(No Model.)

G. A. ROESSLER.

CONTROLLING APPARATUS FOR FEED PUMPS.

No. 464,733. Patented Dec. 8, 1891.

Fig. 1.

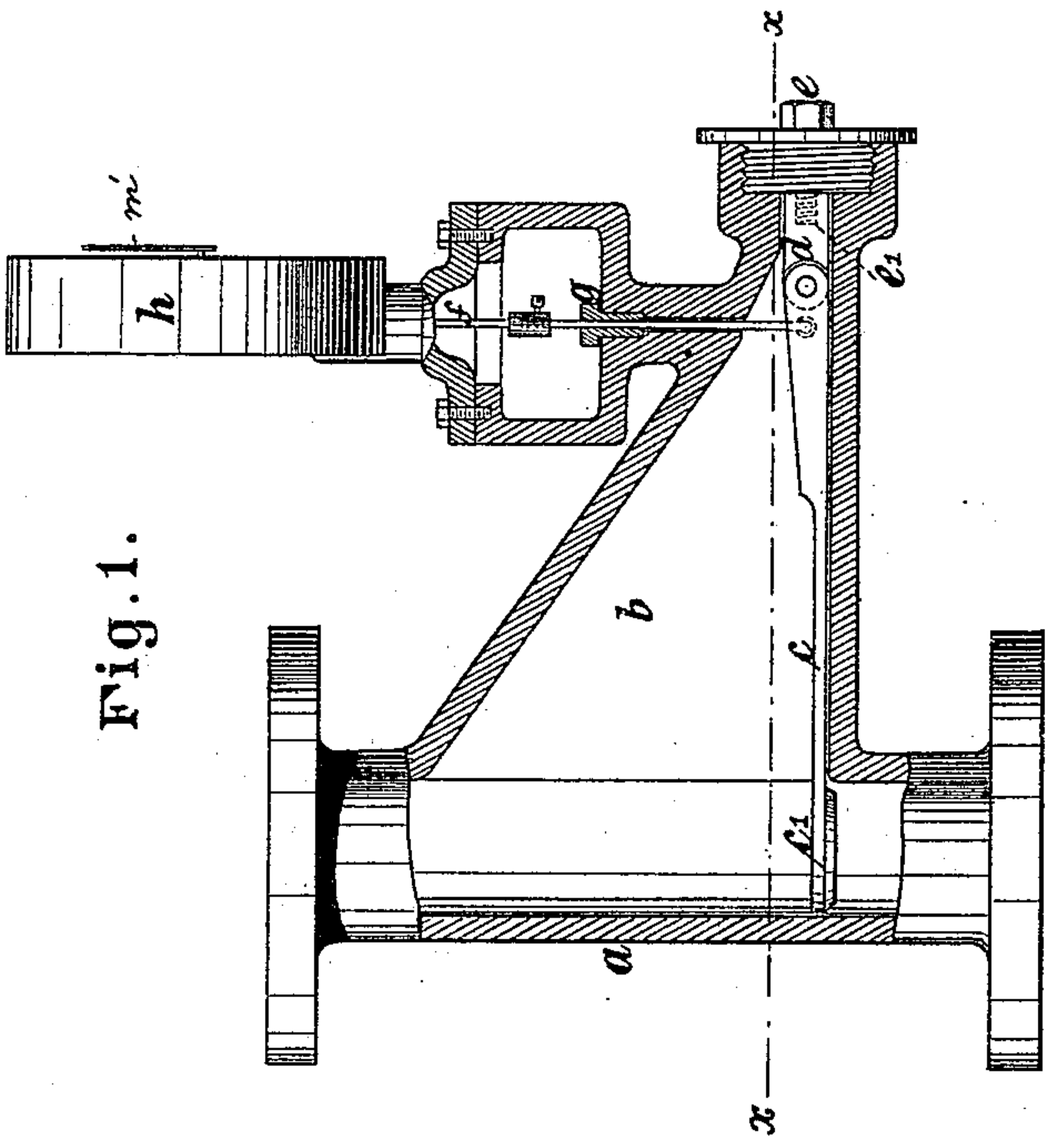


Fig. 2.

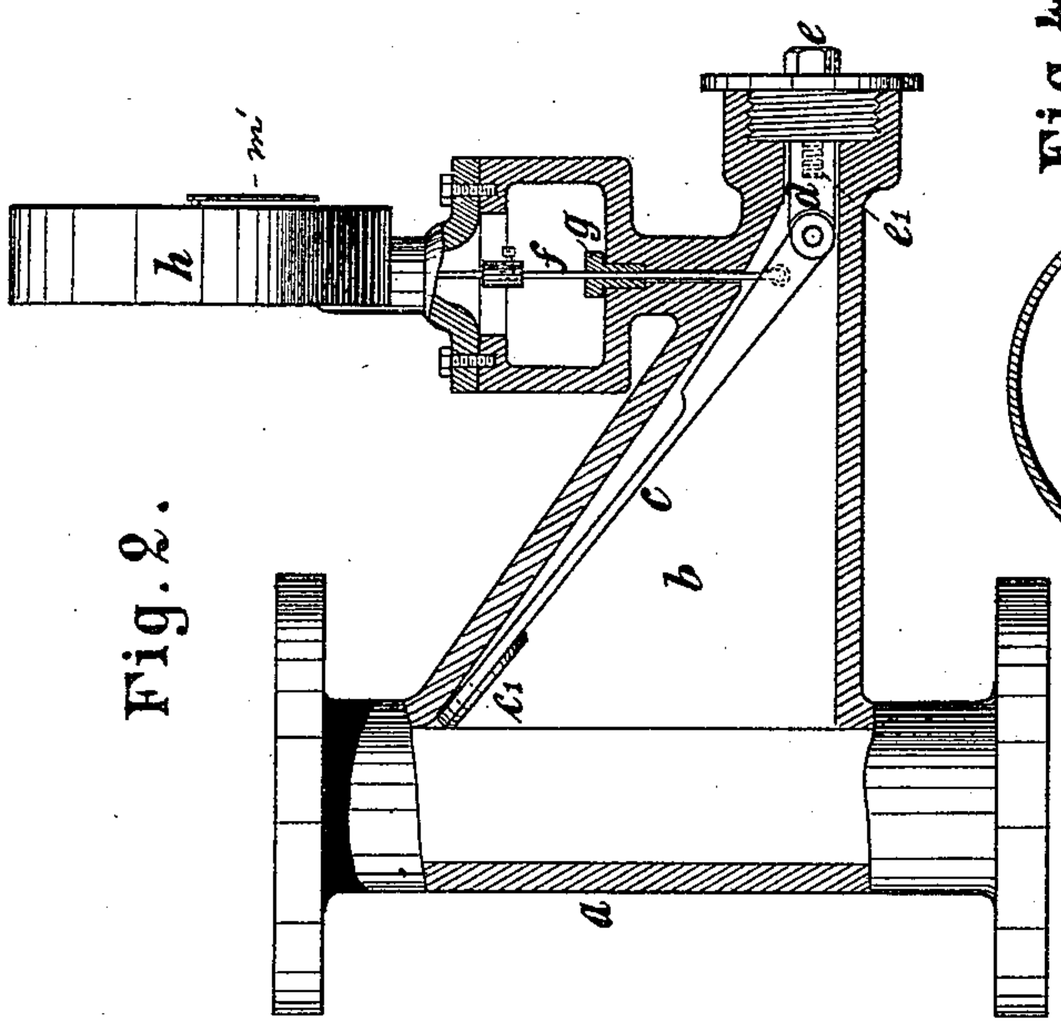


Fig. 3.

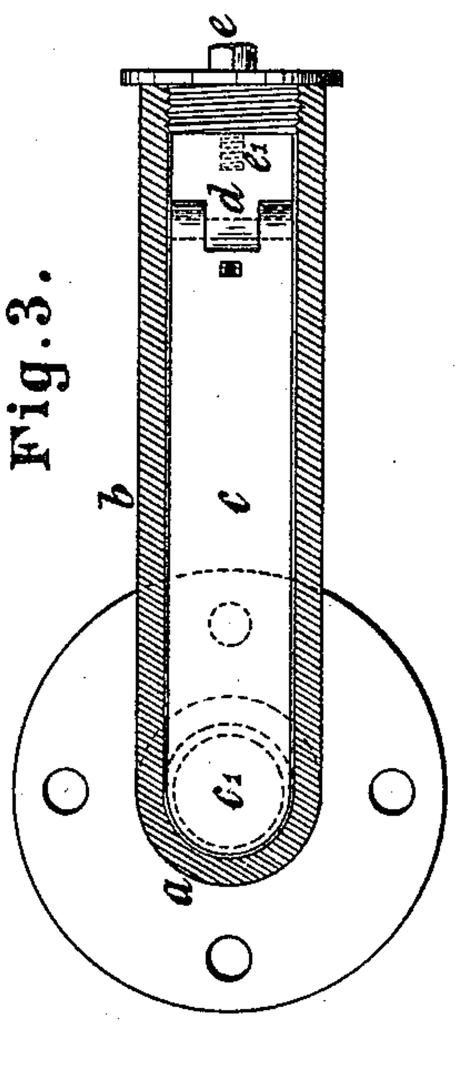
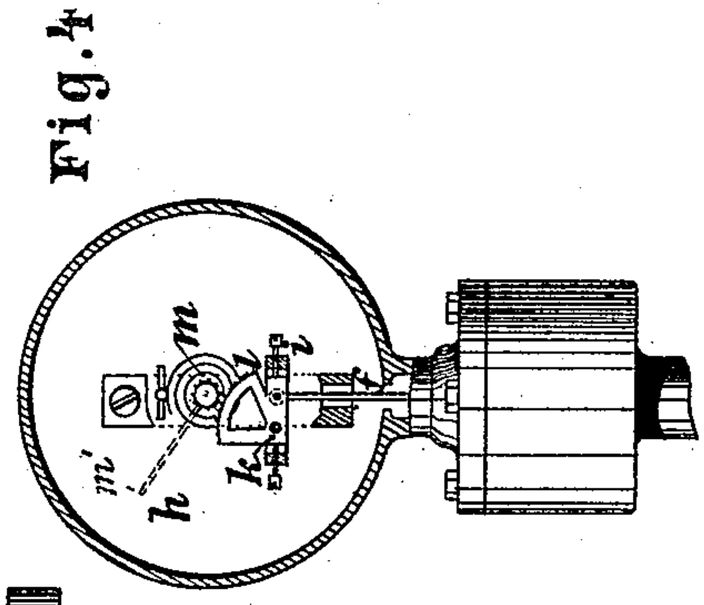


Fig. 4.



Witnesses:
Wm. Schulz.
A. Jonghmans.

Inventor:
G. A. Roessler
by his attorneys
Roeder & Brieen

UNITED STATES PATENT OFFICE.

GEORGE A. ROESSLER, OF TEGAL, JAVA.

CONTROLLING APPARATUS FOR FEED-PUMPS.

SPECIFICATION forming part of Letters Patent No. 464,733, dated December 8, 1891.

Application filed June 13, 1891. Serial No. 396,084. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. ROESSLER, residing at Tegal, in Java, and a subject of the German Emperor, have invented certain new and useful Improvements in Controlling Apparatus for Feed-Pumps, of which the following is a specification.

This invention relates to improvements in feed-pumps for the supply of water to steam-boilers and for other purposes.

The object of my invention is to provide improved means for controlling the supply of water in a simple and thoroughly reliable manner.

The invention consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is a vertical section of my improved feed-pump, partly in side view, showing the valve closed. Fig. 2 is a similar view with the valve open; Fig. 3, a horizontal section on line *x x*, Fig. 1; and Fig. 4, a vertical transverse section through box *h*.

Into the water-supply pipe or conduit I introduce a short pipe *a*, to which a casing *b* is laterally secured. Within the casing *b* a lever *c*, pivoted to a plate *d*, is arranged, normally resting on the horizontal bottom of the casing *b*, as shown in Fig. 1. The free end of lever *c* extends into the short pipe *a*, inside of which said lever carries a disk or circular plate *c'*, corresponding in area to the area of a cross-section of the interior of the pipe *a*. The plate *d*, together with the lever, is introduced into the casing *b* through an aperture or screw-socket, into which fits the screw-plug *e*, having a projecting screw-pin *e'*, which engages a tapped hole of the plate *d* to hold the same in position. When the feed-pump of the boiler is working, the water, which flows through the conduit or pipe, also passes the short pipe *a*, thereby lifting the disk *c'*, and accordingly the lever *c*, to which said disk is secured. The raised position is shown in Fig. 2, and in this position the lever *c* and disk *c'* remain as long as the regular flow of water continues through the pipe. Connected to said lever *c* is the lower end of a rod *f*, which passes up through a stuffing-box *g* into a suitable casing *h*, where said rod is connected to a small lever *i*, arranged to turn on a pivot *k*. As soon as the lever *c* is lifted by the passing water the lever *i* will be rocked on its pivot *k*. A toothed segment *l*, forming part of or secured to the lever *i* by engaging a pinion *m*, will now turn the axis of a finger or pointer *m'*, which moves over a dial placed in front of the casing *h*. It will be easily understood that following the position of the lever *c* and disk *c'* the finger will vary its position on the dial. The raised position of the lever, Fig. 2, causes the finger to keep a determined position on the dial. As long as the finger remains there the attendant may be sure that the supply of water continues normally; but as soon as there are irregularities in the supply or working order of the pump the flow of water through pipe *a* will also be irregular and the lever *c*, owing to the varying pressure acting on the disk *c'*, will begin to oscillate or vibrate, whereby the same variations will be transmitted to the finger. The attendant will thus at once observe that there are irregularities in the working of the feed, and he may regulate the same in proper manner and in good time.

What I claim is—

The combination of pipe *a* with casing *b*, a lever *c*, pivoted therein and carrying disk *c'*, and with rod *f*, lever *i*, segment *l*, pinion *m*, and pointer *m'*, substantially as specified.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 3d day of March, 1891.

G. A. ROESSLER.

Witnesses:
D. J. PARTELLO,
CARL SCHMIEDING.