

S. G. STUCKEY.

LADLE.

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1,063,225.

Patented June 3, 1913.

FIG.1

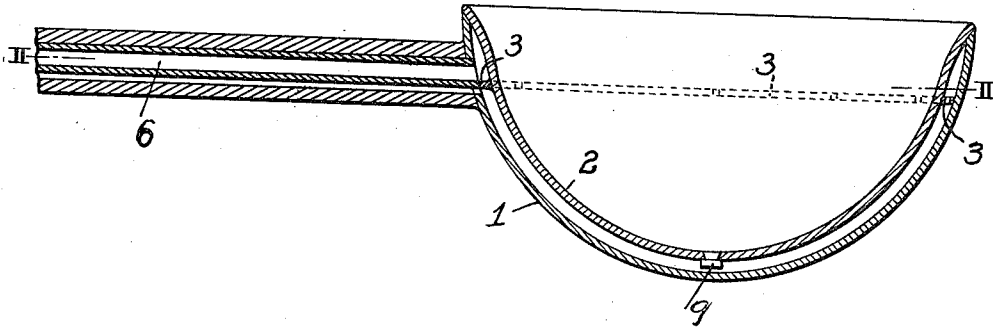


FIG.2.

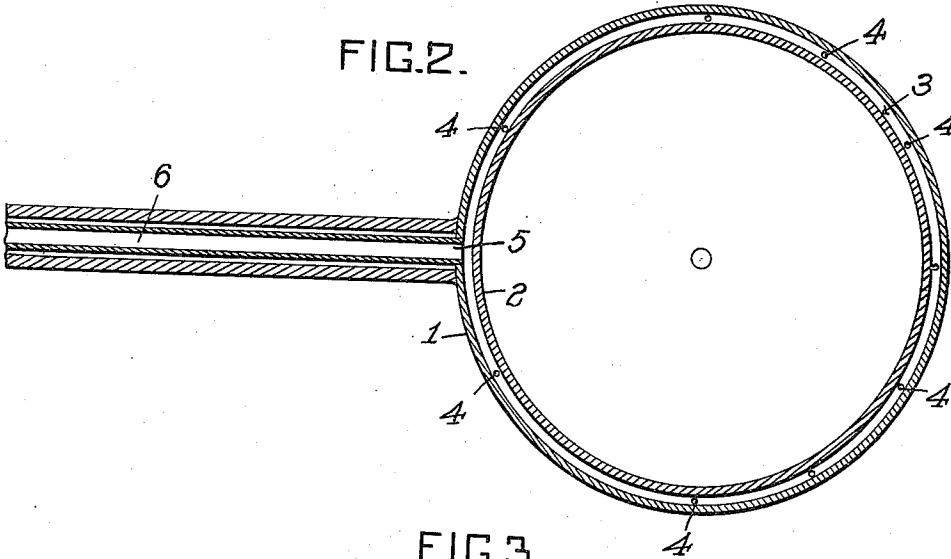


FIG.3.

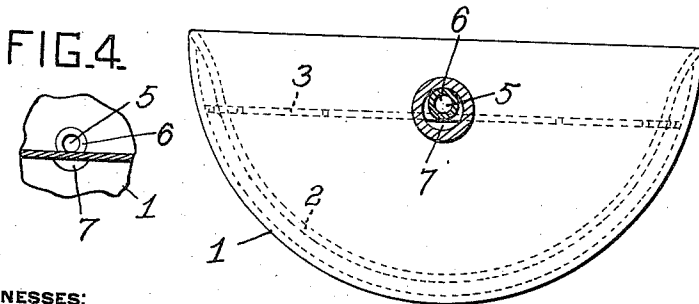
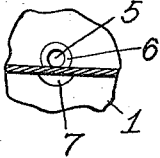


FIG.4.



WITNESSES:

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LADLE.

1,063,225.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SAMUEL G. STUCKEY, residing at Lockland, in the county of Hamilton and State of Ohio, a citizen of the United States, have invented or discovered certain new and useful Improvements in Ladles, of which improvements the following is a specification.

The invention described herein relates to certain improvements in ladles for the transfer of molten metal.

As is well known to those skilled in the art, a metal ladle if in contact with molten metal for a considerable time will soon become so heated that the molten metal will adhere thereto, thus reducing the capacity of the ladle and rendering it unfit for further use.

The invention described herein has for its object a ladle provided with double walls maintained a sufficient distance apart to permit of the circulation of water or other cooling medium whereby excessive heating of the ladle is prevented.

The invention is hereinafter more fully described and claimed.

In the accompanying drawing forming a part of this specification, Figure 1 is a sectional elevation of my improved ladle; Fig. 2 is a sectional plan view, the plane of section being indicated by the line II—II, Fig. 1; Fig. 3 is an elevation, the handle and supply pipe being shown in section, and Fig. 4 is a detail view of portion of the outer shell showing the shapes and relative positions of the inlet and outlet openings therein.

My improved ladle consists of two shells 1 and 2 of suitable contour, the shell 2 being made sufficiently smaller than the shell 1, that when placed inside the latter the space between will allow the circulation of such a volume of water as will prevent excessive or undesirable heating of the inner ladle. The upper edges of the inner and outer shells are welded together with such care as will prevent any escape of the cooling medium. The space between the shells is divided into two compartments by a ring 3 formed on or secured to the outer wall of the inner shell and made of such a thickness that when the shells are placed together this ring will bear against the inner wall of the outer shell. Suitably spaced holes 4 are formed through the ring to permit the

water or cooling medium to flow from one compartment to the other. It is preferred that the size and number of the holes should be so proportioned that their united capacity approximately equals the discharge capacity of the inlet pipe. An inlet opening 5 is formed through the outer shell above the line along which the ring 3 bears against the inner wall of the shell and one end of the supply pipe 6 is welded or otherwise secured to the outer shell around the inlet-opening. The discharge opening 7 is formed through the outer shell below the ring 3. A hollow shaft or handle is secured to the outer shell, said shaft or handle being made sufficiently large to receive the inlet pipe 6 and also afford an outlet passage from the lower compartment of the ladle, the end of the shaft inclosing the opening 7 as shown. As the handle and supply pipe are secured to the outer shell, it can be readily separated from the inner shell by cutting away the welded edges, in case the water space between the shells becomes clogged.

When in use the inner shell will become more highly heated and consequently expand more than the outer shell. The horizontal or transverse movement of the inner shell will not reduce the space between the shells, as the ring 3 will maintain the shells in the desired spaced relation. The expansion of the inner shell downward will be the greater, and in order that it may not reduce the distance between the shells in its downward movement, a spacing or distance block 9 is interposed between the shells, as shown in Fig. 1. This block is secured to only one of the shells preferably the inner shell, and is made of a thickness less than the distance between the shells when of the same temperature, so that the inner shell has a limited range of movement independent of the outer shell.

I claim herein as my invention:

1. A ladle consisting of an outer shell and an inner shell of smaller dimensions than the outer shell, the edges of the shells being hermetically united, the outer shell being provided with inlet and outlet openings in combination with a pipe secured to the outer shell around one of said openings and a hollow shaft or handle secured to the outer shell around the supply pipe and the other opening.

2. A ladle consisting of an outer shell, and

an inner shell of smaller dimensions than the outer shell, the edges of the shells being hermetically united, the outer shell having inlet and outlet openings, in combination
5 with a perforated partition interposed between the shells and lying in a plane passing between the inlet and outlet openings, a pipe secured to the outer shell around one of said
10 openings and a hollow shaft or handle secured to the outer shell around said pipe and the other opening.

3. A ladle consisting of an outer shell having inlet and outlet openings formed there-through and an inner shell of smaller di-
15 mensions than the outer shell and having its edges hermetically secured to the edges of

the outer shell in combination with a perforated partition interposed between said shells and lying in a plane intermediate the inlet and outlet openings, a spacing block
20 interposed between the lower ends of said shells, a pipe secured to the outer shell around one of said openings and a hollow shaft or handle secured to the outer shell around said pipe and the other opening. 25

In testimony whereof, I have hereunto set my hand.

SAMUEL G. STUCKEY.

Witnesses:

CHARLES C. STUTZ,
HOWARD FERRIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."