

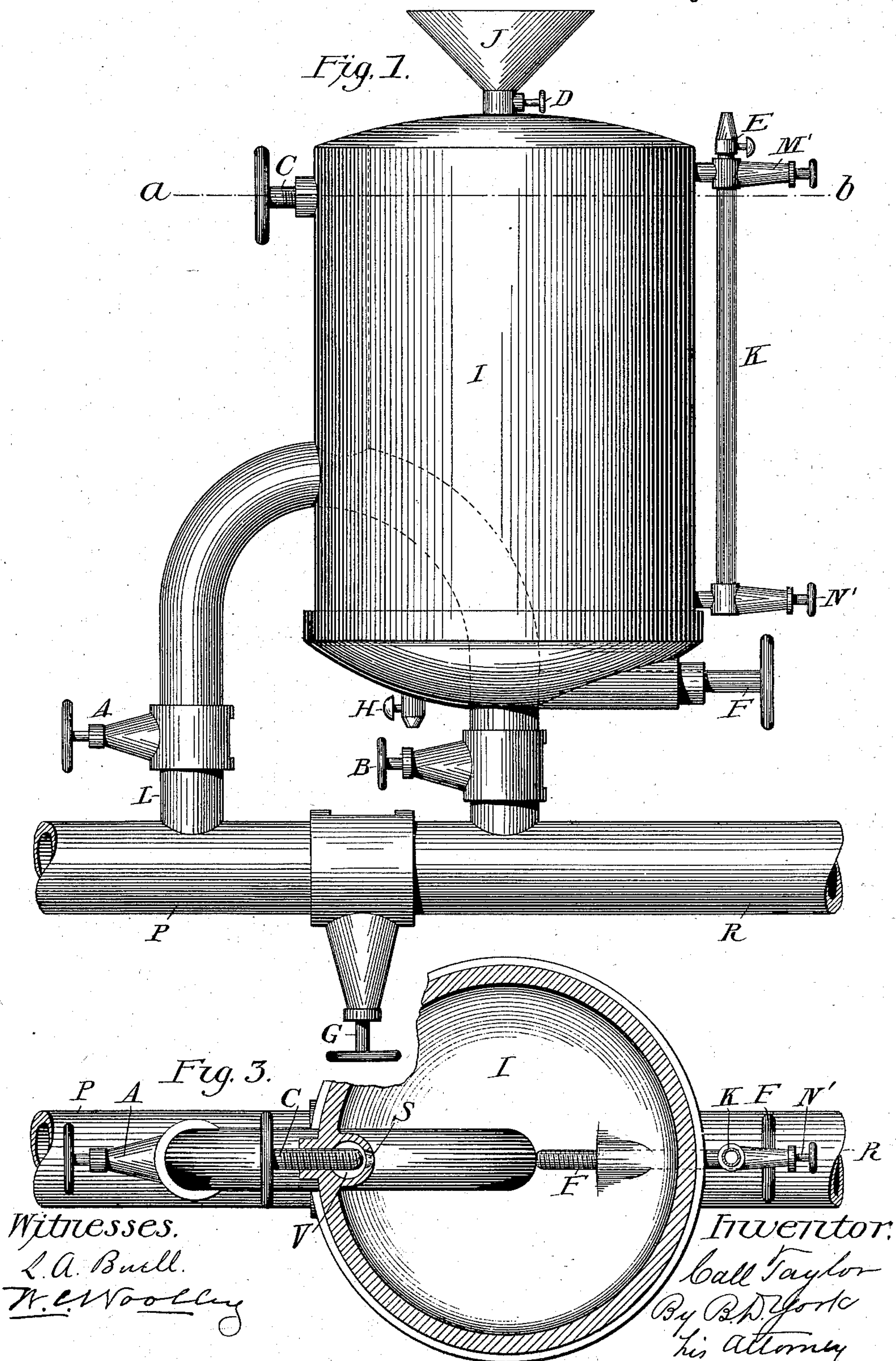
(No Model.)

2 Sheets—Sheet 1.

C. TAYLOR.  
BOILER COMPOUND FEEDER.

No. 560,764.

Patented May 26, 1896.





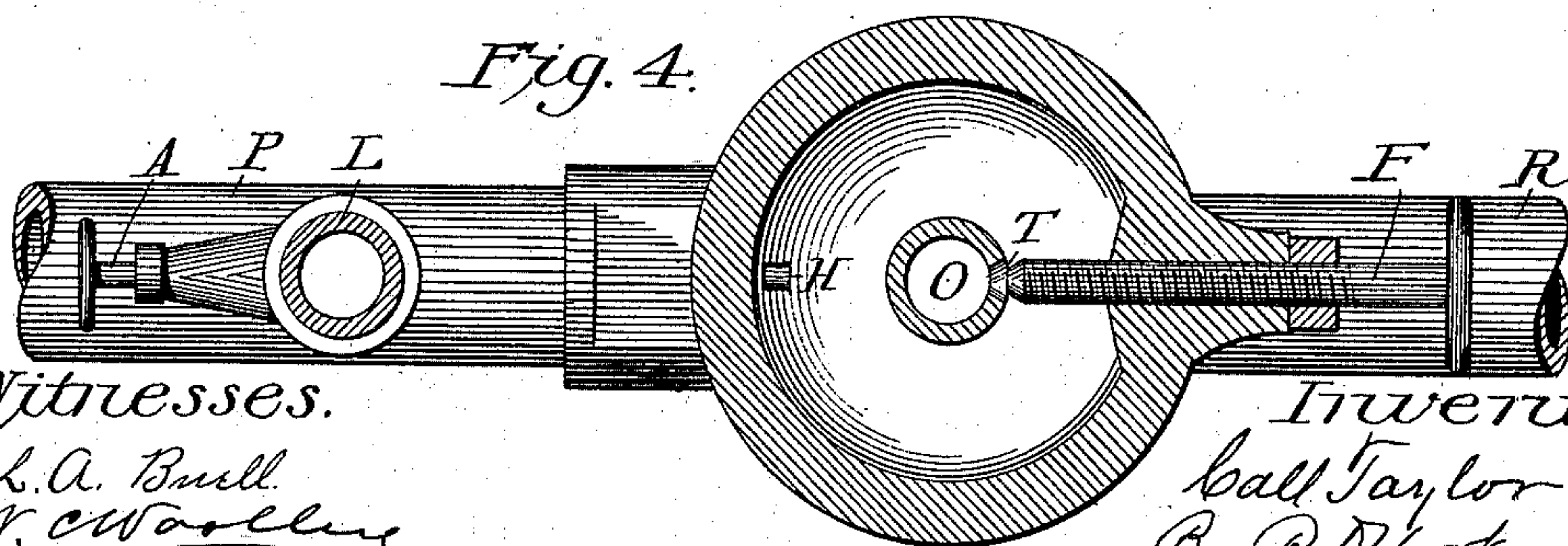
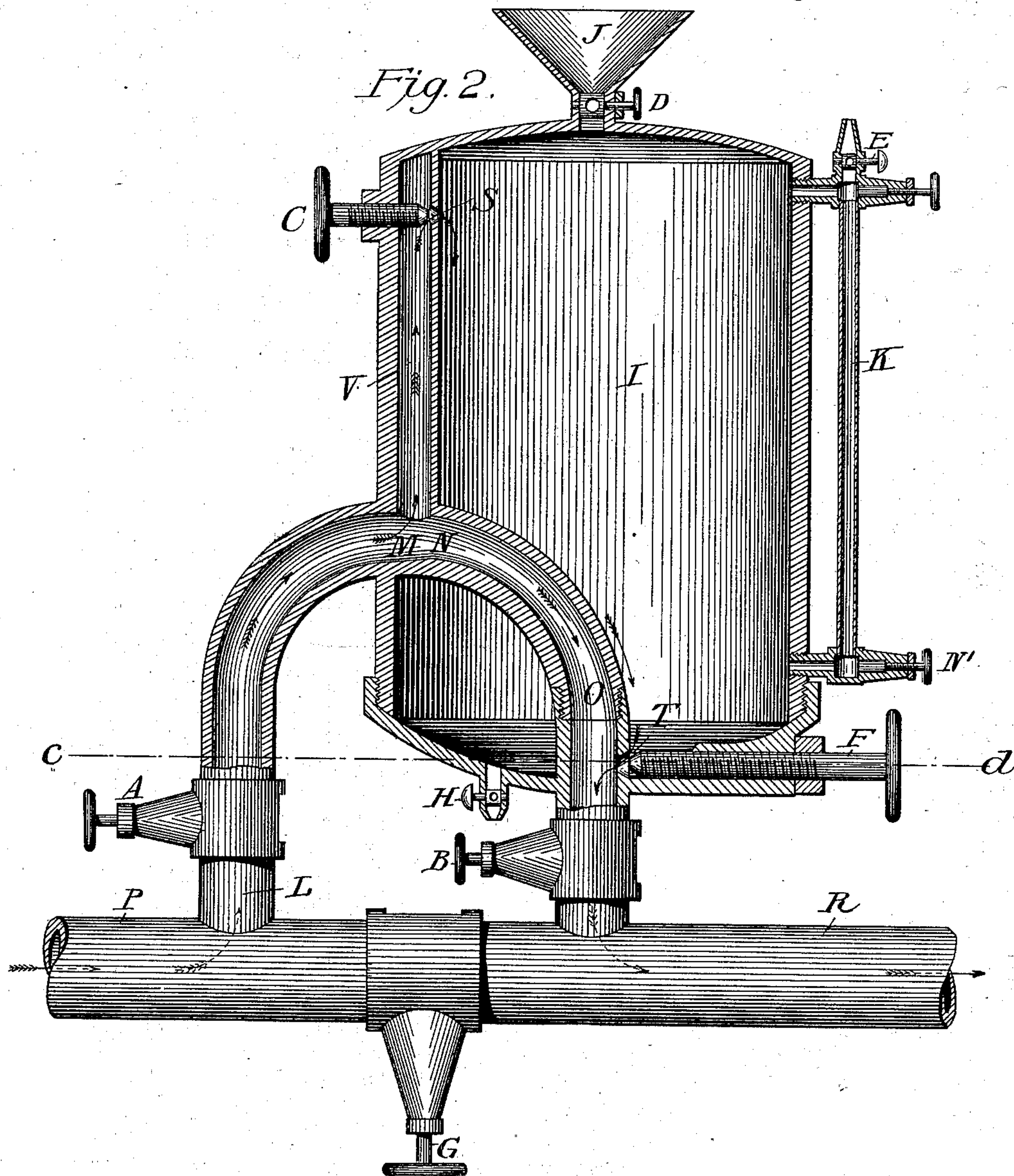
(No Model.)

2 Sheets—Sheet 2.

C. TAYLOR.  
BOILER COMPOUND FEEDER.

No. 560,764.

Patented May 26, 1896.



Witnesses.

L. A. Buell.  
W. C. Woolley

Inventor.

C. Taylor  
By R. D. York  
his Attorney



# UNITED STATES PATENT OFFICE.

CALL TAYLOR, OF DETROIT, MICHIGAN, ASSIGNOR OF THREE-FOURTHS TO WILLIAM J. KINMONT AND CHARLES W. WALTON, OF SAME PLACE, AND WILLIAM H. FAXON, OF BUFFALO, NEW YORK.

## BOILER-COMPOUND FEEDER.

SPECIFICATION forming part of Letters Patent No. 560,764, dated May 26, 1896.

Application filed January 23, 1895. Serial No. 535,984. (No model.)

*To all whom it may concern:*

Be it known that I, CALL TAYLOR, a citizen of the United States, residing in the city of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Boiler-Compound Feeder, of which the following is so full, clear, and exact a description of a preferred means of carrying out my invention as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful apparatus for feeding into steam-boilers, with the water supply, purger or compound of any kind or other substances—such as acid, oil, or boiler-scale dissolvent used for the purpose of cleaning and keeping clean and free from scale boilers used for generating steam; and the objects of my invention are to provide an apparatus that can easily and quickly be connected with any boiler and which will operate in connection with water supply for boilers to which my invention shall be connected, and to so regulate the quantity of the compound that a larger or smaller amount will flow to the boiler and one filling of the feeder made to last a longer or shorter time, as the circumstances and the varying conditions and quantity of water may require.

With these and other minor objects in view my invention consists of the novel construction and combination of parts, as hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the appended claims.

In the drawings, Figure 1 is a side view of the invention. Fig. 2 is a vertical sectional view. Fig. 3 is a horizontal sectional view near the top of the invention at a line from *a* to *b*, and Fig. 4 is a horizontal sectional view taken near the bottom of the device on a line from *c* to *d*.

In the drawings, I is the cup, made of some suitable metal, preferably of brass, to receive and contain the compound or other desirable cleaning substance. The funnel J is placed on the top of the cup I and is for use in filling the same. The passage from the funnel J into the cup I is controlled by the valve D.

K is a glass water-gage, such as in common

use and well known, and is arranged with the valves M and N, which open or close the gage. The top of this gage is also provided with the valve E, which is used as an air-passage when the cup I is being filled.

P R is the water-supply pipe from the injector to the boiler, and with this pipe my invention is connected, and in this supply-pipe I have arranged the valve G, which will regulate and control the flow of water, either forcing the water through the compound-feeder, as indicated by arrows, or allowing the same to pass directly to the boiler by closing valves A and B and opening the valve G. The cock H is arranged simply for the purpose of draining the cup when necessary or desirable for any cause. The valves A and B are arranged to regulate the flow of water through the feeder and the valves C S and F F to allow force of the water from injector and to regulate the flow of compound in the cup I through the opening and passage and into and with the feed-water to the boiler. The feeder is connected to a section of pipe, which is joined to the feed-water pipe between the injector and valve by means of threaded connections, such as are well known in common use. The end of the section of feed-pipe P is placed toward the injector and the end R toward the boiler.

When the compound to be fed into the boiler has a specific gravity greater than water, the feeder is arranged in a position above the feed-pipe P R, as shown in the drawings, Fig. 1; but when the compound to be fed into the boiler has a specific gravity less than water the feeder is made to assume a position substantially the reverse from that shown in the drawings.

The manner or method of using and operating my invention may be briefly described as follows: To fill the feeder, close the valves A B C F and the drain-cock H, open the air-cock E and the valve D, and then fill the cup I through the funnel J with the desired compound, the valve-gage K indicating the quantity of compound in the cup. When the cup is full, or nearly so, close the air-cock E and valve D. If it is desired to force all the feed-water through the pipes L M N O, the valve



G should be closed entirely and the valves A and B opened, or if only a part of the feed-water is to be carried through the pipes L, M, N, and O the valve G should be partially open. Now open the valves C and F. The pipe from N to O being somewhat reduced in size from the pipe from L to N creates a back pressure at N and (the valves C and F being opened) forces the water through the opening S into the cup I and causes the compound in the cup I to pass out through the opening T (the valve F being open) into the feed-water, passing through the pipe N O and on thence to the boiler. The pipe N O is enlarged at O to the size of the pipe L M and will easily carry the water and compound combined. The amount of compound fed into the boiler is perfectly controlled and regulated by the valves C and F, which govern the openings S and T, respectively. It has been customary heretofore to use compounds and scale-dissolvents by putting a quantity into the boiler at intervals; but by the use of my invention a continual flow of the compound can be had and the amount regulated with very little trouble.

It will be readily understood that the cup

I can be made in any desired size, according to circumstances. The top and bottom of the cup are preferably screwed onto the body of the cup, so that the interior can easily be reached should it be desirable, for any cause.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The herein-described boiler-compound feeder arranged to be connected to and with the feed-water supply, having the cup I to receive the compound, the valve G for closing the supply-pipe and forcing the water through the feeder, the valves A and B regulating the flow of water through the feeder, the pipes L, M, N, O, reduced in size at O, and the pipe V all substantially as shown and specified.

2. In a boiler-compound feeder the combination of the cup I with the pipes L, M, N, O and V and the valves A and B adapted to regulate the flow of water through the feeder, substantially as specified.

In witness whereof I hereunto set my hand.

CALL TAYLOR.

Witnesses:

H. PEDDIE,

J. H. GARDINER.