W. F. PENFIELD.

MOLD FOR MAKING CONCRETE BUILDING BLOCKS HAVING AIR SPACES.

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924,373. Patented June 8, 1909.

Fig. 1.

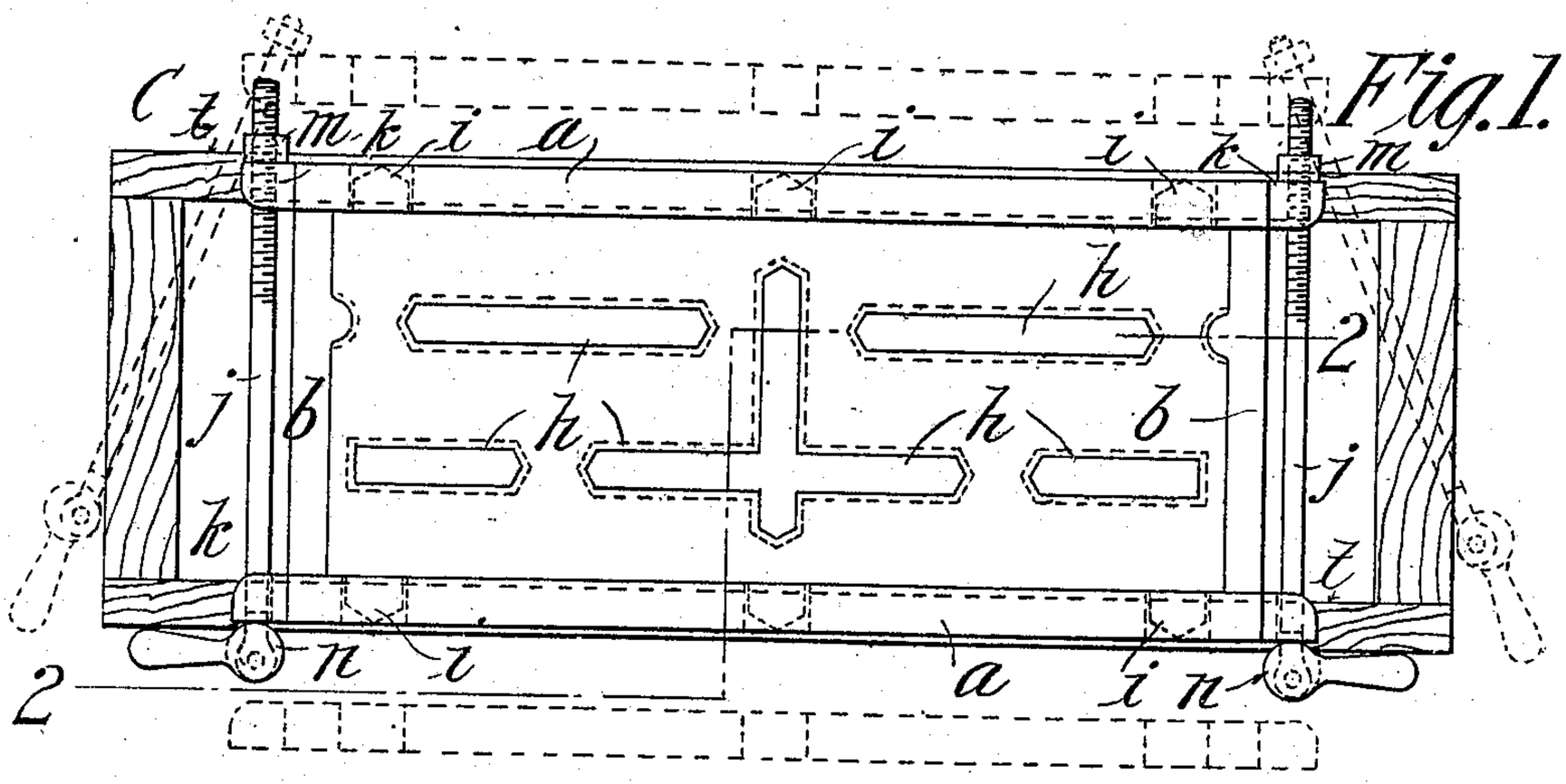


Fig. 2.

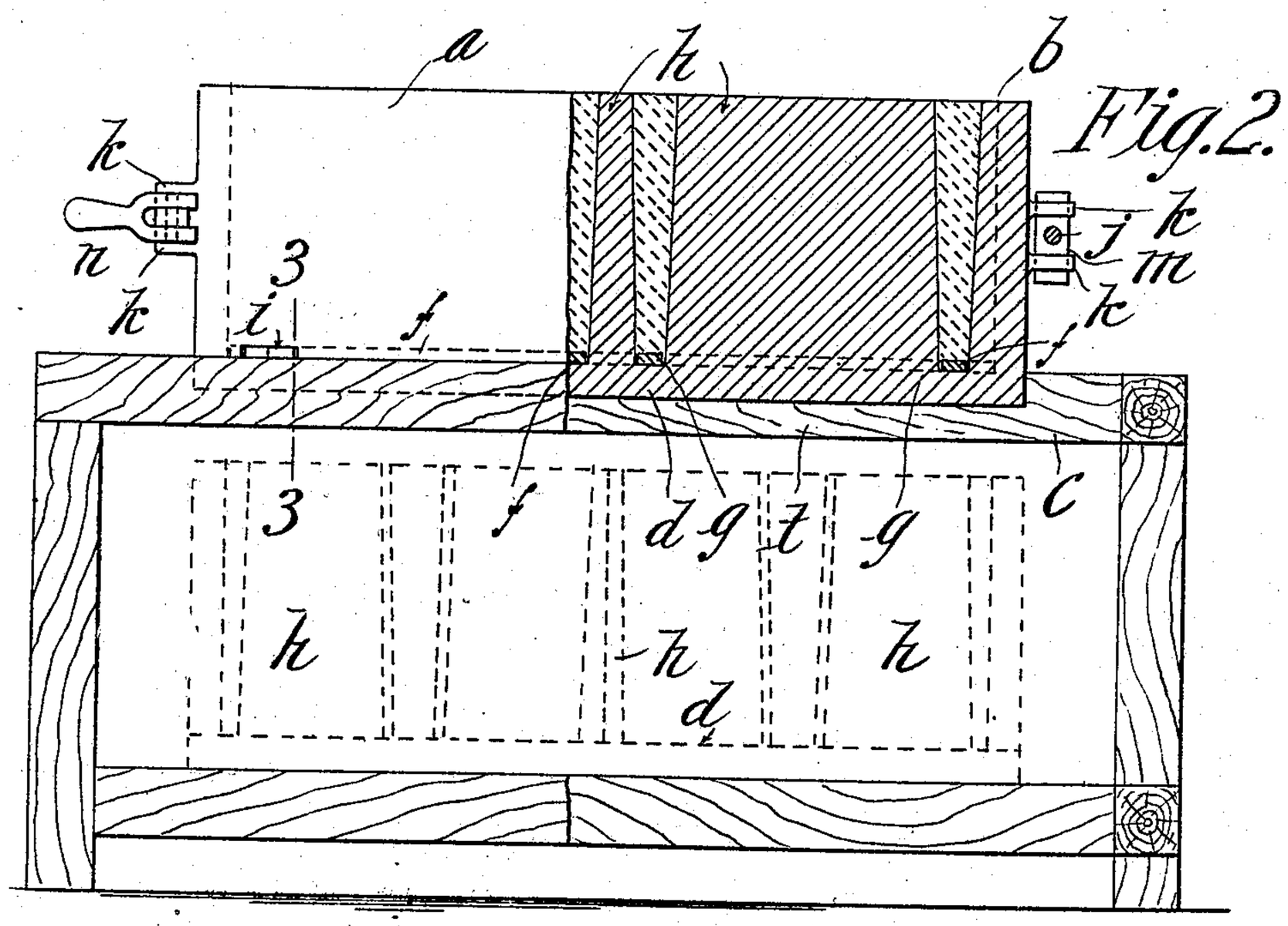


Fig. 4.

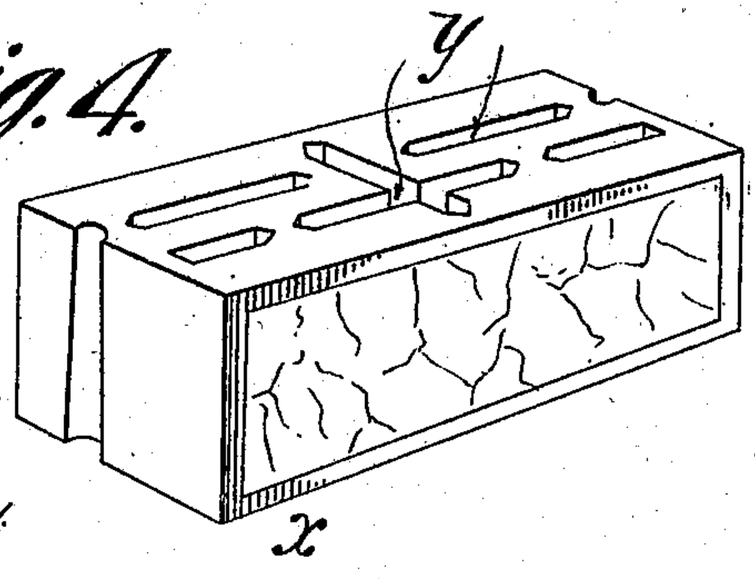
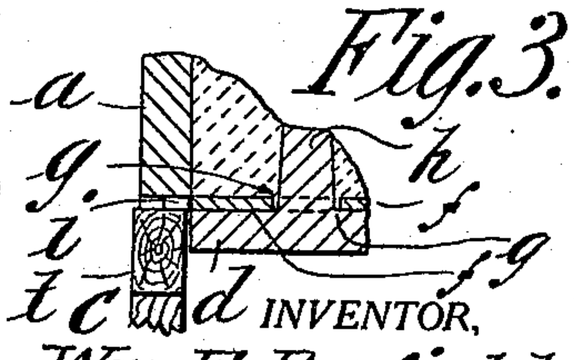


Fig. 3.



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MOLD FOR MAKING CONCRETE BUILDING-BLOCKS HAVING AIR-SPACES.

No. 924,373. Specification of Letters Patent. Patented June 8, 1909.

Application filed March 7, 1908. Serial No. 419,735.

To all whom it may concern:

Be it known that I, WILLIAM F. PENFIELD, a citizen of the United States of America, and a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Molds for Making Concrete Building-Blocks Having Air-Spaces, of which the following is a full, clear, and exact description.

This invention relates to molds for making concrete blocks for building purposes having openings or air spaces extending from top to bottom thereof.

The leading object of the invention is to provide a mold having suitable side and end walls, a base on which the bottom of the block is directly molded or formed and a sub-base carrying upstanding cores which are adapted to project through correspondingly formed apertures therefor in the first mentioned base, the said sub-base being separable from the mold so that in the withdrawal therefrom the cores carried thereby will be downwardly removed from within the mold and the concrete block formed therein, leaving the block supported on the apertured or interposed supplemental base, to remain thereon while in the drying and hardening process.

The invention consists in a mold constituted by combined parts formed or constructed as hereinafter described and set forth in the claims.

A mold, for making concrete blocks, constructed in accordance with this invention is illustrated in the accompanying drawings in which,—

Figure 1 is a plan view, representations by dotted lines being given of the removability of the mold side walls. In this view is also shown an open mold supporting frame or rack. Fig. 2 is in part a side elevation and in part a central longitudinal vertical section taken on line 2—2, Fig. 1. Fig. 3 is a partial vertical cross sectional view as taken on the line 3—3, Fig. 2. Fig. 4 is a perspective view showing an approved form of concrete block such as may be produced in the here illustrated mold.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, *a a* represents the opposite side walls of the rectangular mold and *b b* represents the mold end walls.

d represents the main base of the mold and which may be properly termed a "sub-base" by reason of its being employed below the interposed or supplemental base *f* which has apertures *g* therethrough corresponding to the air space apertures *y* in the concrete block, an example of which is represented in Fig. 4.

The end walls *b b* of the mold are made unitary with and project upwardly from the end portions of the sub-base as are also the cores *h h* in number and arrangement corresponding to the required apertures through the molded block. The opposite edges of the core carrying base are a distance one from another approximately equal to the internal transverse width of the mold, that is the distance between the inner faces of its opposite side walls, while the interposed or supplemental base has portions *i i* which project sidewise through the cut-out portions in the lower edges of side walls *a*, *a*, and extend beyond and outwardly from the lateral edges of the main base as shown by dotted line representations in Fig. 1, and as also indicated in Fig. 3.

The mold sides *a a*, the lower edges of which project below the top surface of the supplemental interposed base *f* and which overlap the end edges of the end walls carried by the sub-base, are removable from the end walls, being temporarily held in their relations thereto by the tie rods *j j* which are engaged through paired ears *k k* at the ends of the side plates, the same having each an adjustable shoulder constituted by a nut *m* at its one end portion and a cam ended lever *n* at its other end portion and operative to temporarily hold with a clamping bind the mold side walls in their properly opposite places.

C represents the open frame or rack on which the mold is operatively employed, and which, or the like of which, may be properly regarded as a portion of the molding apparatus,—it being particularly pointed out that the width between the upper horizontal longitudinally extending members *t t* of this open frame or rack is slightly greater than the width of the core carrying sub-base *d*, but less than the opposite extremities of the portions *i i* at the lateral edges of the supplemental interposed base *f*.

When the mold is set up with the parts thereof in the relations shown by full lines in Figs. 1 to 3, preparatory to the molding of a concrete block therein, the mold will usually be shifted to a position more or less

nearly at right angles to that indicated in the drawing and so that the longer dimension of the mold is transversely of the length of the open frame C. The concrete, in plastic condition, is put into the mold to completely fill the same and leveled at the top; and thereafter the mold is turned to range endwise relatively to the open frame C and to be adjusted or positioned thereon about as shown by the full lines in the drawings; the fastenings for the side walls are then released, such walls are removed, and the sub-base *d* is downwardly drawn carrying the cores which are as one therewith, as also the mold end walls *b b*, and clear from interlock with or proximity to the formed concrete block which is left supported on the apertured supplemental base *f*, the latter in turn being supported on the open frame, and prevented from downward movement relatively thereto by the engagements which the projecting edge portions *i i* of the supplemental base have upon the upper edges of the longitudinal bars or rails of the frame. The molded block may remain for such time as is desirable to harden and dry on the supplemental base of the mold, which had acted as a stripper, it being appreciated that the apertures in the supplemental frame through which the cores had been accommodated permit free circulation of air therethrough and through the apertures *y* in the molded concrete block.

For blocks of different sizes and requirements varied numbers of the air spaces may be formed, and the number of cores may be from one upward to as many as are elected to be provided; and this mold may be constituted of wood, or of iron or other metal, or combinations of wood and metal, or of other material having fitness for the purpose.

I claim:—

1. A mold composed of a base, upwardly projecting cores on said base arranged in spaced relation, end walls and side walls carried by said base, a supplemental base separable from the first named base having openings to receive said cores and seating on said first named base, and a plurality of spaced outwardly projecting portions integral with the side edges of said supplemental base, said side walls having cut-out portions in their lower edges to receive said outwardly projecting portions of the supplemental base.

2. In combination with an open frame, a mold composed of a base of less width than that of the opening of said frame, cores carried by said base in spaced relation, side walls and end walls on said base, a supplemental base having openings therein to receive said cores seating on said first named base, and outwardly extending projections carried by said base to seat on the top faces of the sides of said frame, said side walls of the mold being for seating engagement on said top faces of the sides of said frame and being formed with cut-out portions to receive said projections of the base.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

WM. F. PENFIELD.

Witnesses:
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G. R. DRISCOLL.