

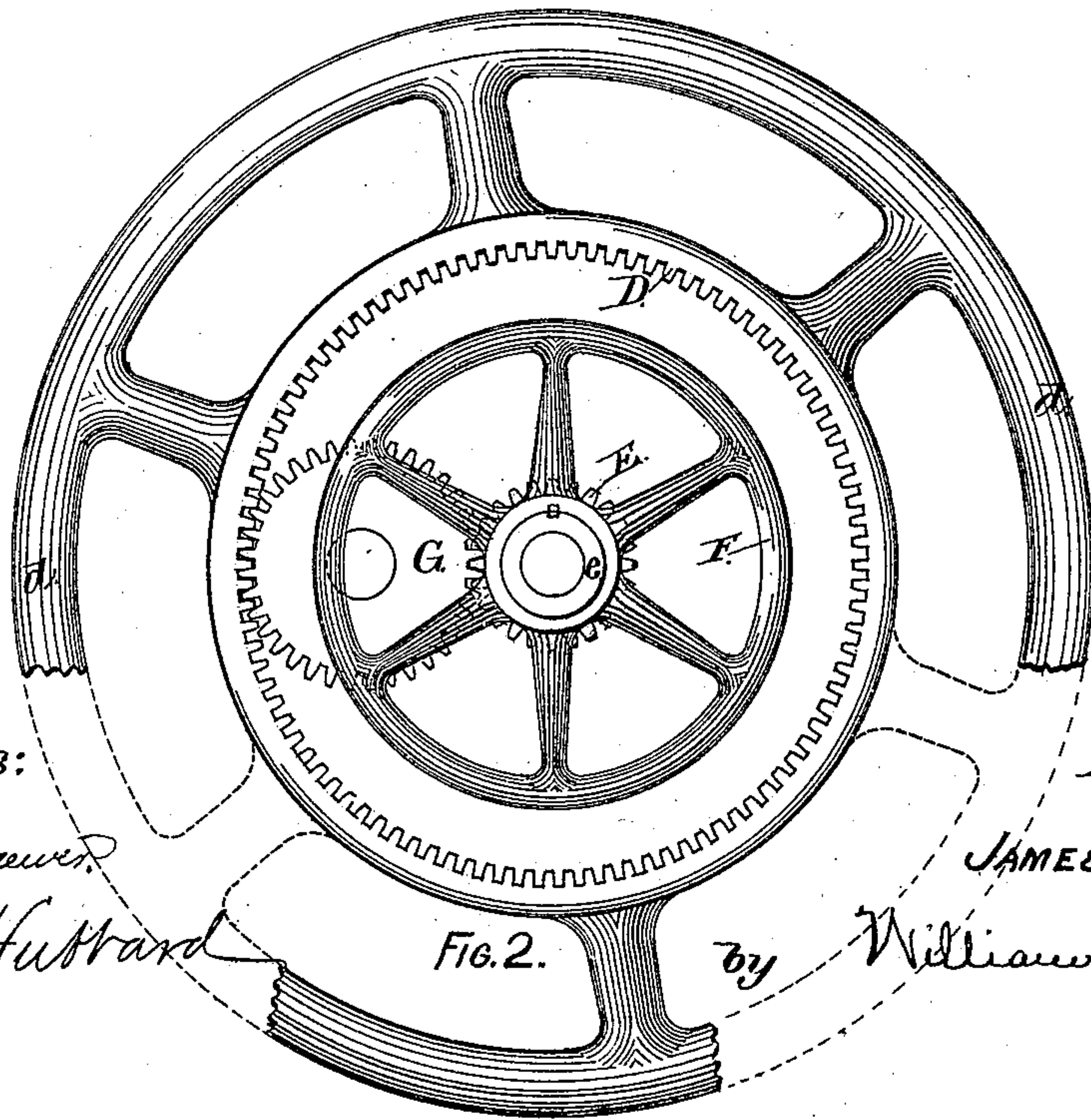
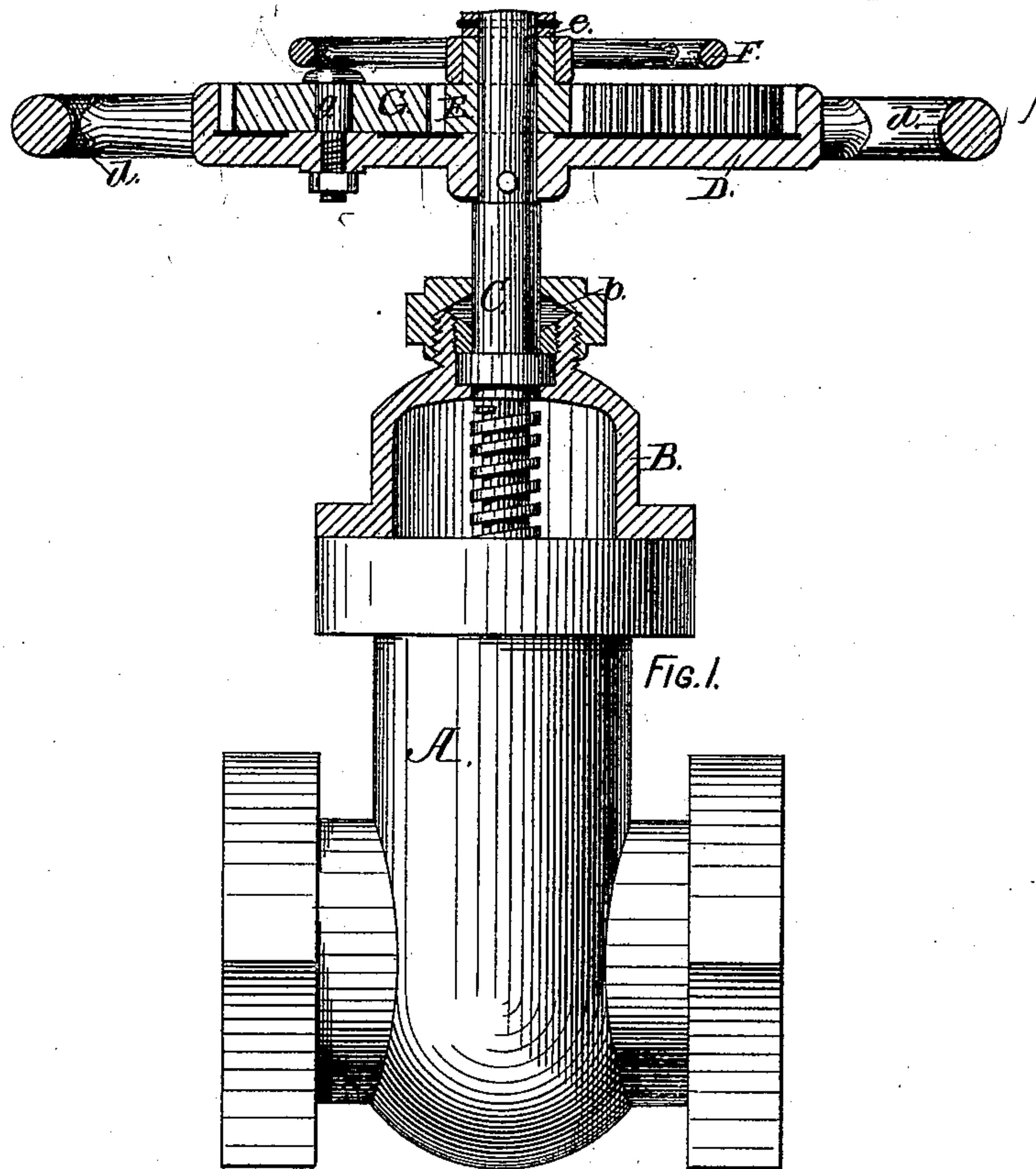
(No Model.)

2 Sheets—Sheet 1.

J. H. BLESSING.
MECHANISM FOR OPERATING VALVES.

No. 326,196.

Patented Sept. 15, 1885.



Witnesses:

S. B. Brewer
Fred B. Hubbard

Inventor:

JAMES H. BLESSING

by

William H. Low,

Attorney.

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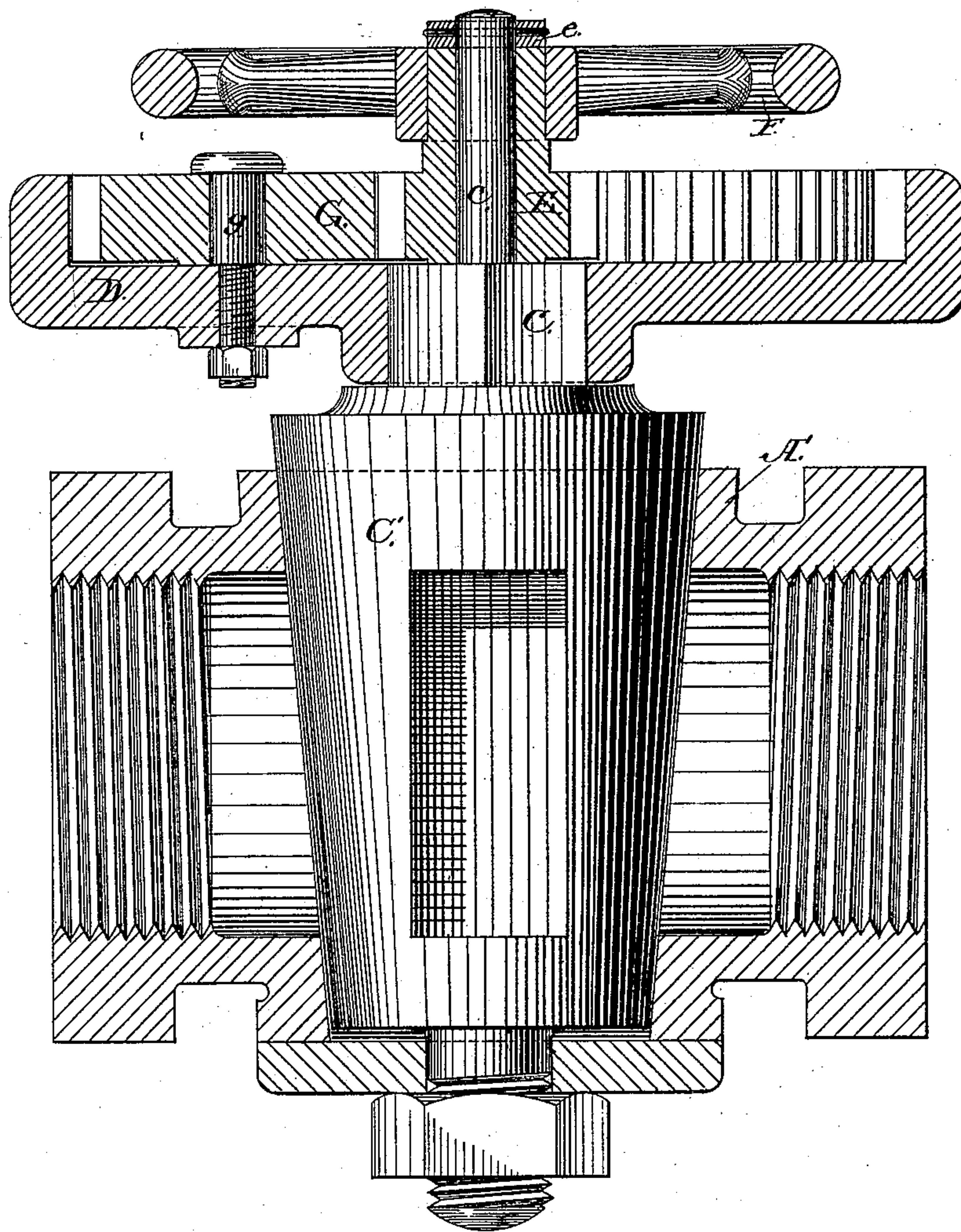


FIG. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES H. BLESSING, OF ALBANY, NEW YORK.

MECHANISM FOR OPERATING VALVES.

SPECIFICATION forming part of Letters Patent No. 326,196, dated September 15, 1885.

Application filed June 30, 1885. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. BLESSING, of the city and county of Albany, in the State of New York, have invented new and useful
5 Improvements in Mechanism for Operating Stop Valves and Cocks, of which the following is a specification.

In operating stop valves and cocks of a large size considerable difficulty is encountered in directly moving the parts, and, as
10 heretofore constructed, the gearing commonly used has been so arranged as to greatly interfere with a proper access to the other parts of the valve or cock.

15 The object of my improvements is to provide a compact and efficient device for operating stop valves and cocks by which the power can be increased to the degree required for operating said valves and cocks
20 with perfect ease. This object I attain by the mechanism illustrated in the accompanying drawings, which, being herein referred to, form part of this specification, and in which—

25 Figure 1 is a side elevation of the casing and screw-stem of a stop-valve provided with my improvements, the balance of the device being shown in vertical section; Fig. 2, a plan view of the same, and Fig. 3 a longitudinal section of a stop-cock provided with
30 my improvements with the turn-plug shown in side elevation.

As shown in Figs. 1 and 2, A is the valve-casing of a gate stop-valve of ordinary construction; B, the bonnet thereof, provided
35 with a stuffing-box, *b*, of the usual form, and C the screw-stem for operating the gates or valves.

As shown in Fig. 3, A' is the casing for
40 a stop-cock, of a usual and well-known construction; and C' the turn-plug for the same, having a stud or stem, *c*, formed on its upper end; D, an internal gear-wheel, secured to the upper part of screw-stem C,
45 as shown in Fig. 1, or to the turn-plug C', as shown in Fig. 3. Said gear-wheel may be provided with a hand-wheel, *d*, as shown in Figs. 1 and 2; or, when preferred, said

hand-wheel may be omitted, as shown in Fig. 3.

E is a pinion fitted loosely on the upper part of the screw-stem C, as shown in Fig. 1, or upon the stem *c*, as shown in Fig. 3; but
50 in either case it is adapted to be rotated on said stems independently of the latter, which only serves as a center on which said pinion
55 may be rotated.

The pinion E is retained in place by means of a collar, *e*, that is fixed on the stem on which
60 the pinion revolves.

A hand-wheel, F, is secured to the pinion E, for the purpose of imparting motion
65 thereto.

G is an idler-pinion fitted to rotate on a stud, *g*, which is fixed in the disk of the
70 gear-wheel D. Said idler-pinion is arranged to constantly engage in gear both with the gear-wheel D and the pinion E, so that motion may be transmitted from the pinion E to the gear-wheel D.

The operation of my improved device is as follows: Power is applied to the hand-wheel F to rotate it in any required direction, and thereby a rotary motion is im-
75 parted to the pinion E, by which the idler-pinion G is set in motion to rotate the gear-wheel D, and the part—either a screw-stem or a turn-plug—to which it is attached.

When this invention is used for operating gate-valves of moderately large size, the
80 hand-wheel *d* (shown in Figs. 1 and 2) may be used for moving the gates when an excessive pressure of the fluid has been removed from the gates by reason of the valve being in a partially-open condition, and under such
85 circumstances it is obvious that the valve can be more quickly moved by means of the hand-wheel *d* than when operated by the train of gearing.

When preferred, the hand-wheel F may be
90 dispensed with if the hub of the pinion E is adapted to receive a wrench or other implement for turning said pinion.

The proportions of the gear-wheel D to the pinion E may be increased or diminished,
95 as occasion requires, and thereby a corre-

sponding increase or diminution of the gain in power may be effected to suit the work to be accomplished.

I claim as my invention—

- 5 In a mechanism for operating stop valves or cocks, the combination, with a central stem or stud having an internal gear-wheel, D, fixed thereon, of a pinion, E, provided with

a hand-wheel, F, or its equivalent, and fitted to rotate on said central stud or stem, and 10 the idler-pinion G, all substantially as herein specified.

JAMES H. BLESSING.

Witnesses:

JOHN W. WHEELLOCK,
WM. H. LOW.