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FRAME OR HOLDER FOR MOLD PATTERNS.

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1,279,714. Patented Sept. 24, 1918.

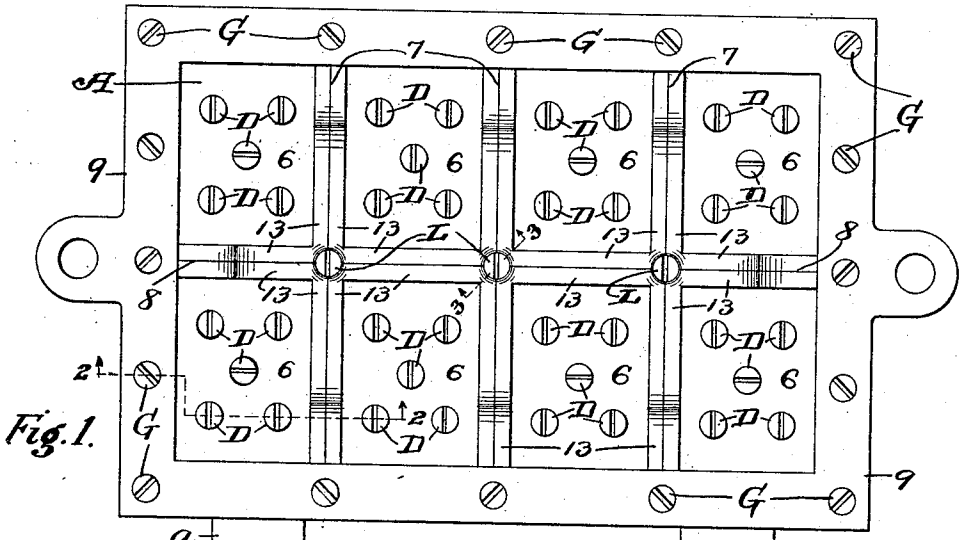


Fig. 1.

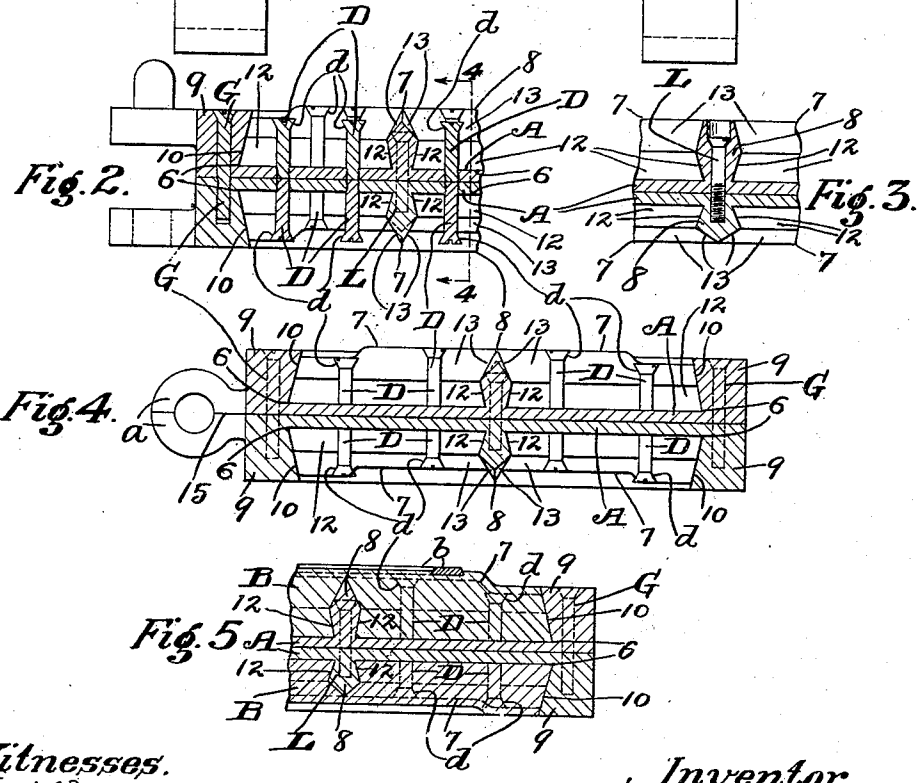


Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Witnesses.
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FRAME OR HOLDER FOR MOLD-PATTERNS.

1,279,714. Specification of Letters Patent. Patented Sept. 24, 1918.

Application filed April 13, 1916. Serial No. 90,967.

To all whom it may concern:

Be it known that I, WILLIAM C. LANG, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Frames or Holders for Mold-Patterns; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to an improved pattern-holder more especially adapted for carrying the mold-patterns for forming the faces of both the drag and the cope of a mold, and pertains more particularly to a rectangular pattern-holder provided at one of its longitudinal edges with ears adapted to be mounted on a horizontally arranged pivotal rod or member to the end that the pattern-holder can be swung in a vertical plane into a horizontal position in one direction to receive, at one of its faces, one of the flask-sections of a mold, and can be swung into a horizontal position in the other direction to receive the other flask-section of said mold at the other of said faces.

One object of this invention is not only to permit the use of plaster or cementitious material in the formation of the patterns employed in forming the faces of the drag and the cope of a mold, but to provide a strong and durable frame or holder for supporting said pattern-forming material.

Another object is to minimize the weight and cost of a pattern-holder having the requisite strength and durability by forming it of two superimposed substantially horizontally arranged metal plates or sections, to provide one of said sections at its outer face with means instrumental in holding a body of material for forming the pattern employed to form the face of the cope of a mold, and to have the other of said sections provided at its outer face with means instrumental in holding a body of material for forming the pattern employed to form the face of the drag of said mold.

Another object is to have the journal-forming ears of the pattern-holder formed partially on each of said plates.

With these objects in view, and to the end of attaining any other advantage hereinafter appearing, this invention consists in certain features of construction, and combinations and relative arrangement of parts, hereinafter described in this specification, pointed out in the claims, and illustrated in the accompanying drawings.

In said drawings, Figure 1 is a plan view of a pattern-holder embodying my invention. Fig. 2 is a vertical section on line 2—2, Fig. 1. Fig. 3 is a diagonal vertical section on line 3—3, Fig. 1. Fig. 4 is a transverse vertical section on line 4—4, Fig, 2. Fig. 5 is a transverse vertical section showing a portion of the pattern holder illustrated in Fig. 4 supplied with cementitious material employed in forming patterns.

My improved pattern-holder preferably consists of two substantially rectangular and substantially horizontally arranged superimposed metal plates or sections A. Said plates lie the one on or over the other and are arranged in substantially parallel planes and removably secured together and form opposite faces respectively of the pattern holder.

One of the plates A is provided at its outer face with means for supporting or holding at said face a body of cementitious material which is to be applied to said face of said plate to form the pattern to be employed in forming the face of the drag of a mold, and the other of said plates is provided at its outer face with means for supporting or holding a body of cementitious material to be applied to said face of said plate to form the pattern to be employed in forming the face of the cope of said mold. The means for supporting or holding the cementitious material to be applied to the outer face of each plate A preferably comprises shallow compartments 6 formed at said face of said plate by ribs 7 and 8 and a marginal rim or flange 9 which are formed on said plate at the outer face of the plate. The rim or flange 9 of each plate A extends along the edges of the plate. The ribs 8 of the plates extend longitudinally of the plates, and the ribs 7 of the plates extend transversely of the plates. That is, the ribs 7 and 8 and the flanges 9 of the plates A form the upright walls of the compartments 6 of the plates, and each rib of each plate forms a partition between adjacent compartments of said plate, and it will be observed that the flanges and the ribs materially reinforce and strengthen the plates. The flange 9 of each plate is undercut at its inner side so that each compartment of each

plate has any side wall thereof which is formed by the rim or flange 9 of the plate undercut, as at 10. The rib or partition formed on each plate between two adjacent compartments is undercut, as at 12, at the inner portions of its sides, and the outer portions of the sides of each rib or partition are beveled, as at 13, and converge toward the outer longitudinal edge of said rib or partition. Preferably the ribs of each plate do not project at the rim or flange of the plate as far from the body of the plate as said rim or flange. Preferably the ribs and the flanges of the plates are so relatively arranged that each compartment formed at the outer face of each plate is arranged directly opposite a compartment formed at the outer face of the other plate, and it will be observed therefore that each rib of each plate is arranged opposite the corresponding rib of the other plate so that each rib of each plate braces or reinforces said plate at a point opposite the corresponding rib of the other plate and so as to render the frame or holder formed by said plates adequately rigid.

Fig. 5 illustrates the application of a body of cementitious material B to each plate, and consequently the compartments shown in Fig. 5 are supplied with a cementitious body for forming patterns, and a metal part *b* may be partially embedded in said cementitious body if desired and form a portion of the pattern, as shown at the top in Fig. 5. Fig. 5 shows the undercut portions of the flange and ribs of each plate as overlapped by the cementitious body applied to said plate and it will be observed that said undercut portions of said flange and said ribs materially assist in supporting or holding said cementitious body.

It will also be observed that within each compartment of each plate are five screws D which are quincuncially arranged and spaced from the upright walls of said compartment, that said screws are screwed into said plate, and that said screws have heads arranged to be embedded in the cementitious body to be applied to said plate, as shown in Fig. 5, and forming inwardly facing shoulders *d* adapted to materially assist in supporting or holding said body.

Screws G having heads countersunk in the marginal rim or flange of one of the plates are screwed into the marginal rim or flange of the other of said plates and instrumental in removably securing said plates together.

Screws L having heads countersunk in one of the plates at the intersection of the longitudinal and transverse ribs of the plates are screwed into the other of said plates and participate in adequately securing the plates together.

My improved pattern-holder is provided at one of its longitudinal edges with ears *a* adapted to be mounted on a horizontally arranged pivotal rod or member (not shown) to the end that the pattern-holder can be swung in a vertical plane into a horizontal position in one direction to receive at one of its faces one of the flask-sections of a mold and can be swung into a horizontal position in the other direction to receive the other flask-section of said mold at the other of said faces. Preferably each ear *a* is divided, as at 15, at the junction of the plates A into two sections and one of said sections is formed on one of said plates and the other of said sections is formed on the other of the plates, as shown in Fig. 4.

It will of course be understood that modifications may be made in the relative arrangement of the ribs, flanges and contour of my improved pattern-holder without departing from the spirit and purpose of my invention.

What I claim is: —

1. In a pattern-holder, two plates arranged in substantially parallel planes and secured together and provided at their outer faces with flanges which extend along the edges of the plates, each plate being provided at its outer face with ribs, and the ribs and flanges of the plates being relatively arranged to form compartments.

2. A pattern-holder comprising a plate provided at its outer face with a flange and ribs, said flange extending along the edges of the plate, said ribs having undercut sides, and said ribs and said flange being relatively arranged to form compartments.

3. A pattern-holder comprising a plate provided at its outer face with a flange and ribs, said flange extending along the edges of the plate, and said ribs having the inner portions of their sides undercut and the outer portions of said sides beveled.

4. In a pattern-holder, two plates arranged in substantially parallel planes and provided at their outer faces with flanges which extend along the edges of the plates and with intersecting ribs, the ribs and flanges of the plates being arranged to form compartments, each rib of each plate forming a partition between adjacent compartments formed at the outer face of said plate, and the plates being secured together at the intersection of intersecting ribs.

5. In a pattern-holder, two substantially rectangular plates arranged in substantially parallel planes and provided at their outer faces with flanges which extend along the edges of the plates, and with ribs arranged longitudinally of the plates and with other ribs arranged transversely of the plates, the ribs and flanges of the plates being relatively arranged to form compartments, each rib of each plate forming a partition between adjacent compartments formed at the outer face of said plate, and the plates be-

ing secured together at the intersection of the longitudinal and transverse ribs of the plates.

6. In a pattern-holder, the combination, with two substantially rectangular plates arranged in substantially parallel planes and provided at their outer faces with flanges which extend along the edges of the plates and with intersecting longitudinal and transverse ribs, the ribs and flanges of the plates being relatively arranged to form compartments at the outer faces of the plates, each rib of each plate forming a partition between adjacent compartments formed at the outer face of said plate, and each compartment formed at the outer face of each plate being arranged directly opposite a compartment formed at the outer face of the other plate, of screws removably securing the plates together at the flanges of the plates, and other screws removably securing the plates together at the intersections of the transverse and longitudinal ribs of the plates.

7. In a pattern-holder, two plates arranged in substantially parallel planes and provided at their outer faces with flanges which extend along the edges of the plates, each plate being provided at its outer face with ribs, the ribs and flanges of the plates being relatively arranged to form compartments, each rib of each plate forming a partition between adjacent compartments and being arranged substantially opposite a corresponding rib of the other plate.

In testimony whereof I sign the foregoing specification in the presence of two witnesses.

WILLIAM C. LANG.

Witnesses:
B. C. BROWN,
EMIL W. KRYZ.

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