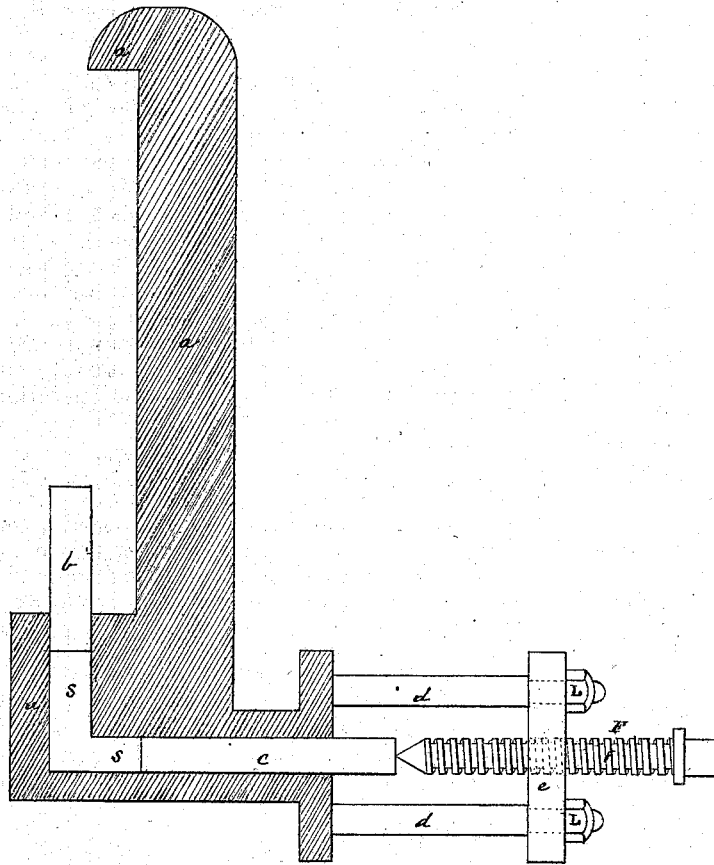


S. A. ALEXANDER.

Improvement in Spring-Adjusters.

No. 115,410.

Patented May 30, 1871.



Witnesses
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SOLOMON A. ALEXANDER, OF SUNBURY, PENNSYLVANIA.

IMPROVEMENT IN SPRING-ADJUSTERS.

Specification forming part of Letters Patent No. 115,410, dated May 30, 1871.

I, SOLOMON A. ALEXANDER, of Sunbury, in the county of Northumberland and State of Pennsylvania, have invented certain Improvements in Spring-Adjusters, of which the following is a specification:

The object of my invention is to save time and labor in placing and removing springs of locomotive-engines, which I accomplish by the use of my machine by drawing the spring to the required position, either to release or to secure the fastenings of the spring.

The accompanying drawing is a side sectional elevation of a machine embodying my invention, in which—

a a is the frame of the machine. *s s* is a chamber for holding any fluid or oleaginous or pliable substance. *b* and *c* are rams fitting the chamber *s s*, which rams are provided with leather or other suitable substance to prevent the escape of the fluid or substance used. *d d* are studs secured to the frame. *e* is a plate, perforated to receive the studs *d d* and secured to the studs by the nuts *L L*. The plate *e* is also perforated to receive the screw *F*. The frame *a* is also supplied with a hook, *a'*.

In using the machine, to take a driving-spring out of an engine the hook *a'* is placed over the equalizing-beam of the engine and the ram *b* is made to press under the frame of the engine by means of the screw *F* acting on the ram *c*, which presses the fluid or substance inclosed in the chamber *s s* against the ram *b*. The ram *b*, being thereby pressed against the frame of the engine, draws the spring to the desired position for removing the spring fastenings. After the fastenings are removed the screw *F* is slackened and the spring can be removed. By a reverse operation the spring can be put in place.

Claim.

I claim as my invention—

A spring-adjuster, consisting of a frame, *a*, having fluid-chamber *s*, rams *b* and *c*, and screw *f*, the whole constructed substantially as and for the purposes set forth.

SOLOMON A. ALEXANDER.

Witnesses:

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