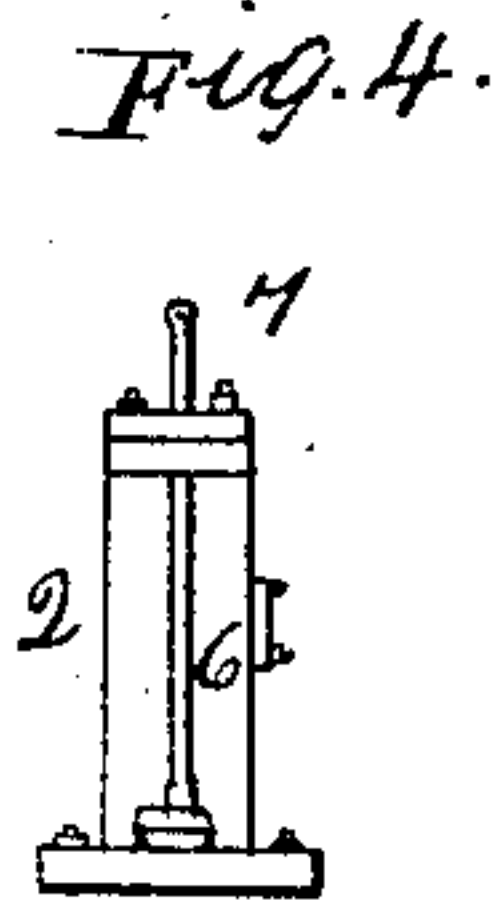
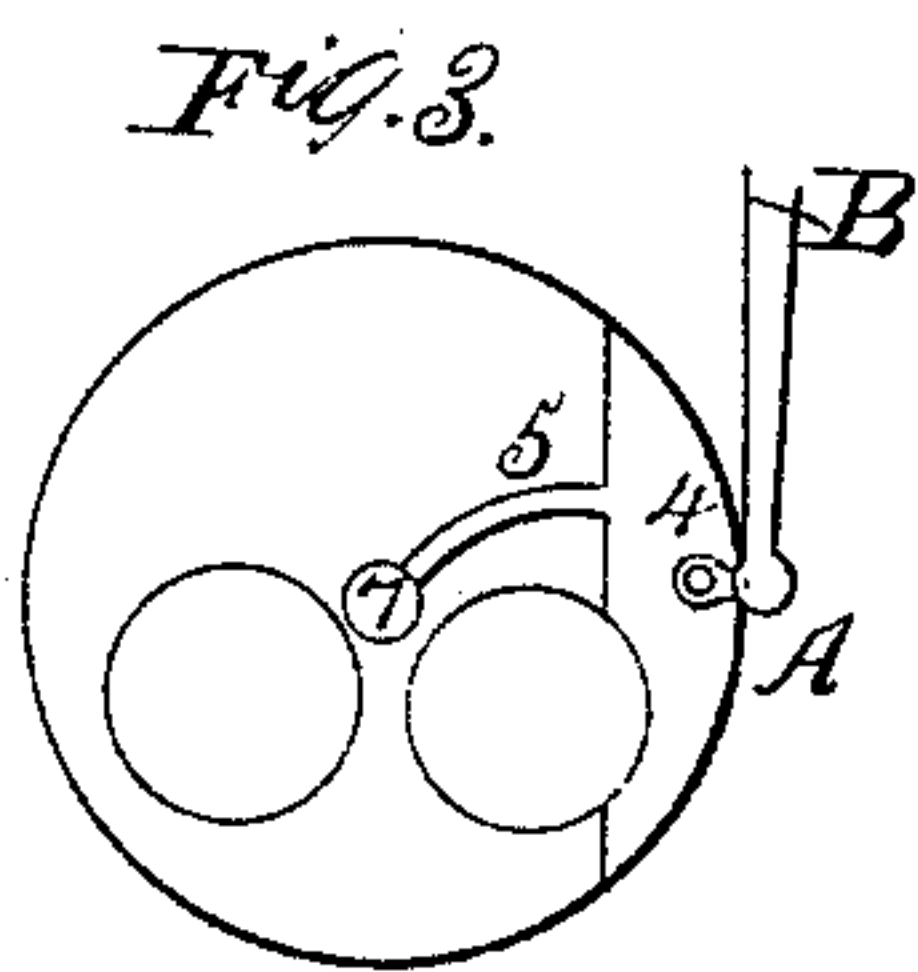
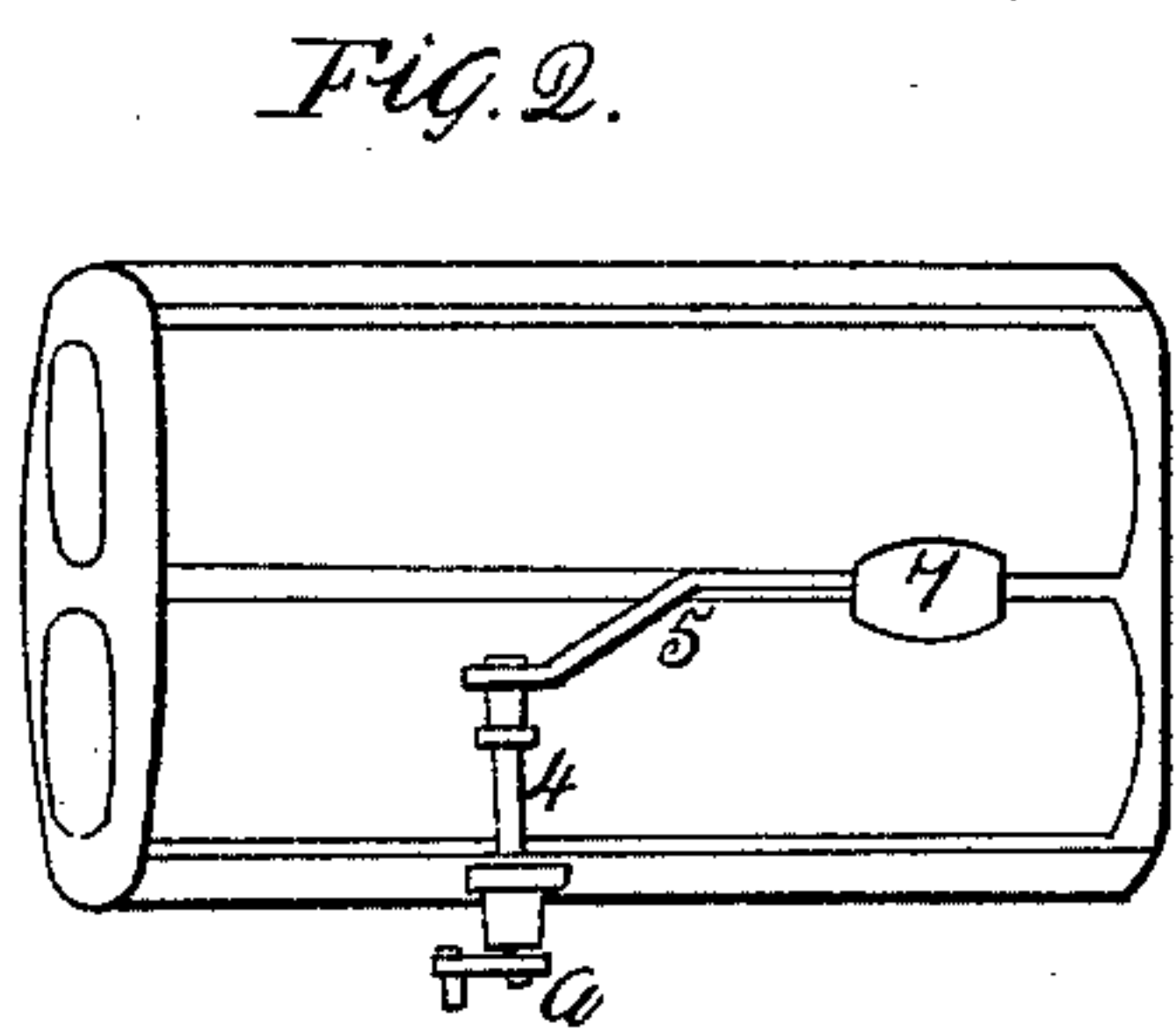
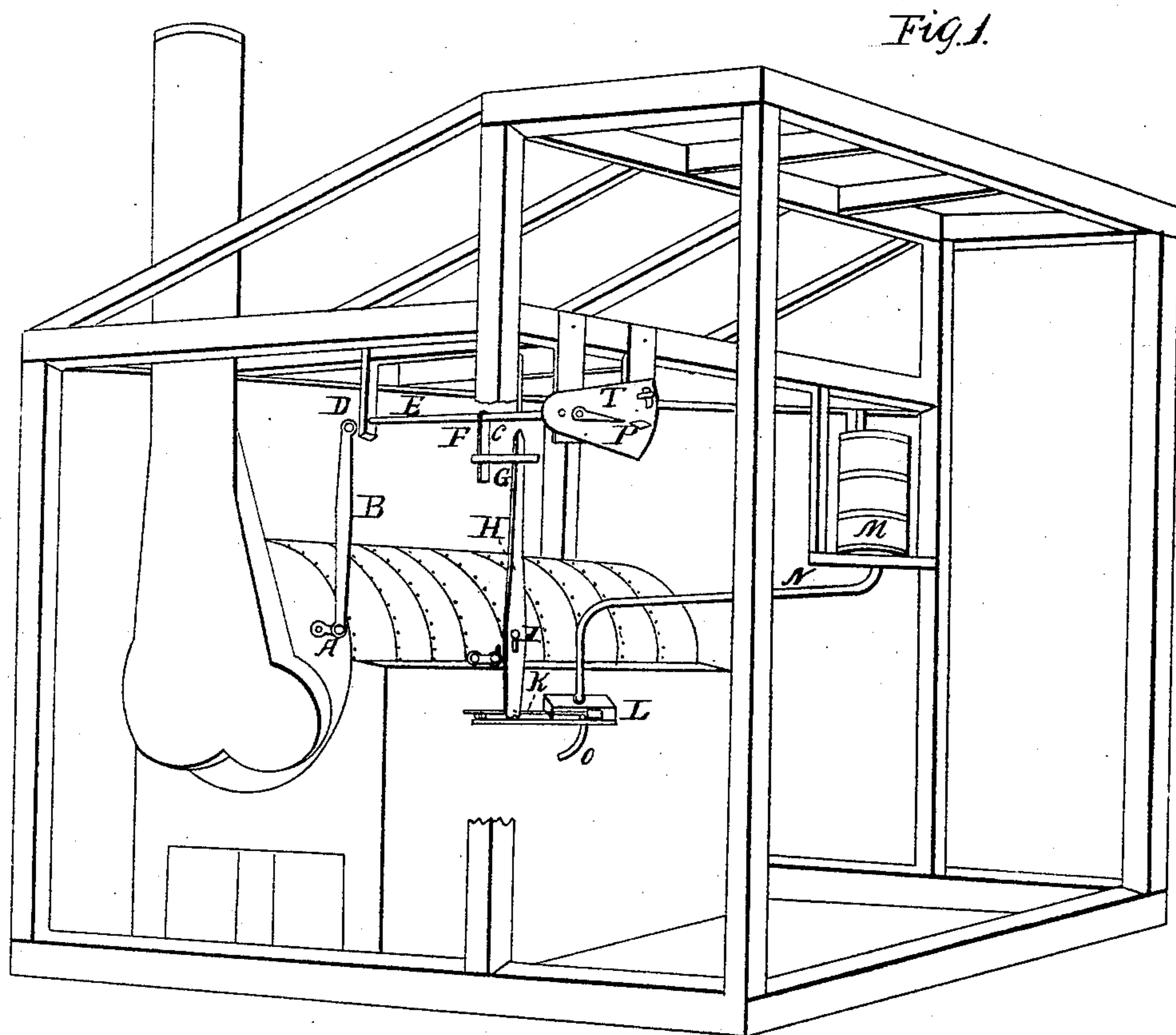


I. L. Colman,
Steam-Boiler Water-Feeder,
No. 23,229,
Patented Mar. 15, 1859



UNITED STATES PATENT OFFICE.

I. L. COLMAN, OF VINCENNES, INDIANA.

APPARATUS FOR REGULATING THE SUPPLY OF WATER TO STEAM-BOILERS.

Specification of Letters Patent No. 23,229, dated March 15, 1859.

To all whom it may concern:

Be it known that I, I. L. COLMAN, of Vincennes, county of Knox, State of Indiana, have invented a new and useful Machine for Regulating the Water in a Steam-Boiler, termed "I. L. Colman's Steam-Boiler Water-Regulator;" and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

To enable others skilled in machinery to make and use my invention I will proceed to describe the construction and operation, in which—

Figure 1 is a perspective view, Fig. 2 a down view into the boiler, Fig. 3 an end view of boiler, Fig. 4 a water chest, Fig. 1 showing head of boiler crank A screwed on float arbor passing into the boiler shown at Fig. 3, end of boiler open, the crank A on the arbor connected with the float arm 5 to the float 7 falling between the flues. If head of boiler is obstructed put it on the side of the boiler as shown at Fig. 2, crank A on the float arbor 4 passing through side of boiler with a bearing screwed into the flue, the float arm 5 fastened on arbor and float 7 between the flues. Fig. 1. From crank A the pitman B extends up to crank D on rocker shaft E. On the rocker shaft at F the lever C is fastened, extending down to the bar G which extends to lever H. This lever vibrates at the oblong hole I, the lower end of lever H at K forked with a pin passing through fork and piston of slide valve in water chest L, supply pipe N leading from cistern M through water chest L, through

pipe O, into heater P, the detector S, the pointer on the end of rocket shaft E, T a plate movable and fastened by a screw so that it will stand with point to the pointer. This detector may be put at any place desired and any number, and every crank or lever may be made a detector, as shown at lever H, the up end being a pointer with point above.

It is easily perceived that when float 7 rises in the boiler the water valve closes discharge pipe and the detector pointer rises and when it falls the water valve opens the detector pointer falls. Thus the valve acting in opposition brings the water in the boiler to a standing point. Should that place be too high screw the valve forward by the valve piston, if too low reverse the screw. When once right it cannot materially change with the same head of supply water and the force pump in order, which if not right the detector will soon tell.

Any of the known valves will answer with a slight change in the machinery, as shown at Fig. 4, water chest 2, supply pipe 3, discharge pipe 4, valve 5, piston 6, connected to the stem of the valve 5, a pitman working on piston at 7.

I do not claim the float in boiler crank levers water chest valve or detector but

I do claim—

The combined arrangement of these to effect the object desired to regulate the water in a steam boiler to any desired point from which is cannot materially change.

I. L. COLMAN.

Witnesses:

M. L. EDSON,
H. HARMAN.