No. 804,240. PATENTED NOV. 14, 1905.

T. LIBBY.

FLASK FOR MOLDING CONCRETE BLOCKS.

APPLICATION FILED AUG. 20, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

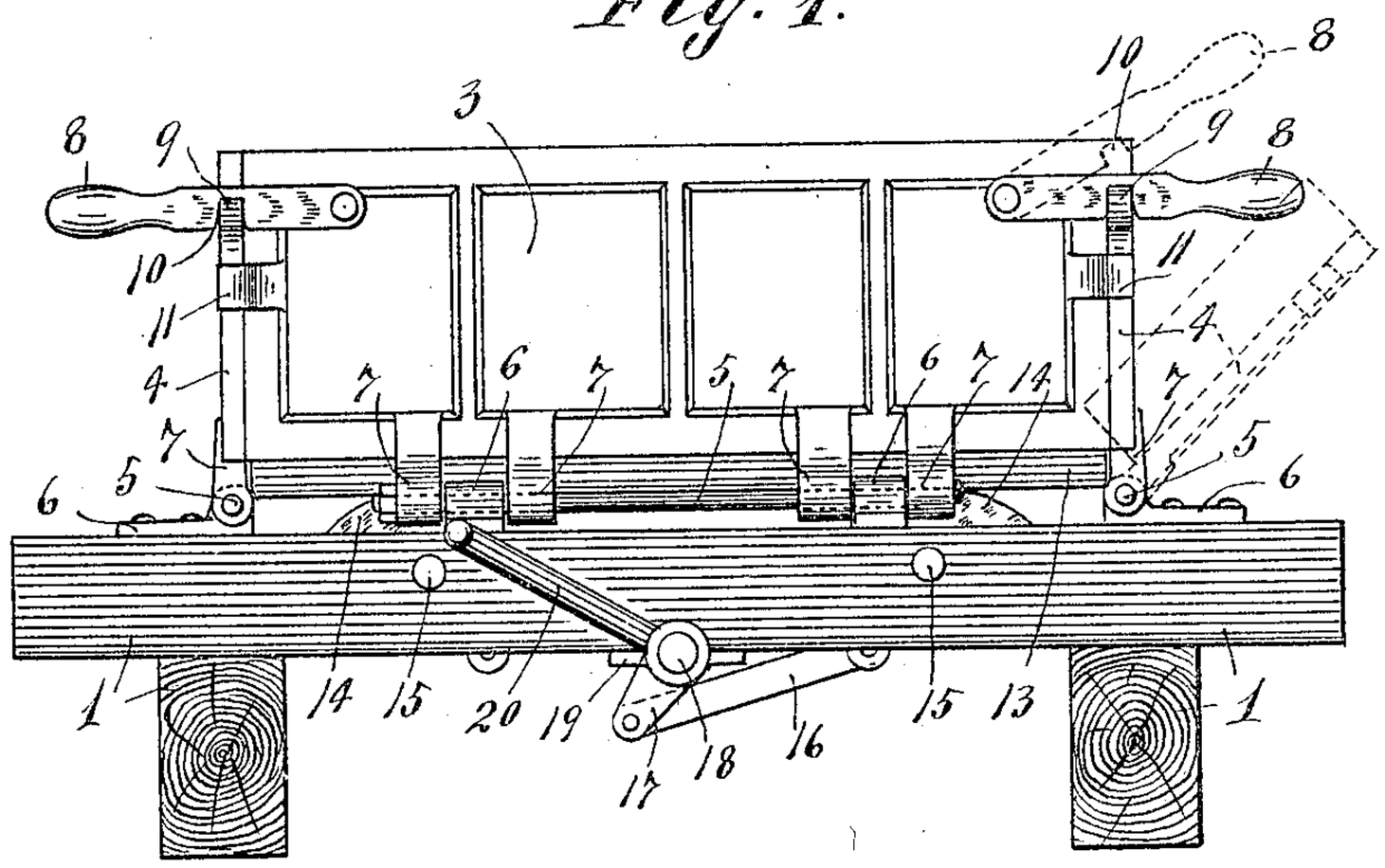
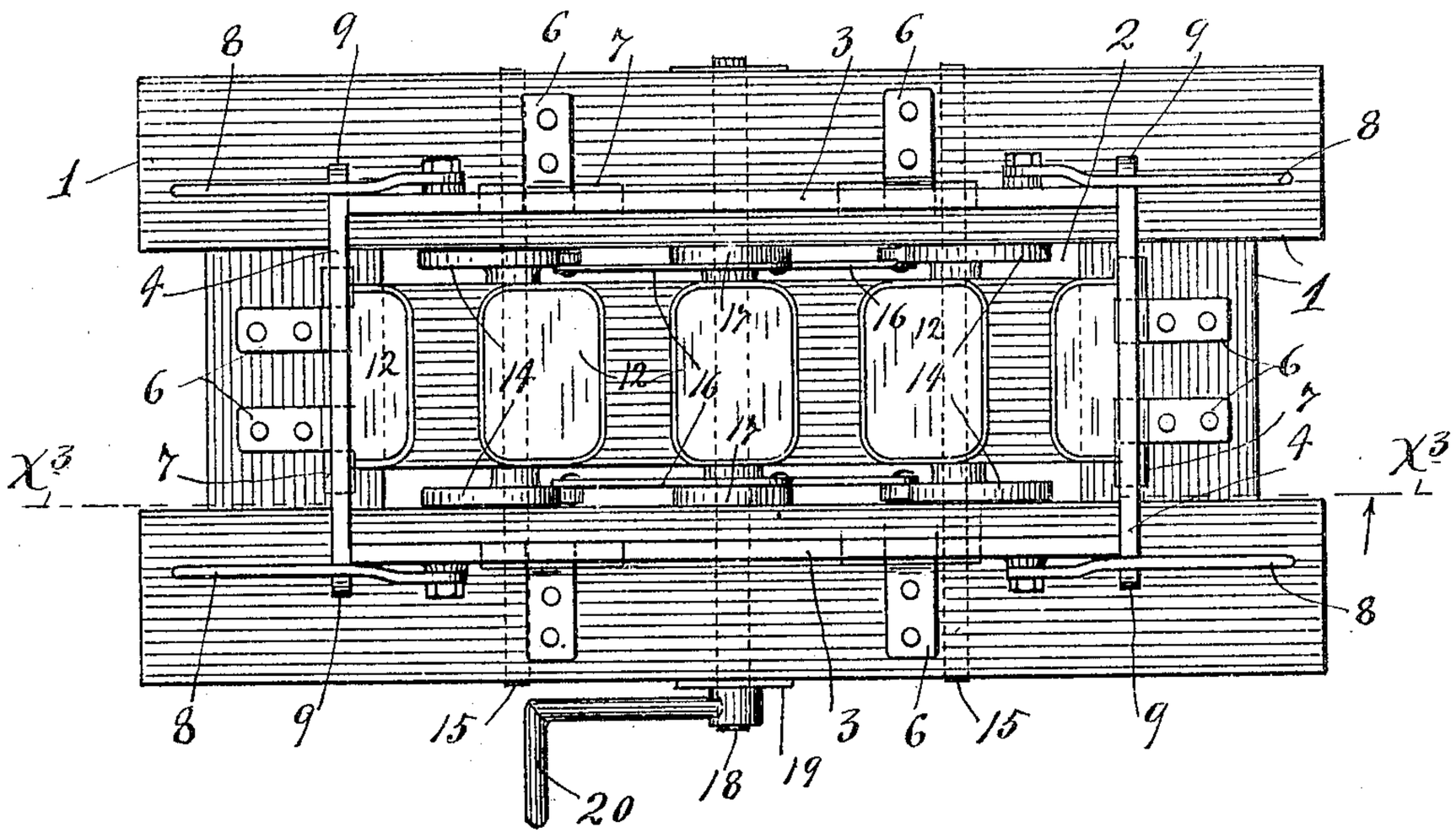


Fig. 2.



Witnesses
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Fig. 3.

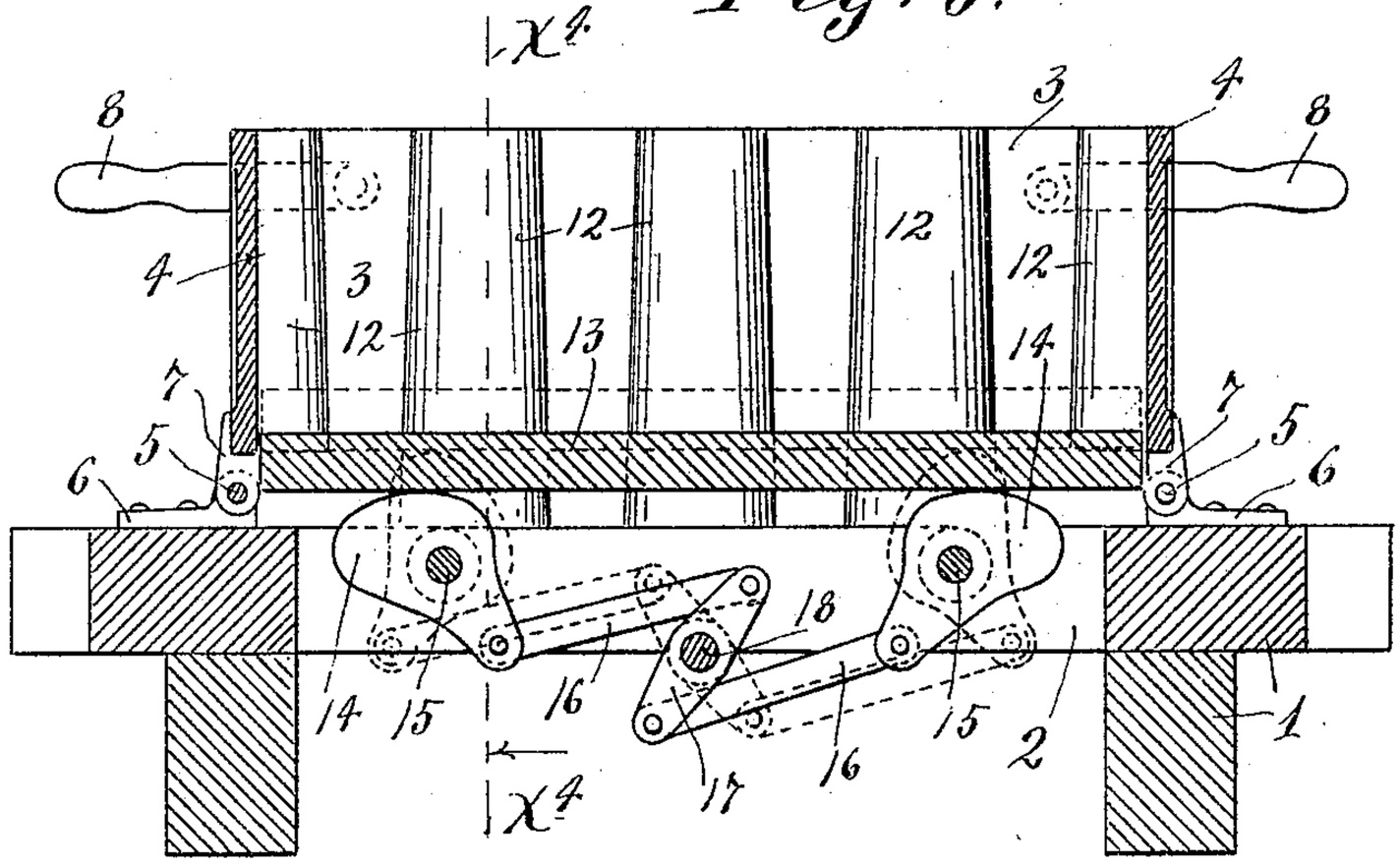


Fig. 5.

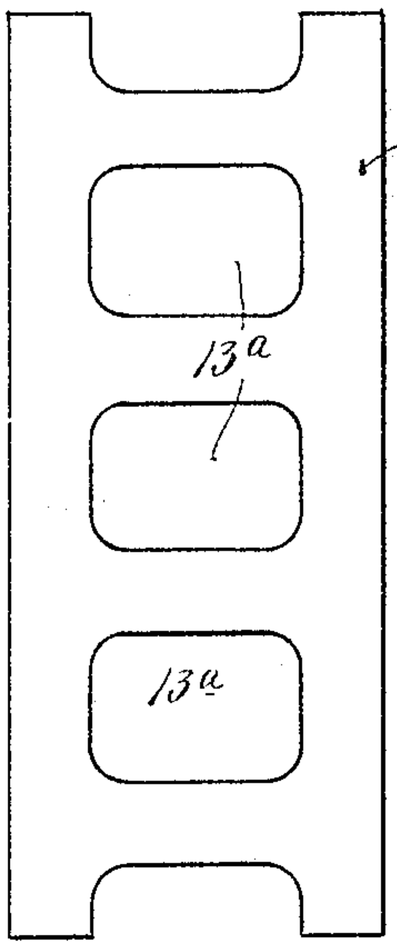
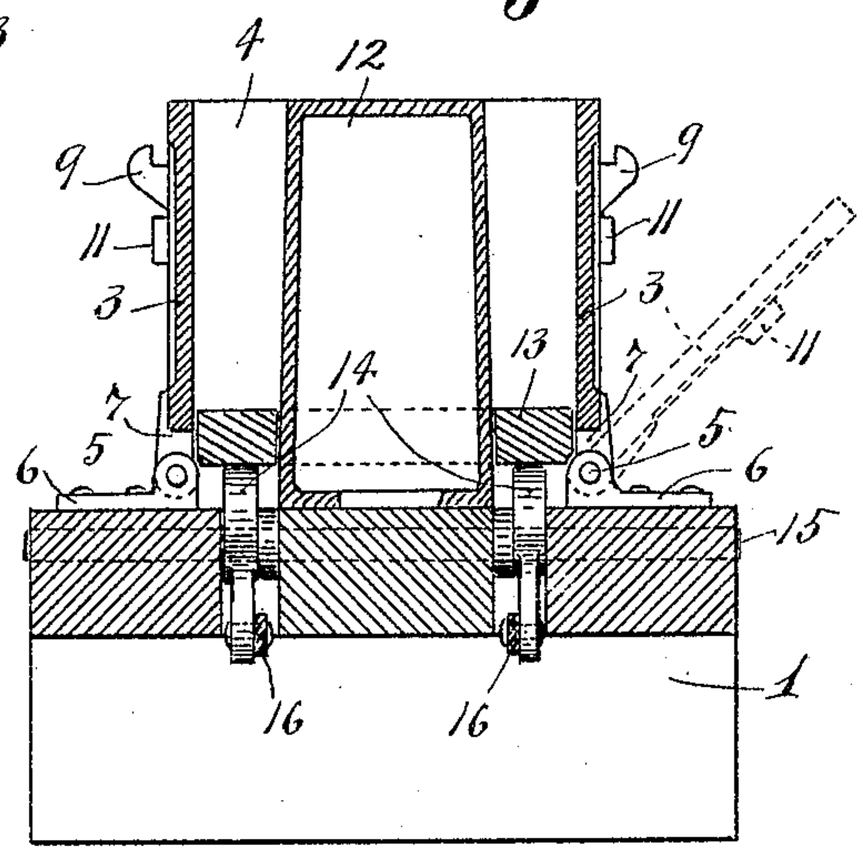


Fig. 4.



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UNITED STATES PATENT OFFICE.

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FLASK FOR MOLDING CONCRETE BLOCKS.

No. 804,240. Specification of Letters Patent. Patented Nov. 14, 1905.

Application filed August 20, 1904. Serial No. 221,454.

To all whom it may concern:

Be it known that I, THOMAS LIBBY, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Flasks for Molding Concrete Blocks; and I do 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 appertains to make and use the same.

My invention has for its object to provide an improved molding-flask especially adapted for use in molding concrete building-blocks; and to this end it consists of the novel devices and combinations of devices hereinafter described, and defined in the claim.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 shows the improved flask in side elevation. Fig. 2 is a plan view of the said flask with the bottom thereof removed. Fig. 3 is a vertical section on the line x^3 x^3 of Fig. 2. Fig. 4 is a transverse vertical section through the flask on the line x^4 x^4 of Fig. 3; and Fig. 5 is a detail view in plan, showing the bottom of the flask removed from working position.

The flask, as shown, is supported by a heavy bed-frame 1, which is cut away at 2 to afford clearance for cams and crank connections hereinafter to be described. This bed-frame may be conveniently constructed from timbers and is adapted to be placed upon the ground, upon the floor, or upon any other suitable support.

The flask, as shown, is rectangular, and its four sides or its two sides and two ends 3 and 4, respectively, are hinged at their lower edges to the support 1, such hinges being, as shown, afforded by bolts 5, passed through lugs 6 and 7, respectively, on the frame 1 and on the said sides and ends. When the said sides and ends are in operative position, they stand in vertical planes, and to lock them in such positions lock-levers 8 are pivoted, as shown, to the sides 3 and are engaged with notches of lock-lugs 9, formed integral with or rigid on the ends 4. Said levers 8 are formed with notches 10, that engage the said lugs 9, so that they not only hold the sides 3 against outward movement with respect to the ends 4, but hold the said ends against outward movement with respect to said sides. Further, as shown, the sides 3 are provided with stop-lugs 11, that engage with the ends 4 to limit the inward movement of the former even when the levers 8 are turned upward into inoperative positions.

One or more, as shown three, cores 12, rigidly secured to the bed-frame 1, project upward into the body of the flask, as best shown in Fig. 4. These cores are preferably tapered upward for a purpose which will hereinafter fully appear.

The bottom 13 of the flask, which is vertically movable and closely fits the rectangular space formed by the ends and sides of the flask, is formed with core-passages 13^a, through which the cores 12 project. This bottom plate 13 is supported by a plurality of cams 14, secured in pairs to rock-shafts 15, journaled in the bed-frame 1. These cams 14 work in the slots or passages 2 of said frame 1, and they are provided with arms, which are connected by links 16 to double-ended rocker-levers 17, carried by an intermediately-located crank-shaft 18, journaled in bearings 19 on the frame 1. At one end the crank-shaft 18 is provided with a crank 20.

Normally the bottom plate 13 under its own gravity presses upon the cams 14 and holds the parts in the normal positions. (Indicated by full lines in the drawings.) The parts being adjusted, as indicated by full lines in the drawings, the concrete while in plastic condition is placed within the flask, completely filling the same. Then when the concrete is sufficiently set and it is desired to remove the formed block the hinged sides and ends of the flask are separated and turned outward. There will be some tendency for the formed concrete block to adhere to the cores 12; but this may be readily overcome by stepping on the crank 20 or otherwise forcing the same downward, thereby causing the cams 14 to assume the positions indicated by dotted lines, thereby raising the bottom plate 12 and lifting the block upward. As the cores 12 are tapered, it is evident that when the concrete block is raised it will become loose from the cores, so that it may be

readily lifted therefrom. It is also evident that the bottom plate 13 is by the cams when raised always held parallel to its normal position, so that the block is given a true vertical movement in stripping it from the cores.

The improved flask above described has been put into actual use and has been found to be extremely efficient for the purposes had in view.

It is of course well understood that concrete blocks for building purposes are constructed with air-spaces, not only to save material, but also in order that a wall constructed therefrom will be warmer. Hence cores of some kind are necessary in the manufacture of the blocks. The flask described makes it possible to very rapidly and economically construct building-blocks of the above character.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

A flask, having its sides and ends hinged near the bottom of the flask, and adapted to be turned outward, and locks at four corners of said flask connecting said sides and ends, each lock involving a notched lug 9 on one of the hinged members, and a coöperating notched lever 8 10 on the abutting hinged member, together with stop-lugs 11, that engage the ends of said abutting hinged member, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS LIBBY.

Witnesses:
H. D. KILGORE,
F. D. MERCHANT.