

No. 672,402.

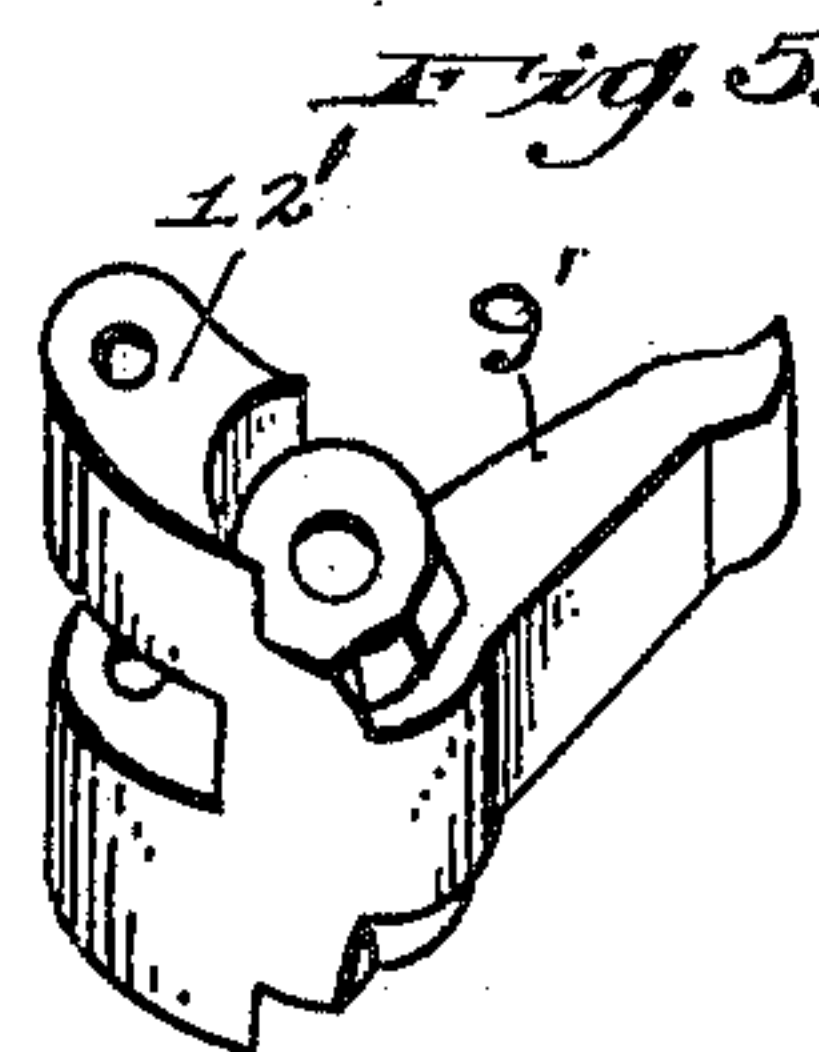
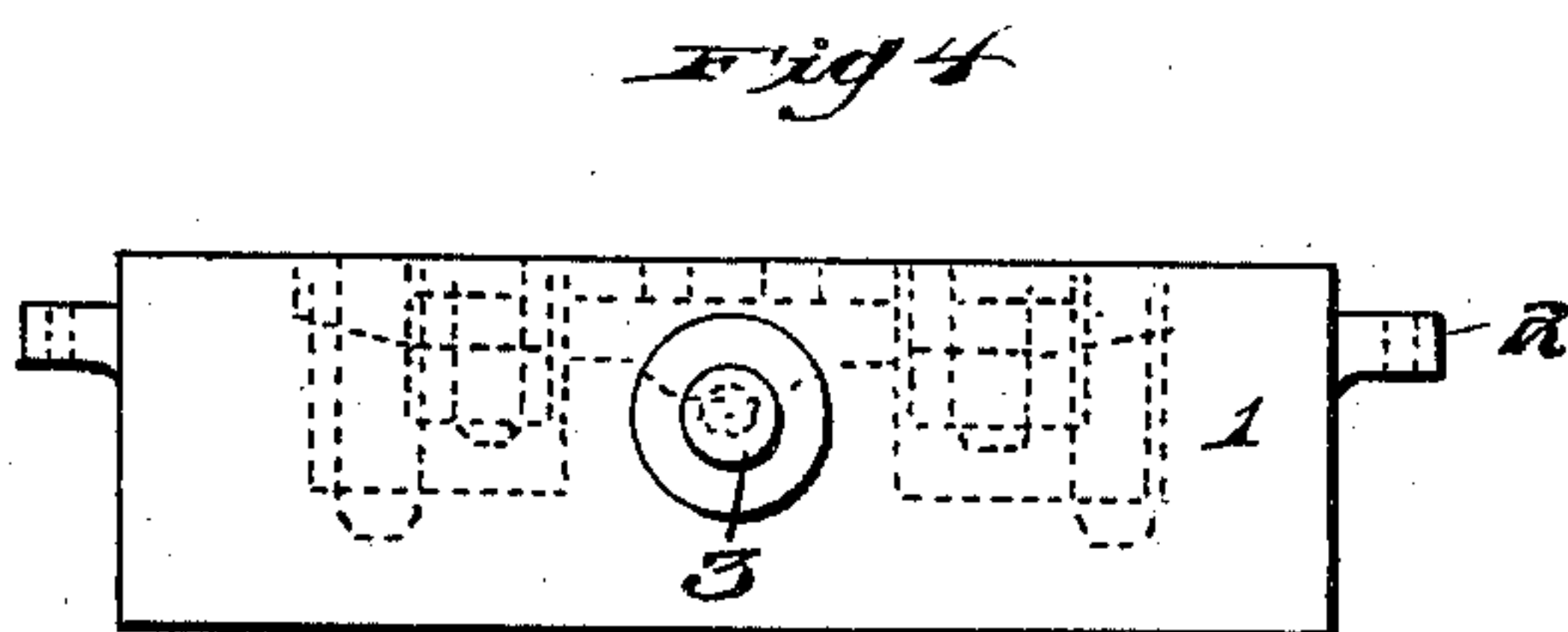
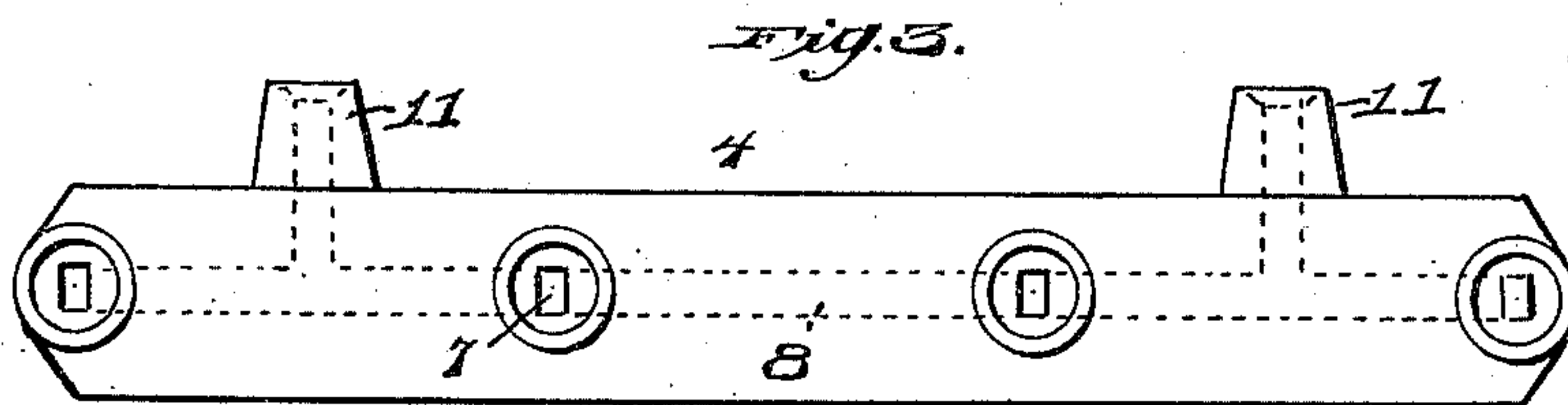
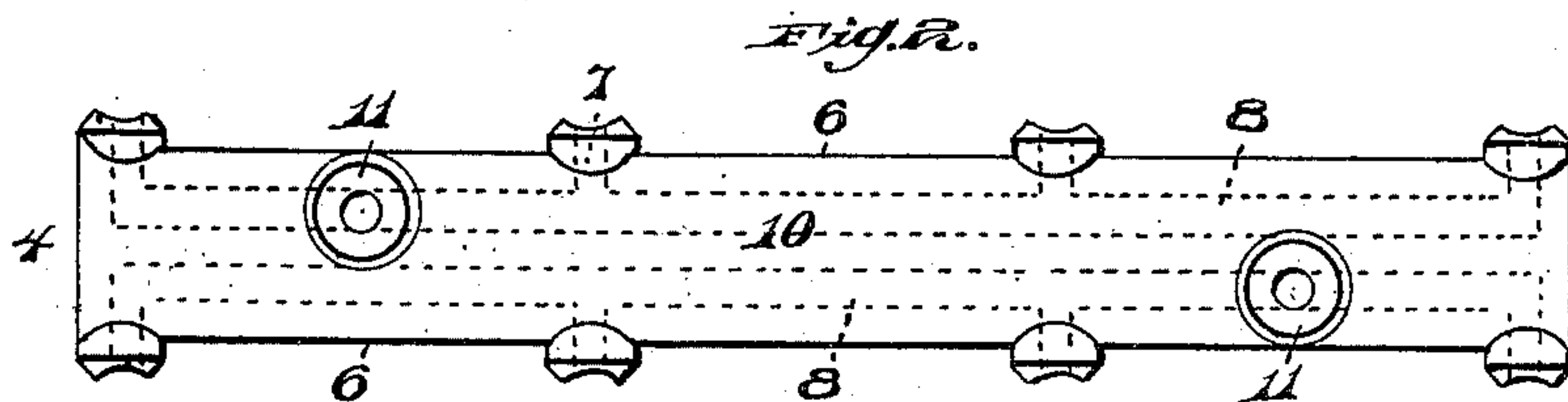
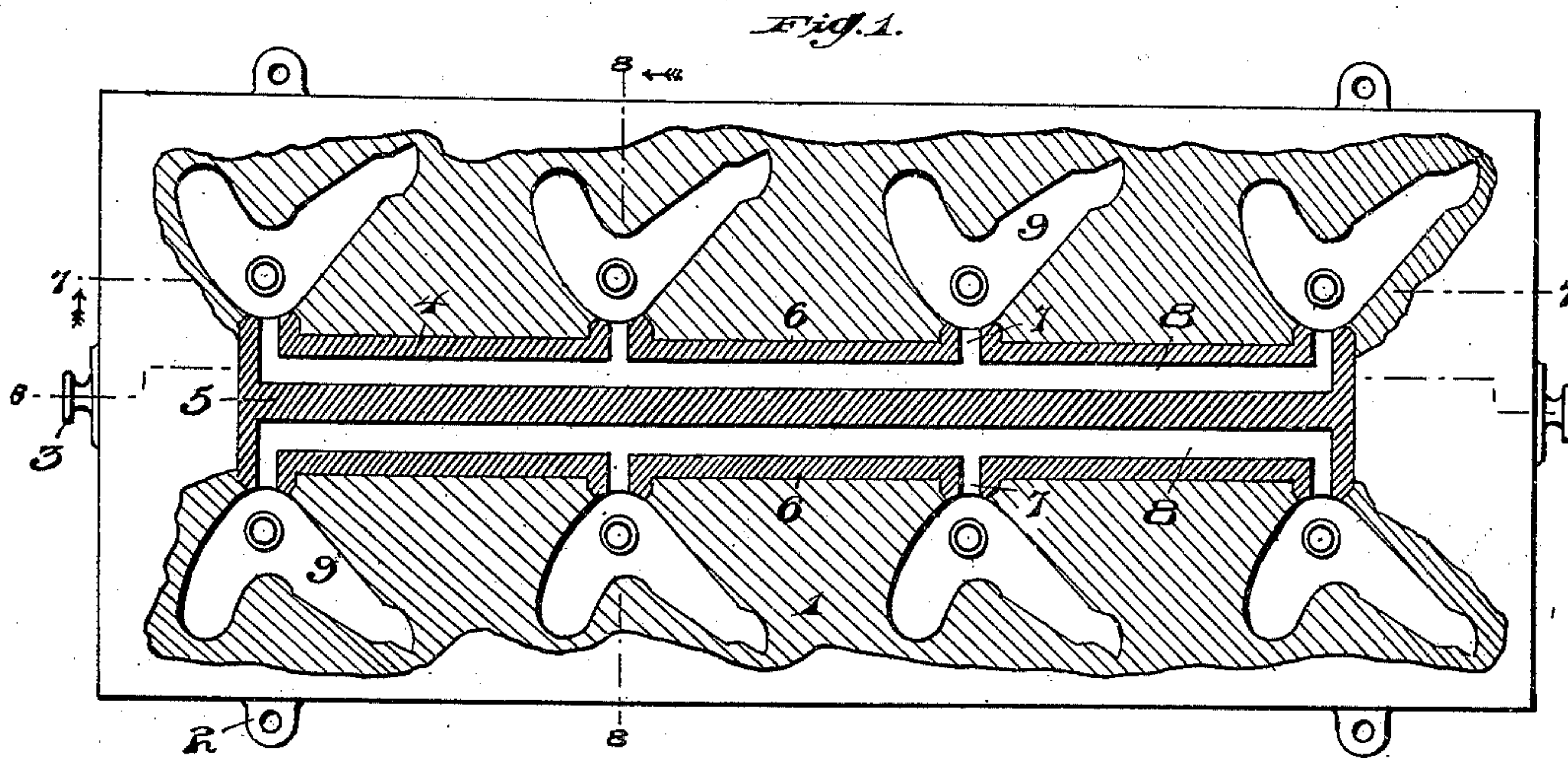
Patented Apr. 16, 1901.

F. COWDEN.
MOLD FOR DUPLICATING CASTINGS.

(Application filed Dec. 5, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 6.

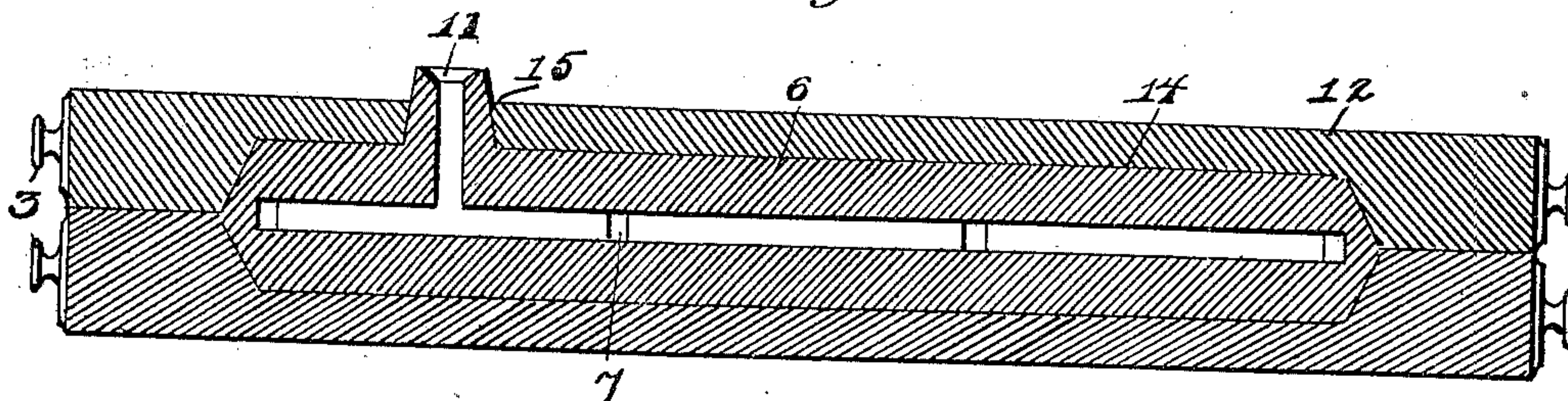


Fig. 7.

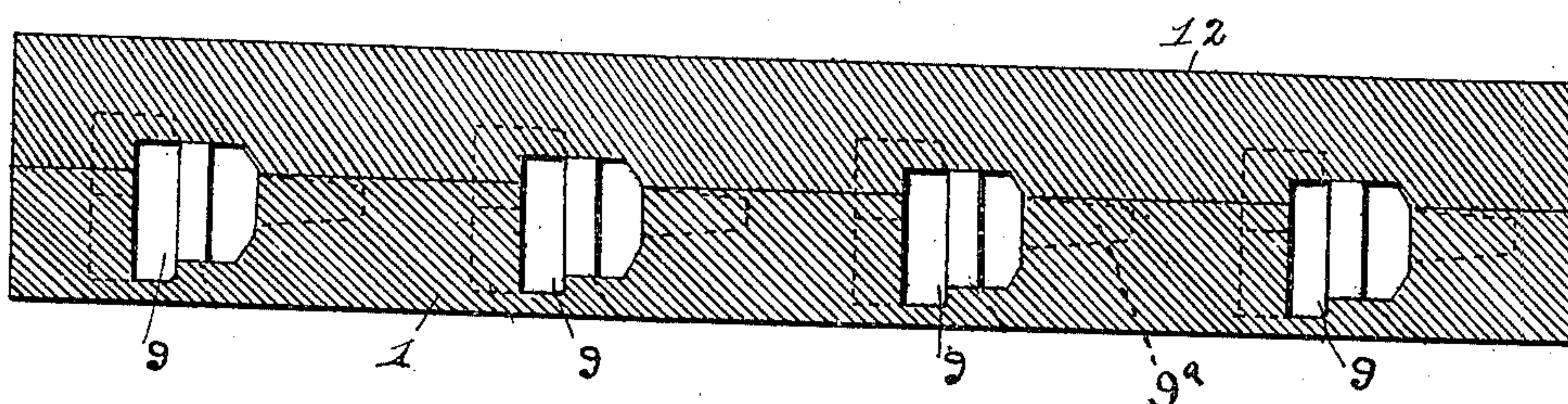
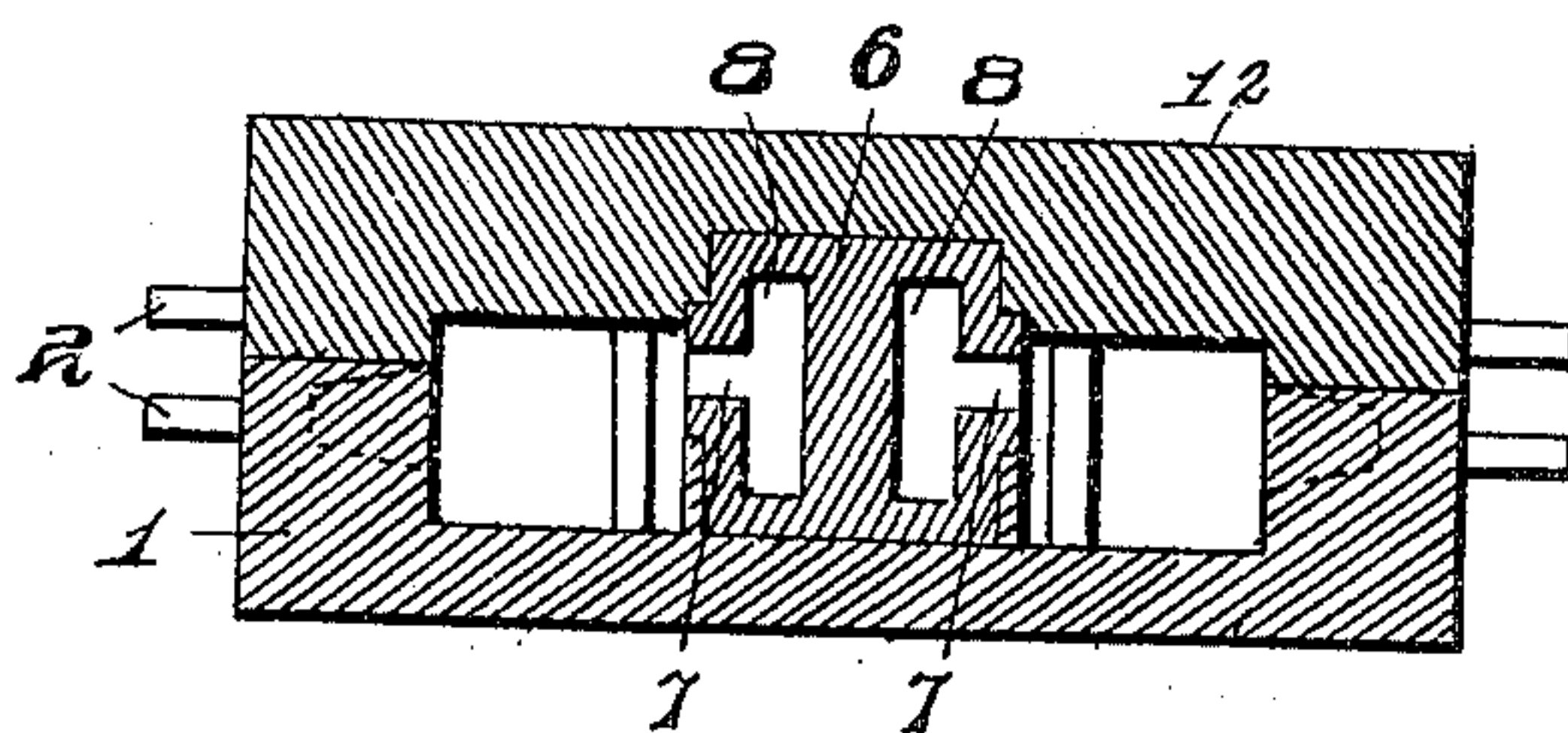


Fig. 8.



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UNITED STATES PATENT OFFICE.

FREDERICK COWDEN, OF PITTSBURG, PENNSYLVANIA.

MOLD FOR DUPLICATING CASTINGS.

SPECIFICATION forming part of Letters Patent No. 672,402, dated April 16, 1901.

Application filed December 5, 1900. Serial No. 38,761. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK COWDEN, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Molds for Duplicating Castings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in molds for duplicating castings, and has for one object the provision of novel means whereby a number of articles may be cast at one time and in a single operation.

The invention has for its further object to employ a new and novel means of duplicating metal bodies in steel or malleable iron, greatly reducing the cost of manufacture and labor formerly required for this character of work.

The invention consists in the novel apparatus to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

Figure 1 is a top plan view, partly in section, of the lower chill. Fig. 2 is a top plan view of the runner. Fig. 3 is a side elevation of the same. Fig. 4 is an end view of the lower chill, showing in dotted lines the interior construction. Fig. 5 is a perspective view of the knuckle or finished article cast in the chill. Fig. 6 is a vertical longitudinal sectional view taken on the line 6 6 of Fig. 1. Fig. 7 is a similar view taken on the line 7 7 of Fig. 1. Fig. 8 is a transverse vertical sectional view taken on the line 8 8 of Fig. 1.

Figs. 6, 7, and 8 show the arrangement of both the upper and lower chill or mold, having the runner interposed between the same.

In the drawings the reference-numeral 1 indicates the lower chill or drag for molding knuckles. 2 represents the apertured lugs formed integral therewith, serving as fastening means for the upper and lower mold.

The reference - numeral 3 indicates the necks upon which the chill may be trundled.

4 indicates the runner, which has a central partition-wall 5, the side walls 6 6, having arranged therein outlets 7 7 on each side, forming gates 8 8. 9 represents the mold-cavities in the chill, in which the knuckles 9' (see Fig. 5) are formed. This runner 4 may be composed of baked sand and clay or other suitable material and has arranged in the upper face 10 thereof pouring-gates 11, communicating with the gates 8 and outlets 7. The lower or drag half 1 of the mold is recessed to receive and have formed therein the entire knuckle, with the exception of the lug 12', (see Fig. 5,) this lug being formed in the upper or cope section 12 of the mold. This upper or cope section or chill of the mold is provided with a recess 14 to receive the runner and has openings 15 to receive the pouring-gates, that protrude above the upper face of this cope-section or chill.

It will be understood that the usual core-prints 9^a are employed when knuckles are cast.

The metal is poured into the pouring-gate and allowed to travel through the gates 8 into the openings 7, thence into the form of the upper and lower chills, producing the castings in two sets of four each or any number, as desired; but for the purpose of illustration two sets of four each have been shown. It will be understood that any number desired may be cast in this manner, and it will be noted that by the novel construction heretofore described all duplicate castings may be manufactured in the same manner, with the exception of changing the form of mold. I therefore do not limit myself to the manner of manufacturing knuckles as herein shown; but all styles of duplicate castings may be made in the same manner.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a mold of the character described, the combination of an upper and lower chill having mold-cavities, a runner interposed be-

between said chills and extending through said upper chill, a partition-wall arranged in said runner forming gates upon each side of said partition-wall, and suitable outlets communicating with said gates.

2. In a mold of the character described, consisting of an upper and lower chill provided with mold-cavities and having recesses formed therein, a runner arranged in said recesses and
10 extending through said upper chill, pouring-gates arranged in the runner and extending

through the upper chill, a partition-wall arranged in said runner, gates arranged on each side of said partition-wall, and suitable openings leading from said gates, substantially as
15 set forth.

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

FREDERICK COWDEN.

Witnesses:

JOHN NOLAND,
E. E. POTTER.