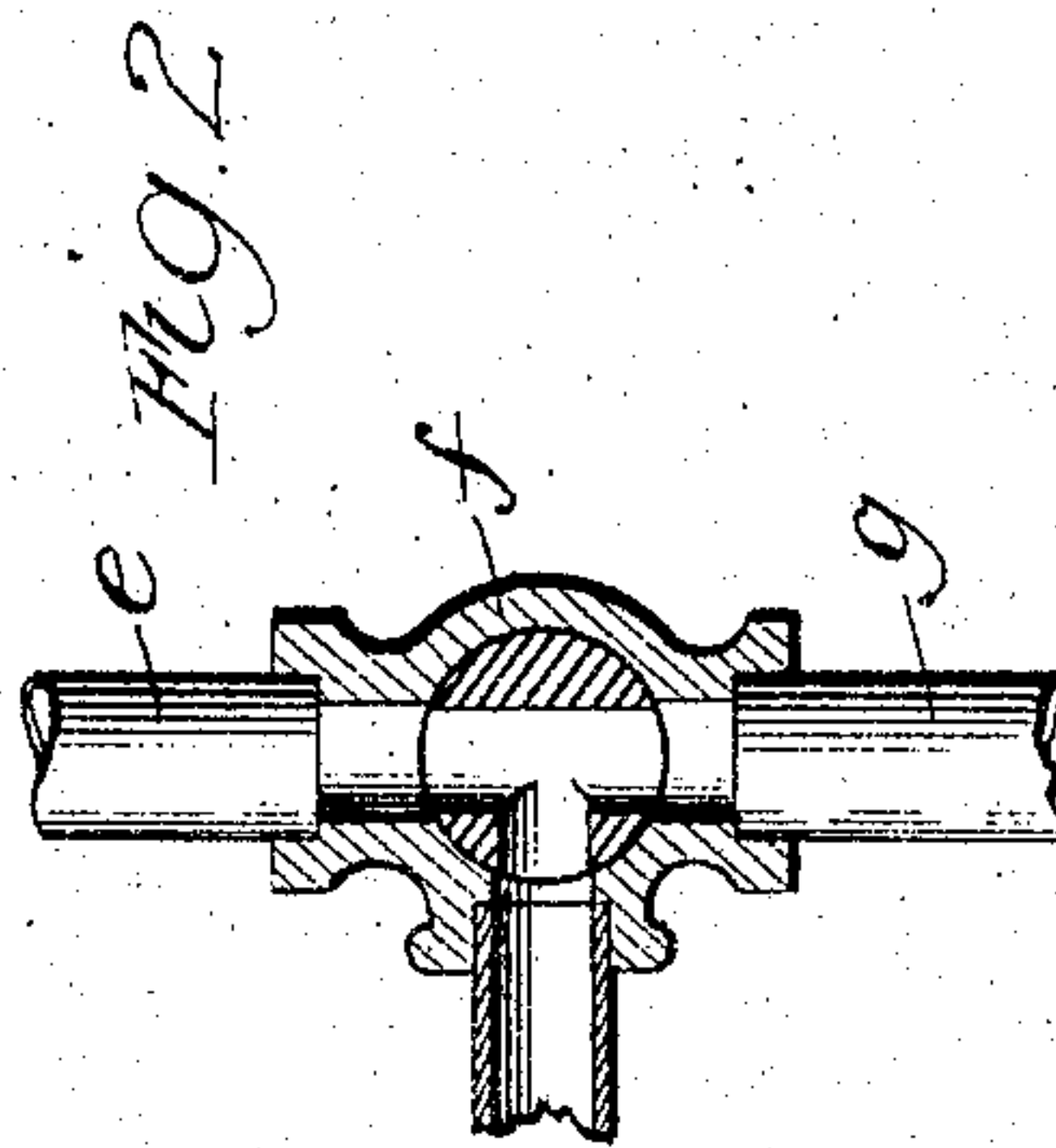
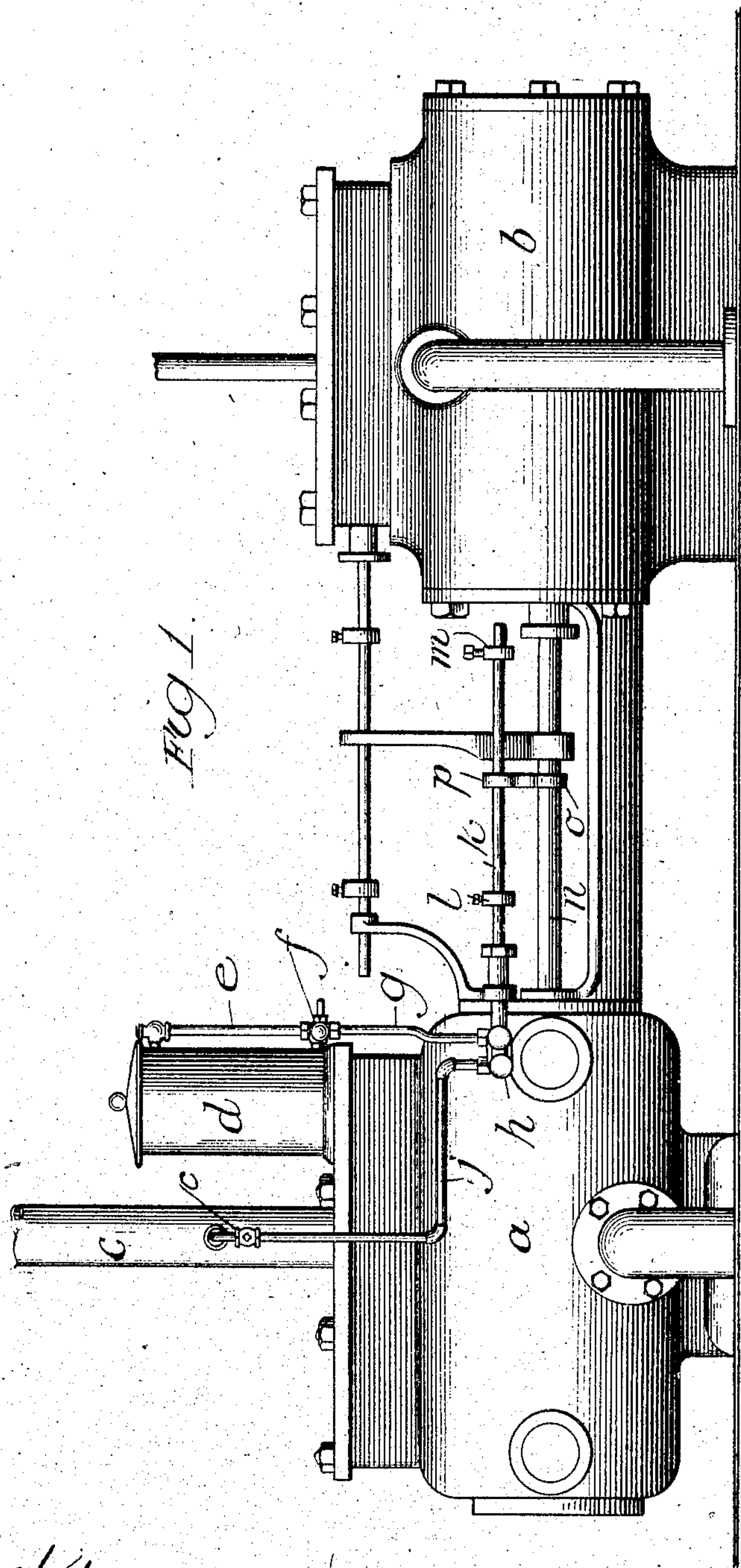


No. 786,914.

PATENTED APR. 11, 1905.

J. F. McCANNA.
BOILER COMPOUND FEEDER.
APPLICATION FILED JULY 25, 1904.



Witnesses:
Harold G. Barrett
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UNITED STATES PATENT OFFICE.

JOHN F. McCANNA, OF CHICAGO, ILLINOIS, ASSIGNOR TO JOHN F. McCANNA COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BOILER-COMPOUND FEEDER.

SPECIFICATION forming part of Letters Patent No. 786,914, dated April 11, 1905.

Application filed July 25, 1904. Serial No. 217,945.

To all whom it may concern:

Be it known that I, JOHN F. McCANNA, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Boiler-Compound Feeders, of which the following is a specification.

My invention is concerned with certain new and useful improvements in boiler-compound feeders; and it consists in certain arrangements and organizations of parts whereby I operate through the pump which supplies water to the boiler an auxiliary pump connected with a reservoir containing a boiler-cleaning compound, so that as the water-pump is operated a quantity of boiler-cleaning compound is forced with the water delivered by said pump to the boiler; and it further consists in associated means whereby the boiler-cleaning compound is delivered in uniform quantity, which may, however, be adjusted and controlled as occasion may require.

To illustrate my invention, I annex hereto a sheet of drawings, in which the same reference characters are used to designate identical parts in both the figures, of which—

Figure 1 is a side elevation showing my apparatus in position, and Fig. 2 is a sectional view through a three-way cock and its gage-glass employed in connection with the reservoir for the boiler-cleaning compound.

In the drawings the reference-letter *a* denotes a pump-cylinder, and *b* a steam-cylinder for operating the same for forcing a supply of water to a boiler (not shown) through the discharge-pipe *c* from the pump-cylinder. A reservoir *d* is mounted at a suitable place, as on top of the pump-cylinder, for the boiler-cleaning compound. This reservoir is preferably provided with a gage-glass *e*, leading from the top of said reservoir and connected thereto at its lower end by a three-way cock *f*. (Shown in detail in Fig. 2.) A supply-pipe *g* leads from the valve to an auxiliary pump *h*, and a discharge-pipe *j* leads from said pump to the water-discharge pipe *c*, so that the boiler-cleaning compound is discharged into the water at each stroke of the auxiliary pump. I op-

erate the auxiliary pump from the water-supply pump, and for this purpose I provide a suitable connection, such as by providing the elongated piston-stem *k* of the auxiliary pump with a pair of tappets *l* and *m*, one or both of which are adjustable thereon, and the piston-rod *n* of the water-pump with a coöperating arm *o*, the upper end of which is provided with a collar or recess *p*, through which the rod *k* passes. As the arm *o* reciprocates it coöperates with the tappets of the stem *k* to move the piston of the auxiliary pump back and forth in its associated cylinder to force the compound through the pipe *j* to the boiler. By adjusting the position of either or both of the tappets *l* and *m* I vary the length of the stroke of the associated piston, and thus regulate and adjust the amount of the discharge, which can be readily ascertained by turning the three-way cock *f* to a position one hundred and eighty degrees from that shown in Fig. 2, where it will be seen that the boiler-cleaning compound will be drawn slowly through the gage-glass, the small diameter of which permits the ready ascertaining of the amount of the feed by merely watching it.

While I have shown my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a boiler feeding apparatus, the combination with a water-supply pump, of a reservoir for the boiler-cleaning compound, an auxiliary pump therefor, a gage-glass connected with said reservoir, a piston for the water-pump having a projection thereon, a piston for the auxiliary pump parallel to said first piston, tappets thereon with which the projection coöperates, a discharge-pipe connecting the water-supply pump and the boiler, a pipe connecting the reservoir and auxiliary pump, a pipe connecting the auxiliary pump with the discharge-pipe, and a three-way valve in the pipe connecting the auxiliary pump and the reservoir whereby the compound may

be drawn either from the reservoir or the gage-glass.

2. In a boiler feeding apparatus, the combination with a water-supply pump, of a reservoir for the boiler-cleaning compound, an auxiliary pump therefor, a gage-glass connected therewith, connections between the water-pump and the auxiliary pump whereby the auxiliary pump will be operated at each operation of the water-pump, a discharge-pipe connecting the water-supply pump and the boiler, a pipe connecting said boiler-cleaning-compound reservoir and auxiliary pump, a discharge-pipe connecting said auxiliary pump

and water-supply pipe, and valve connections between the pipe connecting the auxiliary pump and boiler-cleaning-compound reservoir whereby the contents of said reservoir may be drawn from the reservoir through the gage-glass, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. McCANNA.

Witnesses:

ARTHUR B. SEIBOLD,
ELIZABETH MOLITOR.