

(No Model.)

W. J. INNIS & P. H. KANE.

PATTERN LIFTER.

No. 252,382.

Patented Jan. 17, 1882.

Fig. 1

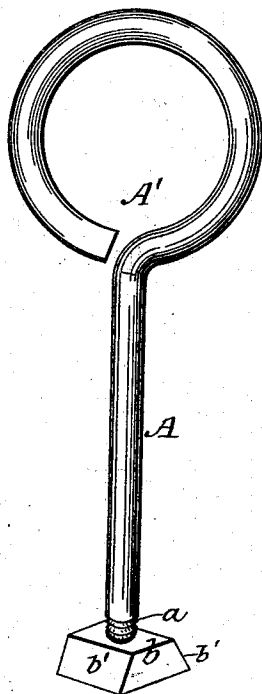


Fig. 3

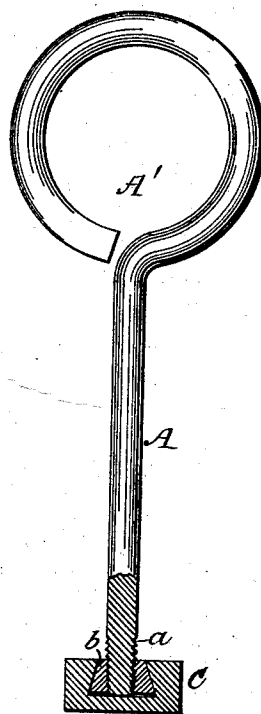


Fig. 2.

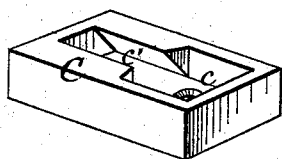
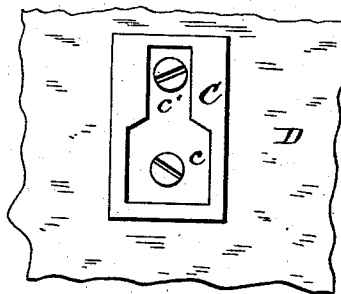


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM J. INNIS AND PATRICK H. KANE, OF OIL CITY, PENNSYLVANIA.

PATTERN-LIFTER.

SPECIFICATION forming part of Letters Patent No. 252,382, dated January 17, 1882.

Application filed July 14, 1881. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. INNIS and PATRICK H. KANE, of Oil City, in the county of Venango and State of Pennsylvania, have
5 invented certain new and useful Improvements in Pattern-Lifters; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in
15 tools for withdrawing patterns of castings from the mold after said mold has been formed.

Heretofore patterns have been lifted out of the sand of the mold with hand-screws partly entering the wood of the pattern or threaded
20 plate fixed in the pattern. Small plates have been attached to the pattern, having a central round hole beveled on the under side to receive the ends of a forked handle, these ends being so formed as to be pressed apart by a
25 pointed screw, forming a part of the tool, and made to engage partly under the beveled edges of the opening in the center of the plates.

The objects of our improvement are to produce a simple tool in connection with a tool-
30 receiver adapted to be secured to a pattern to lift the latter from the mold with uniform safety.

The invention will first be described in connection with the drawings and then pointed
35 out in the claims.

In the drawings, Figure 1 represents a perspective view of the pattern-lifting tool. Fig. 2 represents a perspective view of the tool-
40 receiver. Fig. 3 is a vertical section through the lower end of the tool and its receiver. Fig. 4 is a plan view of the tool-receiver secured to a portion of a pattern.

In said drawings, A represents a handle made of a piece of stout wire or small rod bent
45 at one end to form an open ring, A', and provided with a screw-thread, *a*, cut upon its opposite end, to engage with a trapezoidal head or nut, *b*, having two or more of its faces, *b'*, beveled, so that when ready for use it will be
50 placed upon the lower end of the handle with its broader face down.

The head *b* may be permanently secured by riveting to the extremity of the handle; but we prefer to connect the two by a screw-thread, to cause said head to act as a jam-nut and give
55 stability to the handle when connected with its receiver, as will be hereinafter explained. This tool-receiver G is a light casting, having made in its upper face a recess, *c*, extending half the length of said casting, and of such size
60 and depth as to readily receive the head or nut, *b*, secured to the lower end of the handle. The recess *c* is made with vertical walls, and communicates with a dovetailed recess, *c'*, of about the same length as the recess *c*, but
65 having the width of the opening cut in the upper face of said receiver C only equal to the width of the upper face of the nut *b* of the handle. The receiver C is let into the wood of the pattern D, even with its top, and is secured
70 thereto with a couple of screws passing through the bottom of the receiver.

The recesses *c c'* can be temporarily closed with a rectangular plug before the cope or upper part of the flask is placed in position.
75

If the pattern is not thick enough to admit the receiver C it can be fastened on the top, and in such case the rectangular recess *c* can be omitted.

After the sand has received the impression
80 of the pattern the plug is taken out and the pattern removed with the handle A by inserting the dovetailed head or nut *b* thereof in the recess *c* and sliding it within the dovetailed recess *c'*; and if the lower end of said handle
85 is screw-threaded, and the head or nut *b* is suitably tapped, by turning said handle it will jam the dovetailed or beveled nut up against the dovetailed recess and form a perfectly rigid connection between the handle and
90 its receiver, and consequently with the pattern.

In case the pattern is of iron, the recess can be cast in the pattern; or if the pattern is not thick enough for the purpose, small ribs with a proper dovetail can be cast on the top of the
95 pattern.

We claim as our invention—

1. A pattern-lifter composed of a handle formed of a screw-threaded single stem, in combination with a beveled nut having its
100 lower face wider than its top, substantially as and for the purpose described.

2. The combination of a pattern-lifter handle
having at its lower end a beveled head or nut
with a receiver having an internal recess formed
with rectangular sides a portion of its length
5 and beveled sides or a dovetailed opening the
balance of its length, substantially as and for
the purposes set forth.

3. Ribs upon a pattern with an interior dove-
tail, in combination with a beveled nut upon
10 a screw-threaded stem or handle, for the pur-

pose of lifting the pattern from the sand, sub-
stantially as described.

In testimony that we claim the foregoing as
our own we have hereto affixed our signatures
in presence of two witnesses.

WILLIAM J. INNIS.
PATRICK H. KANE.

Witnesses:

HIRAM D. HANCOCK,
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