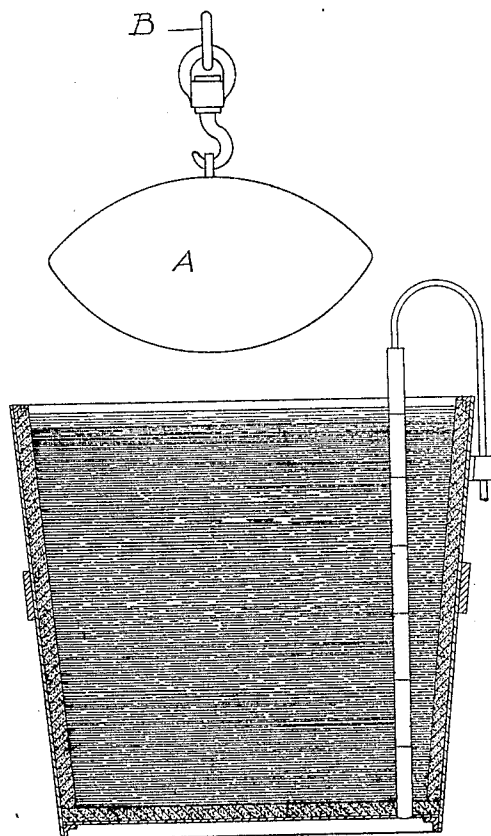


No. 809,405.

PATENTED JAN. 9, 1906.

M. M. SUPPES.
METHOD OF SKIMMING SLAG FROM MOLTEN METAL.
APPLICATION FILED JULY 1, 1903.



WITNESSES:
A. V. A. B. M. Cawley.
Loretto O'Connell

INVENTOR
M. M. Suppes,
BY
Geo. H. Parmelee,
his ATTORNEY.

UNITED STATES PATENT OFFICE.

MAXIMILIAN M. SUPPES, OF ELYRIA, OHIO.

METHOD OF SKIMMING SLAG FROM MOLTEN METAL.

No. 809,405.

Specification of Letters Patent.

Patented Jan. 9, 1906.

Application filed July 1, 1903. Serial No. 163,953.

To all whom it may concern:

Be it known that I, MAXIMILIAN M. SUPPES, of Elyria, in the county of Lorain and State of Ohio, have invented a new and useful Improvement in Methods of Skimming Slag from Molten Metal, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms a part of this specification.

My invention has relation to a novel method of skimming slag from the surface of molten metal; and it consists in displacing the slag by immersing therein a displacing-body, thereby causing the slag to rise to the level of an overflow or discharge, where it escapes. The displacing-body is preferably, but not necessarily, of a higher specific gravity than the slag and of a lower specific gravity than the liquid metal.

In carrying out this method the hot metal to be skimmed is placed in a suitable vessel, as indicated in the accompanying drawing. It is not necessary to provide a special vessel for this purpose, as the method may ordinarily be carried out while the hot metal is in the ladle or other receptacle in which it is placed or handled in its usual treatment. The displacing-body (indicated at A in the drawing) is preferably of refractory material—such as ganister, magnesite, or dolomite; but it may be a mass of iron, steel, or other suitable material. It may be of any desired shape, although preferably of such contour that its displacement will increase with its depth of immersion. It is attached to a

metal rod B, by means of which it may be raised and lowered. As above stated, said body is preferably of higher specific gravity than the slag, but of lower specific gravity than the underlying metal, so that it will not sink in the latter unless forced. This is not essential, however, since a displacing-body without reference to its relative specific gravity may be kept suspended in the vessel and raised and lowered through the plane of the surface of the metal.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described method of skimming slag from liquid metal, which consists in displacing the slag by the immersion, or partial immersion, therein, of a displacing mass or body, having a specific gravity higher than that of the slag and lower than that of the underlying metal.

2. The herein-described method of skimming slag from liquid metal, which consists in displacing the slag by the immersion, or partial immersion, therein of a body of refractory material, having a specific gravity higher than that of the slag and lower than that of the underlying metal.

In testimony whereof I have affixed my signature in presence of two witnesses.

MAXIMILIAN M. SUPPES.

Witnesses:

F. W. WATERMAN,
D. W. LAWRENCE.