

UNITED STATES PATENT OFFICE.

NATHANIEL C. LOCKE, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN STEAM-PRESSURE REGULATORS.

Specification forming part of Letters Patent No. **133,459**, dated November 26, 1872.

To all whom it may concern:

Be it known that I, NATHANIEL C. LOCKE, of Salem, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Steam-Pressure Regulators; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing.

The invention consists of a novel combination and arrangement of mechanical devices for connecting a steam-pressure regulator and with the shipper-rod of the machine, as, for instance, a slasher-machine, in connection with which the regulator is used.

In the accompanying drawing the present invention is illustrated, Figure 1 being a plan view, and Fig. 2 a side elevation.

A in the drawing represents a steam-pressure regulator of the construction to which this invention refers, B being the lever arranged to press on the diaphragm of the regulator, which lever, through a flexible band, C, is connected to an eccentric, D, that carries the weight. E, the axis of the eccentric D. To this axis E is attached one end of a chain, F. This chain F passes through the bed-plate G of the regulator, running against a friction-roller, H, and at its end, I, by an eye, *a*, is connected to the hook end *b* of an arm, J. This

arm J is secured by set-screw *c* to the shipper-rod K of the slasher, so that, moving said rod K to let on or stop the slasher, as the case may be, through the connecting-chain F and arm J, the eccentric axis E will, in the one case, be set free for the action of the regulator, and in the other turned and pulled in the proper direction—that is, in the direction of the arrow in the drawing—to reduce or relieve the leverage or weight upon the diaphragm; or, in other words, to leave the diaphragm free for the steam-pressure to raise it, and thus, as it raises, to lift and close the valve to the passage of steam through its chamber to the cylinders, shutting off the steam therefrom.

Having thus described my invention, I shall state my claim as follows:

The combination and arrangement of the flexible band or chain F, arm J, shipper-rod K, with the axis E of eccentric D to a steam-pressure regulator, all constructed to operate substantially as and for the purpose described.

The above specification of my improvements in steam-pressure regulators signed by me this 19th of August, 1872.

NATHANIEL C. LOCKE.

Witnesses:

ALBERT W. BROWN,
JOHN P. McELROY.