

No. 681,890.

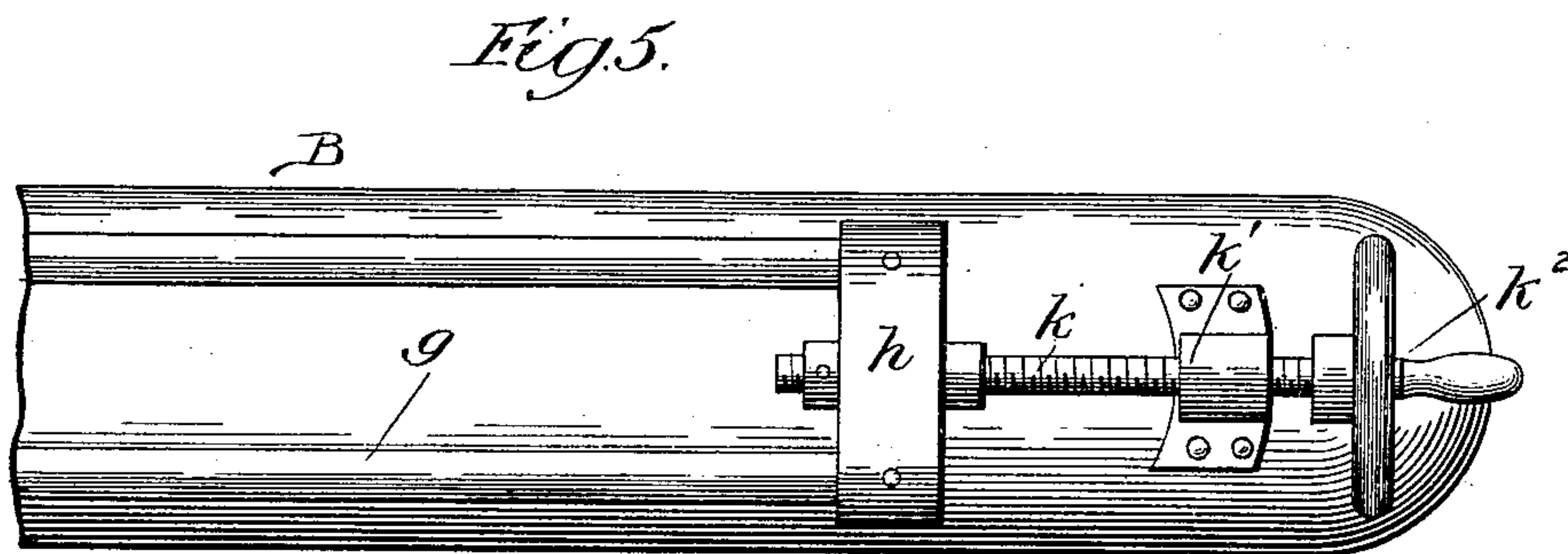
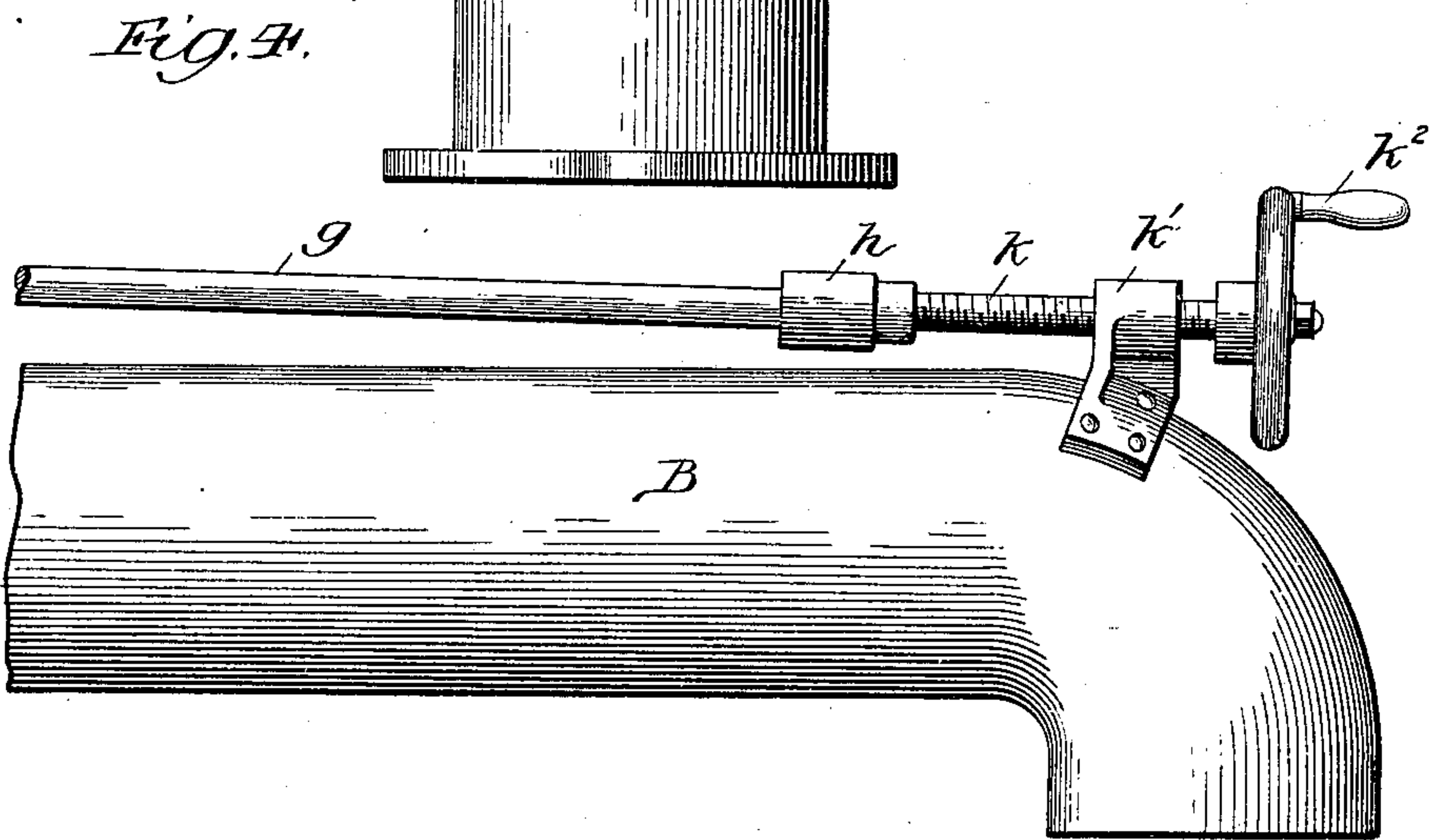
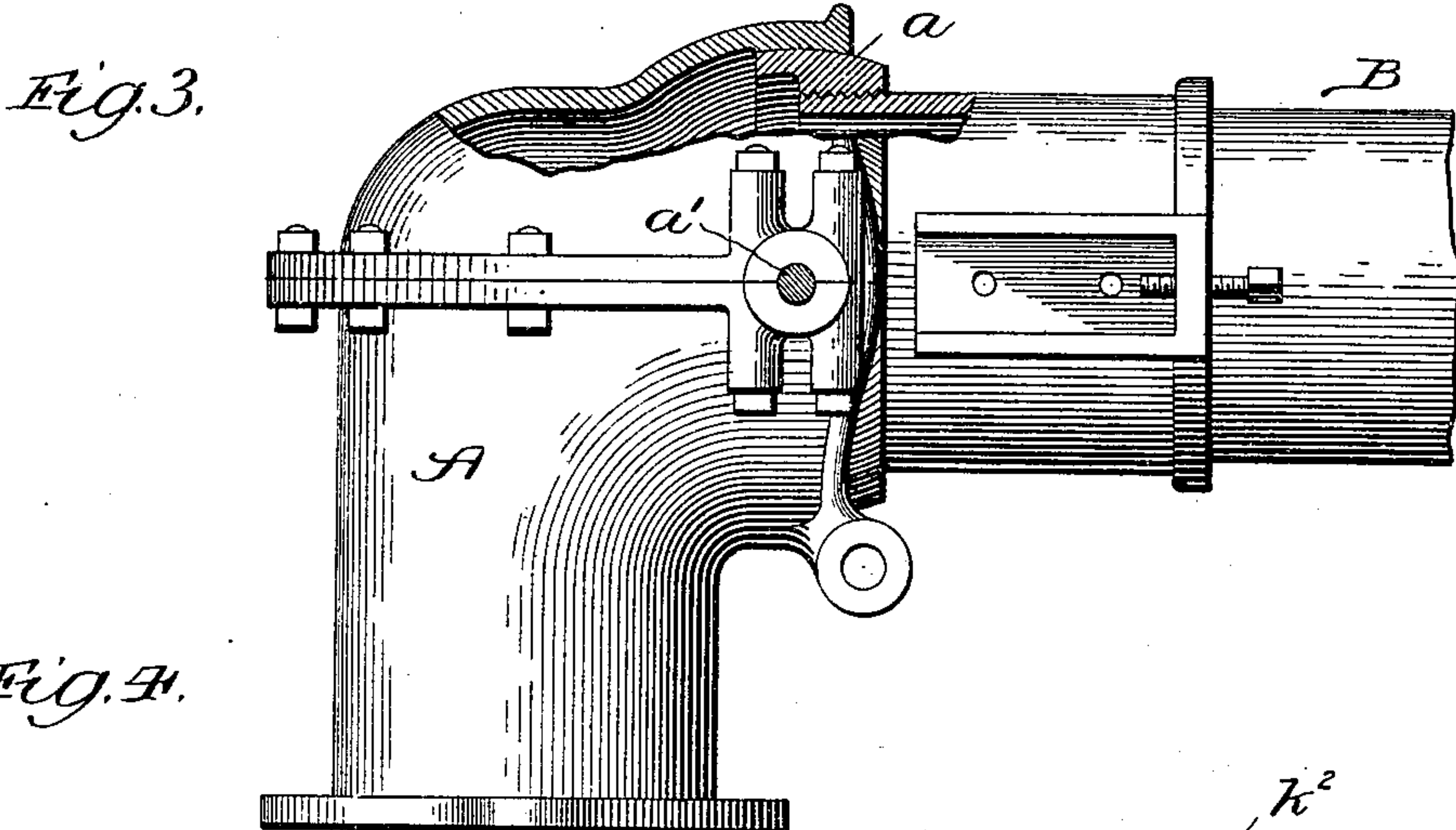
Patented Sept. 3, 1901.

T. W. SNOW.
VALVE ACTUATING DEVICE.

(Application filed Feb. 4, 1901.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

THEODORE W. SNOW, OF CHICAGO, ILLINOIS.

VALVE-ACTUATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 681,890, dated September 3, 1901.

Application filed February 4, 1901. Serial No. 45,915. (No model.)

To all whom it may concern:

Be it known that I, THEODORE W. SNOW, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Valve-Actuating Devices, of which the following is a specification.

My invention relates particularly to valve-actuating devices for use in connection with water stand-pipes, such as commonly are employed for railway purposes.

My primary object is to provide a valve-actuating device, the manipulated portion of which is connected with the vertically-swinging portion of the stand-pipe, and the parts of which are so fashioned and disposed that the vertically-swinging part of the pipe may be freely moved while the valve is closed.

My invention is illustrated in one form in the accompanying drawings, in which—

Figure 1 represents a broken view in side elevation of the upper portion of a stand-pipe and the vertically-swinging pipe connected therewith; Fig. 2, a plan view of the same; Fig. 3, a broken section, certain of the parts being removed; Fig. 4, a view in side elevation of the outer or free end of the vertically-swinging pipe, and Fig. 5 a plan view of the same.

In the construction here shown the vertical portion of the pipe swings about its vertical axis, according to the construction shown in the patent to Moore, No. 547,962, dated October 15, 1895.

A represents the vertical portion of the stand-pipe, and B the normally horizontally-disposed vertically-swinging pipe connected therewith. In the construction here shown the pipe B has a globe-surface joint *a* with the upper portion of the vertical pipe and swings about a horizontal axis *a'*. The pipe B is provided with rigid arms *b*, with which connects a yoke *b'*, bearing a counterweight *b²*. The construction of the joint *a* and various accessory parts is fully described and claimed in the application of Moore, Serial No. 45,909, filed on even date herewith.

The valve-operating device herewith shown and claimed is for use in operating the valve at the base of the stand-pipe, which valve is kept normally closed and which is opened to admit water to the stand-pipe after the lat-

ter has been swung into position to supply a locomotive-tender.

The improved valve-actuating device comprises vertically-disposed rods *c*, bell-crank levers *d*, a yoke or head *f*, horizontally-disposed rods *g*, connected with the head *f*, a head *h*, connected with the rods *g*, and a screw *k*, having threaded connection with a lug *k'* on the free end of the pipe B and supplied with a hand-wheel *k²*.

In the construction to which the valve-actuating device shown has been applied there is employed an upwardly-seating valve, and in the construction described in the above-named application said valve is actuated by rods *c*, placed exterior to the vertical pipe A. In the drawings the upper portions of the pipe A and the rods *c* only are shown; but it will be understood that the lower ends of the rods connect with the valve in a suitable manner—such, for instance, as shown in said application.

The rods *c* are located at the sides of the pipe A out of the plane of the pipes A and B. The bell-crank levers *d* are pivoted to stationary parts at points *l*, and one arm of each bell-crank has pivotal connection at a point *l'* with the adjacent end of the yoke *f*. The yoke *f* is located above the pipe B near the joint between said pipe and the pipe A, and the pivotal points *l'* coincide with the horizontal axis *a'*, about which the pipe B swings. This is true when the parts are in the position shown in Fig. 1, which is the position corresponding to the closed position of the valve.

In practice the pipe B is normally disposed parallel to the railroad-track and is swung perpendicularly to the track when water is to be taken. As stated, the pipe A turns on a vertical axis to permit the pipe B to assume a position perpendicular to the track, and from the foregoing description it will be understood that the pipe B may be swung to bring its free end to any desired height, while the valve remains closed. This action is permitted by locating the points *l'* in extensions of the axis *a'*. When the pipe B has been given the required position to conduct water to the tender which is being supplied, the hand-wheel *k²* may be turned to move the head *h* away from the lug *k'*. This rocks the

bell-crank d in a direction to depress the rods c , thereby lowering the valve (not shown) from its seat and permitting water to enter the stand-pipe. After the tender-tank has
 5 been filled the hand-wheel may be turned in a reverse direction to shut off the water-supply. This action brings the points l' again to the position shown in Fig. 1, when the pipe B may be swung upwardly, after which the
 10 whole stand-pipe may be turned to its position with the arm B parallel to the track.

Changes in details of the means for actuating the head f are contemplated, the gist of the present invention lying in having the
 15 connection between the portion of the valve-actuating mechanism carried by the pipe B and the portion carried by the pipe A located when the valve is closed in the axis about which the pipe B swings.

20 It is to be understood that the valve may open upwardly, in which case the location of the pivot for the bell-cranks could be changed accordingly.

What I claim as new, and desire to secure
 25 by Letters Patent, is—

1. In a valve-actuating device for stand-pipes, mechanism carried by the vertical portion of the stand-pipe and connected with the valve, manual operating means therefor connected with the horizontal arm of the pipe,
 30 and connection between said two portions lying, when the valve is closed, in substantially the axis about which said horizontal arm swings, substantially as described.

35 2. In a stand-pipe having a vertical standard, and an arm connected therewith and swinging about a horizontal axis, a bell-crank lever pivoted to a relatively stationary part and connected at one of its arms with the
 40 valve, and an actuating device for said lever carried by the horizontal arm of the pipe, and pivotally connected with the free end of said lever, said pivoted connection lying in the

axis about which said horizontal pipe swings, substantially as described. 45

3. The combination with a pipe A and a pipe B connected therewith to swing about an axis a' , of bell-crank levers pivoted on opposite sides of the upper portion of the pipe A, each lever having connection at one arm with the
 50 valve, a yoke connected with the free ends of said levers, the points of connection coinciding with the axis a' , and manual means carried by the pipe B for moving said yoke, substantially as described. 55

4. In a valve-actuating device for the purpose set forth, bell-crank levers pivoted to relatively stationary parts and located at opposite sides of the stand-pipe, vertical valve-actuating rods connected with one set of arms
 60 of said levers, and manual operating means connected with the vertically-swinging arm of the pipe and having pivotal connection with the free arms of said levers, said last-named pivotal connections coinciding with
 65 the axis about which said vertically-swinging arm turns, substantially as described.

5. In a valve-actuating device for the purpose set forth, a yoke f , rods g connected with said yoke, manual means for moving
 70 said rods, bell-crank levers at the sides of the stand-pipe to which the device is applied and having pivotal connection at one set of arms with said yoke, pivotal connections between said levers and relatively stationary
 75 parts of the vertical portion of the stand-pipe, vertically-moving valve-actuating rods in the rear of the bell-crank fulcrums, and pivotal connections between said last-named rods and the free arms of said bell-cranks,
 80 substantially as and for the purpose set forth.

THEODORE W. SNOW.

In presence of—

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ALBERT D. BACCI.