

No. 683,386.

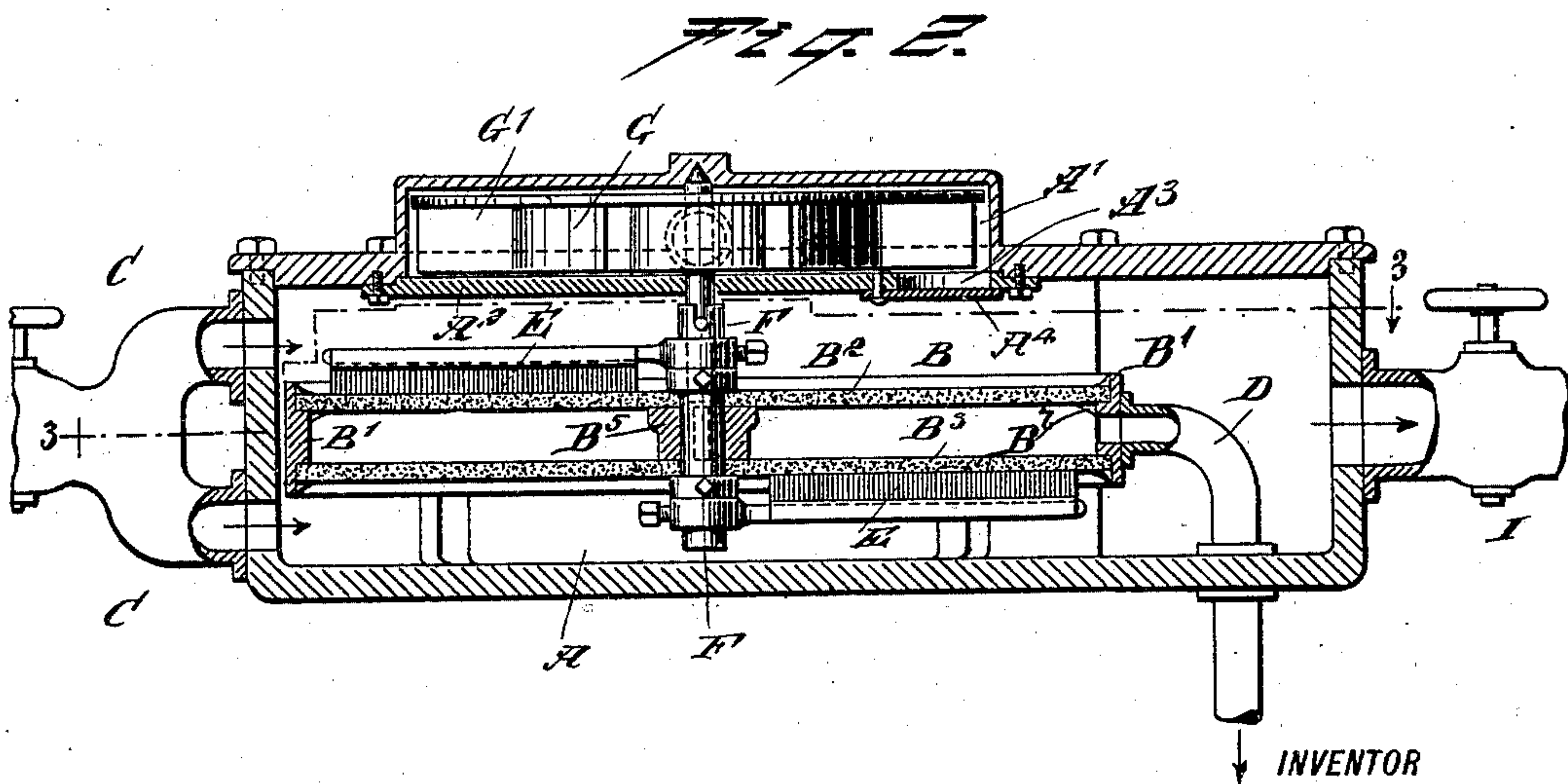
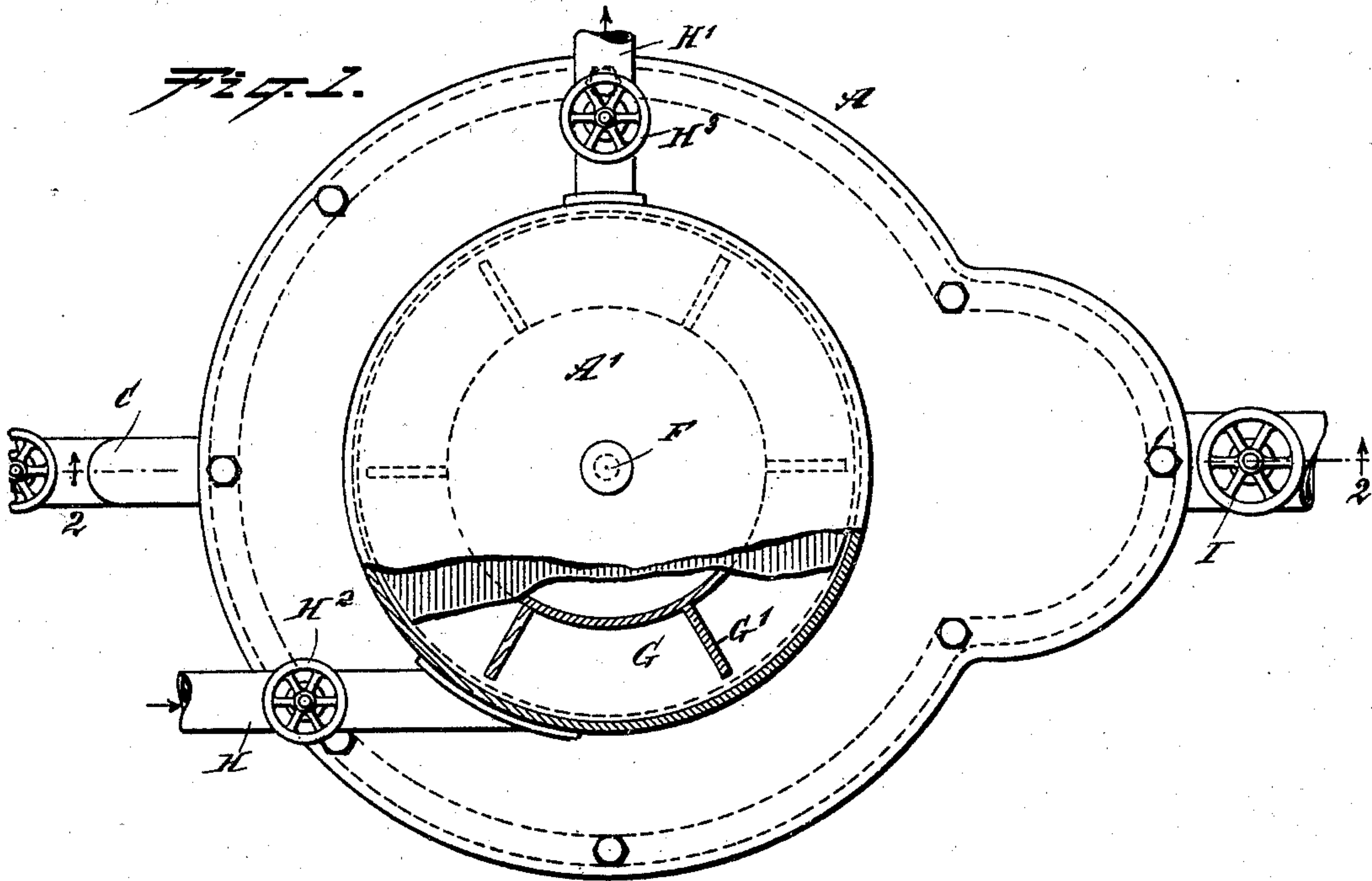
Patented Sept. 24, 1901.

W. E. CORLETT.
FILTER.

(Application filed Dec. 17, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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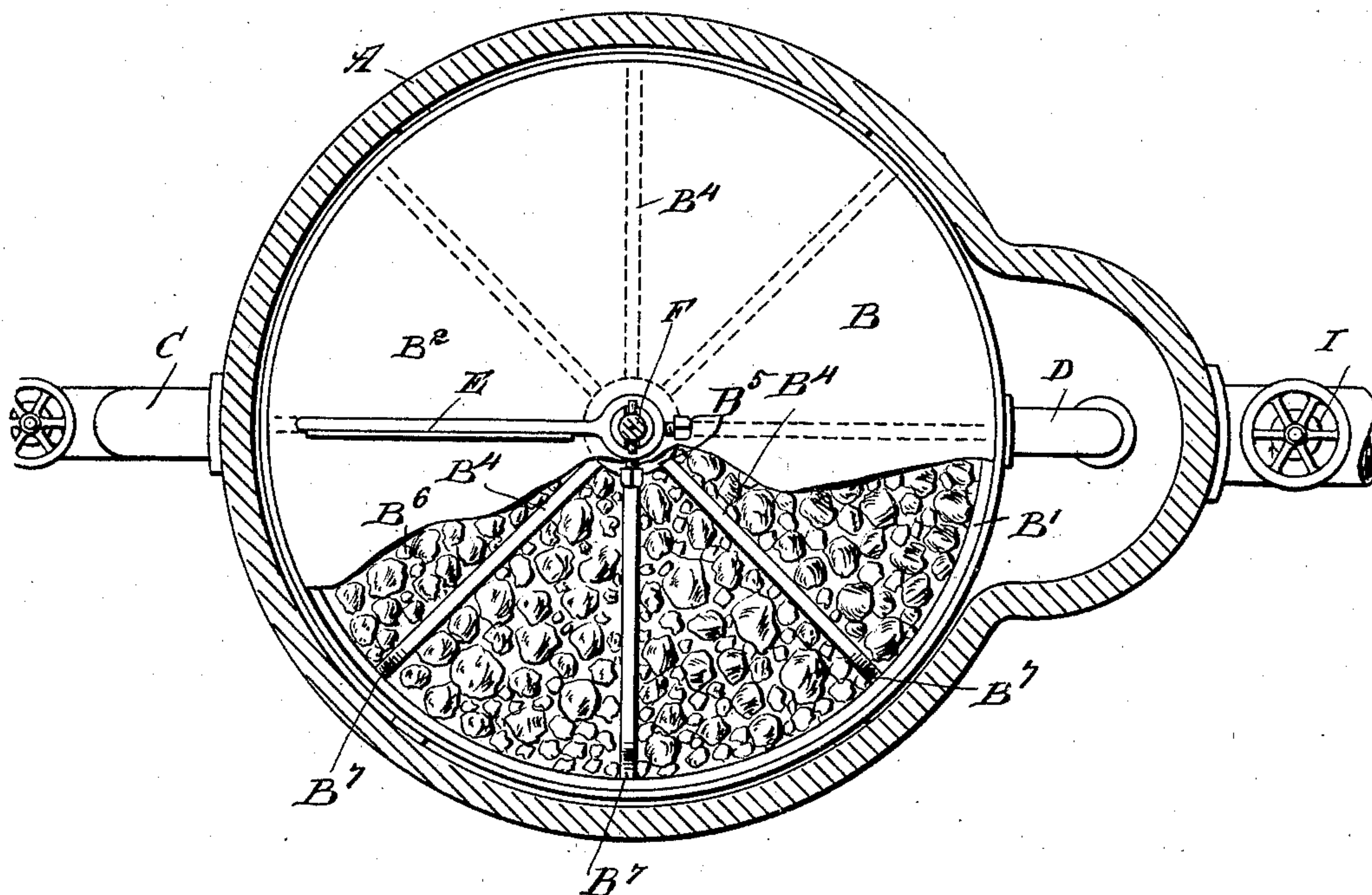
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2 Sheets—Sheet 2.

Fig. 2.



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WILLIAM EDWARD CORLETT, OF JENNINGS, OKLAHOMA TERRITORY.

FILTER.

SPECIFICATION forming part of Letters Patent No. 683,386, dated September 24, 1901.

Application filed December 17, 1900. Serial No. 40,200. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EDWARD CORLETT, a citizen of the United States, and a resident of Jennings, in the county of Pawnee, Oklahoma Territory, have invented a new and Improved Filter, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved filter which is simple and durable in construction and readily cleaned at any time at the will of the operator without necessitating taking the filter apart.

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

Figure 1 is a side elevation of the improvement with part in section. Fig. 2 is an inverted sectional plan view of the same on the line 2 2 of Fig. 1, and Fig. 3 is a sectional side elevation of the same on the line 3 3 of Fig. 2.

The improved filter is provided with a casing A, in which is suspended a filtering-head B, provided with a skeleton frame in the form of a wheel, with a rim B' and heads B² B³, fitted against the spokes B⁴, and annular shoulders in the said rim B', the heads also abutting against the faces of the hub B⁵ of the said wheel, as will be readily understood by reference to Fig. 2, the wheel being preferably made of metal or other suitable non-filtering material, and the heads B² B³ being preferably made of tripoli rock or other filtering material to form filtering-walls.

One side of the casing A is provided with water-supply pipes C to permit the water to be filtered to pass into the casing and through the filtering-walls B² B³ to the interior of the filtering-head and flow in a filtered condition into a discharge-pipe D, connected with the rim of a filtering-head and extending from one side of the casing A to the outside, as plainly indicated in Fig. 2.

The compartments formed in the filtering-wheel by the spokes B⁴, the hub B⁵, and rim B' are preferably filled with a filtering material, such as rock B⁶, and the ends of the spokes B⁴ are cut out, as at B⁷, to permit the filtered water to pass from one compartment to the other, so as to finally reach the discharge-pipe D.

It is evident that the water passing through the filtering-walls B² and B³ from the outside leaves the coarser impurities on the outer faces of the said walls, and these impurities are wiped off from time to time or continuously by brushes E, having bristles or wipers of rubber or other elastic material, the brushes being secured on a shaft F, mounted to rotate loosely in the hub B⁵ of the wheel B'.

The shaft F is the driven shaft of a water-motor G, having buckets G' and contained in a recess A', formed in one of the heads of the casing A. The recess A' is connected with a water-supply pipe H and is also provided with a discharge-pipe H', so that the water flowing by the pipe H into the said recess A' acts on the buckets of the water-motor G to rotate the latter, so as to cause the brushes E to brush or wipe the faces of the heads B² B³. The impurities wiped off the heads or filtering-walls B² B³ settle and accumulate in the casing A and are discharged therefrom from time to time on opening a valve I in the discharge-pipe leading from the casing.

The inner end of the recess A' is preferably closed by a plate A², formed with an opening A³, normally closed by a valve A⁴ to permit of discharging the water from the recess A' into the casing A in case the pipe H' is closed by a valve H³, and the water thus used for driving the water-motor may be passed into the casing A to be filtered by passing through the filtering-head B, as above described.

The pipe H is preferably provided with a valve H² for permitting the water to enter the motor and actuate the same and the brushes E whenever it is desired to clean the faces of the filtering-heads B² B³ by the said brushes E.

From the foregoing it is understood that the construction of the skeleton frame in the form of a wheel forms a very strong support for the filtering-walls, as the latter rest against the radial spokes, and the latter also form a support for the loose filtering material contained in the compartments.

It is evident that by the arrangement described the filter is rendered self-cleansing, and it is not necessary to take the filter apart, as the impurities scraped off from the faces of the walls can be discharged at any time through the pipe having the valve I.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. A filter, having a filter-head comprising a skeleton frame in the form of a wheel with a hub, spokes and rim, filtering-walls set against the spokes of the wheel and the said rim to form filtering-compartments in the wheel, and an outlet for the filter liquid from the wheel, substantially as shown and described.

2. A filter, having a filter-head comprising a skeleton frame in the form of a wheel with a hub, spokes and rim, filtering-walls set against the spokes of the wheel and the said rim to form filtering-compartments in the wheel, and an outlet for the filtering liquid from the wheel, the said spokes being arranged to connect the compartments with each other, the said compartments contain-

ing filtering material, substantially as shown and described.

3. A filter, comprising a casing having a water-inlet, a filtering-head secured within the said casing and provided with a filtering-wall, an outlet leading from the head, a water-motor, brushes secured on the shaft of the said motor and engaging the face of the said wall, and a connection between the casing of the water-motor and the said casing, to permit the water discharged from the water-motor to pass into the casing to be filtered by the said head, substantially as shown and described.

WILLIAM EDWARD CORLETT.

Witnesses:

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