of which the following is a specification.

My invention relates to molders' flasks; and it consists in various features hereinafter set forth and claimed.

Heretofore flasks have been generally constructed of wood; but these are found to be objectionable because of the burning and rotting of the wood and the breakage of the flasks by the rough handling to which they are subjected. The nailing or bolting of the corners of the wooden flasks is also a constant source of weakness. Cast-iron has also been used for molders' flasks; but it is objectionable because of the great weight and its liability to breakage by rough handling. To overcome these defects, which I have observed after practical experience in the foundry, I make the flask of corrugated metal—preferably of sheet-steel—as shown in the accompanying drawings, in which—

Figure 1 is a top plan view of my improved flask. Fig. 2 is a side elevation; Fig. 3, an end elevation, and Figs. 4 and 5 are sectional views of the material of which the flask is made.

A indicates the drag, and B the nowel. The walls of each are formed of a single piece *a* of metal corrugated lengthwise and bent to proper form, the ends of the piece *a* being joined by soldering, brazing, or riveting, or in any other suitable manner.

In Fig. 3 I have shown the ends of the pieces *a* brought squarely together and a plate *b* (corrugated to conform to the corrugations in the pieces *a*) applied to the inner face over the joint and riveted to the ends of the pieces to which they are applied. These plates *b* are shown by the dotted lines in Fig. 3, and one of them is shown in section in Fig. 4.

I prefer to make the joint at the end of the flask-section, as I am thereby enabled to utilize the same rivets *c* for the attachment of the pin and ear-plates *d* and *e*.

Upon reference to Fig. 1 it will be observed that the walls are continuous, the corners being curved or rounded, a construction which

is preferred for all ordinary uses; but when the flask is unusually large and heavy the use of correspondingly heavier metal will interfere in a measure with the ready bending of the corners. In such case separate corner-pieces might be used and riveted or otherwise rigidly united to the side and end walls. I have represented such an idea by the dotted lines *f* in Fig. 1.

It will be noted upon reference to Fig. 4 that the metal pieces *a* of which the sides and ends of the flask-sections are made are provided with T-shaped edges or flanges *g*, which add materially to the rigidity, stiffness, and strength of the flask. If the metal should be of such thickness as to preclude the ready bending at the corners, this flange may be cut or notched, as is commonly done in the manufacture of safe-irons, bag-frames, and the like, such an idea being illustrated by lines *h* in Fig. 1. These flanges *g* form a firm steady bearing for the flask-sections when placed one upon the other, and, while they are preferred and will generally be employed, they may in certain cases be omitted and the pieces *a* given the form in cross-section represented in Fig. 5.

The flask may be painted, galvanized, or protected from rusting by the Bower-Barff process or in any other suitable manner.

Any of the common forms of pins or hinge-joints now employed upon wooden flasks may be used upon the flask herein shown and described.

My improved flask combines the properties of strength, rigidity, and lightness, and, owing to the peculiar formation of its walls, holds or retains the sand much better than the ordinary plain-faced flask.

I am aware that packing-boxes, casks, and tempering-pots have been made of corrugated metal, and to these I make no claim.

The term "longitudinal" is here used with reference to a mold-section having its greatest measurement in a plane parallel with that on which the cope and nowel meet; but obviously if the measurement of the section be greatest in a direction at right angles to said meeting plane the corrugations would be transverse instead of longitudinal, and the claims are to be read with this understanding.

Having thus described my invention, what I claim is—

1. A molder's flask consisting of a sheet-metal drag and nowel having their walls corrugated in lines approximately parallel with the meeting plane of the two parts.
- 5 2. As an improved article of manufacture, a flask-section having its walls composed of a longitudinally-corrugated piece of sheet metal bent to proper form.
- 10 3. In a molder's flask, the drag A, composed of a sheet of longitudinally-corrugated metal bent to proper form, in combination with the nowel B, composed of a sheet of longitudinally-corrugated metal also bent to proper form, all substantially as shown and described.
- 15 4. A flask-section having its walls composed of a piece of corrugated metal provided along its edges with the T-flanges.
5. In a molder's flask, the combination, with the corrugated piece *a*, bent to form and arranged with its ends meeting, of the corrugated plate *b*, applied to the ends of the piece *a* and united thereto.
6. In a molder's flask, the drag and the nowel, each comprising a longitudinally-corrugated piece *a*, bent to proper form, a corrugated plate *b*, secured to the ends of the piece *a*, and the corrugated pin and eye-plates *d e*, all combined substantially as shown and described.

In witness whereof I hereunto set my hand in the presence of two witnesses.

CONRAD M. CONRADSON.

Witnesses:

EDWARD F. APPLEBY,
W. R. BAGLEY.