

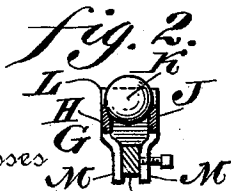
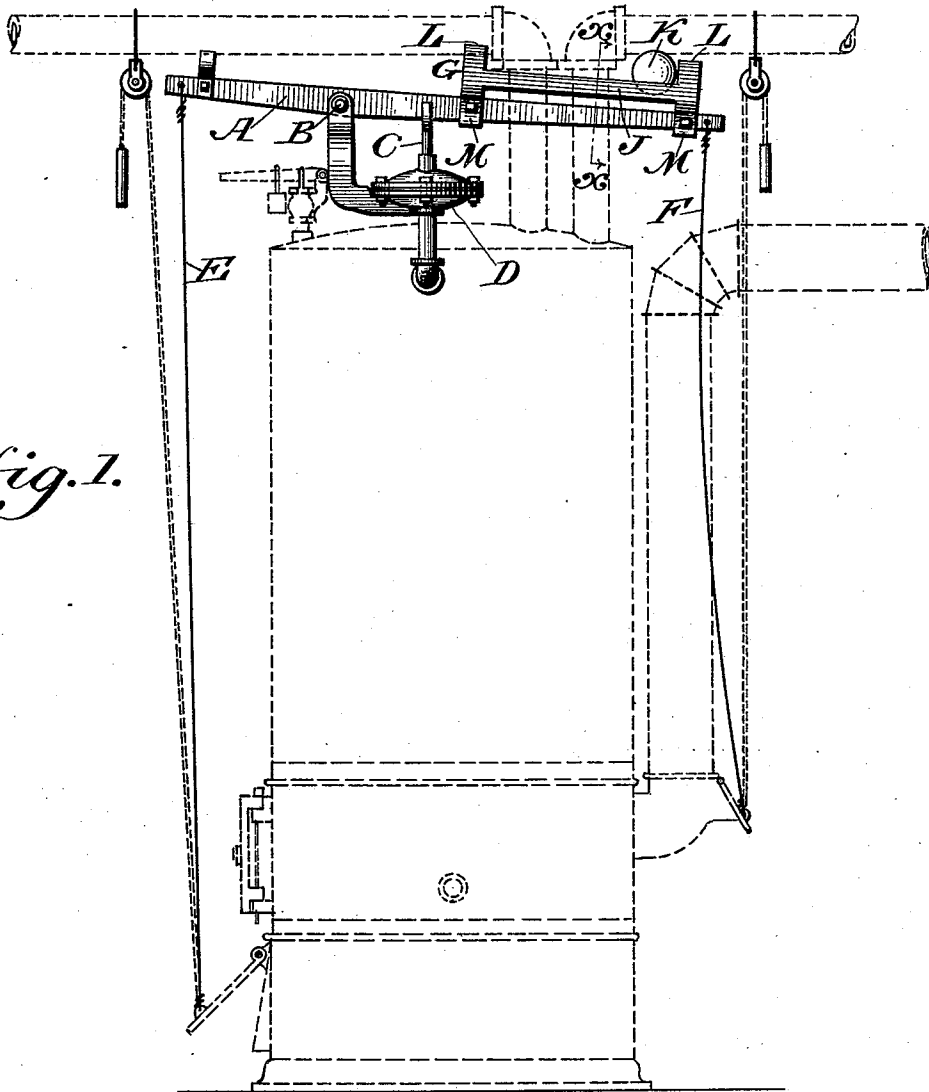
(No Model.)

S. COATS.
DAMPER REGULATOR.

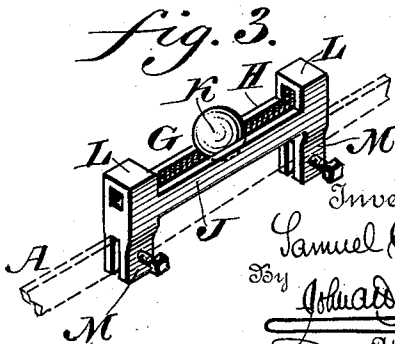
No. 541,721.

Patented June 25, 1895.

fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL COATS, OF BRIDGEPORT, PENNSYLVANIA.

DAMPER-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 541,721, dated June 25, 1895.

Application filed October 29, 1894. Serial No. 527,221. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL COATS, a citizen of the United States, residing at Bridgeport, in the county of Montgomery, State of Pennsylvania, have invented a new and useful Improvement in Damper-Regulators for Steam-Heaters, &c., which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to damper regulators, and consists of a novel attachment therefor, by means of which any variation of the temperature of the water or steam in the boiler or heater to which said regulator is attached, will cause a proper adjustment of the furnace dampers, the especial function of the attachment being to cause a quick or accelerated movement of the damper regulator lever whenever the pressure in the boiler reaches a predetermined point, thereby instantly opening or closing the said dampers, all as will be hereinafter set forth.

Figure 1 represents a side elevation of a damper-regulator embodying my invention, and a boiler or heater to which the same is applicable. Fig. 2 represents a section on line $x x$, Fig. 1. Fig. 3 represents a perspective view of the attachment for said regulator and its manner of application.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates the rocking lever of a damper regulator, which is pivoted to a suitable fixed point B, and has attached thereto the stem C, which is actuated by a diaphragm in the chamber D, connected to a boiler or heater, said lever having also the rods or connections E and F which lead to dampers, all of the above parts being of the usual construction and forming no part of my invention.

G designates the attachment proper, which consists of a frame having the ways H and J, which form a track on which moves the weight K, said weight in the present instance being spherical, and said track having the stops L at each end thereof.

M designates ears which embrace the lever A, and are held in position relative to the same by set screws or other devices.

The operation is as follows, assuming the parts to be in the position shown: First suppose the pressure in the boiler to increase, the lever A will slowly move into a horizontal position, at about which point the weight K will roll from the position shown, into its extreme left hand position, thereby giving an accelerated downward movement to the left hand end of said lever A, thus instantly closing the damper to which the rod E is attached, and opening the one to which the rod F is secured. When the pressure falls below the normal, the same action will take place in the opposite direction, and the parts will assume the positions shown in Fig. 1.

It will furthermore be noticed that the frame G is readily applicable to the lever of any damper regulator, and that said frame can be moved along said lever into any desired position, thus rendering it possible to adjust the attachment to fulfill any desired requirements although the preferred location of the latter is the one shown, in which the weight is in every position of the lever, on the same side of the fulcrum.

It is evident that by the employment of the track formed by the ways H and J, and the ball or weight K movable thereon, the friction between said weight and track will be reduced to a minimum, and thus the device will be rendered extremely sensitive to variations of temperature, the action being resisted by means of counter-poisies which may be attached to the dampers in any suitable manner.

It will also be apparent that while the above attachment is capable of general application, it is especially adapted to that class of regulators which begin to move at a predetermined pressure, and continue said movement as said pressure gradually rises, such as where a diaphragm is influenced by fluid pressure, the resistance of the same gradually increasing, as it is moved from its normal position.

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

1. An attachment for a damper regulator
5 consisting of a frame having a track thereon, a weight movable on said track, and means for attaching said frame to a suitable portion of said regulator, substantially as described.
2. An attachment for a damper regulator

consisting of a frame having a track thereon, 10 stops on said frame, and a weight movable on said track between said stops, substantially as described.

SAMUEL COATS.

Witnesses:

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