(No Model.)

C. W. LEACH.

RAPPING PLATE AND DRAWING BAR FOR PATTERNS.

No. 516,867. Patented Mar. 20, 1894.

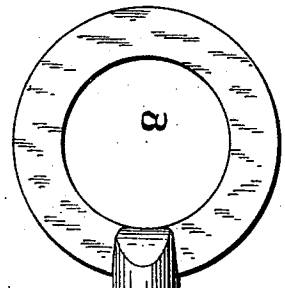


Fig 1

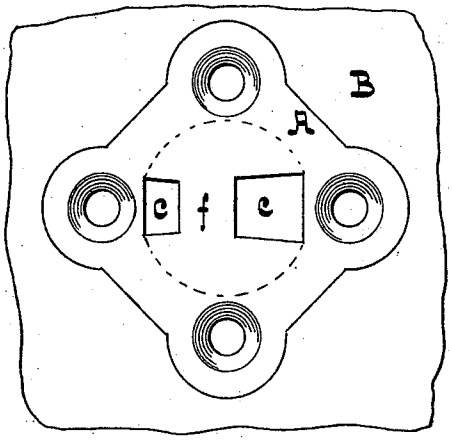


Fig 2.

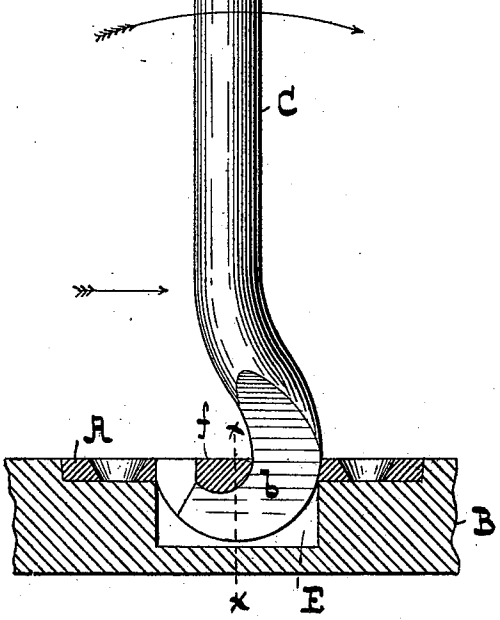


Fig 4

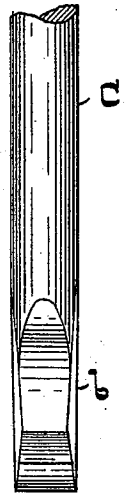
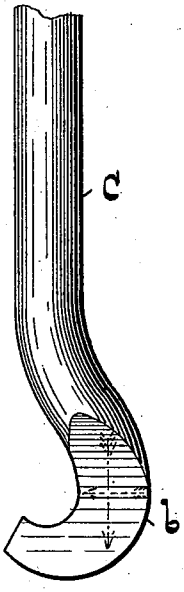


Fig 5.



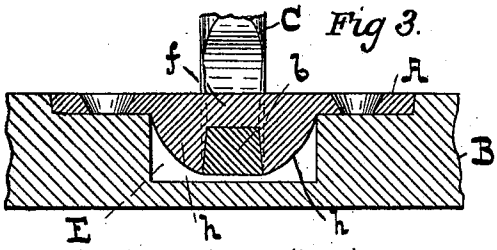


Fig 3.

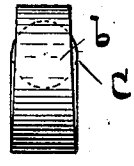


Fig 6.

-WITNESSES-

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CHARLES W. LEACH, OF BALTIMORE, MARYLAND.

RAPPING-PLATE AND DRAWING-BAR FOR PATTERNS.

SPECIFICATION forming part of Letters Patent No. 516,867, dated March 20, 1894.

Application filed June 29, 1893. Serial No. 479,181. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. LEACH, of Baltimore, Maryland, have invented certain Improvements in Rapping-Plates and Drawing-Bars for Patterns, of which the following is a specification.

In the description of the said invention which follows, reference is made to the accompanying drawings forming a part hereof, and in which—

Figure 1 is a sectional view of the improved rapping plate and the drawing bar, together with a piece of the pattern to which the former is secured. Fig. 2 is a top view of Fig. 1 without the bar. Fig. 3 is a section of Fig. 1 taken on the dotted line *x*—*x*. Fig. 4 is a view of a part of the bar alone, looking in the direction indicated by the straight arrow in Fig. 1. Fig. 5 is a side view of a part of the bar alone, and Fig. 6 is an under side view of Fig. 4.

Referring to the drawings, A is a plate adapted to be secured in the surface of a pattern, a part of which is shown and denoted by B. The shape of this plate is of no importance. It is shown in Fig. 2 as square with circular projecting corners through which screws, not shown, are inserted so as to enter the wood pattern B.

C is the drawing bar having a ring *a* at the upper, and a hook *b* at the lower end. The hook *b* is flattened and tapered in two directions, that is to say, from the back toward the front or in the direction indicated by the dotted arrow, and also in the direction indicated by the arrow in broken lines, see Fig. 5. A plate A has a hole *c* which corresponds in size and shape with the hook, and a central connecting piece *f* which fits the throat of the hook and serves to divide the hole *c* into two parts, see Fig. 2. To support the hook *b* below the plate A, the under side of the plate has two cheek pieces *h*, see particularly Fig. 3.

From the foregoing description of the construction of the hook *b*, it will be seen that that device is a curved wedge and as it fits the cavity into which it is forced in the plate A, the bar cannot be moved out of a straight line when pressure is placed upon it in the direction of the curved arrow in Fig. 1; and that it will stand in an upright position; but may be removed by applying force in a contrary direction, which brings the wedge from the cavity.

The plate A is sunk its entire thickness in the pattern, as shown in Figs. 1 and 3 and central of the recess in the pattern is bored a hole E to receive the cheek pieces *h*. The plate is secured in place by screws as before stated.

In ramming sand around the pattern in the flask, the holes E and *c* generally become filled with sand, but by the insertion of the hook of the draw bar, a portion of the sand is expelled at the smaller end of the hole *c*, or sufficient sand is forced out to admit of the connection of the hook with the plate.

The plate A is rapped so as to loosen the pattern in the sand, and when it is loose, the pattern is drawn out of the sand by the bar C, as will be understood by pattern makers and molders.

I claim as my invention—

A rapping plate having a hole for the reception of a hooked bar, a connecting piece to fit the throat of the said hook and cheek pieces to support the portion of the hook below the plate, substantially as specified.

CHARLES W. LEACH.

Witnesses:
WM. T. HOWARD,
DANL. FISHER.