

993,381.

Patented May 30, 1911.

Fig. 1.

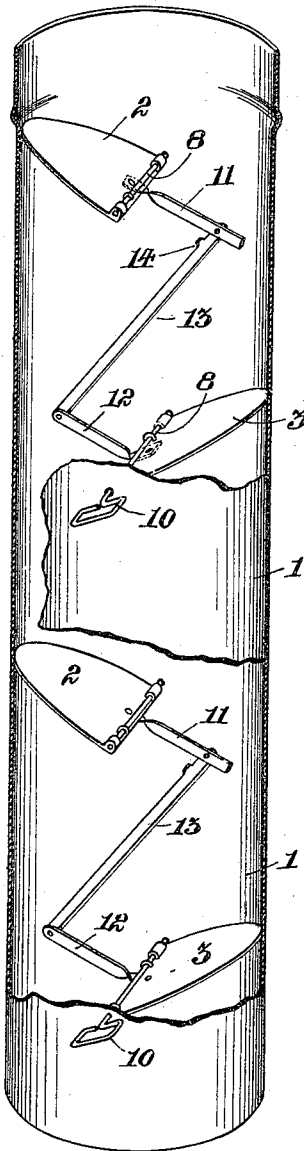


Fig. 3.

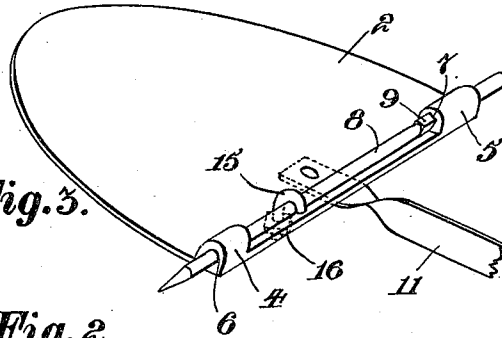


Fig. 2

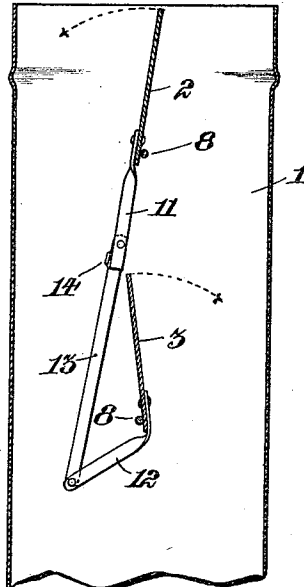


Fig. 4.

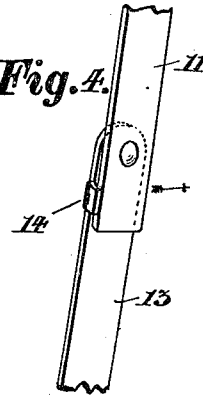
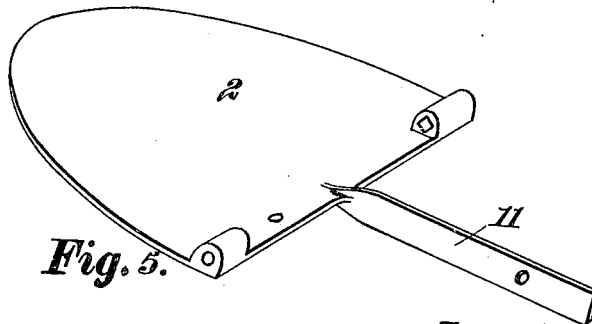


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

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PIPE-DAMPER.

993,381.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed May 21, 1910. Serial No. 562,720.

To all whom it may concern:

Be it known that I, WILLIAM KENNEDY, resident of 7 Union avenue, in the city and District of Montreal, in the Province of Quebec, in the Dominion of Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in Pipe-Dampers; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in pipe dampers, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel construction and arrangement of parts whereby a plurality of semi-circular dampers pivotally secured to the pipe are co-incidently operated from one key.

The objects of the invention are to devise a means of quickly effecting a change in the draft regulations in the pipes leading from a stove or furnace and generally to provide a simple, cheap and durable construction.

In the drawings, Figure 1 is a vertical sectional perspective view of a pipe showing the arrangement of the dampers therein in their closed position. Fig. 2 is a vertical sectional view of a pipe showing an arrangement of dampers therein in their open position. Fig. 3 is an enlarged perspective detail of a damper and pivot rod. Fig. 4 is an enlarged perspective detail of the connecting bars broken away. Fig. 5 is an enlarged perspective detail of a damper showing the operating lug integral with the damper.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is the pipe length, 2 and 3 are the dampers semi-circular in shape and having the lugs 4 and 5 at the ends of the straight edge respectively, said lug 4 having a circular orifice 6 therethrough and said lug 5 having a squared orifice 7 therethrough.

8 are the pivot rods having the squared ends 9, said rods being inserted through the orifices 6 and 7 and through suitable pivot holes in the pipe length 1, said pivot holes being diametrically opposite one to the other. The squared ends 9 of the pivot rods 8 extend into the squared orifice 7 in the lugs 5.

10 is a key on the rod of the damper 3.

11 is a bar or lug extending outwardly from the straight edge of the damper 2 and in the same plane as said damper, said lug or bar 11 being rigidly secured to said damper or forming part therewith, as for instance, in casting, the lug or bar would form a part with the damper, whereas in sheet metal work, it would in all likelihood be riveted thereto.

12 is a lug or bar extending outwardly from the straight edge of the damper 3 at an angle to the surface of said damper slightly greater than a right-angle, said bar being rigidly secured to said damper or forming part therewith.

13 is a connecting rod pivotally secured to the end of the lug or bar 12 and to the bar 11 adjacent to the end thereof.

14 is a stop on the connecting rod 13 which, in the open position of the damper comes in contact with the projecting end of the lug or bar 11.

In the operation of this mechanism, the key 10 is turned which brings the dampers into their upright position, the upright position of said dampers being slightly beyond the center in each case so that they will remain in that upright position without any spring or other device. The connecting rod 13 draws down on the lug or bar 11, consequently the dampers 2 and 3 must turn to their upright position and the stop 14 will prevent said dampers going over all the way, just allowing them to pass slightly over the center. The closing of the dampers is accomplished by turning the key in the opposite direction which will push on the lug or bar 11 and pull on the lug or bar 12, the weight of the dampers alone being sufficient to bring them down to their closed position.

Some details of construction as herein shown and described are not fully essential to the invention, for in the manufacture of these articles from sheet metal, such details may be slightly changed for such construction as may be necessary in castings, therefore, the way the rods are put in and held and the way the dampers are supported in the pipe length need not be considered as novel features. In order to secure the rods in position and prevent them from sliding laterally, a means is required for securing them intermediate of their length to the damper.

15 is a clamp in the form of a hook having a threaded end extending through the said

dampers, the hook gripping the rods 8 while the threaded end projects from the other side of the damper. 16 is a nut turning on said threaded end and drawing said hook tightly to said rod and firmly gripping said rod and securely preventing it from lateral movement.

The dampers are shown in pairs of two, vertically arranged and operated by two keys, but it must be understood that there may be quite a number of dampers operated by the one key, though in use it is generally considered preferable to have them in pairs.

Without departing from the spirit of the invention, modifications may be made in the details of construction and the conditions under which they are used, so long as the essential features of the invention remain, such as, the positioning of the lugs to bring the dampers to their longitudinal and self-supporting position.

What I claim as my invention is:

1. In a pipe damper, in combination, a pipe length, a plurality of semi-circular dampers pivotally secured in said pipe length, one above the other, and swinging to the opposite sides of the pipe alternately, a lug on every second damper extending in substantially the same plane as the surface of said damper, a lug extending from each of the other dampers and arranged at an obtuse angle to the surface of the damper, connecting rods pivotally connecting the straight lugs to the angularly arranged lugs, and means for operating one of said dampers.

2. In pipe dampers, in combination, a pipe length, a plurality of semi-circular dampers pivotally secured in said pipe one above the other and—swinging to opposite sides of said pipe length alternately and resting against the inner wall of said pipe

in a position inclined upwardly from their pivot points, a lug from every second one of said dampers extending downwardly from the straight edge of the damper into the open pipe space therebeyond, and a lug on each one of the remaining dampers extending from the straight edge of the damper in an upward direction at an angle to the surface of the damper and substantially parallel with the aforesaid lugs, and connecting rods joining said lugs.

3. In a device of the class described, in combination, a pipe length, a pair of semi-circular dampers having pivot rod lugs at the straight edges thereof, pivot rods inserted through said lugs and through suitable holes in the pipe length, said dampers alternately folding over to opposite sides of the wall of the pipe, a rigid lug extending outwardly from a straight edge of the upper of said pair in substantially the same plane as said damper, a lug extending outwardly from the lower one of said pair at an angle to the upper surface of said damper slightly greater than a right angle, a connecting rod pivotally secured to the end of the lower lug and pivotally secured adjacent to the end of the upper lug and having a stop extending from one side thereof adapted to catch the projecting end of the upper lug in the open position of the dampers, and a key secured on the projecting end of the lower pivot rod for opening and closing the dampers.

Signed at the city and District of Montreal, in the Province of Quebec, in the Dominion of Canada, this 17th day of May, 1910.

WILLIAM KENNEDY.

Witnesses:

G. H. TRESIDDER,
HARRY DAVIS.