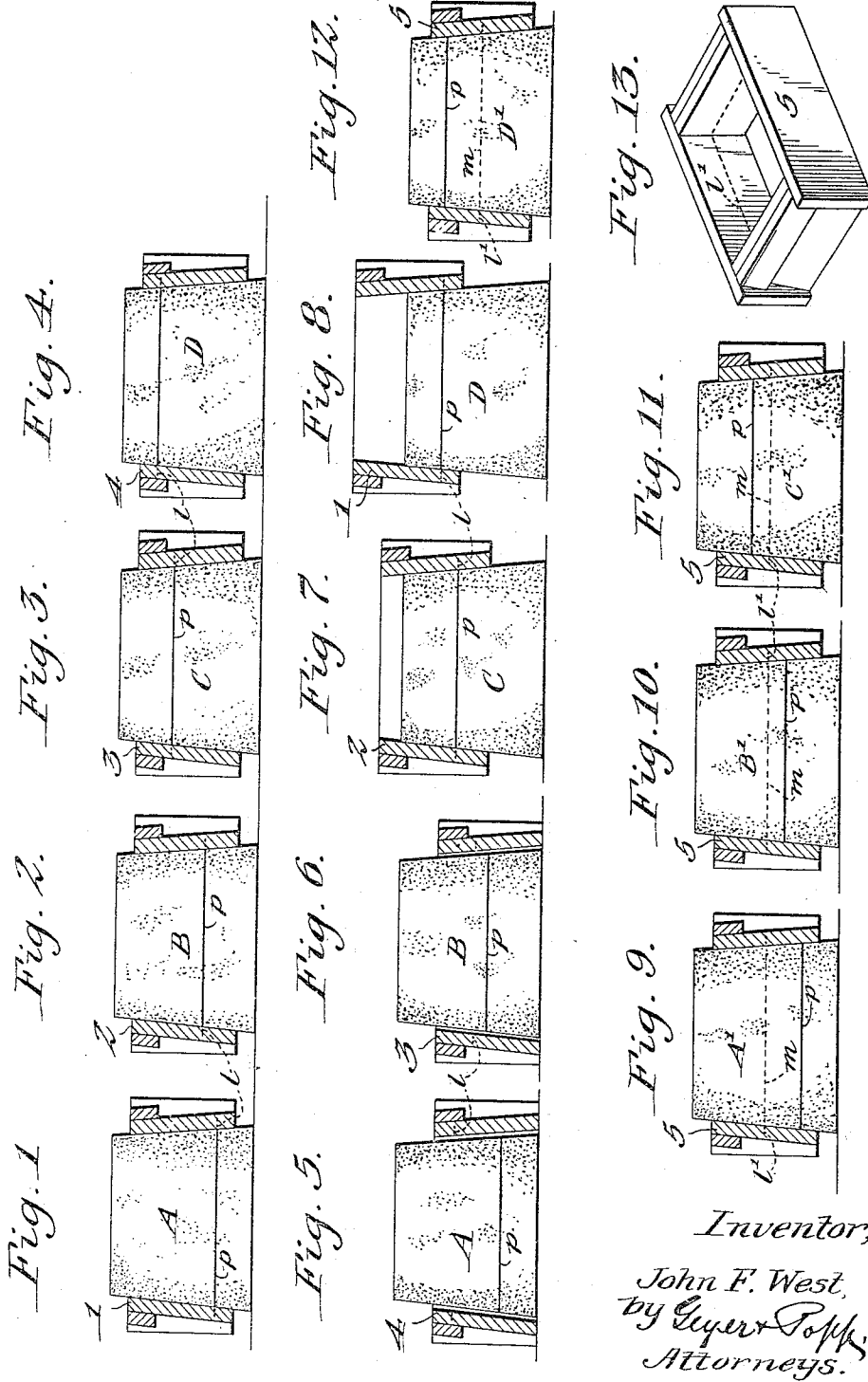


1,288,326.

Patented Dec. 17, 1918.



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UNITED STATES PATENT OFFICE.

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MOLD-JACKET AND METHOD OF MAKING THE SAME.

1,288,326.

Specification of Letters Patent.

Patented Dec. 17, 1918.

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To all whom it may concern:

Be it known that I, JOHN F. WEST, a citizen of the United States, residing at Lancaster, in the county of Erie and State of New York, have invented new and useful Improvements in Mold-Jackets and Methods of Making the Same, of which the following is a specification.

This invention relates to the tapering mold jackets employed in foundries for supporting the molds made in snap-flasks and to a method of making the same.

In order to properly support all portions of such molds to prevent cracking or breaking thereof during the pouring operation, it is customary to make the jackets of such height and dimensions that when snugly fitted over the molds they terminate no less than an inch from their top and bottom.

As is well known, the level or elevation of the parting line of such molds varies according to the nature of the articles to be cast, the line being near the horizontal center of the mold in some cases and a greater or less distance from it in others. According to the present practice, such jackets are laid out or measured on the parting lines of the molds as a basis. For example, if the external width of such a mold is eight inches at the parting line, the corresponding contiguous portion of the companion jacket is made of the same internal width. While that particular jacket will properly fit and support molds with that particular parting line, it will not properly fit other molds of the same height having their parting lines located at a different height or level, even though their width at the parting lines is the same. Obviously, if the parting line is higher than that on which the jacket is laid out, the jacket will stop or stand higher on the mold and leave its lower portion uncovered and unsupported to an excessive extent, while if the parting line is lower, the jacket will descend too far over the mold and leave its upper portion uncovered to an objectionable degree. It follows that by this method of laying out mold jackets, as many separate and distinct jackets are required for molds of the same height as there are different parting lines in that size, necessitating not only the use of a large number of jackets and entailing a corresponding expense for repairs and renewals, but also requiring considerable space for their storage.

The aim of my invention is the production

of a universal mold jacket which will fit a series of molds of substantially the same height or size but having differently-located parting lines, thus greatly reducing the number of jackets required for a given variety of molds and correspondingly lessening the outlay for this foundry-item, as well as economizing in storage space.

To that end my invention consists of a jacket laid out on the horizontal median line of the molds instead of their varying parting lines.

In the accompanying drawings:

Figures 1-4 are transverse vertical sections of a series of ordinary sand molds of about the same dimensions having different parting lines and supported by their companion jackets. Figs. 5-8, inclusive, are similar sections, showing the impracticability of a single jacket of ordinary construction for more than one of such molds. Figs. 9-12, inclusive, are similar sections of the same series of molds supported by my improved jacket, showing its universal applicability to entire series. Fig. 13 is a perspective view of one of the improved jackets.

Similar characters of reference indicate corresponding parts throughout the several views.

Referring to Figs. 1-4, the parting lines p of the four ordinary molds A, B, C and D, are located at different levels, but the molds are all of the same width at their parting lines, say eight inches, for example. The ordinary companion jackets 1, 2, 3 and 4, for those molds are laid out on those parting lines, respectively, with the result that while each fits its own mold it will not properly fit any of the rest. By reference to Figs. 1 to 4, it will be seen that the several jackets fit their respective molds, the lay-out line l of each jacket coinciding with the parting line p of the companion mold. But when it is attempted to interchange these jackets none of them will properly support the molds. As seen in Fig. 8, if the jacket 1 be placed over the mold D, it can descend no farther after its lay-out line registers with the parting line of that mold, the jacket projecting a considerable distance above the mold and leaving its base and middle portions unsupported. The same is true when the jacket 2 is placed on the mold C; while when the jackets 3 and 4 are applied to the molds A and B, they fit them so loosely that no parts of the molds are supported.

As before briefly described, each of my improved jackets 5, shown in Figs. 9-12, is constructed or laid out on the horizontal center or median line m of a series of molds, 5 A^1 , B^1 , C^1 , D^1 , of substantially the same height or size having parting lines at different levels, but regardless of those lines, the lay-out line of the jacket being dotted and designated l^1 . By this construction of 10 the jacket, its lay-out line coincides with the median line of each and all of the corresponding series of molds, suiting one and the same jacket to the entire series and properly fitting and supporting any one of them, 15 as is obvious from a comparison of Figs. 9-12, each of the four jackets there shown being interchangeable with any one of the other three and each fitting any of the four molds, irrespective of the different levels of 20 their parting lines. Each jacket is thus universally applicable to a series of molds with different parting lines but of approximately the same height or size.

By this improvement, the number of jackets 25 required for a given variety of molds is very materially reduced, effecting an important saving in the cost of jackets and their repairs and renewals, and also in the amount of floor space required for their storage.

30 The present practice of building a series of snap-flasks with different parting lines is to start an inch and a half from the bottom of the flask and make successive partings every half inch to within an inch and a half from 35 the top; that is, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3 inches, and so on. By this construction, nine different sizes of jackets are required for the usual variety of molds made in a snap flask 16 inches long, 12 inches wide and 7 inches high. 40 By the use of this improvement, but a single-sized jacket is required for the same variety of molds, one size doing the work of nine

sizes of ordinary construction. This material gain is due partly to the fact that only a single jacket of a given size is required for 45 molds of somewhat different heights, say seven and eight inches, respectively. On a seven-inch mold a sand margin of half an inch is left above and below the jacket, whereas on an 8 inch mold a sand margin 50 of one inch is obtained with the same sized jacket.

While affording these important advantages, the improved jacket can be constructed as cheaply as those now in common use. 55

The mold jackets may be provided with rigid or movable or adjustable walls. I do not wish to limit myself to any particular construction of jacket, except as defined in 60 the appended claims.

The snap-flasks in which the molds are made are laid out in the same manner as the mold-jackets herein shown and described. Such flasks and their method of construction will form the subject of a separate ap- 65 plication for patent.

I claim as my invention:

1. The combination with a series of tapering sand-molds of substantially uniform size having differently-located parting lines, 70 of a tapering universal jacket applicable to all of said molds and constructed of the same interior dimensions at its horizontal median line as the external dimensions of the molds at their median line. 75

2. The hereindescribed method of laying out a tapering universal mold jacket to fit a series of sand molds with different parting lines, which consists in so constructing the jacket that its internal dimensions at its 80 horizontal median line are the same as the external dimensions of said series of molds at their horizontal median lines.

JOHN F. WEST.

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