

J. W. HARRISON.

Devices for Black-Washing Molds.

No. 156,999.

Patented Nov. 17, 1874.

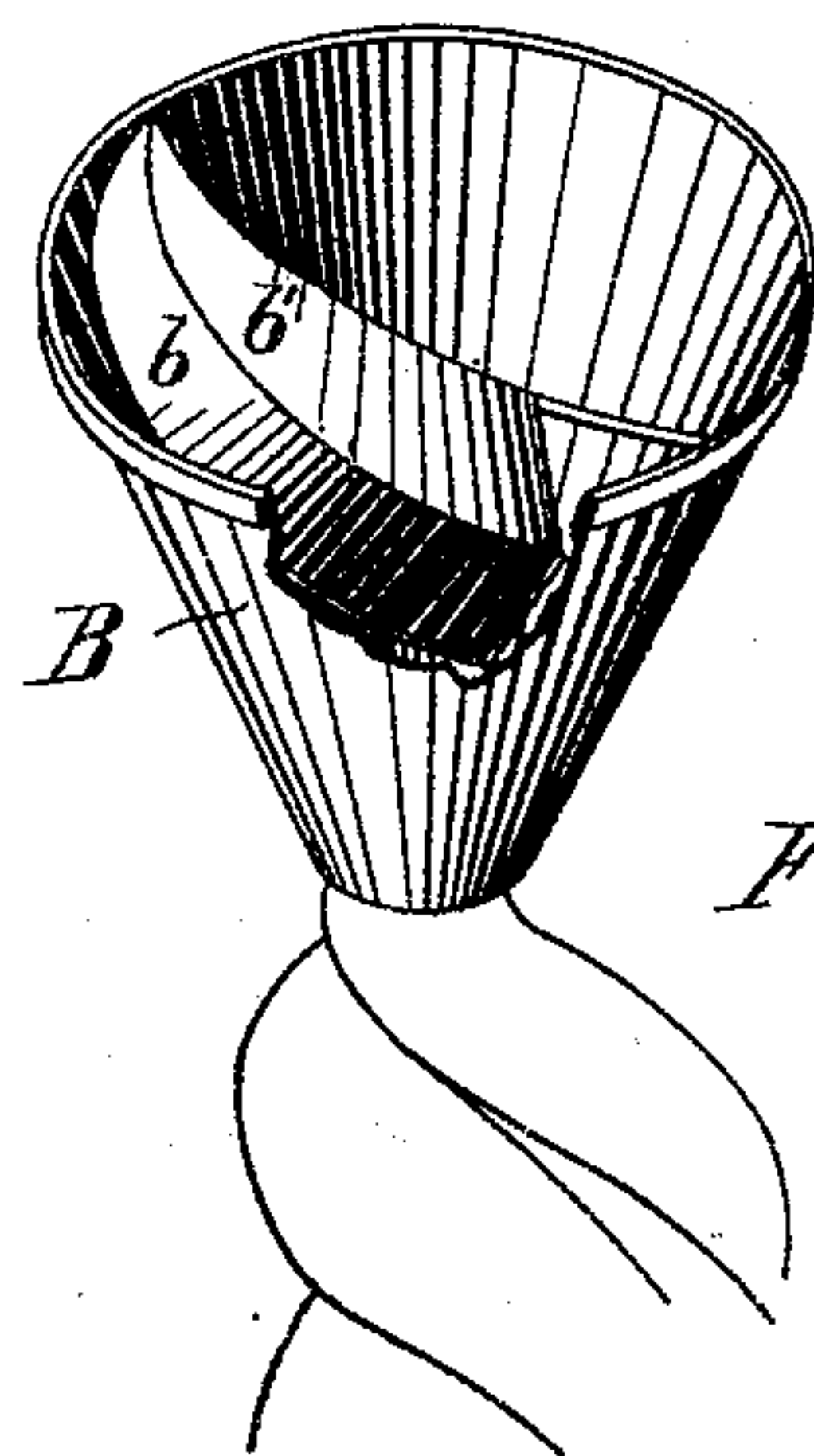
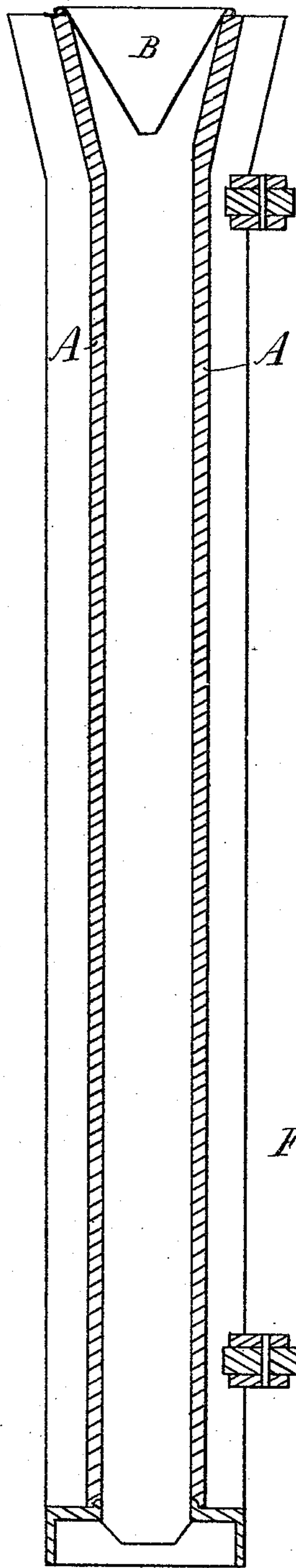


Fig. 1.

Fig. 2.

WITNESSES:
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UNITED STATES PATENT OFFICE

JOHN W. HARRISON, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN DEVICES FOR BLACK-WASHING MOLDS.

Specification forming part of Letters Patent No. **156,999**, dated November 17, 1874; application filed August 19, 1874.

To all whom it may concern:

Be it known that I, JOHN W. HARRISON, of St. Louis, in the county of St. Louis and State of Missouri, have invented an Improvement in Black-Washing Pipe-Molds, of which the following is a specification:

This invention relates to an improvement in coating or black-washing molds for the manufacture of cast-iron pipes and other cylindrical castings.

In order to more fully explain the nature and importance of my invention, I will refer to the usual and well-known methods for black-washing cylindrical molds.

When the mold was over twelve inches diameter, a brush or a "swab" was generally used by dipping the same in the black-wash and applying it by hand; for molds of a smaller diameter by the use of a block of wood, a disk, or other material inserted into the mold, and thereby restraining the flow of the black-wash temporarily until sufficient can be poured in to accomplish the purpose, and dropping said devices through the mold, or withdrawing said devices out from the top, causing the black-wash to flow down the sides.

The difficulties attending the use of these methods and devices of a similar nature have been the unequal flow of the black-wash over the surface of the mold, leaving streaks and parts not coated at all; especially in the cases where the black-wash was temporarily arrested, the sedimentary part of the black-wash, by its gravity, created ridges or "tears" in the surfaces of the mold, thus destroying the usefulness or value of the casting when made; also, since the use of flasks for molding pipes, adjusted so as to avoid placing them upon a "ramming-stand," by inserting the conical end of the pattern into the same form as is used in holding the core in position, the lowering of the block of wood or brush through the mold is rendered impossible without removing the bottom or lower section of the mold, which the late improvements in

molding pipe were especially designed to avoid.

My invention obviates all these difficulties, and consists in the use of a device, as will hereinafter appear, for causing a stream or volume of coating or black-wash to have a spiral flow, and producing a cone-shaped discharge, to come in contact with every part of the mold.

Of the drawing, Figure 1 is a sectional elevation of a pipe-mold, showing my device in same. Fig. 2 is a perspective view, illustrating my improved device.

A is the pipe-mold. The "bell end" or top opening of the pipe A I provide with a funnel, B.

In Fig. 2 I show the funnel B provided with one or more spiral blades, *b*. This blade can further be provided, if desired, with a vertical blade, *b'*, so as to form a duct or chute, in which the black-wash can be simply poured; and said black-wash, by virtue of said blades *b b'*, is caused to assume the spiral flow, and to produce a cone-shaped discharge out of funnel, as above stated.

The flow, motion, or action of the black-wash in my core is therefore adequate, free, and decisive, especially is of such a nature as not to permit the heavier ingredients or sedimentary parts of the black-wash from being temporarily arrested, and which produces the effect of tears, and consequently injures the casting.

What I claim is—

A funnel, B, with the spiral blades *b b'*, for the purpose of imparting a spiral flow to the black-wash, in the manner herein shown and described.

In testimony of said invention I have hereunto set my hand.

JOHN W. HARRISON.

Witnesses:

WILLIAM W. HERTHEL,
CHAS. F. MEISNER.