

(No Model.)

2 Sheets—Sheet 1.

J. McCaffrey.

MOLD FOR CASTING LOOSE PULLEYS.

No. 377,859.

Patented Feb. 14, 1888.

Fig. 1.

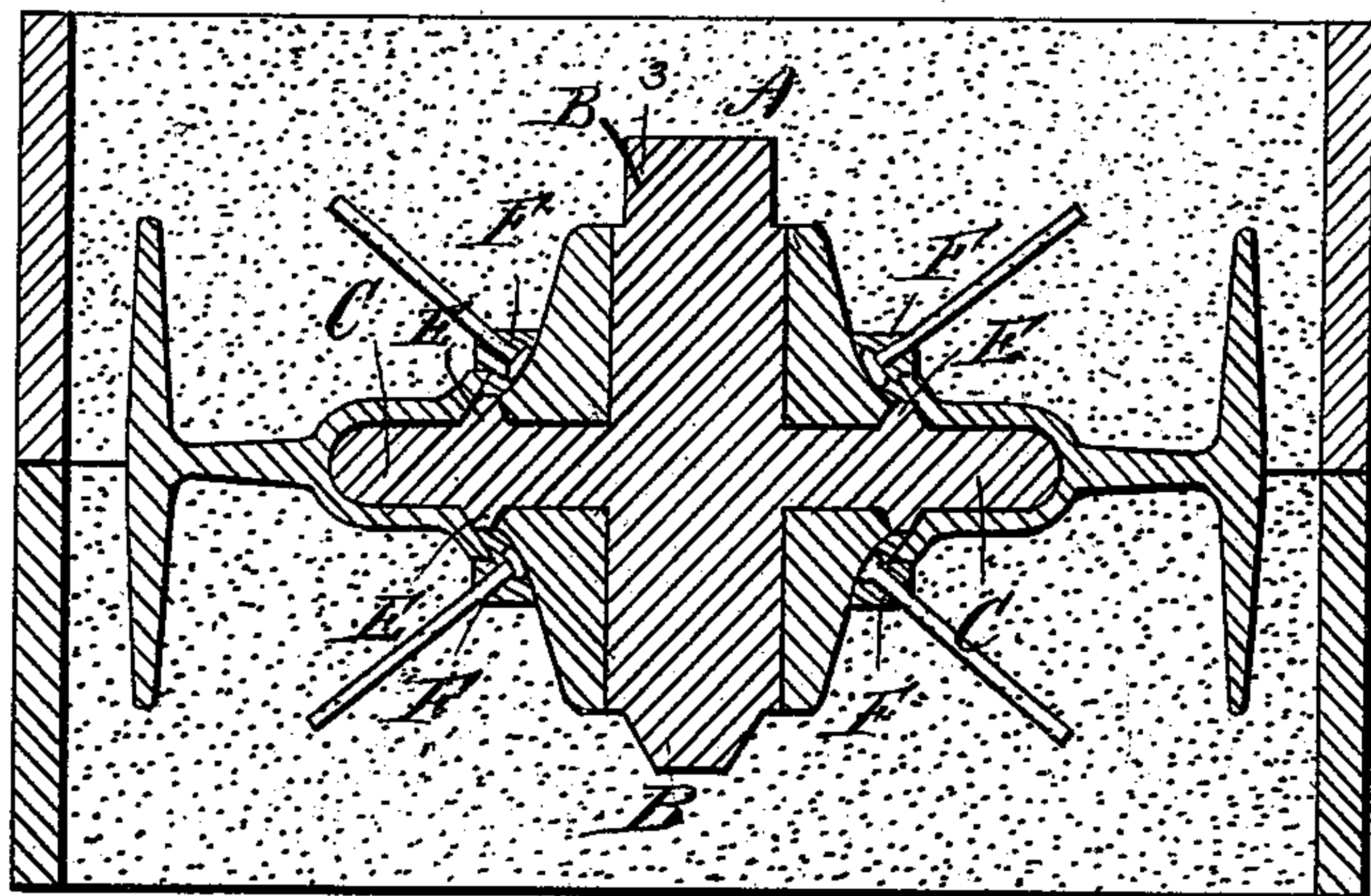


Fig. 2.

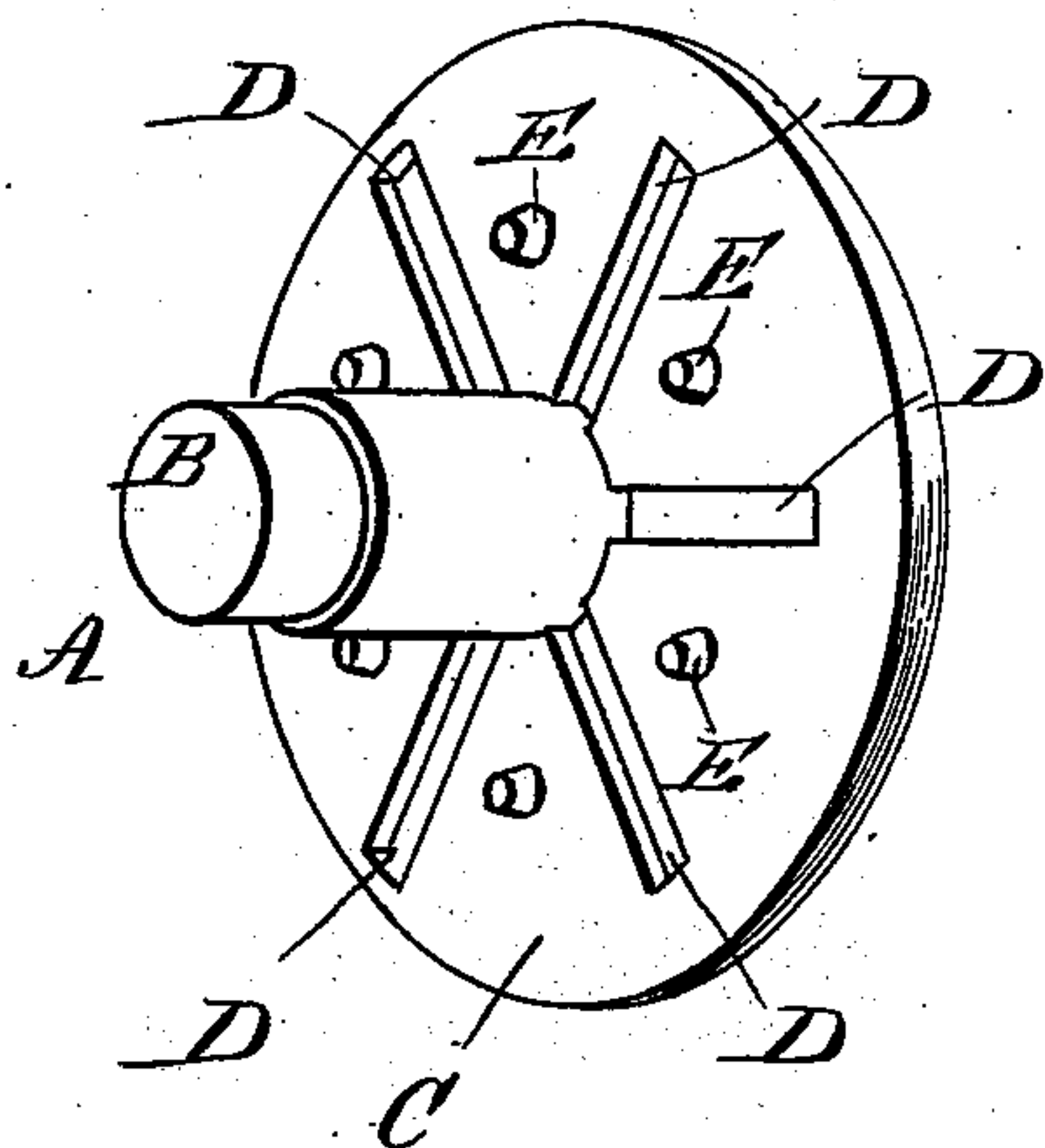
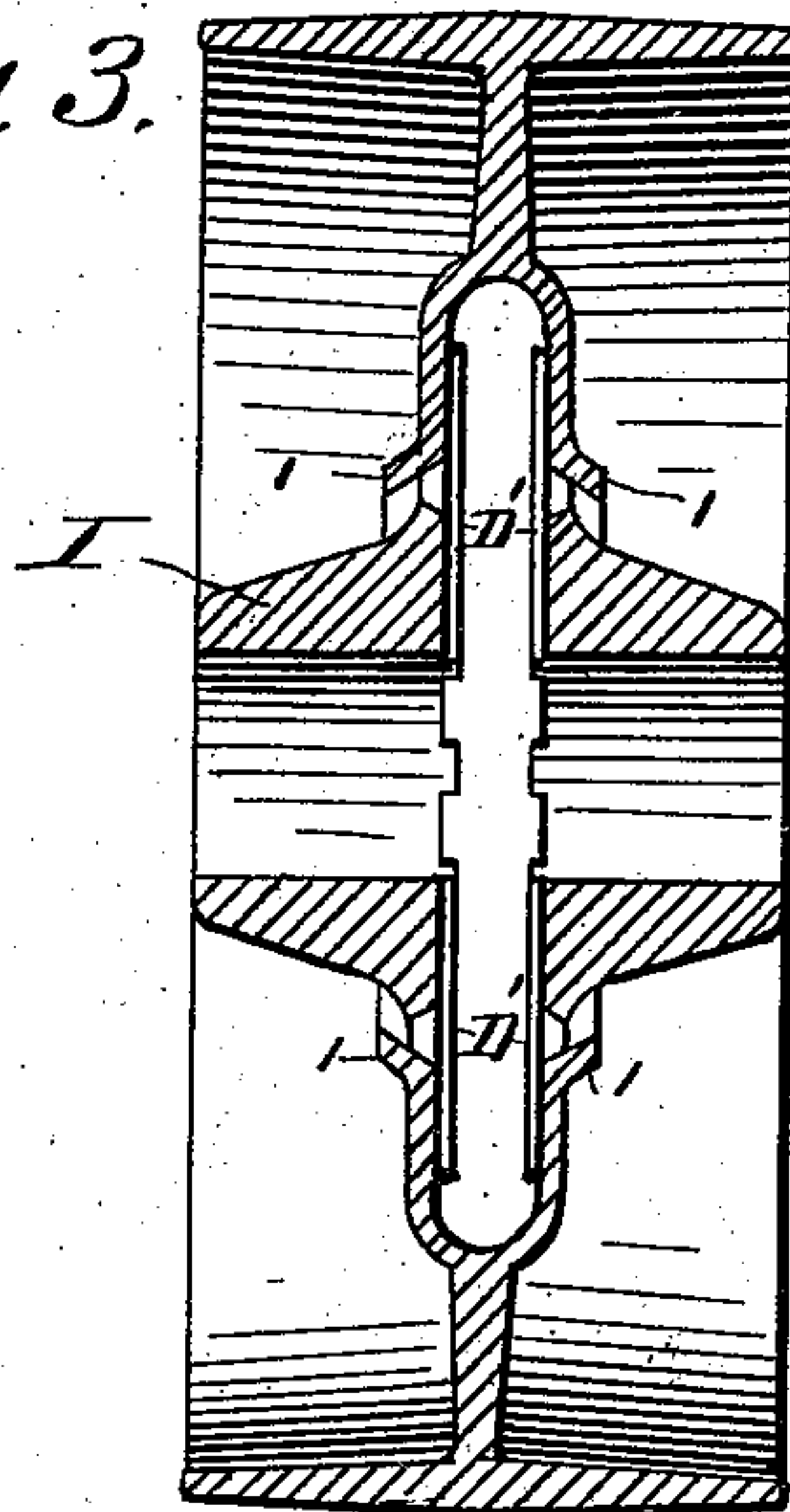


Fig. 3.



WITNESSES:

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Fig. 4.

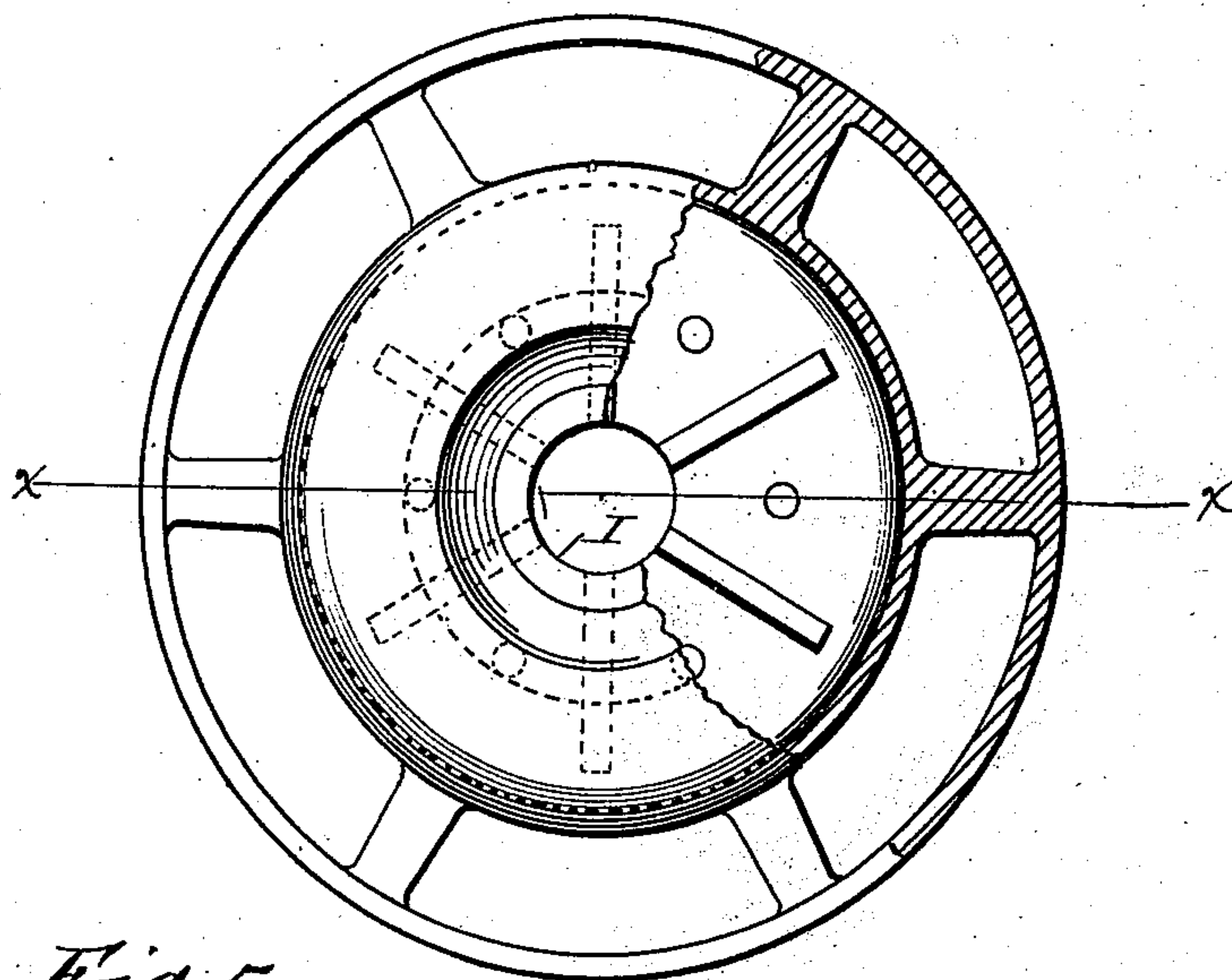
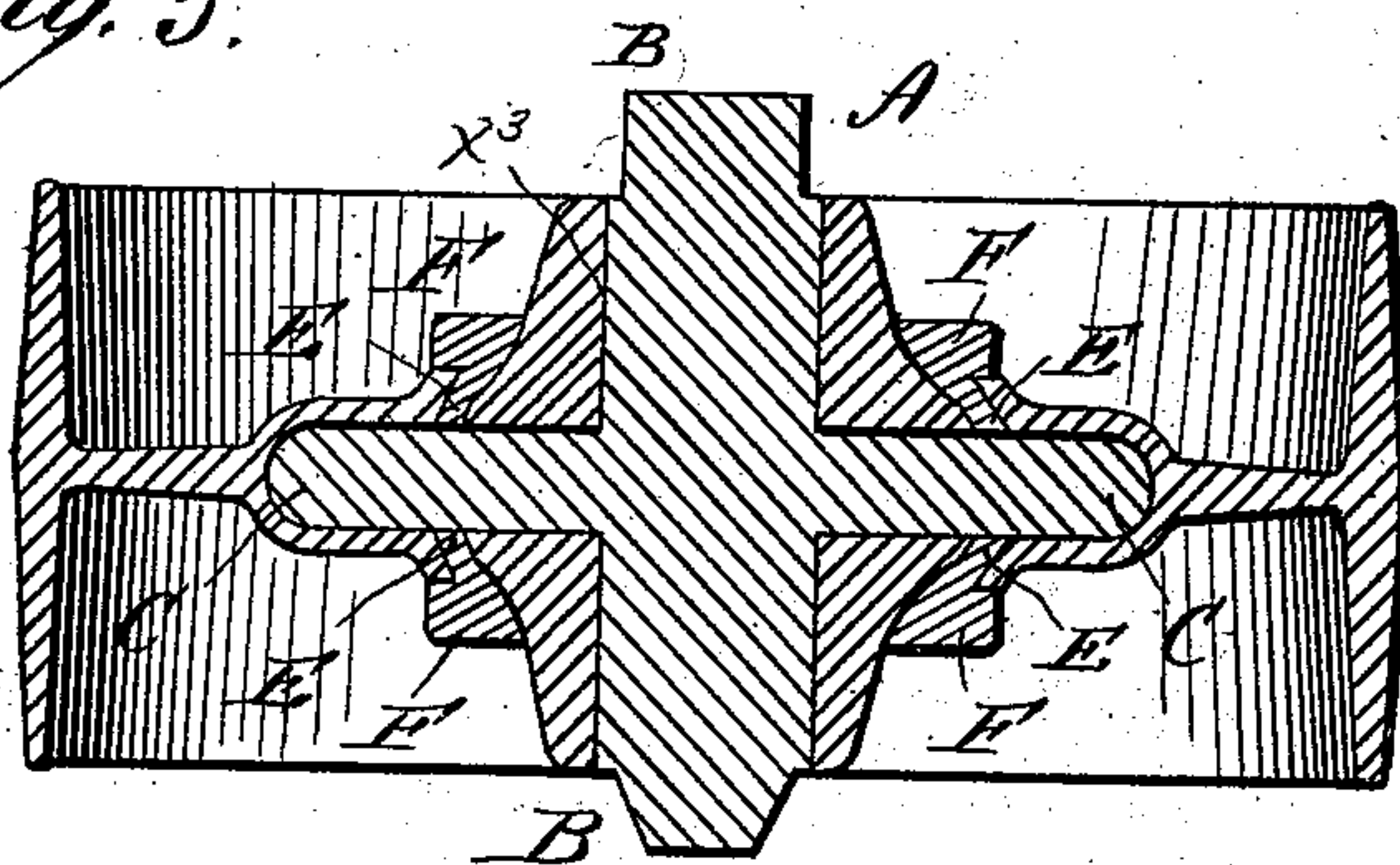


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN McCaffrey, of Lawrence, Massachusetts.

MOLD FOR CASTING LOOSE PULLEYS.

SPECIFICATION forming part of Letters Patent No. 377,859, dated February 14, 1888.

Application filed March 26, 1887. Serial No. 232,519. (No model.)

To all whom it may concern:

Be it known that I, JOHN McCaffrey, of Lawrence, in the county of Essex and State of Massachusetts, have invented a new and Improved Means for Casting Loose Pulleys, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved means for casting loose pulleys, whereby each pulley is formed in one piece provided with a central oil-chamber, radial ribs, and lateral openings for the admission of oil to the central oil-receptacle.

My invention consists in the combination of an internal disk-core, an external ring-core, and lugs provided on one of such parts, and in certain other features of construction and combinations of parts, as will be described, and pointed out in the claims.

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

Figure 1 is a section of a mold and its cores and of the cast pulley therein. Fig. 2 is a perspective view of the center core. Fig. 3 is a sectional view of the finished pulley, taken on the line *xx*, Fig. 4. Fig. 4 is a face view of the same with parts in section; and Fig. 5 is a sectional elevation illustrating modified forms of my improvement, the cast pulley being shown with the cores in place.

In making the loose pulleys for which Letters Patent No. 309,554, dated December 23, 1884, were granted to me, I find that instead of boring or cutting the lateral apertures leading to the oil-receptacle I can cast the same by providing each side of the oil-receptacle core with outwardly-extended lugs which terminate on the cores forming the hub and annular ring on the outer sides of the oil-receptacle.

In carrying out the invention I provide the oil-receptacle core A with the central eye part B, from which extends in its center the disk C, provided on each side with radial grooves D, and the lugs E. The latter abut at their outer ends against the annular cores F, for forming the inner part of the hub of the pul-

ley and the annular rings 1 on the outside of the oil-receptacle.

The other parts of the pulley-molds may be made in the usual manner, and the several cores may be held in the flask in any suitable manner.

The cores are usually of similar composition to that of the ordinary core, comprising molding and bank sand, &c., faced with black-lead, and manifestly such cores will break up and shake out as in other cases.

The ring-cores may be held in place by anchor-pins—such, for instance, as shown in Fig. 1—holes for the pins being pierced through the cores before baking them by having holes in the core-box and pushing the pins through them. The chamber-core, being a part of the cylindrical core, may be held in place in similar manner to an ordinary cylindrical core.

It will be understood that the pattern will be formed with core-prints to produce in the mold receptacles for the ends of the cylindrical core as well as recesses for the ring-cores. When the pattern has been drawn, the cores may be placed in position and secured in the manner shown in Fig. 1.

When the metal is poured, the central part, B, of the core forms the hub I of the pulley, the disk C, in connection with the outer cores F, forms the oil-receptacle, and the grooves D in the disk C form the ribs D' in the oil-receptacle for transmitting the oil to the shaft on which the pulley is to turn; but those grooves D may be omitted. The lugs E on the disk C form the lateral apertures leading from the oil-receptacle through the walls of the oil-receptacle after the core A is removed. The cores A and F, after the casting is made, are broken up into small fragments and removed from the cast pulley.

Instead of forming the lateral apertures by the lugs E on the disk C, I may also reverse the order of things and place the lugs on the inside of the annular cores F, so that the lugs abut against the oil-receptacle disk C, as shown in Fig. 5.

The result after casting is the same as before described.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent,
is—

1. The combination of an internal disk core,
an external ring-core, and lugs provided on
5 one of such parts and leading to the other,
substantially as set forth.

2. The combination of the core A, having
cylindrical portion B and disk portion C,

the ring-cores F F, and the lugs E, all sub-
stantially as described, and for the purposes so
specified.

JOHN McCAFFREY.

Witnesses:

CHARLES U. BELL,
ROBERT M. SMITH.