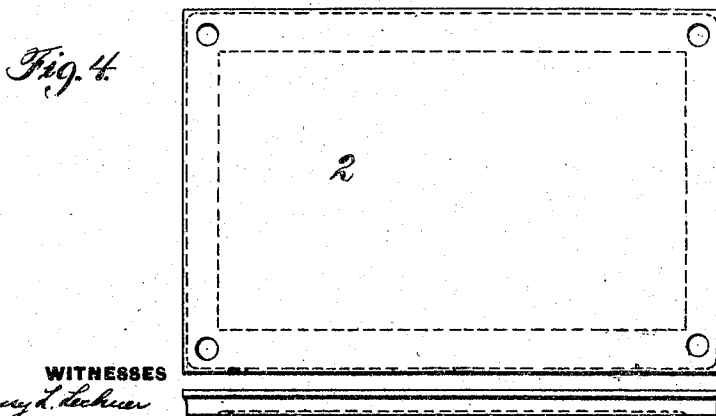
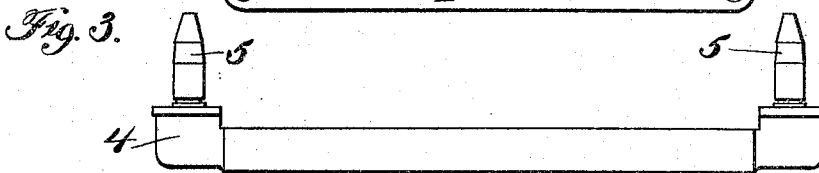
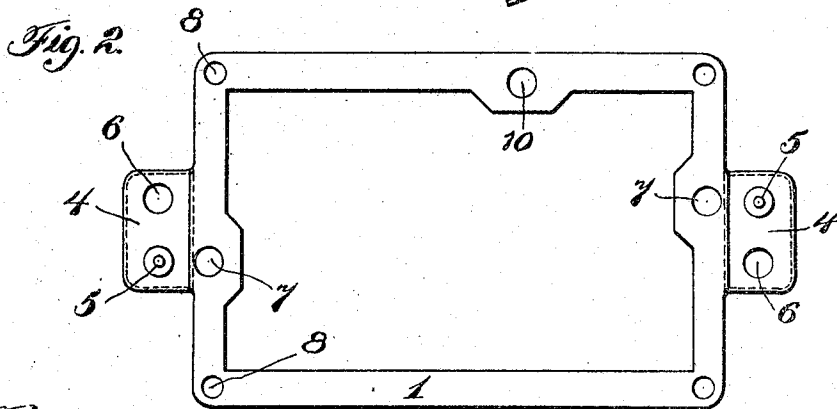
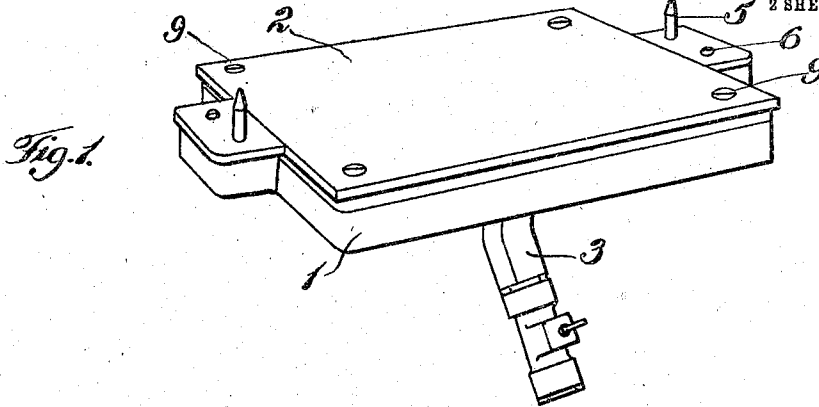


E. H. MUMFORD.
PATTERN CARRIER.
APPLICATION FILED APR. 6, 1907.

932,563.

Patented Aug. 31, 1909.

2 SHEETS—SHEET 1.



WITNESSES
Harry L. Leckner
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INVENTOR

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by *Paul Symmetrecht*

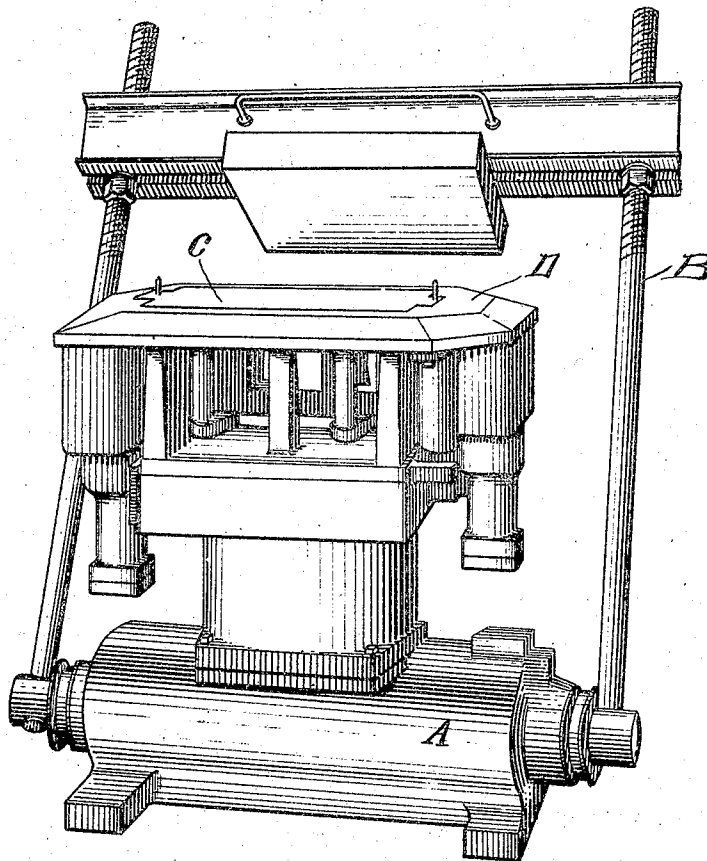
Fig. 5.

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2 SHEETS—SHEET 2.

Fig. 6.



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UNITED STATES PATENT OFFICE.

EDGAR H. MUMFORD, OF PHILADELPHIA, PENNSYLVANIA.

PATTERN-CARRIER.

932,563.

Specification of Letters Patent. Patented Aug. 31, 1909.

Application filed April 6, 1907. Serial No. 366,757.

To all whom it may concern:

Be it known that I, EDGAR H. MUMFORD, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Pattern-Carriers, of which the following is a specification.

My invention relates to pattern carriers, and has for its objects; to provide a composite pattern carrier whereby the necessity of fitting each pattern plate with flask pins or holes is avoided; and, to provide a pattern carrier by the use of which accurate mating of the parts of a sectional mold is secured. One embodiment of my invention is shown in the accompanying drawings, wherein:—

Figure 1 is a perspective view of the assembled pattern carrier,

Figure 2 is a plan view of the carrier frame,

Figure 3 is a side elevation of the carrier frame,

Figure 4 is a plan view of the pattern plate,

Figure 5 is a side elevation of the pattern plate, and

Figure 6 is a perspective of the machine, with the pattern carrier thereon.

The pattern carrier shown in Figures 1 to 5 inclusive of the drawings, described hereinafter, and wherein my invention particularly resides, is to be used in the usual way on a machine such as that of Figure 6, wherein A is the base of the machine, B is the rammer yoke, C is the pattern carrier to which the pattern is attached, and D is the elevating frame upon which the flask or mold rests, and by the movement of which the mold is freed from the pattern.

Referring to Figures 1 to 5 inclusive, which show in detail the pattern carrier, 1 is the carrier frame, shown in details in Figures 2 and 3, 2 is the pattern plate fitting therein, and shown in detail in Figures 3 and 4, and 3 is the vibrator, which may be of any improved form, and is secured to the carrier frame 1 by bolt in hole 10, preferably at the oblique angle shown. As shown in Figures 2 and 3, the carrier frame is made in skeleton form and is provided at each end with an upstanding lug or ear 4, each of which ears is provided with a flask pin 5 and a hole 6 for the reception of the flask pin on the flask or drag. The carrier frame has two holes 7 for the passage of bolts whereby

the carrier frame is secured to the frame work of the machine in which it is mounted and a hole 10 for the vibrator bolt. Holes 8 are also provided at the corners of the carrier frame for the reception of the screws 9 by which the pattern plate is secured to the carrier frame. The pattern plate, as shown in Figures 4 and 5, is provided at its corners with holes for the reception of screws 9, and is of such size that it will fit snugly between the lugs 4—4 on the carrier frame, with its upper face in substantially the same plane as the upper faces of the lugs 4. All of the pattern plates which are to be used with the carrier frame are of the same size, so that any number of different pattern plates may be used with the same carrier frame, and the necessity of providing the pattern plates with flask pins or holes is avoided, one set of pins on the carrier frame thus serving for a plurality of pattern plates.

It will be seen from the foregoing, that my device not only reduces the cost of the pattern plates by permitting the pins on each plate to be dispensed with, but also performs another function, especially important where different pattern plates are used for forming the two halves of a sectional mold, viz, it secures in one rigid composite structure the all important common center line of patterns and flasks.

In all forms of machines in which continuous match plates or continuous stripping plates have been used, the same thing has been true, but, in each case, it has been necessary to drill and pin all the separate plates. In vibrator machines of a type which use single faced pattern plates, such as the one shown and described herein, it has been customary to provide for separate lateral freedom of the pattern plate and the frame or lug containing the flask pin, with the result that serious mismatching of molds resulted. Temporarily locking devices were added to correct this error, but they were not infallible. This device, which is virtually a composite match plate, is believed to be the first for use in machines of this type to thoroughly eliminate mismatch without the necessity of drilling all pattern or stripping plates, excepting, as above stated, that frames for holding a plurality of stripping plates have been used, and a plurality of match or pattern plates have been detachably secured to portable, that is, hand operated and hand guided

vibrator frames, containing flask pins. My device, therefore, not only reduces the cost of the pattern plates where any considerable number are used, but also insures a better product.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is the following:—

10 1. In combination, a pattern carrier comprising a carrier frame provided on each of two opposite sides with a guide pin and a guide hole and a pattern plate detachably secured to the carrier frame.

15 2. In combination, a pattern carrier, comprising a carrier frame provided on each of two opposite sides with an upstanding lug having flask guiding means, and a pattern plate fitting between the lugs and secured to the carrier frame.

20 3. In combination, a pattern carrier comprising a carrier frame provided on each of two opposite sides with an upstanding lug having flask guiding means, and a pattern

plate fitting between the lugs and secured to the carrier frame, the surface of the pattern plate being flush with the surface of the lugs.

4. In combination, a pattern carrier comprising a carrier frame provided on each of two opposite sides with an upstanding lug having flask guiding means, and a pattern plate of substantially the same area as the carrier frame fitting between the lugs and secured to the carrier frame.

5. In combination, a pattern carrier comprising a carrier frame with flask guiding means, a pattern plate detachably secured thereto, and means whereby a vibrator may be secured to the carrier frame.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

EDGAR H. MUMFORD.

Witnesses:

C. S. LOVELL,

E. MELVILLE HUGGINS.