

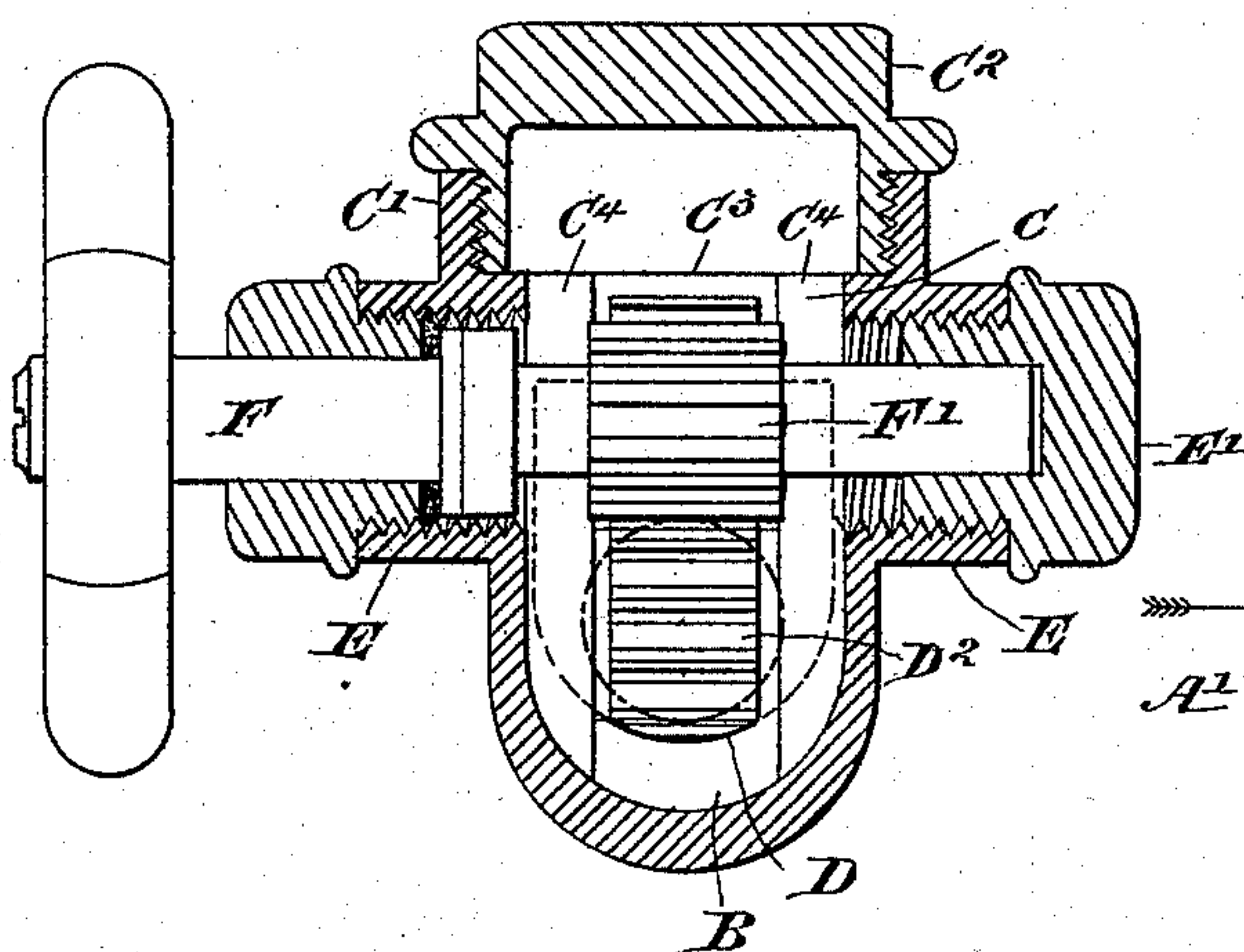
(No Model.)

J. R. MEADOWCROFT.
VALVE.

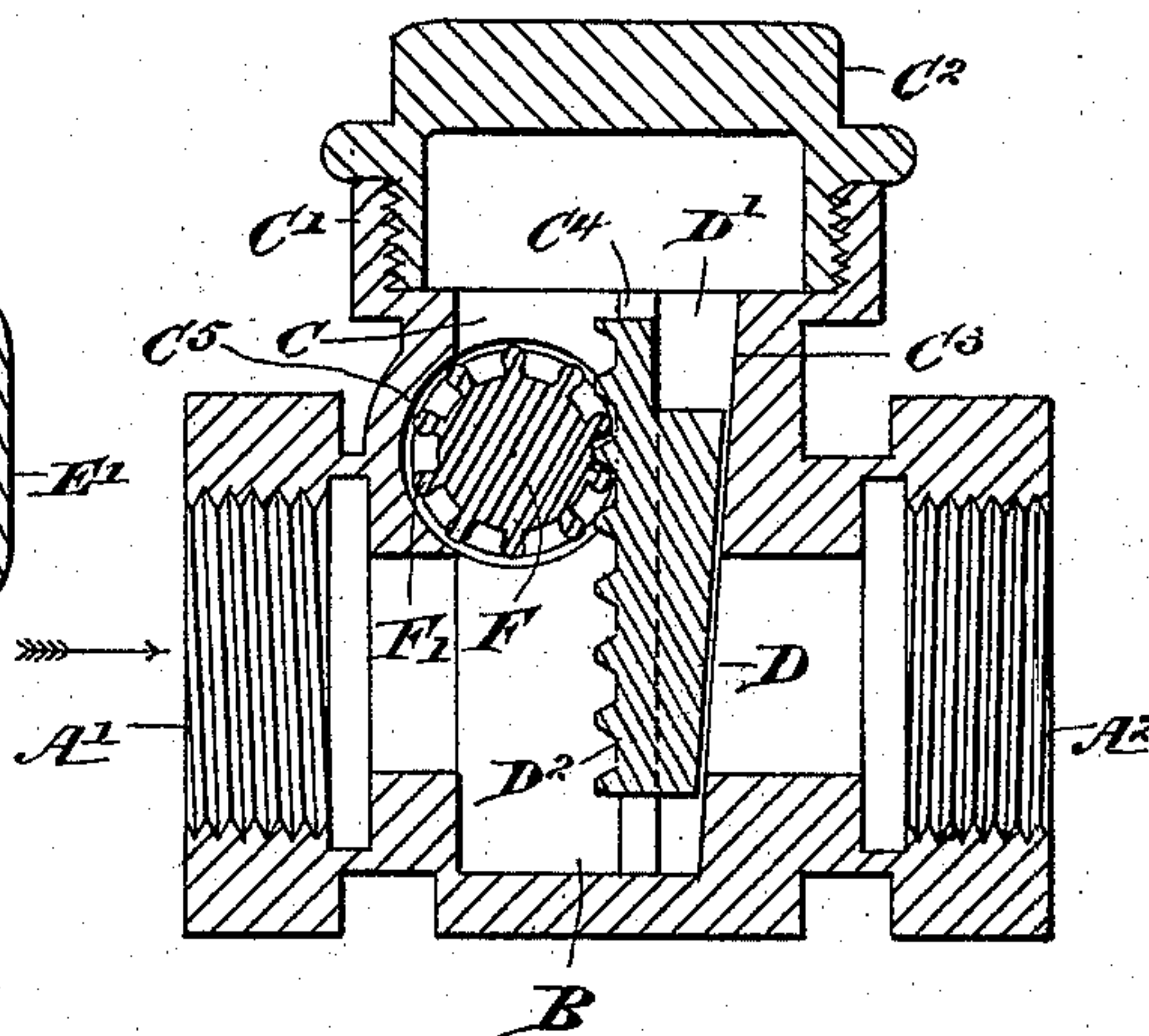
No. 535,766.

Patented Mar. 12, 1895.

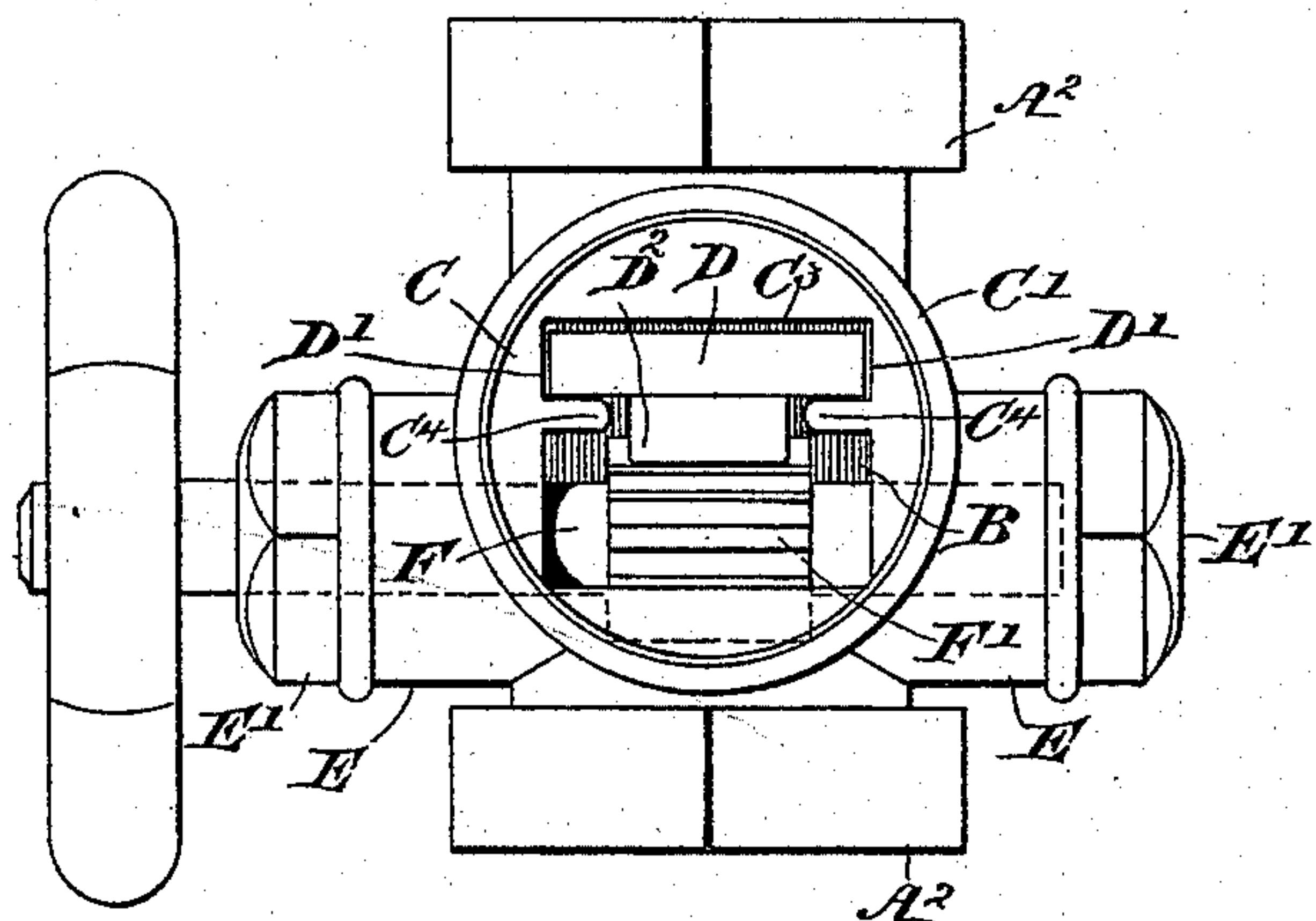
— Fig. 1 —



— Fig. 2 —



— Fig. 3 —



Witnesses

Wm. P. M. Post
Fred J. Leary

Inventor.

John R. Meadowcroft
By his Attorney
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UNITED STATES PATENT OFFICE.

JOHN ROBERT MEADOWCROFT, OF MONTREAL, CANADA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 535,766, dated March 12, 1895.

Application filed April 29, 1891. Serial No. 391,018. (No model.) Patented in Canada May 5, 1891, No. 36,544.

To all whom it may concern:

Be it known that I, JOHN ROBERT MEADOWCROFT, of the city of Montreal, in the district of Montreal, and Province of Quebec, Canada, have invented certain new and useful Improvements in Valves, (for which I have obtained a patent in Canada, No. 36,544, dated May 5, 1891;) and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention applies specially to gate valves but can with advantage replace several others of well known type. Its object is to simplify and cheapen the construction of the valve to secure rapidity of movement in closing and opening to render the working of the valve possible in varying positions and to effect a more perfect closure of same.

The invention also embraces a feature of construction which allows of the interchangeability of some of its parts to render the handling of the valve convenient under certain circumstances.

The invention consists in providing a rack on the sliding disk or valve proper setting such valve proper in guide ways and arranging a pinion in place on a turn spindle to engage the rack so that by a partial turn of such spindle the valve proper will be fully opened or closed and pressure withstood from either direction.

For full comprehension however of the invention reference must be had to the annexed drawings, forming part of this specification, in which like symbols indicate corresponding parts, and wherein—

Figure 1 is a transverse vertical section of valve chamber showing valve proper and turn spindle in elevation; Fig. 2, a longitudinal vertical section of the valve proper and its chamber taken at right angles to Fig. 1 and Fig. 3, a plan view of the complete valve with top cap removed.

A' A² are respectively the inlet and outlet ends of the passage through the valve of any usual form, B being the intermediate portion of such valve which is formed with a chamber C at right angles to the passage extending out beyond one side of same as usual and having an open head C' (covered by a cap C²)

to allow of the insertion and play of the valve proper D. Guideways D' D' for such valve proper are formed in the chamber between the back side C³ thereof and ribs C⁴ on the sides, such back sides having its surface beveled to correspond with the beveled surface of one side of the valve proper which is so shaped for the purpose of allowing plumbago or asbestos disks to be used on its face if desired.

The opposite side of the valve proper has a rack D² formed on it of a width which leaves surfaces for sliding on the ribs C⁴ and the side C⁵ of the chamber which is opposite the back side C³ thereof and beyond the passageway of the valve is curved to correspond with circular perforated and screwed bosses E E which receive nuts or caps E' E' in which bearings for the turn spindle F are formed this spindle extending transversely to the passage way of the valve but out of the line of same and carrying a pinion F' to mesh with the rack D² on the valve proper. This duplicate arrangement of bosses and caps allows the turn spindle to be inserted from either side of the valve so that the inconvenient location of its handle or wheel between the line of piping and a wall, as would not infrequently happen when the pressure in the pipes is in a certain direction can be avoided.

What I claim is as follows:

In a valve, the combination with the inlet and outlet sections, forming a common passage way, and with a valve chamber having a beveled face c³ and guideways D' D',—of a sliding valve D having a toothed rack D² on one of its sides and the other beveled to correspond with and traverse the beveled face of said chamber; a turn spindle F located out of the line of said passageway with pinion F' thereon and intermeshing with said rack D² and transverse bosses E E on both sides of the valve with caps E' E' attached to same to form bearings for said turn spindle, as set forth.

Montreal, 14th day of April, 1891.

JOHN ROBERT MEADOWCROFT.

Witnesses:

WILL. P. McFEAT,
FRED. J. SEARS.