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1,459,197

H. C. DRUMM

FOUNDRY FLASK

Filed Aug. 17, 1922

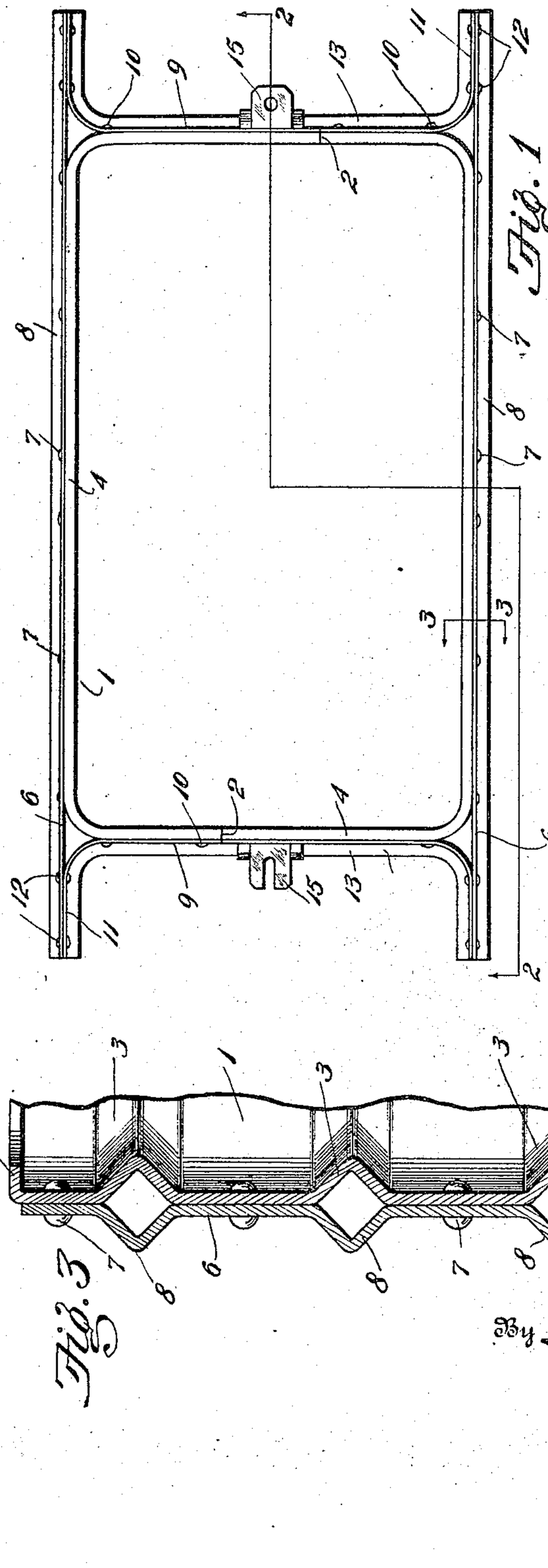

Fig. 1

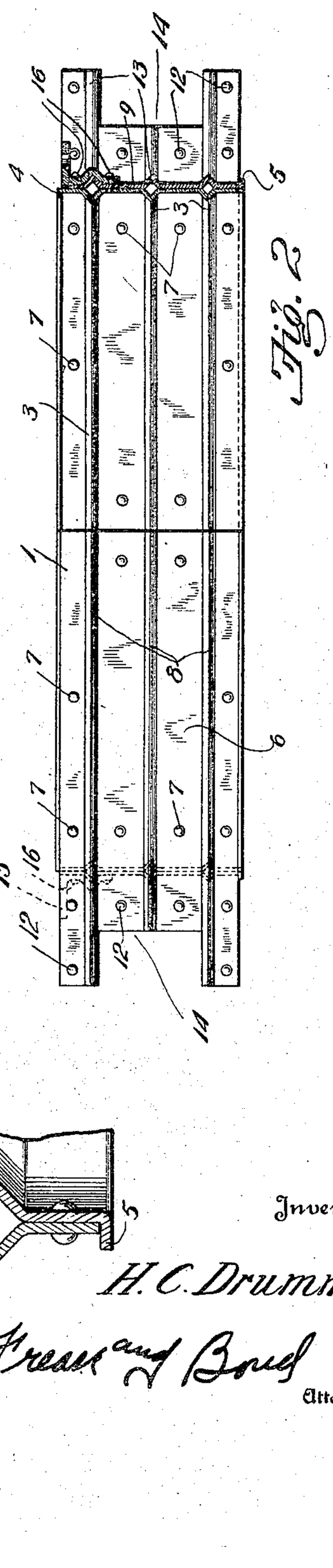

Fig. 2

Fig. 3

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HERBERT C. DRUMM, OF CANTON, OHIO, ASSIGNOR TO THE UNION METAL MANUFACTURING COMPANY, OF CANTON, OHIO, A CORPORATION OF OHIO.

FOUNDRY FLASK.

Application filed August 17, 1922. Serial No. 582,417.

To all whom it may concern:

Be it known that I, HERBERT C. DRUMM, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Foundry Flask, of which the following is a specification.

This invention relates to improvements in foundry flasks constructed of sheet metal and has more especial reference to a flask of this character formed of corrugated sheet metal and provided with corrugated reinforcing plates surrounding the body portion of the flask.

The usual form of foundry flask comprises two similar sections generally known as the cope and drag, provided with means for attaching the two sections together. These flasks were commonly formed of wood, but owing to the molten metal and burning gases, which are necessarily brought into contact with the flasks, it has been found desirable to construct the sections of the flasks of sheet metal.

Experience has proven, however, that flasks formed of sheet metal do not have the required strength and rigidity to withstand the rough usage to which the flasks are subjected, this being especially true of larger flasks such as are used for molding heavy castings.

The objects of the invention are to provide a sheet metal foundry flask having reinforcing side plates and end plates connected to the body portion of the flask and to each other, both the body portion of the flask and the reinforcing plates being preferably provided with oppositely disposed, longitudinal corrugations for stiffening the structure and preventing warping or distortion of the flask sections in use.

The above and other objects may be attained by constructing the flask as illustrated in the accompanying drawing, in which—

Figure 1 is a plan view of a flask section embodying the invention;

Fig. 2, a section on the line 2—2, Fig. 1; and

Fig. 3, a section on the line 3—3, Fig. 1.

Similar numerals refer to similar parts throughout the drawing.

Referring to the construction illustrated in the accompany drawing, the body portion 1 of the flask section is formed of one or more sheets of metal, the adjoining ends thereof being connected together as at 2 in any suitable and well known manner. This body portion of the section is preferably rectangular and provided with the spaced, longitudinal corrugations 3 which may be of V-shape as illustrated and which extend inward.

The upper and lower edges of the flask section may be bent inward and outward respectively, as shown at 4 and 5. The section illustrated in the drawing is the lower or drag section, and it will be understood that the upper or cope section is of the same form, being inverted, however, when it is placed upon the drag section.

A reinforcing sheet 6 is riveted to each side wall of the body portion as at 7, each of these sheets being of substantially the width of the side wall, but of considerably greater length and being preferably provided with outwardly disposed, longitudinal corrugations 8 registering with the corrugations 3 of the body portion of the flask.

U-shaped reinforcing sheets 9 are connected to the end walls of the body portion as by the rivets 10, these sheets being of the same width as the sheets 6, the outturned ends 11 thereof terminating at the extremities of the side sheets 6 and being riveted thereto as at 12.

The end sheets 9 are provided with horizontal corrugations 13 registering with the corrugations 3 and 8 of the body portion and side sheets respectively. The end portions of the side sheets and the end sheets are preferably cut out as at 14 between the upper and lower corrugations as best illustrated in Fig. 2, providing handles by means of which the flasks may be carried either manually or with a crane or the like.

The usual pin lugs 15 are provided at the intersecting edges of the cope and drag sections, being arranged to register with each other to receive the usual guide pin by means of which the flask sections are ordinarily connected together when in use. These pin lugs may be attached to the end walls of each section as by the rivets 16.

It will be evident from the above that a construction of reinforced sheet metal flask is provided which will withstand the rough usage to which foundry flasks are necessarily subjected, and which will not warp or become distorted from the weight of the

sand and castings placed therein in the operation of molding, while at the same time, the weight of the flask is not increased sufficiently to form an objection to the reinforcement.

I claim:—

1. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, certain of said reinforcing sheets being of greater length than the corresponding walls of the flask and extended outward beyond said flask walls at each end.

2. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said side reinforcing sheets being of greater length than the body portion of the flask.

3. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said side reinforcing sheets being of greater length than the body portion of the flask, the end portions of said side reinforcing sheets being cut away forming handles.

4. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said end reinforcing sheets having outturned ends.

5. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said end reinforcing sheets having outturned ends cut away to form handles.

6. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said side reinforcing sheets being of greater length than the side walls of the flask and the end reinforcing sheets having outturned ends connected to the end portions of the side reinforcing sheets.

7. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said body portion and reinforcing sheets being provided with longitudinal corrugations.

8. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said side reinforcing sheets being of greater length than the body portion of the flask, said body portion and reinforcing sheets being provided with longitudinal corrugations.

9. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said side reinforcing sheets being of greater length than the body portion of the flask, the end portions of said side reinforcing sheets being cut away forming handles, said body portion and reinforcing sheets being provided with longitudinal corrugations.

10. A foundry flask comprising a sheet metal body portion and a sheet metal reinforcement surrounding the body portion and connected therewith and provided with integral handle portions projecting beyond the extremities of the body portion.

11. A foundry flask comprising a sheet metal body portion and a sheet metal reinforcement surrounding the body portion and connected therewith and provided with portions of double thickness projecting beyond the extremities of the body portion.

12. A foundry flask comprising a sheet metal body portion and a sheet metal reinforcement surrounding the body portion and connected therewith and provided with portions projecting beyond the extremities of the body portion, and cut out to form handles.

13. A foundry flask comprising a sheet metal body portion and a sheet metal reinforcement surrounding the body portion and connected therewith and provided with portions projecting beyond the extremities of the body portion, the body portion and reinforcement being provided with oppositely disposed, longitudinal corrugations.

14. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said end reinforcing sheets having outturned ends, said body portion and reinforcing sheets being provided with longitudinal corrugations.

15. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said end reinforcing sheets having outturned ends cut away to form handles,

said body portion and reinforcing sheets being provided with longitudinal corrugations.

16. A foundry flask comprising a sheet metal body portion, reinforcing sheets connected to the side walls thereof and reinforcing sheets connected to the end walls of the body portion and to said side reinforcing sheets, said side reinforcing sheets being of greater length than the side walls of the flask and the end reinforcing sheets having outturned ends connected to the end portions of the side reinforcing sheets, said body portion and reinforcing sheets being provided with longitudinal corrugations.

17. A foundry flask comprising a sheet metal body portion and reinforcing sheets connected to the walls thereof and to each other, certain of said reinforcing sheets being of greater length than the flask walls to which they are connected and extended outward beyond said flask walls at each end.

HERBERT C. DRUMM.