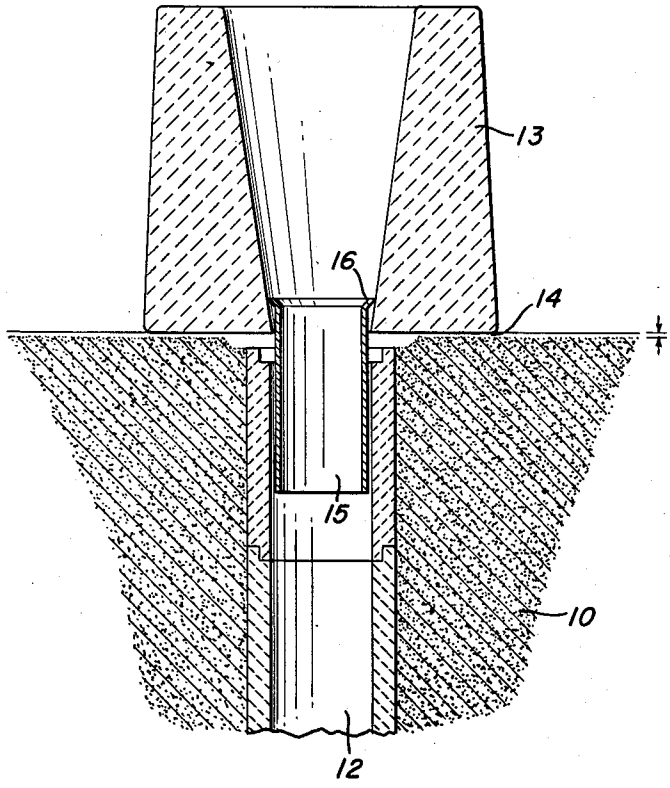
March 12, 1957 H. B. GANS, JR 2,784,467

MOLD APPLIANCE

Filed April 20, 1956



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United States Patent Office

2,784,467

Patented Mar. 12, 1957

2,784,467

MOLD APPLIANCE

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Application April 20, 1956, Serial No. 579,522

2 Claims. (Cl. 22—134)

This invention relates to a mold appliance for preventing leakage of molten metal into the crevice between a runner cup and a sand mold body.

An object of the invention is to provide a simple and inexpensive appliance which can be inserted into a runner cup to prevent such leakage and thereby overcome the tendency of sand from the mold to wash into the mold cavity.

A more specific object is to provide, in combination with a mold body and runner cup, a short length tubular metal shield which covers the crevice between the body and cup and prevents leakage.

In accomplishing these and other objects of the invention, I have provided improved details of structure, a preferred form of which is shown in the accompanying drawing, in which the single figure is a vertical section through the upper portion of a sand mold and runner cup showing my appliance installed therein.

The drawing shows the upper portion of a sand mold **10**, which contains a series of gate tiles **12**. A runner cup **13** is positioned over the uppermost tile and rests on the top face of the mold. A crevice **14** commonly is present between the mold and cup, being shown somewhat exaggerated. Molten metal introduced to the mold to form a casting is poured into the runner cup and flows downwardly through gate tiles into the mold cavity. When the mold is filled, the level of metal lies within the runner cup, leaving the usual gate extending from the casting. In the absence of my appliance, molten metal from the gate tends to leak into the crevice **14**, lift the runner cup from its proper position, and wash sand into the mold cavity.

In accordance with my invention, an appliance in the form of a short length tubular metal shield **15** is inserted into the runner cup **13** and upper portion of the uppermost gate tile **12** and covers the crevice **14**. The pouring opening in the runner cup conventionally tapers downwardly, and the upper edge of the shield has an outwardly extending bead or flange **16** that engages the tapered surface to support the shield and prevent its being washed into the mold cavity. The shield prevents leakage into the crevice, and when the casting is removed from the mold, remains welded to the gate.

While I have shown and described only a single embodiment of my invention, it is apparent that other modifications may arise. Therefore, I do not wish to be limited to the disclosure set forth but only by the scope of the appended claims.

I claim:

1. The combination, with a sand mold having a series of gate tiles therein and a runner cup resting on its upper face over said gate tiles, of an appliance comprising a tubular metal shield inserted within said cup and the uppermost tile and covering the crevice between the cup and the mold to prevent leakage.

2. The combination, with a sand mold having a series of gate tiles therein and a runner cup resting on its upper face over said gate tiles, said cup having a downwardly tapered pouring opening, of an appliance comprising a tubular metal shield inserted within said cup and the uppermost tile and covering the crevice between the cup and the mold to prevent leakage, and means extending from the upper edge of said shield engaging the surface of said tapered opening to support the shield and prevent its being washed into the mold cavity.

References Cited in the file of this patent

UNITED STATES PATENTS

1,139,885	Mellen	May 18, 1915
2,341,589	Anthony	Feb. 15, 1944
2,459,025	Graham	Jan. 11, 1949

FOREIGN PATENTS

852,126	Germany	Oct. 13, 1952