

No. 834,052.

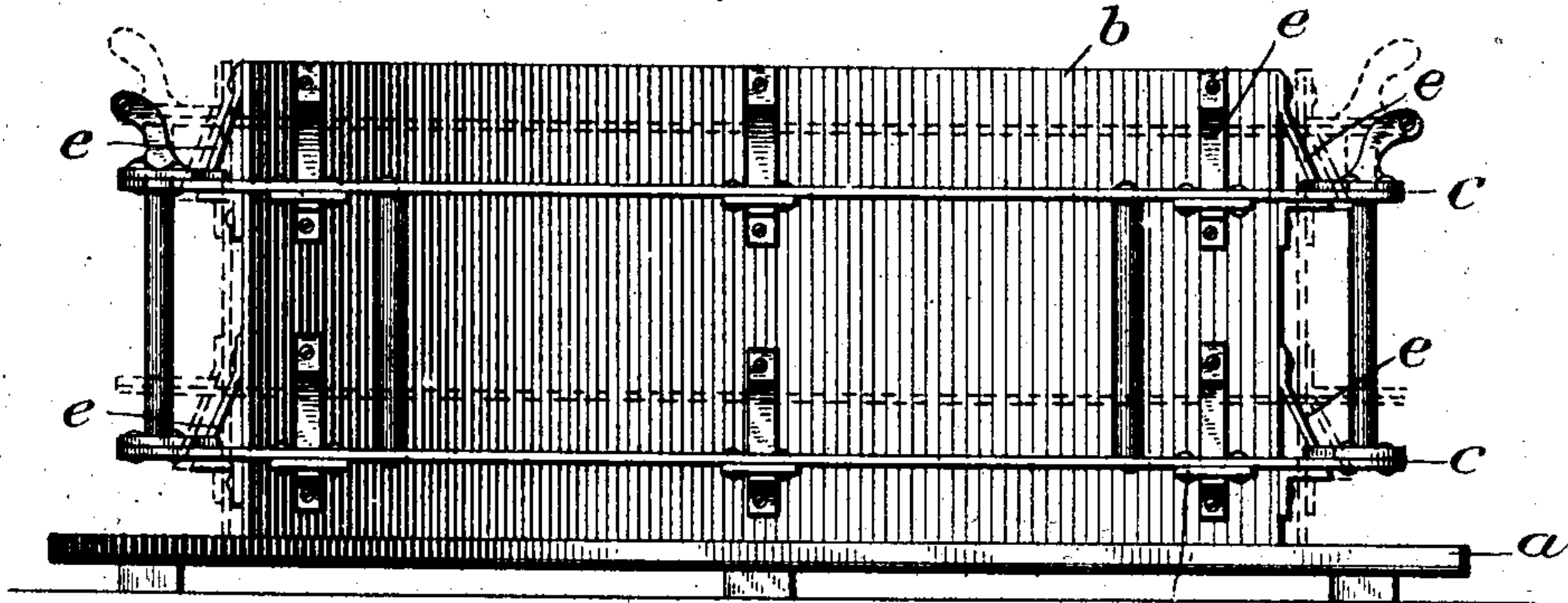
PATENTED OCT. 23, 1906.

J. A. GIBSON.  
BLOCK MOLD.

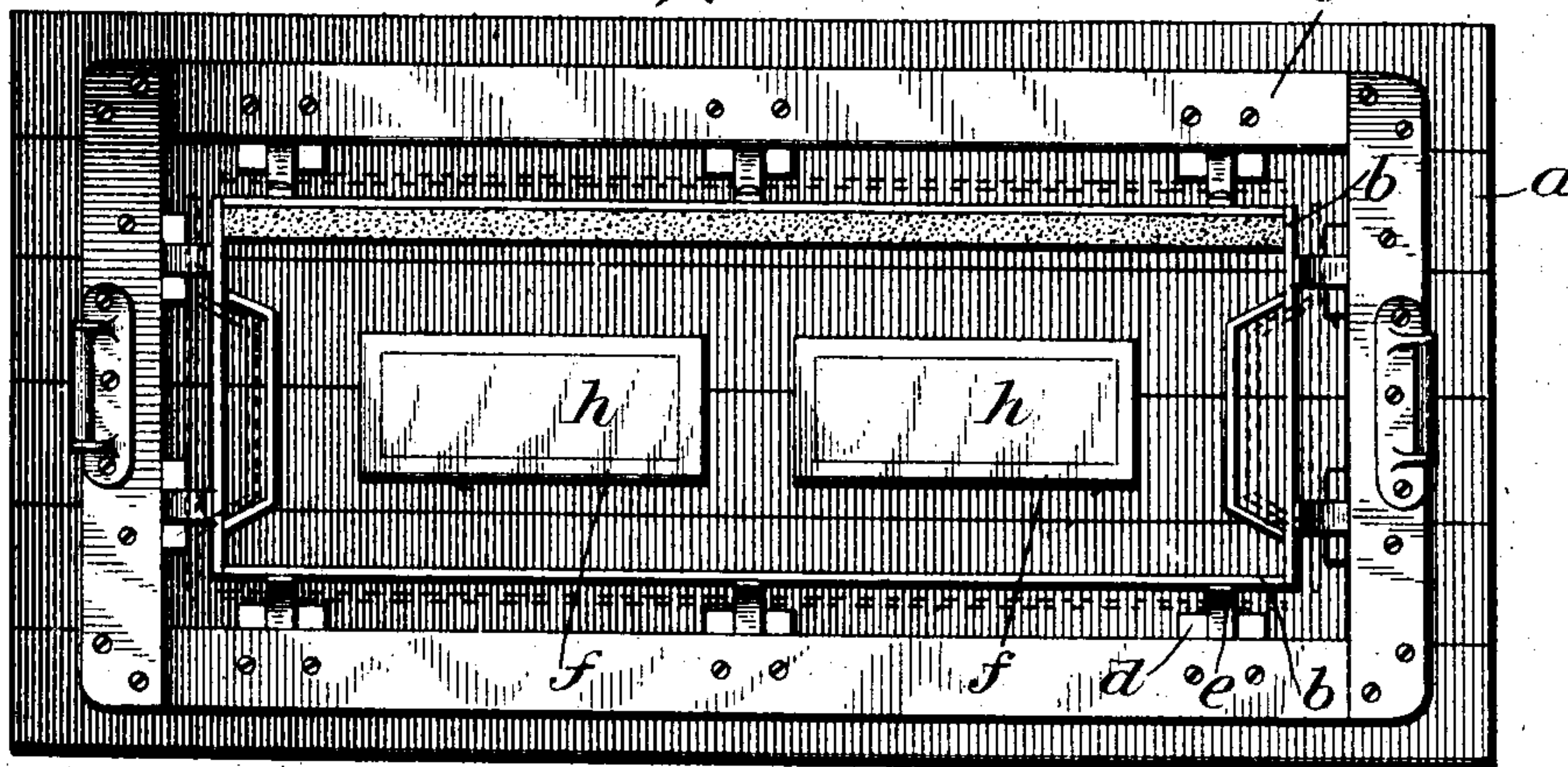
APPLICATION FILED OCT. 24, 1905.

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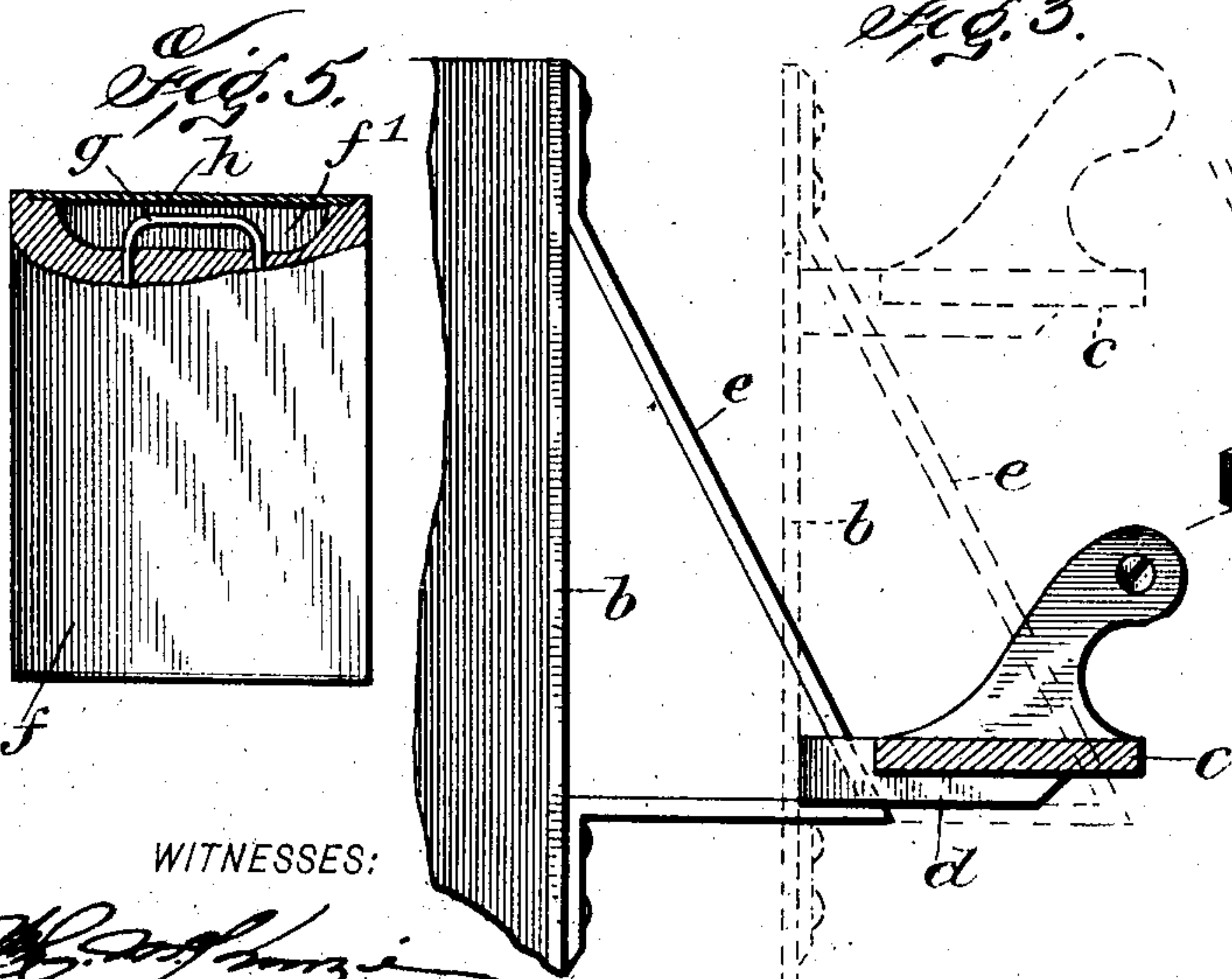
*Fig. 1.*



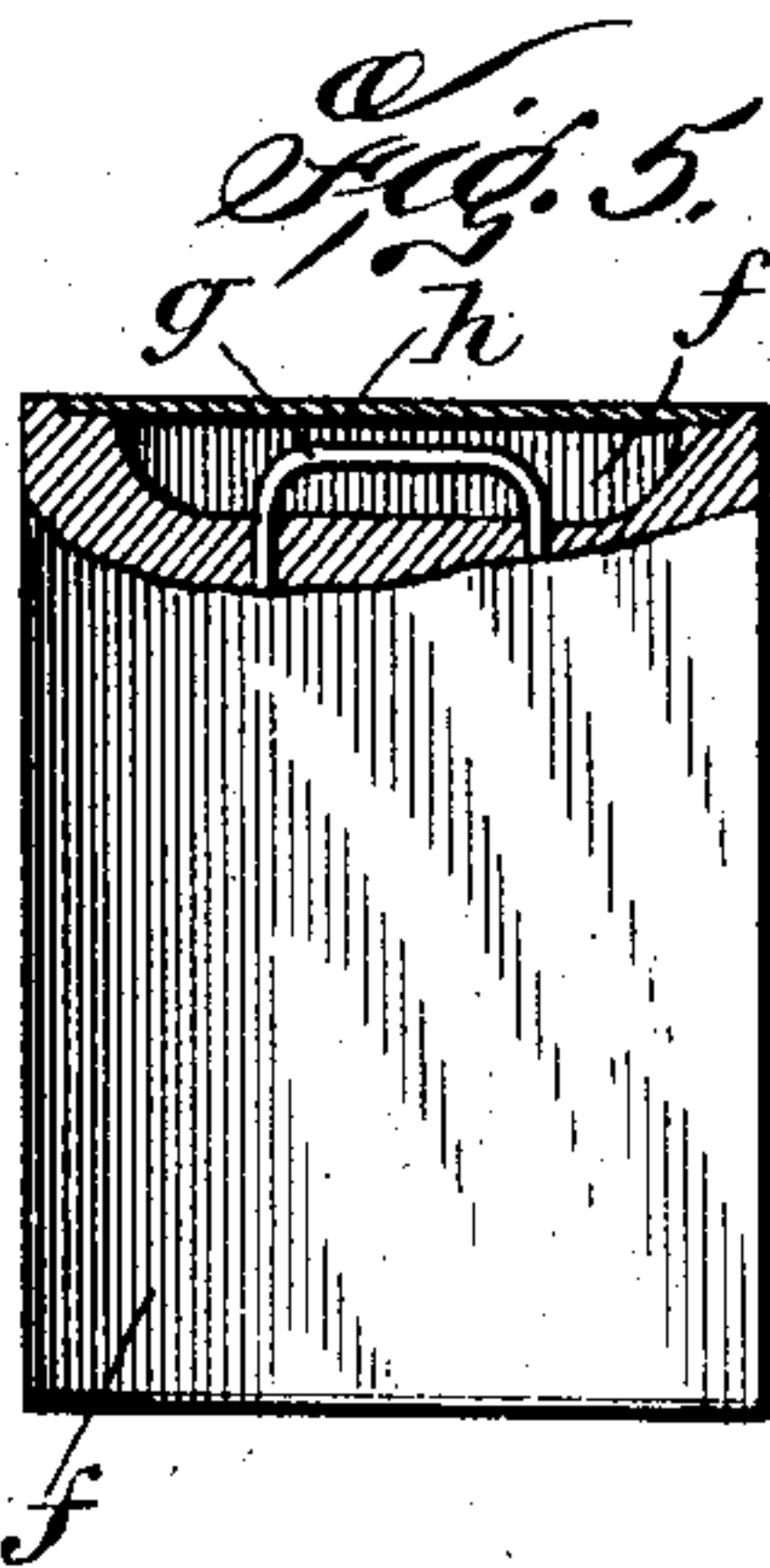
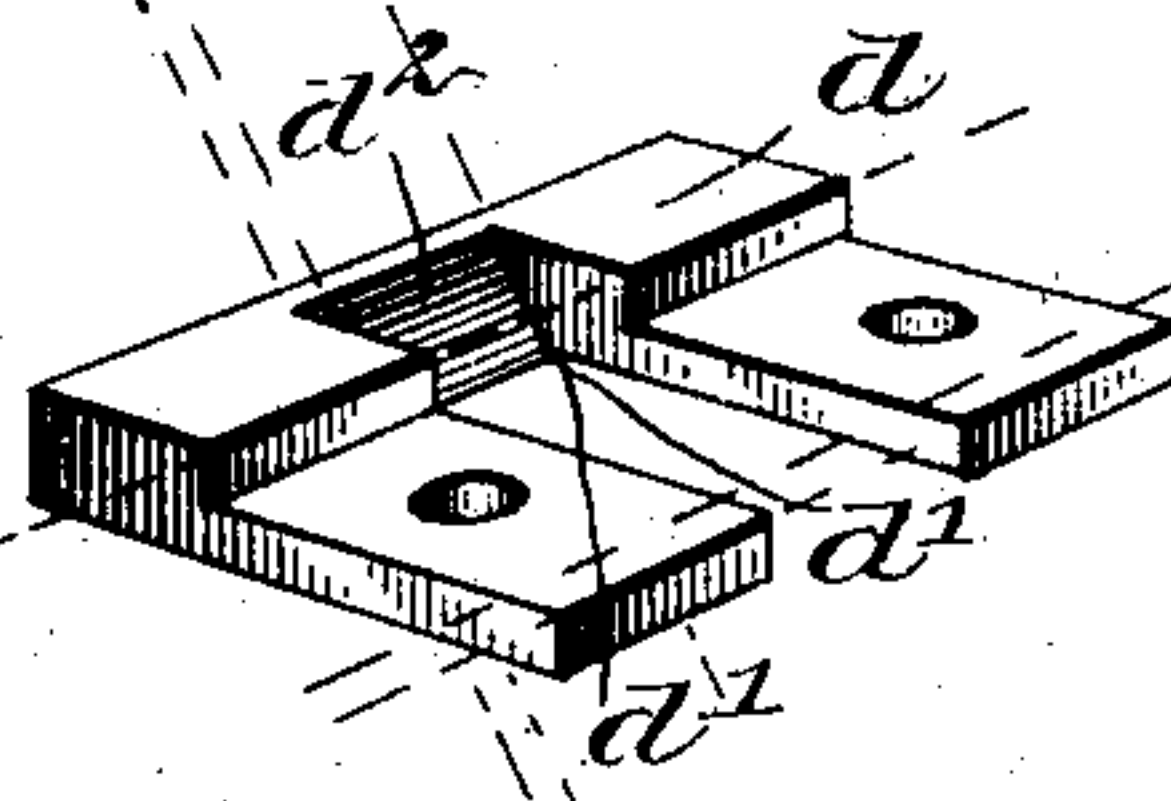
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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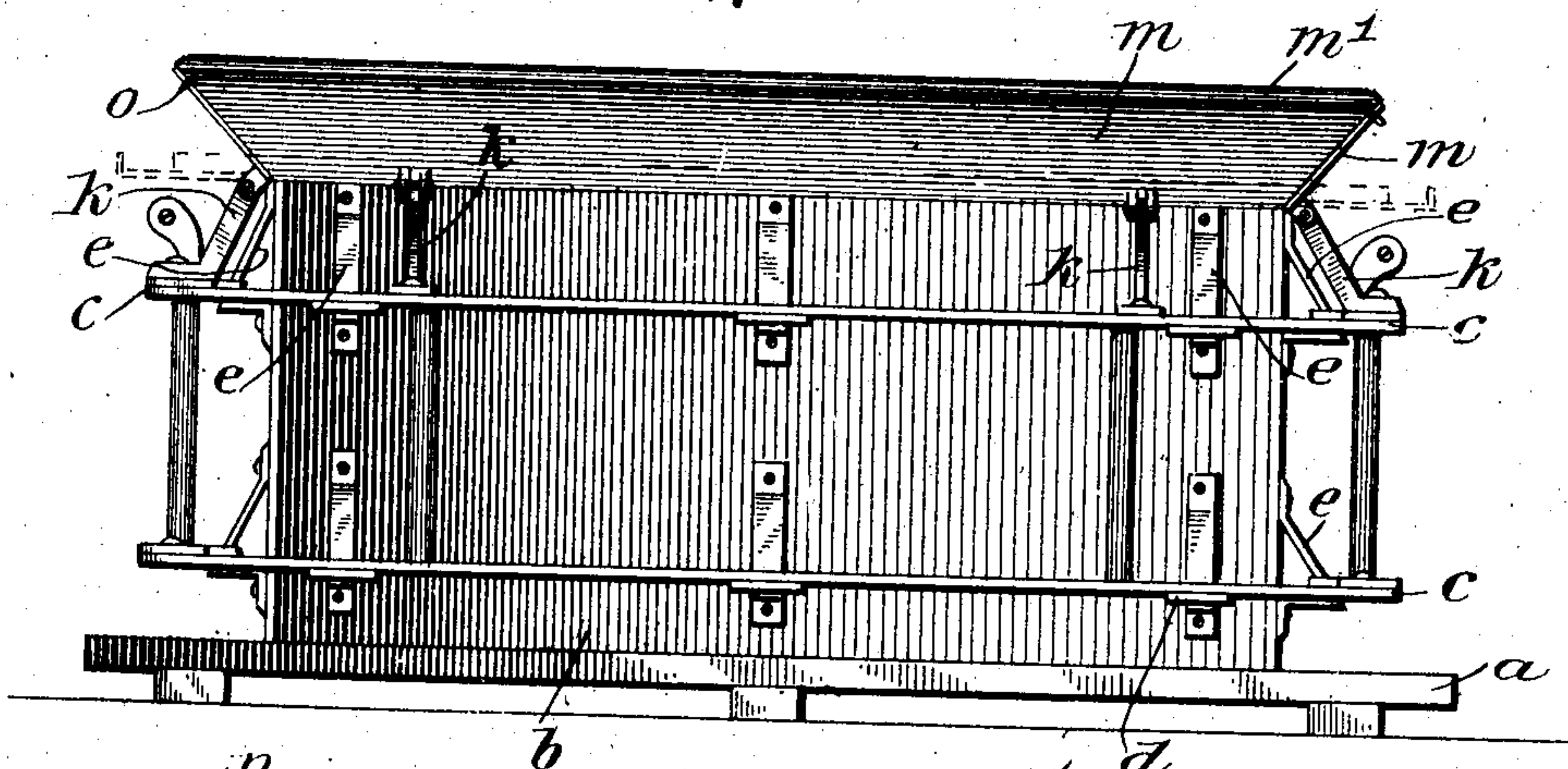
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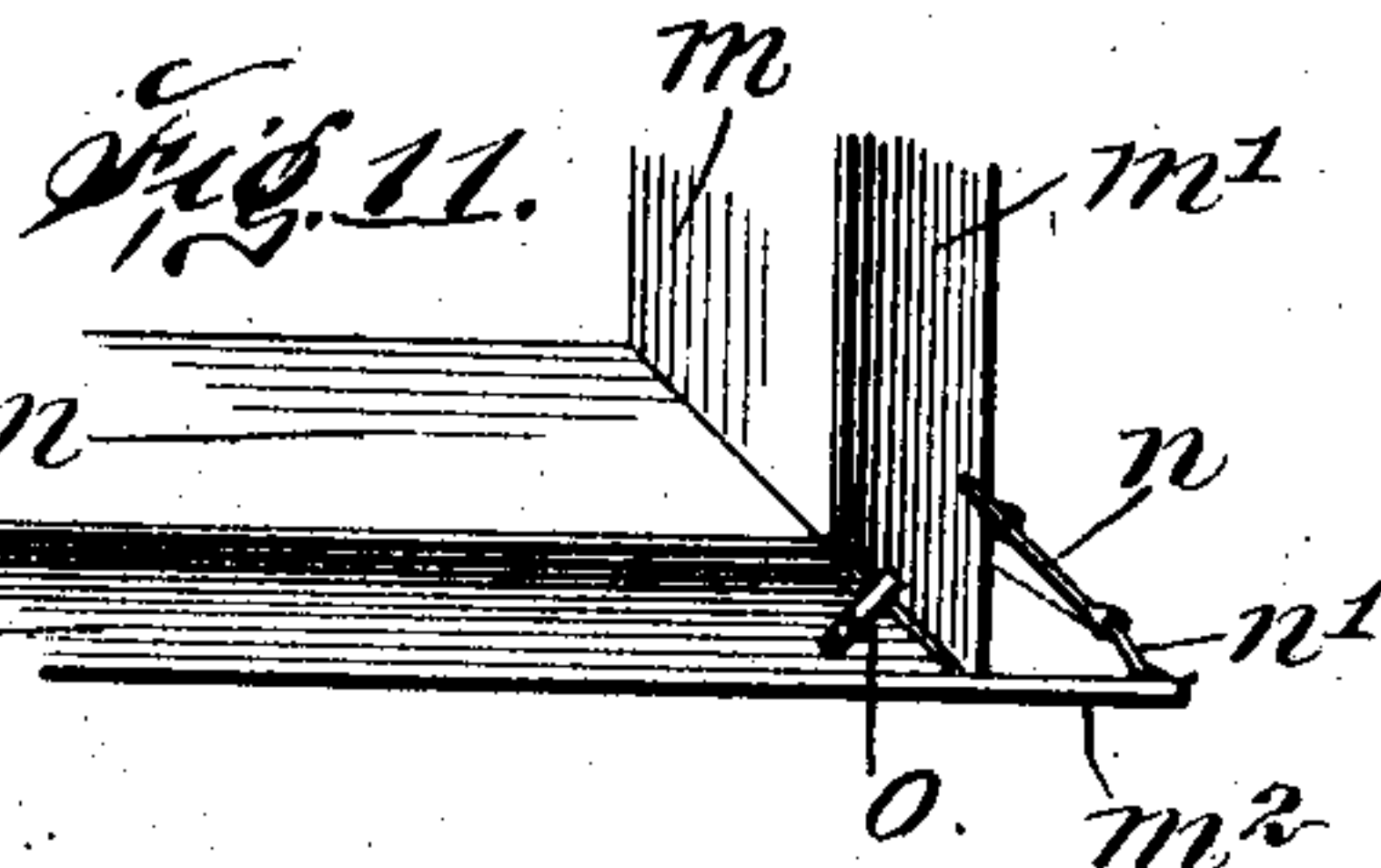
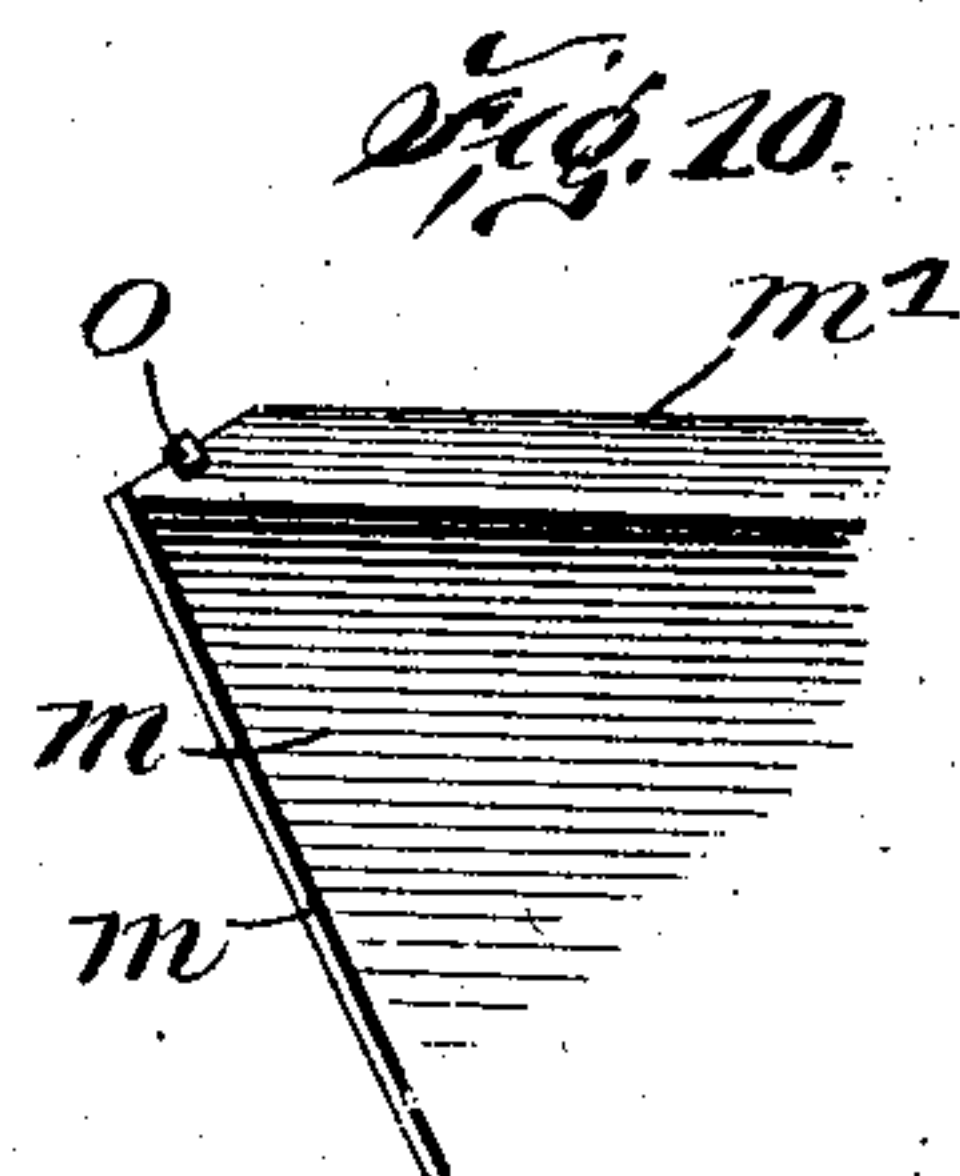
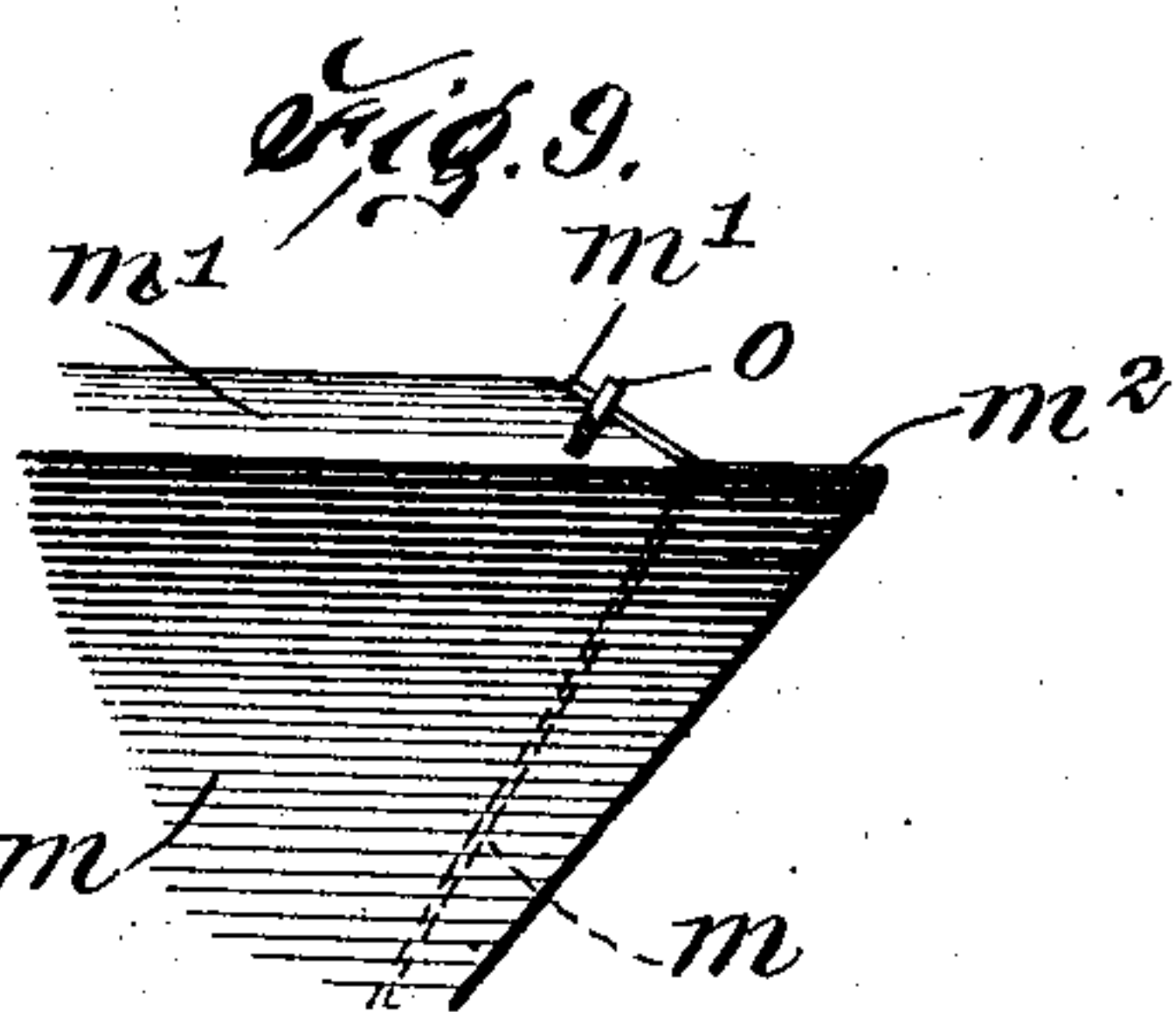
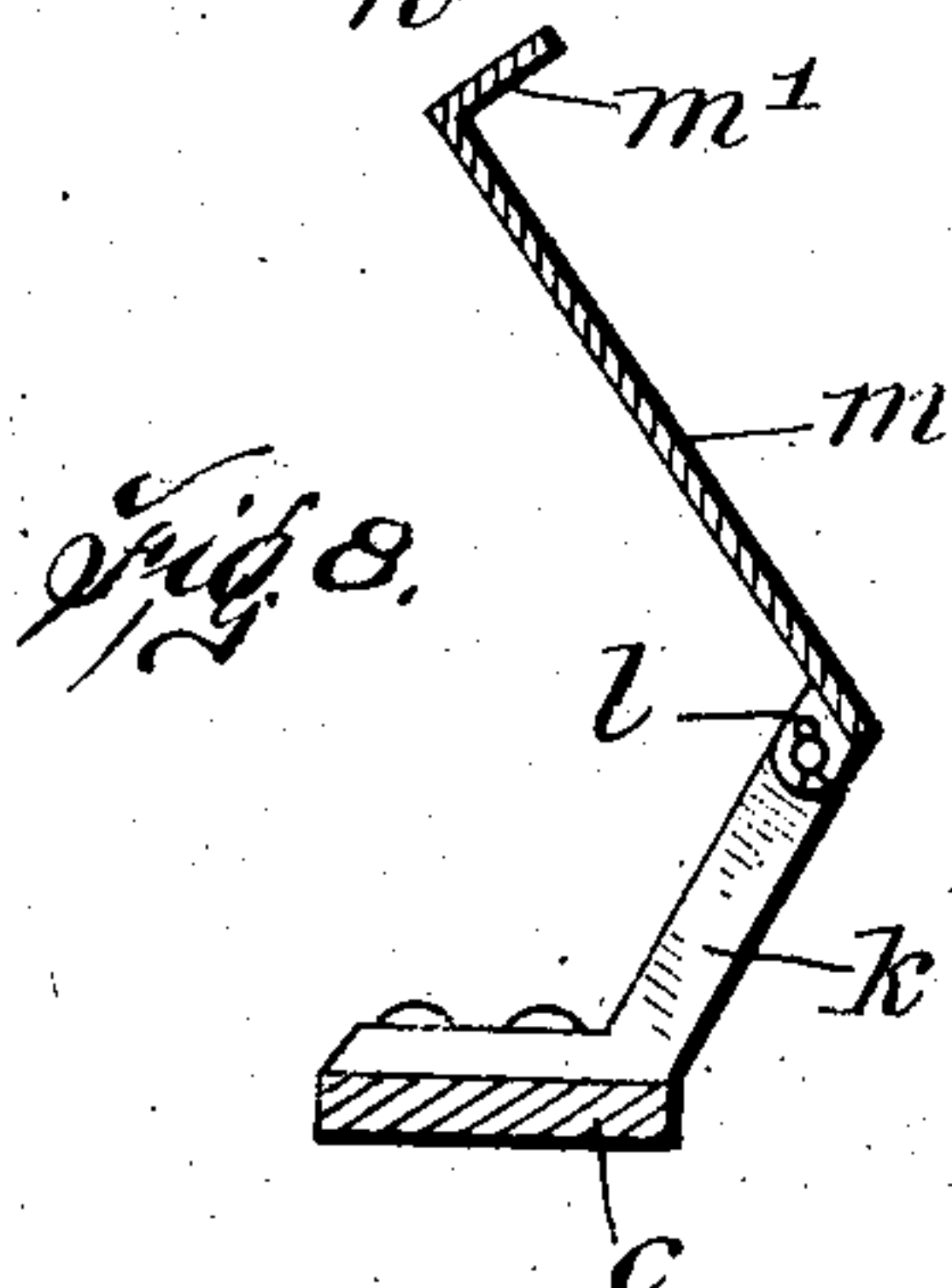
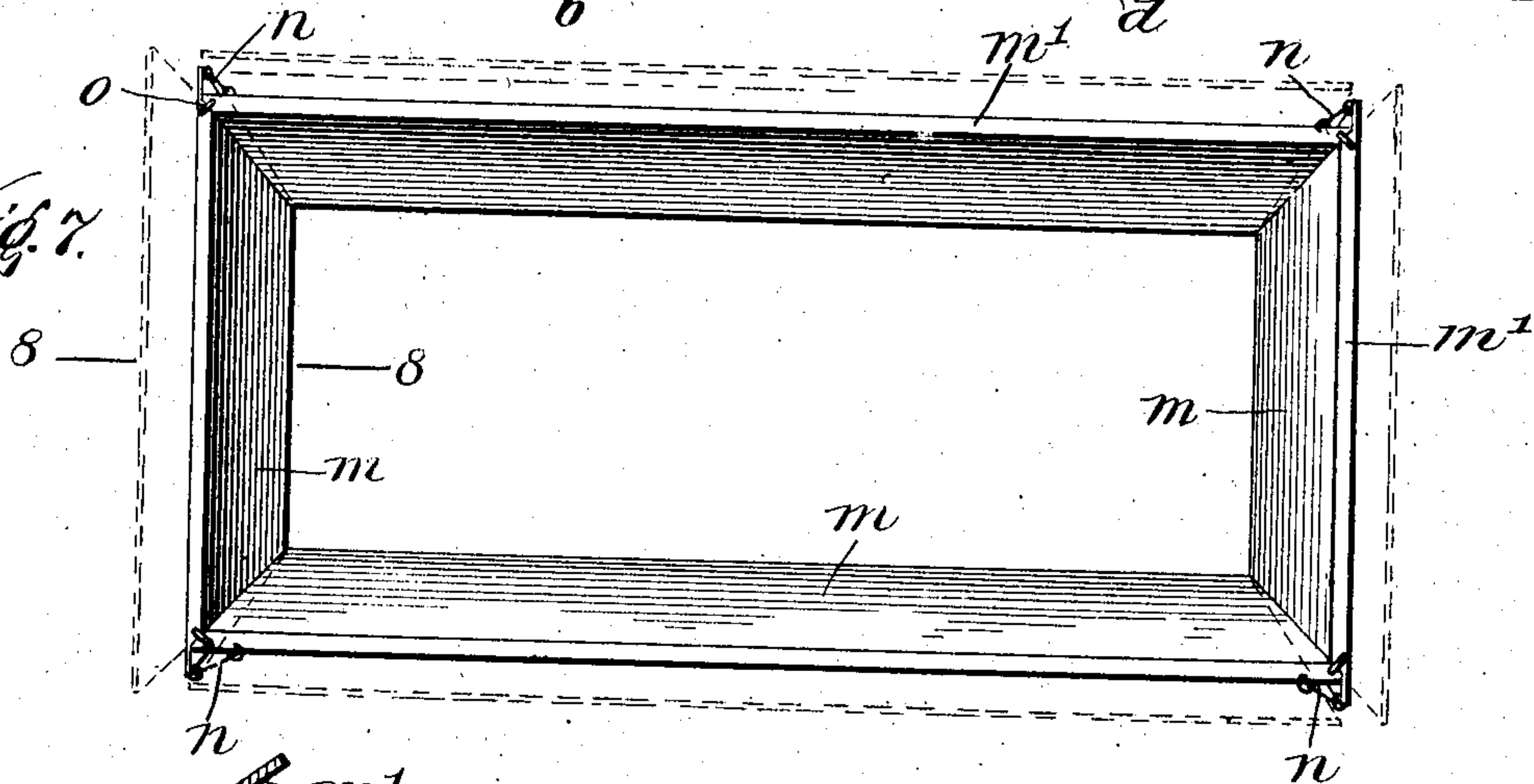
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2 SHEETS—SHEET 2.

*Fig. 6.*



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

JOE A. GIBSON, OF BUFFALO, NEW YORK.

## BLOCK-MOLD.

No. 834,052.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed October 24, 1905. Serial No. 284,142.

*To all whom it may concern:*

Be it known that I, JOE A. GIBSON, a citizen of the United States, and a resident of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Block-Mold, of which the following is a full, clear, and exact description.

My invention relates to that class of block-molds which are usually employed for making concrete and other building-blocks, and is especially applicable to those molds which have separable walls and which are used for forming blocks either singly or a small number at a time.

The principal objects of the invention are to provide means for automatically separating the walls of the mold when the lifting-frame which is ordinarily employed is raised and for accurately replacing the mold-walls in the proper position for receiving the molding material when the frame is lowered and the mold placed on the pallet, to provide means for securing cores to the pallet in such a manner that there will be no projecting handle or the like to interfere with smoothing off the top of the mold, thus necessitating the use of a heavy tamp, and also to provide an improved hopper for directing material into the mold and preventing loss thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of a mold constructed in accordance with the principle of my invention. Fig. 2 is a plan of the same. Fig. 3 is a fragmentary end view of a portion of the device, showing a second position in dotted lines. Fig. 4 is a perspective view of a detail. Fig. 5 is an elevation of a core, partly in section. Fig. 6 is a side elevation of a mold and an improved hopper which constitutes a part of my invention. Fig. 7 is a plan of the hopper. Fig. 8 is a sectional view on the line 8 8 of Fig. 7. Fig. 9 is an end elevation of a portion of the hopper. Fig. 10 is a side elevation of the same, and Fig. 11 is a plan of one corner of the hopper.

The mold is, as usual, adapted to be used upon a pallet *a*, and, as usual, it is constructed of four or more walls *b*, adapted to be separably connected together and designed to be automatically separated when a lifting-frame

is raised, thus leaving the molded block upon the pallet free from all parts of the mold. In order to accomplish this result, the lifting-frame is provided with a series of plates *d*, which are preferably rigidly secured to the frame and extend inwardly therefrom. Each of these plates is provided with a passage *d'*, preferably having a slanting wall *d''* upon its inner end. Connected with these guides are a series of inclined plates *e*, secured to the several mold-walls *b*. These plates are inclined at the same angle as the surface *d''* and are farthest from the mold-walls at their lower ends. Consequently when the lifting-frame is lifted from the position shown in full lines to that shown in dotted lines in Fig. 3 the plates *e* are necessarily moved outward, taking with them the mold-walls *b*. It will be understood that as the frame *c* is constructed with as many sides as the mold and entirely surrounding the same the lifting of this frame will be performed in opposition to equal forces upon opposite sides, so that it will ordinarily and most easily be lifted in a vertical direction. Consequently all of the mold-walls will move outwardly in the manner specified. This construction is designed to take the place of those molds of a similar character in which the mold-walls are connected by links to the lifting-frame, which permits the mold-walls to be swung in a slightly irregular manner at times.

I have shown the device as applied to a mold having cores *f*. Ordinarily cores used in molds of this character are connected with the pallet by means of handles which pass through them and extend above them. These handles are in the way when it is desired to smooth off the top of the mold. In order to avoid this, I provide handles *g*, shaped at the bottom in the same way as is usually the case and extending into a cavity *f'* in the upper part of the core. They can be readily manipulated in this position, and when it is desired to complete the molding operation the cavities and handle are covered by plates *h*, which fit into the tops of the cores. When horizontal cores are used instead of vertical ones, I prefer to make them of wood and leave them in the block until hardened, so that there will be no danger of the sides of the cavities caving in. This construction also could be used with vertical cores; but ordinarily there is no necessity for it.

In using a device of this character a considerable quantity of molding material is or-



dinarily lost during each operation unless a hopper is provided. An ordinary hopper, however, has to be removed and replaced between operations, and this fact makes it un-  
 5 handy to use one. In order that a hopper may be employed to direct the molding material into the mold and also for the purpose of preventing the molding material from passing over the top of the mold and being lost  
 10 when the top is struck off or during other operations after the mold is filled, I have provided the following mechanism: On the frame *c* are located a plurality of brackets *k*. These brackets project inwardly or at least are  
 15 shaped in such a manner that their upper ends are located adjacent to the top of the mold when the mold parts are in operative position. To the upper ends of the brackets are pivoted ears *l* on walls *m*. These walls  
 20 are provided with projections *m'* at their upper ends. These projections preferably extend at substantially right angles to the walls and constitute flanges thereon. It will be noticed that side walls and end walls are pro-  
 25 vided, both being mounted in the same way. Being pivoted in this manner, it is obvious that both the side and end walls are capable of swinging outwardly away from each other. In order to hold them in such position as  
 30 that shown in dotted lines in Figs. 6 and 7, I have provided a series of links *n* at the corners of the hopper. These links are connected by rings *n'* with the side and end walls. On account of the use of these rings this connection  
 35 is flexible and permits the walls to move into the two positions shown. In order to connect the walls together in their closed position, I provide a series of catches *o* on the  
 40 end walls adapted to engage over the adjacent edges of the side walls when they are brought together. It will be noticed by reference to Fig. 9 that each end wall is provided with a projection *m<sup>2</sup>* and that the flanges *m'*  
 45 thereon are cut away at such an angle as to allow the flanges *m'* of the side walls to overlap them and also to permit the catch *o* to operate. The way in which this hopper is employed is as follows: Supposing it to be in  
 50 the open position shown in dotted lines in Figs. 6 and 7, the raising of the sides *m* about their pivots will of course cause them to swing inwardly. The links connected with them will also force the ends into raised position, swinging them about their pivots. The  
 55 sides and ends swinging in simultaneously it will be observed that the former will engage the inclined surfaces on the ends of the flanges *m'* of the ends and rest over the projections *m<sup>2</sup>* thereof when they are raised to their limiting  
 60 position. The catches *o* will at this time engage the flanges *m'* of the sides, and these parts will then be securely held in position. The molding material can then be introduced in the ordinary way. When it is  
 65 desired to strike off the top of the mold, the

catches are released and the sides and ends allowed to drop into the horizontal position shown in dotted lines. Any molding material which is then forced over the sides or ends of the mold, except at the corners, will rest on  
 70 the walls *m*, being prevented from passing over these walls by the flanges *m'*. Then when the walls of the hopper are again raised this material is dropped back into the mold. This prevents a loss of much material, and  
 75 furthermore the manipulation of the hopper is very simple, because the dropping of the sides does not require the changing of the hands of the operator from one side to the other.  
 80

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A molding device comprising a vertically-movable frame provided with a plurality of vertically-arranged pairs of guides, and a mold having separable walls and located within said frame, each of said walls being provided with pairs of plates inclined outwardly from the top and engaging said  
 85 guides, whereby the upward motion of the guides will cause a bodily outward movement of all the mold-walls simultaneously.  
 90

2. A molding device, comprising a mold having a plurality of walls forming an inclosure, a hopper comprising inclined walls, the walls of the hopper corresponding in number and position to the walls of the mold, means for moving said mold and hopper walls bodily outward in unison, said hopper-walls being  
 95 hinged to said moving means, and releasable means for securing the hopper-walls in an inclined position and in proper relation with respect to each other and to the mold-walls.  
 100

3. A molding device comprising a mold having movable walls, each of said walls having upper and lower series of outwardly and downwardly inclined plates secured thereto, and a vertically-movable frame inclosing said mold and having guides provided with  
 105 openings for receiving the inclined plates, whereby the upward movement of the frame with respect to the mold will move said walls bodily outward.  
 110

4. A block-molding device, comprising a frame having rigid guides thereon, a mold having separable walls, the walls being provided with inclined plates adapted to engage said guides, and a hopper having separable walls mounted on said frame.  
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 120

5. A molding device comprising a mold, and a hopper therefor, said hopper having pivotally-mounted sides and ends each provided with a marginal flange.

6. A molding device, comprising a mold, a lifting-frame therefor, a series of brackets on said lifting-frame, the upper ends of said brackets being located near the top of the mold, walls pivotally mounted on the upper ends of said brackets, said walls having in-  
 125  
 130



wardly-projecting flanges at their outer ends, and links for connecting said walls together at their corners.

5 7. The combination of a pallet, a mold thereon, a core resting upon the pallet and having a cavity, means in said cavity located entirely below the top of the core for lifting the core, and means for covering said first-named means and cavity.

10 8. A molding device comprising a mold composed of a plurality of vertical walls forming an inclosure, a hopper having in-

clined walls corresponding in number and position to the walls of the mold, and means whereby to turn said hopper-walls outwardly 15 into a horizontal plane.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOE A. GIBSON.

Witnesses:

ORINETTE C. GIBSON,  
PEARL E. WHITELEY.