UNITED STATES PATENT OFFICE.

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DOVETAIL FOR PATTERNS.


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To all whom it may concern:

Be it known that we, JOSEPH P. EXTON and JESSE M. HAHN, residing at High Bridge, in the county of Hunterdon and State of New Jersey, citizens of the United States, have invented certain new and useful Improvements in Dovetails for Patterns, of which the following is a specification.

This invention relates to and has for an object to provide an improved dovetail device for holding together the separate parts of wooden patterns.

In making castings at times some of the protruding or extending portions of the pattern have to be made separately from the main portion, so that the main portion may be drawn from the sand and afterward the protruding portions picked out from the mold, which portions are sometimes called "pick ins." It has heretofore been the practice to make a dovetail mortise or female member in the pick in, and upon the main portion of the mold the dovetail tenon or the male member of the dovetail has frequently been made of a separate piece of wood and glued in position; but the moisture of the sand will sometimes loosen the glue and at other times it will cause swelling of the parts, so that the pick in will not slide from the pattern as it is drawn from the mold, thus destroying the mold and requiring the same to be patched up or re-formed; but the present improvement provides a metal dovetail which will not be affected by the moisture of the sand and which can be more readily attached to the protruding portion of the pattern and a nicer fit be had than by the formation of the wooden dovetails as heretofore employed.

In the drawings accompanying and forming a part of this specification, Figure 1 illustrates a top view, partly in horizontal section, of a portion of a pattern and detachable portion in their assembled relation and provided with the present improvement. Fig. 2 is a side view thereof, showing the main portion of the pattern partly taken away to illustrate the detachable portion of the pattern lying beyond it. Fig. 3 illustrates in perspective the two members or sections of the dovetail, and Fig. 4 illustrates a blank from which the sections or members may be bent up.

For the purpose of simplification, the pattern 7 and the detachable portion 8 are shown in simple form and in Figs. 1 and 2 are held in position by means of my improved dovetail, the protruding or male member 9 of which is shown carried by the detachable portion and the female member 10 by the main portion of the pattern. This is to permit the pattern being drawn from the mold without marring the same, for were the male portion of the dovetail carried by the portion of the pattern which is drawn from the sand it would scrape the face of the mold; but it may be carried by the detachable or pick in and in which instance it will serve as a handle by which the mold-maker may take hold of it to pick it out from the mold. As seen in Fig. 3, the male member 9 of the dovetail is carried by or has attached to it wings 11, having suitable holes 12 for screws, whereby it may be attached to the face of the portion of the pattern by which it will be carried.

The edges of the member 9 overhang the sides 13, which are somewhat slanting, making an undercut, as it were, and since this member of the dovetail is hollow, owing to the fact that it is made from sheet metal, it may be closed top and bottom by flaps 14 and 15, respectively. The female member 10 is also carried by suitable plate or wing portions 16 and which, as at 17, overhang the side walls 18 for engaging the side walls 13 and overhang on the male member 9.

In Fig. 4 a blank is illustrated for bending up into the male member, it having wing-forming portions 20 and portions 21 and 22 for forming in the present instance the male member, and when the blank is bent upon the lines 23 and 24 a structure somewhat similar to that seen in the left-hand side of Fig. 3 will be formed. The blank is also shown as carrying portions 25 and 26 for forming top and bottom closures for the male member of the dovetail, these closures being necessary for preventing sand filling in the hollow interior of the male portion of the dovetail. The blank is also shown as having portions 27 for forming wings for securing the device at the narrow ends of the members, such members being shown as tapered for the purpose of more ready disassemblage. These wings are shown in position at 28 in Fig. 3.

Having described our invention, we claim—

1. A securing device for the parts of wooden patterns comprising wing-plates for
securement to the pattern and an undercut taper member bent up from said wings and
the wings having securing portions extending toward each other at the smaller end of
said member.

2. A securing device for the parts of wooden patterns, comprising a sheet-metal
structure embodying wing-plates for securement to the pattern, and an undercut taper
male member bent up from said wings and having end closures for preventing the en-
trance of sand.

3. A pattern having a main portion and a "pick-in" portion in combination with secure-
ing devices carried thereby, one of these comprising wing-plates secured to one portion,
and an undercut taper male member bent up from said wings and the wings having securing
portions extending toward each other at the smaller end of the member, and the other of
these comprising wing-plates secured to the other portion, and an undercut taper fe-
male member bent in from said wings, and the wings having securing portions extend-
ing toward each other at the smaller end of the said member.

4. A pattern having a main portion and a "pick-in" portion in combination with sheet-
metal securing devices carried thereby, one of these comprising wing-plates secured to
one portion, and an undercut taper male member bent up from said wings and the
wings having securing portions extending toward each other at the smaller end of the
member, and said member having a closure at each end for preventing the entrance of sand,
and the other of these comprising wing-plates secured to the other portion, and an undercut
taper female member bent in from said wings and the wings having securing portions ex-
tending toward each other at the smaller end of the said member.

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Witnesses:
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