

(No Model.)

2 Sheets—Sheet 1.

J. J. CARR.

PATTERN FOR MOLDING.

No. 371,820.

Patented Oct. 18, 1887.

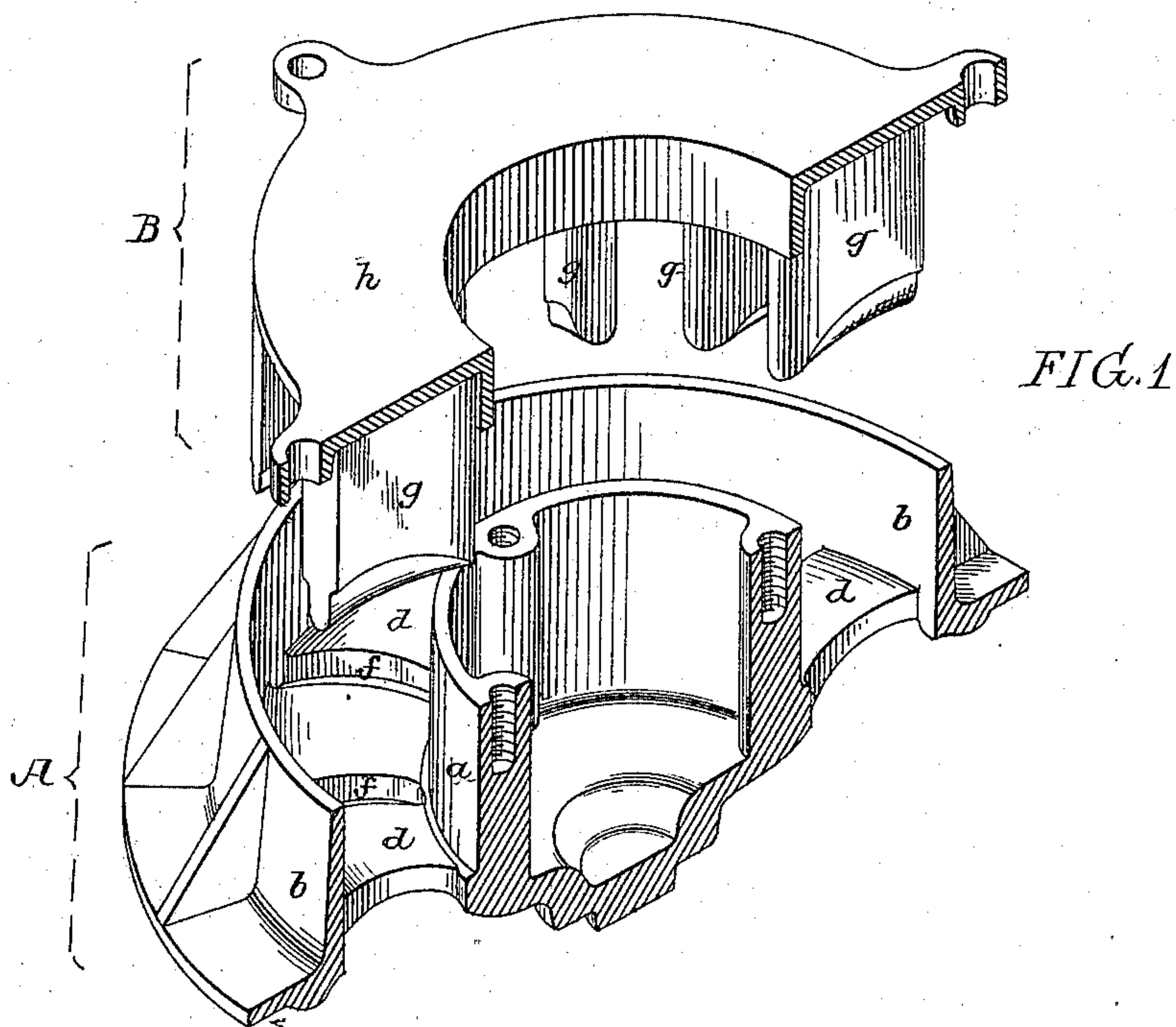
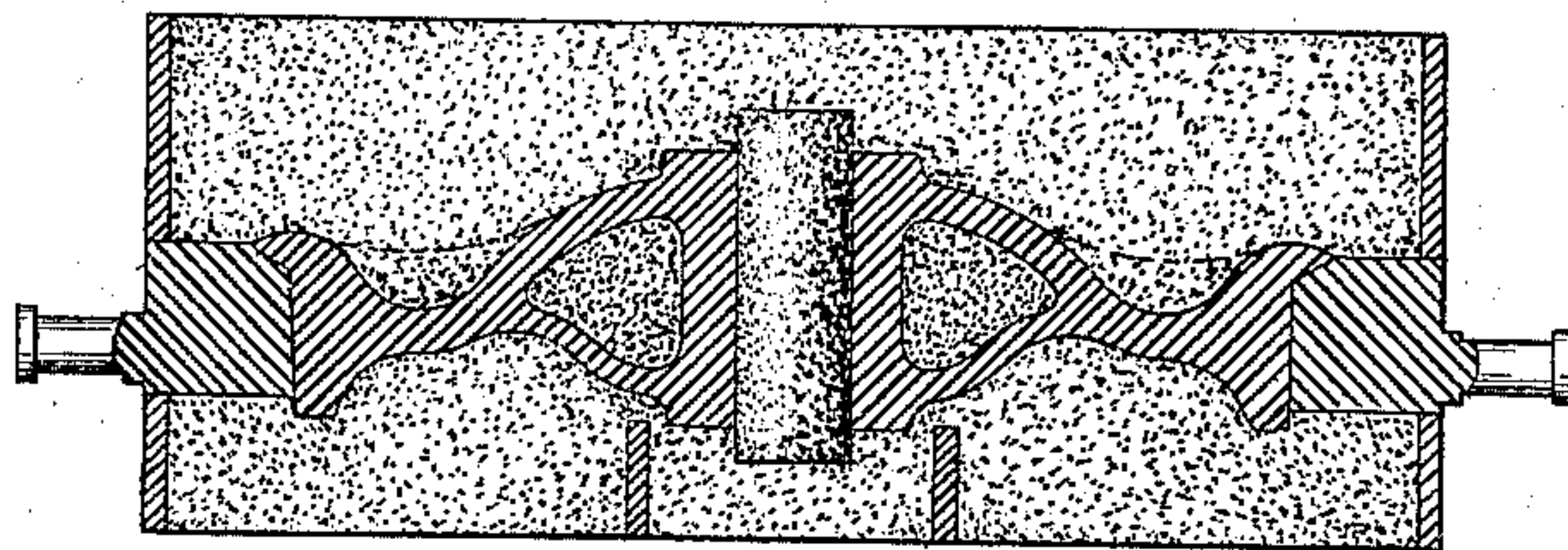


FIG. 2.



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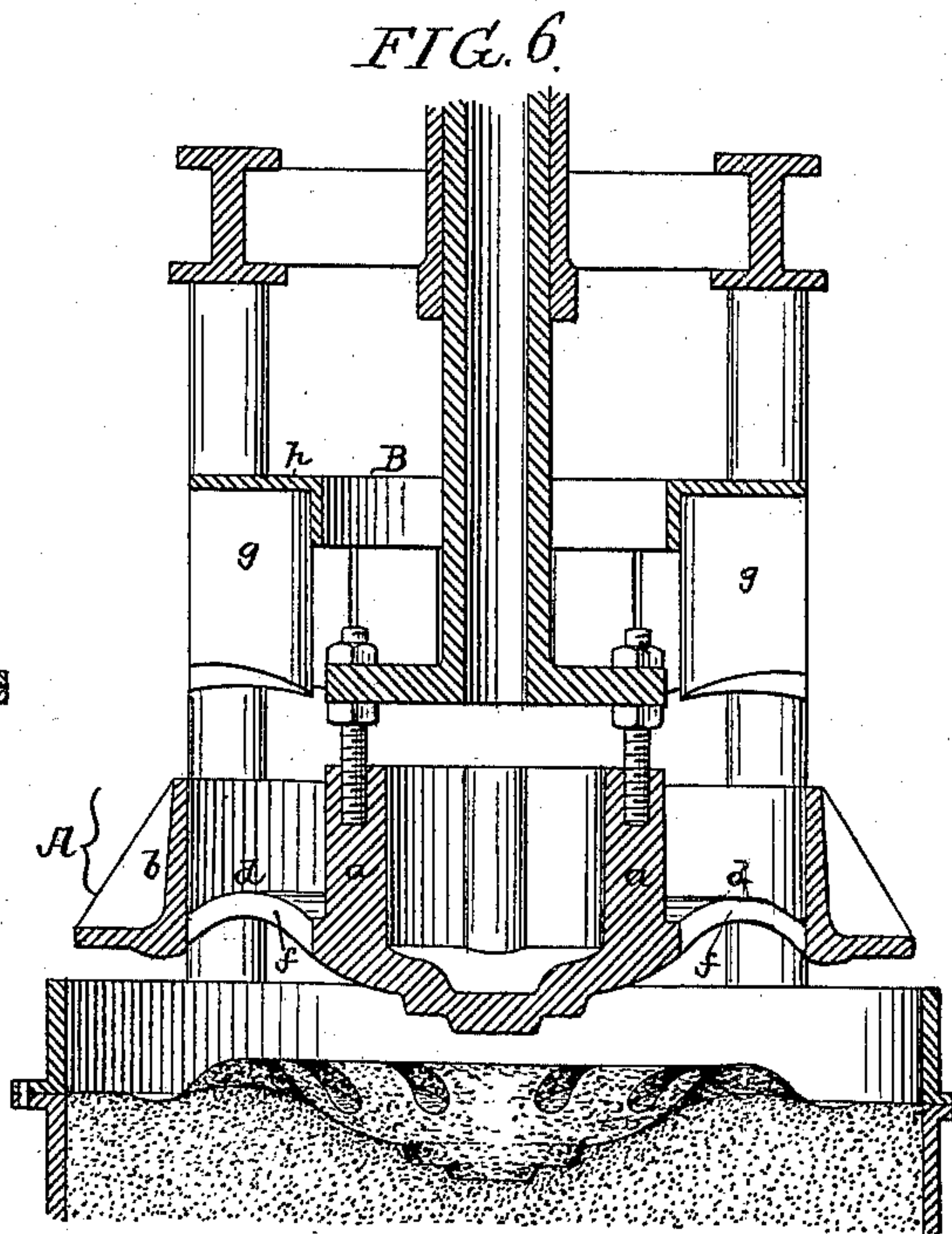
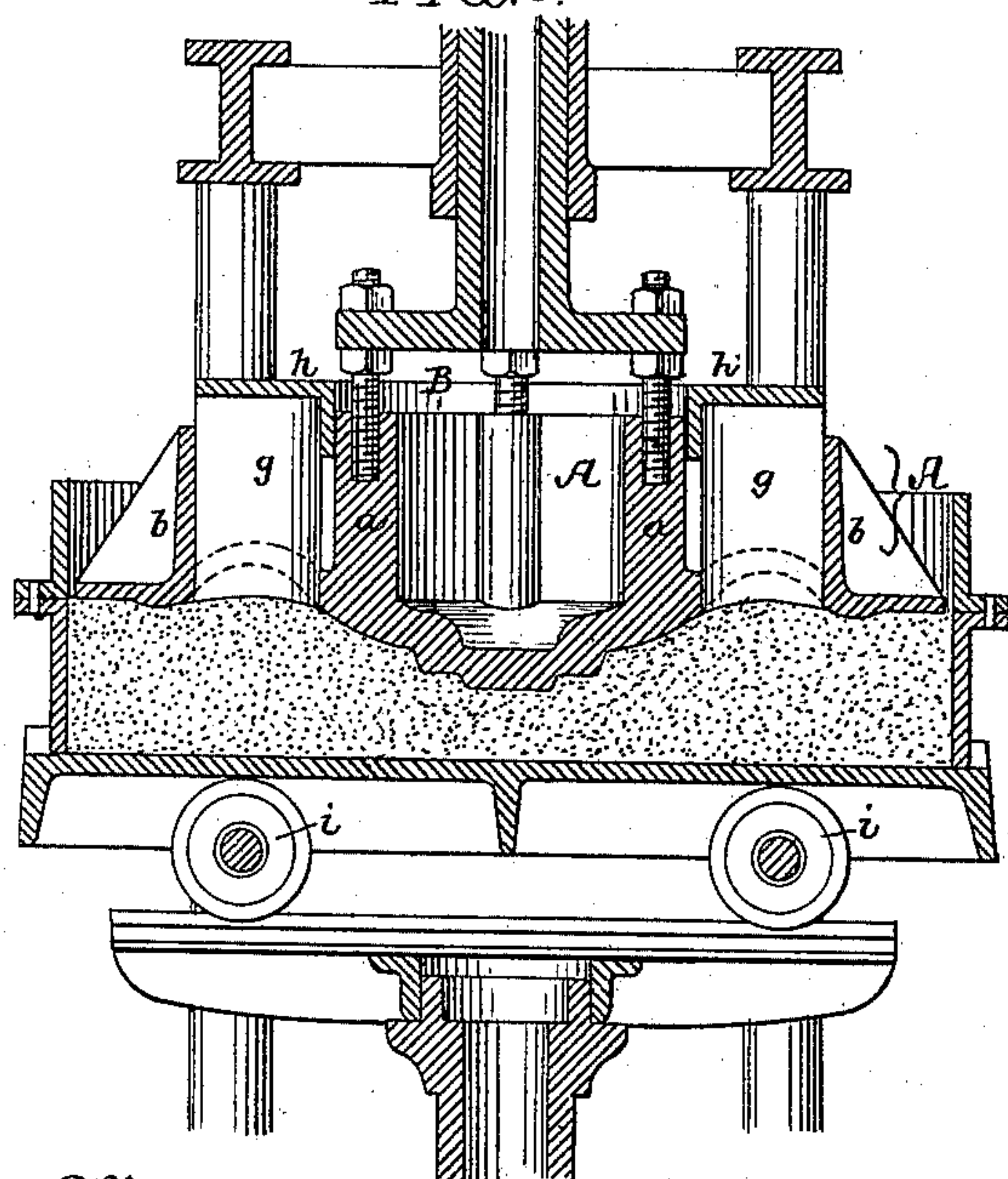
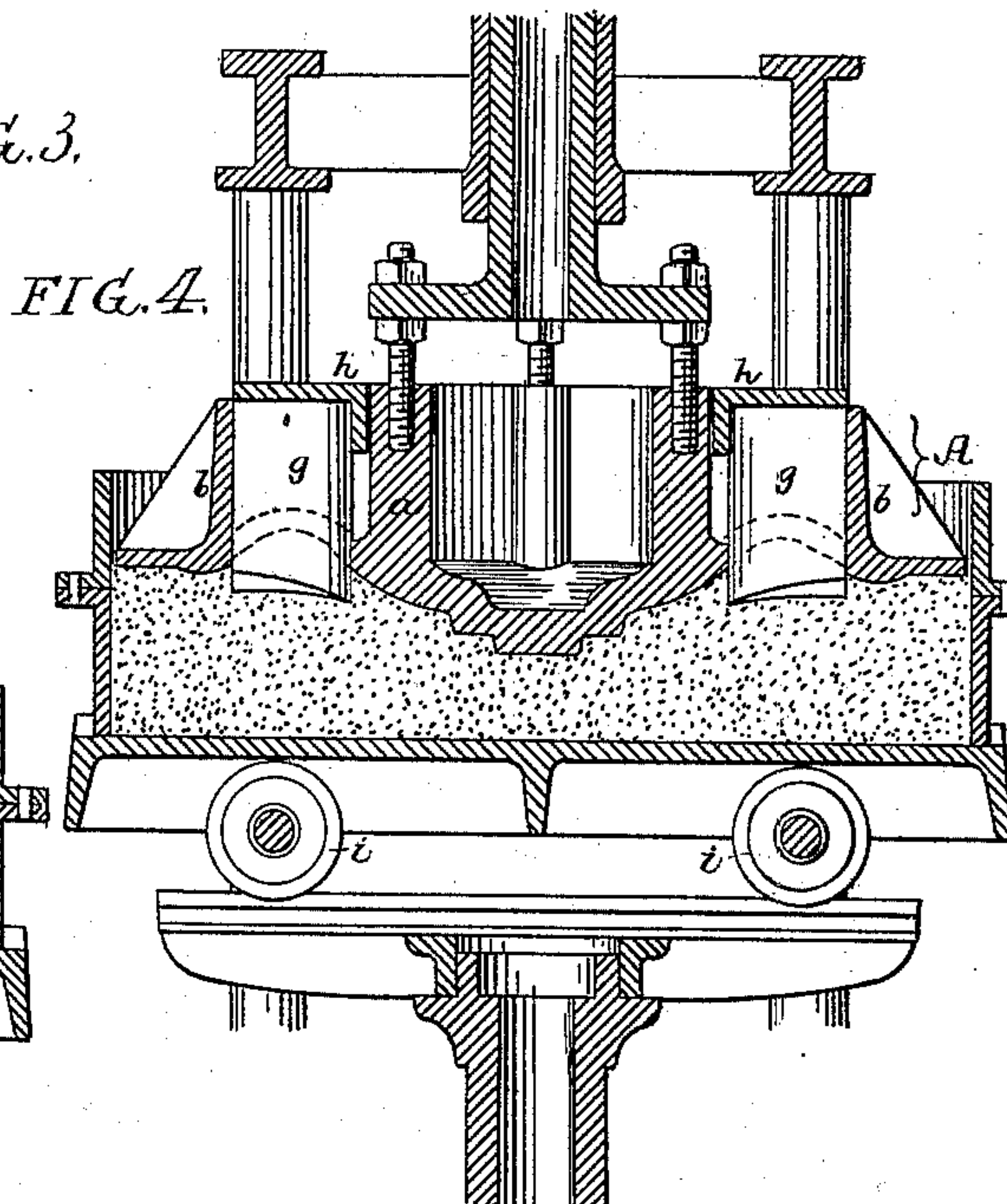
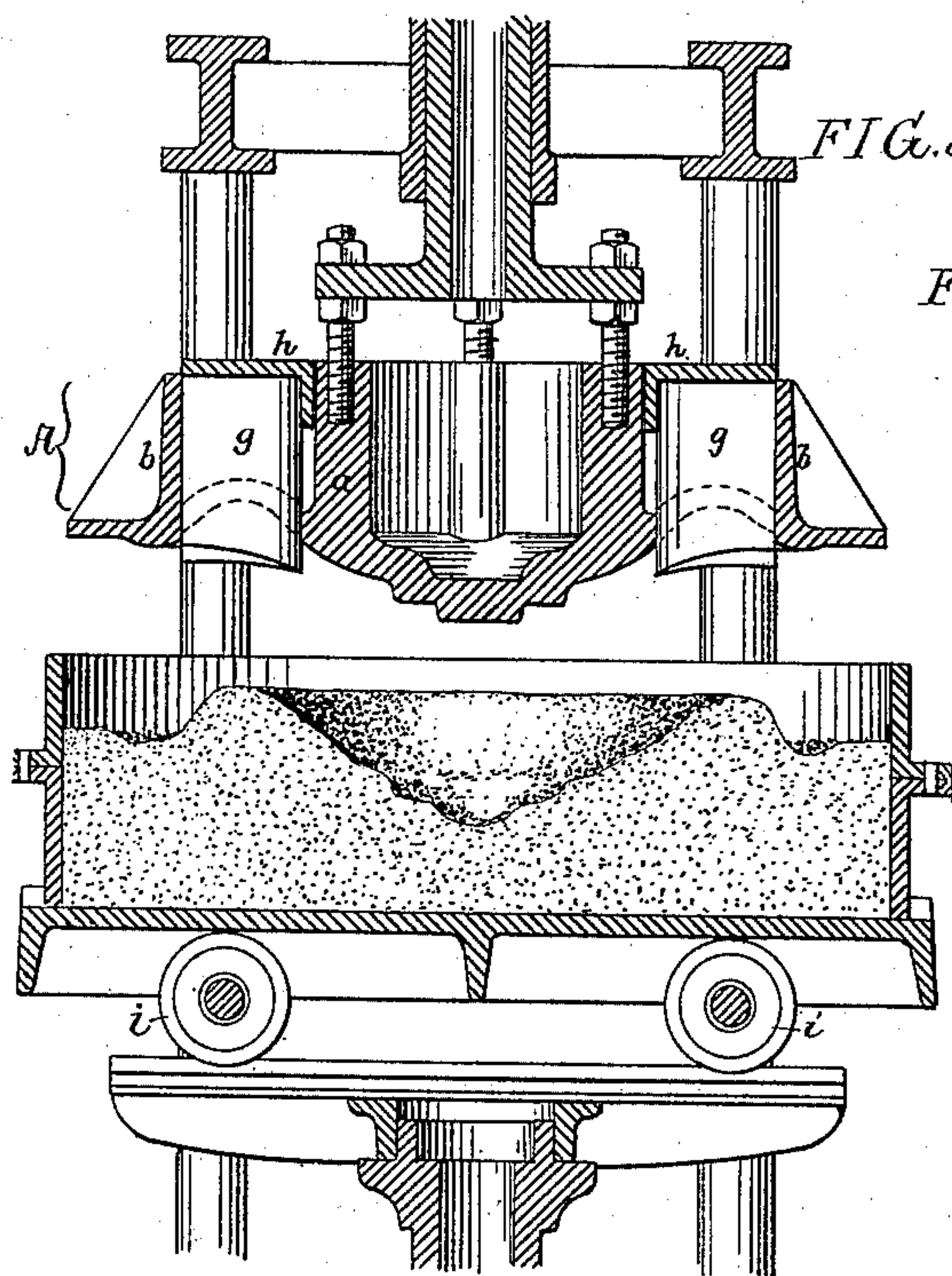
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JOSEPH J. CARR, OF WILKES-BARRÉ, PENNSYLVANIA.

PATTERN FOR MOLDING.

SPECIFICATION forming part of Letters Patent No. 371,820, dated October 18, 1887.

Application filed June 22, 1887. Serial No. 242,155. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. CARR, a citizen of the United States, and a resident of Wilkes-Barré, Luzerne county, Pennsylvania, have invented certain Improvements in Patterns for Molding, of which the following is a specification.

My invention consists of certain improvements in molding car-wheels, for which Letters Patent were granted to me on the 29th day of March, 1887, and numbered 360,086.

The object of my present invention is to render the parts of the drag-pattern more rigid than those in my patent, and thus insure the formation of a clean and well-rammed mold, especially at the joints where the ribs or spokes join the web or body of the wheel.

In the accompanying drawings, Figure 1 is a sectional perspective view of the two portions of the drag-pattern detached from each other. Fig. 2 is a sectional view of the mold containing the casting of a double-plate car-wheel; and Figs. 3, 4, 5, and 6 are sectional views showing the different steps in the formation of the drag portion of the mold.

The drag portion of the pattern is shown in Fig. 1, and comprises the two parts A and B, the part A having a hub portion, *a*, rim portion *b*, and intervening web portion *d*, connecting said hub and rim, and having radial slots *f* for the reception of radially-arranged fingers *g*, depending from the under side of a ring, *h*, this ring, with its fingers, constituting the portion B of the pattern. Said portion B of the pattern is secured to the stationary frame-work of the molding-machine, the flask for containing the drag of the mold being mounted upon rollers *i*, carried by the platen of a hydraulic press, and the portion A of the pattern being supported by the plunger of a hydraulic cylinder secured to the upper part of the permanent frame-work.

In molding the wheel the portion A of the pattern occupies the elevated position shown in Fig. 1, so that the lower ends of the fingers *g*, which are rounded and otherwise shaped to properly form the ribs or spokes of the wheel, project below the face of said portion A of the pattern, as shown in Fig. 3. The flask containing the sand for the drag of the mold being elevated, said sand, which has been previously shaped to the general outline of the

lower face of the portion A of the pattern, is pressed against said face and against the lower ends of the fingers *g*, which form recesses in the sand, as shown in Fig. 4. The flask being retained in the position to which it has been raised, pressure is applied to the portion A of the pattern, and the latter is depressed until the hub portion *a* and rim portion *b* of the same coincide with the ends of the fingers *g*, as shown in Fig. 5, the result of this operation being that the sand between the fingers and at the inner and outer ends of the same is firmly compressed, so as to form clear and sharply-defined corners or angles where the ribs join the web of the wheel. This operation being completed, the flask, and with it the portion A of the pattern, is caused to descend, so that the fingers *g* are withdrawn from the mold, as shown in Fig. 6, the portion A of the pattern being then elevated so as to be free from the flask, and the latter removed to make way for a new one.

The operations of forming the mold are substantially similar to those heretofore adopted; but the drag portion of the pattern differs from that heretofore used in that the hub, rim, and web forming portions of the pattern constitute one structure, and the rib-forming fingers an independent structure, whereas in the device formerly patented the web-forming portion of the pattern was in one piece with the hub, while the fingers for forming the ribs were carried by the rim portion of the pattern. The present construction is much more rigid, and provides for a firmer ramming of the mold than that shown in the former patent.

I claim as my invention—

The within-described pattern for use in molding a wheel, said pattern comprising a portion, A, with hub, rim, and slotted web connecting the two, and portion B, with ring having depending fingers, all substantially as specified.

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

JOSEPH J. CARR.

Witnesses:

F. C. STURGES,
EDWARD E. HOYT.