





## UNITED STATES PATENT OFFICE.

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## STOVEPIPE-DAMPER.

SPECIFICATION forming part of Letters Patent No. 767,039, dated August 9, 1904.

Application filed March 2, 1904. Serial No. 196,575. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES M. BULLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stovepipe-Dampers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in stovepipe-dampers, and has for its object to simplify and improve the construction and produce a device of this character which may be inexpensively constructed, easily and quickly installed in or removed from the pipe, and adaptable to all different sizes of pipe without change of structure.

With this and other objects in view, the nature of which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction as hereinafter described and shown, and particularly specified in the claims.

In the accompanying drawings, forming a part of this specification, is illustrated one form of the embodiment of the invention, it being understood that the invention is not necessarily limited thereto, as various changes in the form, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fall within the scope of the invention and the claims made therefor.

In the drawings thus employed and in which corresponding parts are denoted by like designating characters, Figure 1 is a sectional view of a portion of a stovepipe with the improved damper disposed therein. Fig. 2 is a perspective view of the damper-plate detached. Fig. 3 is a perspective view of the damper-spindle detached. Fig. 4 is a view similar to Fig. 1, illustrating a modification in the construction.

The improved device comprises a damper-plate or stock C, to which the spindle D is detachably connected, the plate or stock adapted to be secured, as by rivets  $c^2$ , to a damper-disk B of any required size to fit any required size of pipe A, the same stock and spindle being

thus adapted to any size of pipe or damper disk. The stock C is further secured to the damper-disk by tongues  $c'$  cleft from the body of the stock and clenched through apertures in the disk.

The stock C is provided with spaced bearings  $c^6$   $c^7$   $c^8$ , the bearings  $c^6$   $c^7$  formed by cutting U-shaped clefts in the stock and bending the tongues thus released at right angles to the body of the stock, and the bearing  $c^8$  formed by bending the end of the stock up at right angles to the same, as shown in Fig. 2. The bearings are pierced, respectively, by aligned apertures  $c^3$   $c^9$   $c^{10}$  to receive the spindle D, and the central aperture  $c^9$  is further provided with oppositely-disposed radial recesses  $c^4$   $c^5$ , the recess  $c^5$  being the smaller, and the aperture  $c^{10}$  provided with a radial recess  $c^{11}$  of the same size as the recess  $c^4$ .

The spindle D is provided with a handle  $d^2$  and a lug  $d$ , having a reduced portion or shoulder  $d'$  the larger portion to pass through the recesses  $c^4$  and  $c^{11}$ , but too large to pass through the recess  $c^5$ , which smaller recess is just large enough to receive the smaller portion  $d'$  of the lug. The inner terminal of the spindle is preferably pointed to enable it to be employed as a punch to form the necessary aperture through the pipe A, if required. A washer is provided for the spindle D, and between the washer and handle  $d^2$  a spring E is coiled.

When thus constructed, the device is attached as follows: The apertures for the spindle D having been formed in the pipe A, the damper-disk, with the stock C attached, is inserted into the pipe and the spindle thrust through the apertures in the bearings  $c^6$ ,  $c^7$ , and  $c^8$  with the lug  $d$   $d'$  turned toward the stock. The spring E is then compressed until both portions  $d$   $d'$  of the lug pass beyond the bearing  $c^7$ , when the spindle can be rotated one-half around until the lug comes opposite the smaller recess  $c^5$ , when the smaller portion  $d'$  of the lug will be forced into it by the recoil of the spring; but the larger portion  $d$  will not pass through the smaller recess. Thus the spindle becomes locked to the stock, and the damper will be rotated by the turning of the handle, while at the same time the pressure of the spring will hold the damper com-



pressed against the side of the pipe, so that it will remain at whatever point it may be placed and can be moved only by the exercise of force sufficient to overcome the pressure of the spring.

When the damper is to be detached, it is only necessary to reverse the movements, as will be obvious.

It will thus be noted that a very simple, cheap, and effective device is provided, which may be applied to any size of pipe and to any form and size of damper-disk.

The stock will preferably be stamped from a single sheet of metal and can be thus very quickly and cheaply constructed.

The stock and spindle may be manufactured and sold to dealers and by them fitted to any required size of damper-disk by merely furnishing the spindle of extra length to fit the larger pipes and the surplus lengths cut off when employed for the smaller sized pipes. Thus the device may be employed with great economy and producing a convenient and useful article.

In Fig. 4 a slight modification in the construction is shown, consisting in forming bearings  $b' b'' b'''$  similar to the bearings  $c^6 c^7 c^8$  directly upon the damper-disk B; but this would not be a departure from the principle of the invention, as the same results are produced in substantially the same manner.

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

1. In a stovepipe-damper a stock having means for attachment to a damper-disk and provided with spaced lateral bearings having alined transverse apertures, one of said apertures formed with radiating recesses of unequal length, a spindle for insertion through the stovepipe and likewise through said alined apertures and with an enlarged head at one end and an intermediate lug formed in two portions of unequal length, a longer portion for passing through the longer radial recess

and a shorter portion for entering the shorter recess when the spindle is inserted and rotated, and a spring disposed between said spindle-head and stovepipe.

2. In a stovepipe-damper, a member formed from a single sheet of metal and provided with lateral bearings bent from the body of the same and provided with transversely-disposed apertures, one of said apertures having radiating recesses of unequal length, a spindle for insertion through the stovepipe and likewise through said alined apertures and with an enlarged head at one end and an intermediate lug formed in two portions of unequal length, a longer portion for passing through the longer radial recess and a shorter portion for entering the shorter recess when the spindle is inserted and rotated, and a spring disposed between said spindle-head and stovepipe.

3. In a stovepipe-damper, a stock formed from a single sheet of metal and having a plurality of V-shaped clefts whereby tongues are released for bending through the damper-disk and clenching in the same, said stock also having a plurality of spaced U-shaped clefts provided with central apertures for bending laterally to form spindle-bearings, one of said apertures formed with radiating recesses of unequal length, a spindle for insertion through the stovepipe and likewise through said alined apertures and with an enlarged head at one end and an intermediate lug formed in two portions of unequal length, a longer portion for passing through the longer radial recess and a shorter portion for entering the shorter recess when the spindle is inserted and rotated, and a spring disposed between said spindle-head and stovepipe.

In testimony whereof I hereunto affix my signature in presence of two witnesses:

CHARLES M. BULLER.

Witnesses:

FRED NEHLS,  
JOHN M. LORENZ.