

No. 714,146.

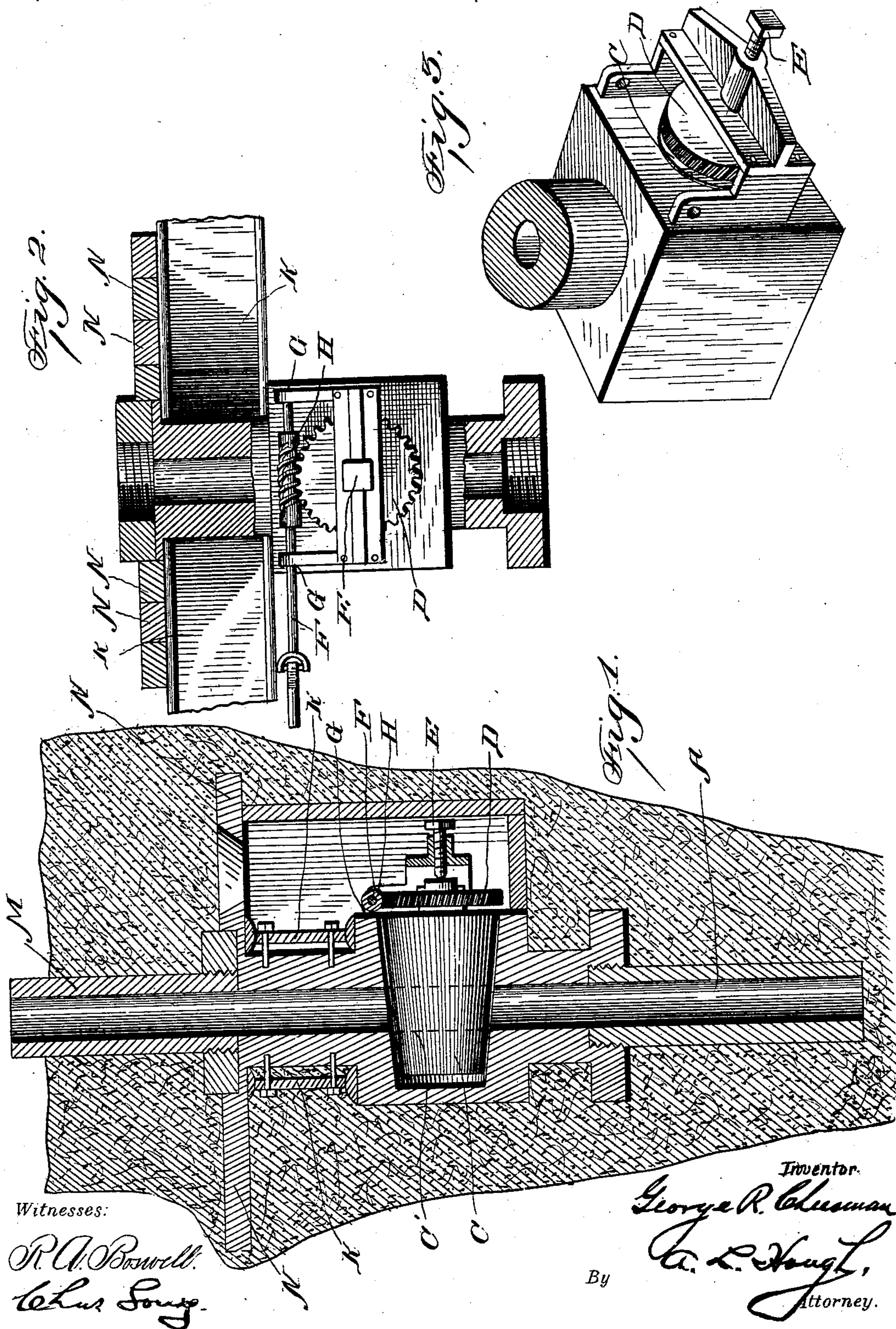
Patented Nov. 25, 1902.

G. R. CHEESMAN.

DEVICE FOR PREVENTING GAS OR OIL WELLS FROM GUSHING, &c.

(Application filed Mar. 26, 1902.)

(No Model.)



UNITED STATES PATENT OFFICE.

GEORGE R. CHEESMAN, OF AUBURN, NEW YORK.

DEVICE FOR PREVENTING GAS OR OIL WELLS FROM GUSHING, &c.

SPECIFICATION forming part of Letters Patent No. 714,146, dated November 25, 1902.

Application filed March 26, 1902. Serial No. 100,057. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. CHEESMAN, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Devices for Preventing Gas or Oil Wells from Gushing, &c.; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in devices for controlling the flow in gas and oil wells, and has for its object to provide means whereby when the well is drilled down to rock and piped gushing of the well may be prevented and, if necessary, the supply of gas or oil being forced from the well under great pressure may be effectually shut off or providing means which allows the continuing of the drilling of the well by passing the drill through an apertured valve forming the stop-cock in the device.

The invention consists, further, in various details of construction and in the combination and arrangement of parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

My invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings similar letters of reference indicate like parts in the views, in which—

Figure 1 is a vertical sectional view through an excavation, showing my improved device in section with parts in side elevation. Fig. 2 is an end or side elevation showing the means for rotating the plug-valve.

Reference now being had to the details of the drawings by letter, A designates a piping to a well, which after having been driven into the well as a casing is thoroughly grouted, and to the upper threaded end of said pipe is screwed the lower end of the valve-chamber, which is centrally apertured and has its wall interiorly threaded to receive said pipe. Centrally and longitudinally through said cham-

ber is a passage-way of a diameter preferably equal to the diameter of said pipe, and in said chamber is a turning plug C, having a square shank portion projecting from its enlarged end. Said turning plug or valve has an aperture C' diametrically through same at such a location as to be in registration with the central passage-way through the chamber when the plug is turned in a certain position. On said square shank portion of the valve is mounted a wheel D, having a series of teeth about its circumference. E designates a thumb-screw the inner end of which is adapted to bear against the end of the valve to hold same in an adjusted position. A shaft F is journaled in the bearings G G, which are mounted on either side of the opening in the valve-chamber to receive the valve and on the end of said chamber. This shaft has a worm H thereon, which is in mesh with the teeth of said wheel D, whereby as said shaft is rotated the valve may be turned within the valve-chamber and the passage-way leading through the chamber may be opened or closed, as may be desired. To the end of the shaft F may be secured a rod having a universal-coupling connection therewith, and, if desired, any number of rods with similar connections may be connected together, so that the valve may be operated at any desired distance from the chamber.

In anchoring down the pipe and valve-chamber it is my purpose, after making a suitable excavation, to place struts K on the upper face of the valve-chamber on opposite sides of the central passage-way, and on these struts I lay a floor of planking N, which will cover a considerable area below the surface of the ground. This flooring may be twenty or thirty feet square, if desired, and to the upper threaded end of the chamber I fasten the lower threaded end of the piping M, which is adapted to extend up a short distance above the surface of the ground. After the piping M has been adjusted in place the excavation, which has its bottom covered by said plank, is filled up to the level of the adjacent ground, thus making a secure anchoring for the piping and valve-chamber, such as is intended to withstand an enormous pressure incident to gushes of gas and oil.

By the provision of the means hereinbefore

described and as illustrated in the accompanying drawings it will be apparent that in case of the well getting on fire the supply may be quickly and with safety shut off, and by
 5 having the means for operating the valve at a considerable distance from the well the regulating of the gushing may be easily adjusted.

While it is preferable to place the valve
 10 below the surface of the ground for protection in anchorage, it may be placed on the surface or above the ground with suitable anchorage without departing from the spirit of my invention.

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

1. A device for preventing gas and oil wells from gushing, comprising in combination with
 20 the piping or casing of the well, a valve-chamber secured to the upper end of said casing, and positioned in an excavation in the ground, struts resting on said chamber, planking resting on said trusses, and a filling over said

planking, a pipe screwed to the upper end of
 said chamber, a turning valve in said chamber, and means for rotating said valve, as set forth. 25

2. In combination with the piping for the well, the valve-chamber and means for anchoring same in an excavation in the ground,
 30 a turning plug in said chamber, a shank portion of said valve being squared, a toothed wheel mounted on said shank portion, a worm-shaft mounted in journal-bearings fastened
 35 to the end of the valve-chamber, a worm on said shaft in engagement with the teeth of said wheel, a rod having universal-coupling connection with said shaft for rotating said valve, a thumb-screw bearing against the end
 40 of the valve, as set forth.

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

GEORGE R. CHEESMAN.

Witnesses:

SIDNEY J. WESTFALL,
 FRED M. HOSMER.