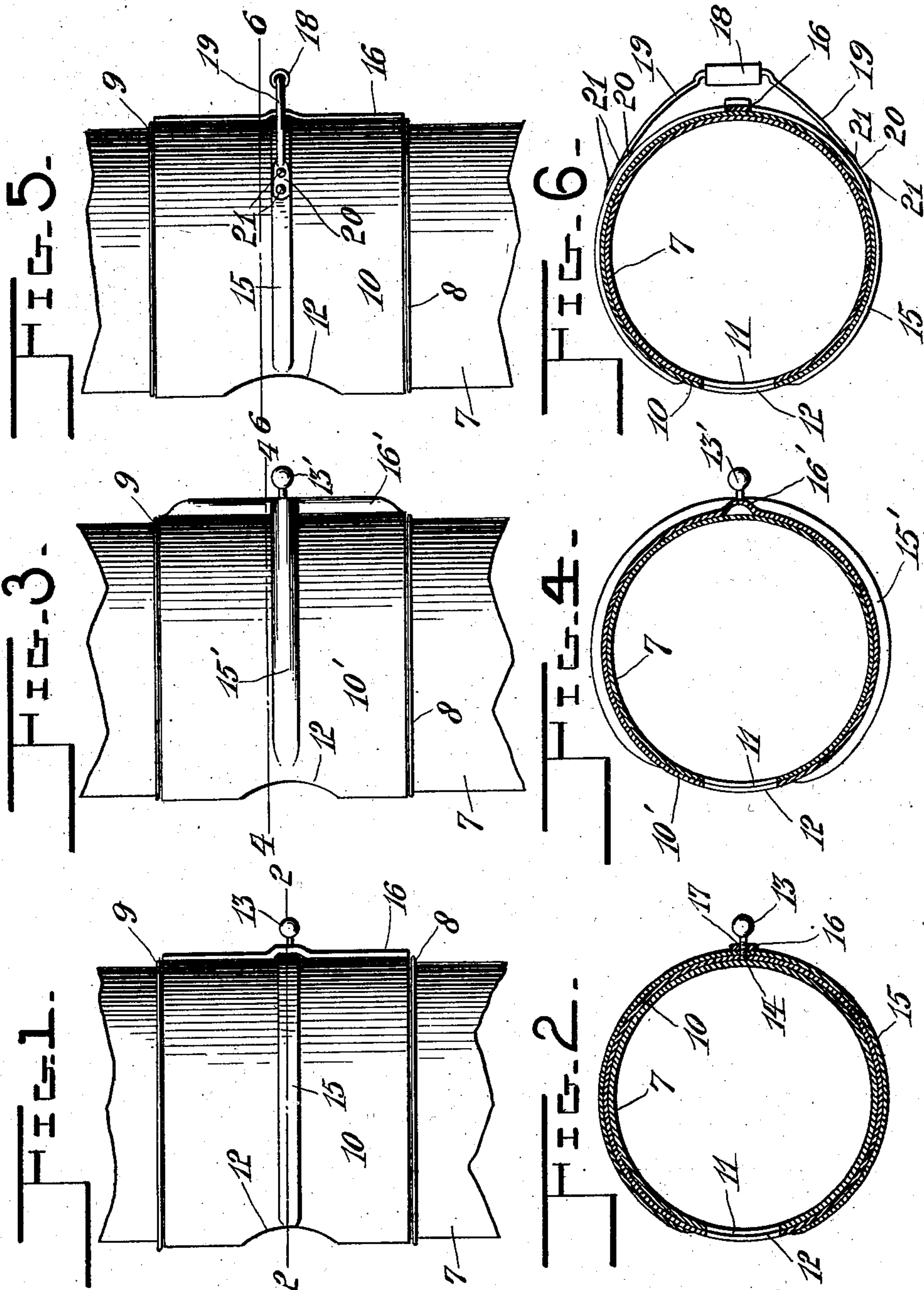


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L. F. CUTTEN.
DAMPER FOR STOVEPIPES.
APPLICATION FILED MAY 17, 1902.

NO MODEL.



Witnesses:

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LEWYN FRANK CUTTEN, OF BOISSEVAIN, CANADA.

DAMPER FOR STOVEPIPES.

SPECIFICATION forming part of Letters Patent No. 721,429, dated February 24, 1903.

Application filed May 17, 1902. Serial No. 107,766. (No model.)

To all whom it may concern:

Be it known that I, LEWYN FRANK CUTTEN, a subject of the King of Great Britain, residing at Boissevain, county of Turtle Mountain, Province of Manitoba, Canada, have invented certain new and useful Improvements in Dampers for Stovepipes; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved form of damper of that type wherein a rotary sleeve is adapted to cover a hole in the side of a stovepipe, said sleeve having a hole therein adapted to coincide with a hole in the pipe when the damper is properly placed, and thereby to admit more or less cold air thereto.

The object of my invention is to overcome a difficulty which exists in this type of damper due to the fact that the force applied to the sleeve to rotate it is not applied centrally—that is to say, in the body of the sleeve itself—but it is applied to a handle which projects laterally from the sleeve, and the necessary force required to overcome the friction of the sleeve against the pipe, combined with the thin and flexible material of which the sleeve is made, causes a distortion of the material of the sleeve, whereby it is caused to bind upon the side of the stovepipe in the manner of a chain wrench applied to a pipe to twist the same. This will be more fully explained later on.

The essential feature of my invention consists in so arranging the handle that it will not cause the said distortion of the sleeve when lateral force is brought upon it to turn the sleeve, and to this end I provide various modes of construction, in particular a belt of metal, which is in the form of either a band or a raised bead surrounding the sleeve of the damper and which may be used in conjunction with an upright band or bead of similar form which crosses the said belt at the junction-point of the handle.

In another form of my invention I provide a peculiarly-shaped handle which is adapted to straddle the sleeve of the damper, and thereby to remove any possible tendency to

distort the same by a tangential pressure brought upon said handle.

My invention further consists in the peculiar construction and combination of parts hereinafter described, and more particularly set forth in the claims.

In the drawings accompanying this specification I have shown three preferred modifications of my invention, and herein—

Figures 1 and 2 are respectively a side elevation and a horizontal section on the line 2 2 of the first form of my invention. Figs. 3 and 4 are respectively a side elevation and a horizontal section on the line 4 4 of the second form of my invention. Figs. 5 and 6 are respectively a side elevation and a horizontal section on the line 6 6 of the third form of my invention.

The same numerals of reference denote like parts in all the figures of the drawings.

In all of the figures the stovepipe to which the damper is attached is represented by the numeral 7, and it is provided with a pair of parallel beads 8 9, encircling it at proper suitable distances apart to form guides for the upper and lower side of the damper-sleeve, which is shown at 10 in Figs. 1 and 5. The pipe 7 has midway between these two beads 8 and 9 an aperture 11 in the side thereof, with which is adapted to coact a similarly-formed aperture 12 in the damper-sleeve 10.

Now in the dampers at present in use the sleeve 10 consists of a plain cylindrical piece of pipe having a handle-knob 13 attached to and projecting from the rear side thereof, so that by shifting the handle 13 laterally the position of the aperture 12 is changed relatively to the aperture 11; but the disadvantage of this type has been that the side pressure brought upon the handle-knob 13 in conjunction with the friction has induced a couple acting in three ways—first, to bend the sleeve in the immediate vicinity of the attachment-point 14 of the handle to the sleeve, so as to cause the metal to be indented at the forward side and raised at the rear side; secondly, the indentation of the sleeve at the forward side of the handle caused a similar indentation in the metal of the pipe, so as to form intermeshing teeth, as it were, which

prevented the sleeve from being turned relatively to the pipe, and, thirdly, the distortion of the sleeve acted to shorten the circumference of the sleeve, and thus to bind it around the circumference of the pipe in the manner of a chain wrench, thus increasing the difficulty of turning the damper and rendering it necessary to make the sleeve very loose fitting upon the pipe, whereby the damper could not be shut off tight, owing to the leakage around the sides thereof. In order to avoid these difficulties, I provide a strengthening band or belt 15, which is riveted or welded around the exterior of the sleeve at the back thereof and extends around as far as the opening 12 therein and to which the handle 13 is attached, and this band 15 is of sufficient strength and stiffness to hold the sleeve rigidly in shape and prevent the distortion thereof. As a further strengthening means also, especially to prevent the sleeve from becoming distorted by vertical pressure, I provide a longitudinal strap 16, which crosses the horizontal band 15 at the point at which the handle 13 is joined thereto, and this further results in permitting a better hold for the attachment of the handle, which may be screw-threaded, as shown at 17, and socketed in a suitable threaded aperture formed through the overlying parts 10, 15, and 16.

In some cases it may be cheaper and more desirable to provide a somewhat modified form of this arrangement, which is shown in Figs. 3 and 4, in which the surrounding damper-sleeve is designated as 10'. In place of the band 15 and strap 16 I herein provide a circular bead 15', which is crossed at the attachment-point of the handle 13' by a vertical bead or corrugation 16'. This arrangement has the same effect, as will be readily seen, as the first form. (Shown in Fig. 1.)

As a further improvement I provide the modified form shown in Figs. 5 and 6, wherein the sleeve 10, band 15, and strap 16 are the same as shown in Figs. 1 and 2; but instead of attaching the handle-knob 13 to the central point of meeting of the band and strap I provide a peculiar form of handle, which is in the form of a roller 18, through which passes a bail 19, which is flattened out at its ends, as shown at 20, and riveted to the band 15, as at 21, whereby the bail 19 is caused to straddle the damper-sleeve, and therefore to bring the couple acting on it, as before mentioned, to points of application nearly at opposite sides of the pipe, so as to coincide with the axis of the couple induced

by friction. It will be readily seen that in this case the band 15 and strap 16 are not ordinarily necessary.

While I have shown in the accompanying drawings the preferred forms of my invention, it will be understood that I do not limit myself to the precise forms shown, for many of the details may be changed in form or position without affecting the operativeness or utility of my invention, and I therefore reserve the right to make such modifications as are included in the scope of the following claims.

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

1. In a pipe-damper, the combination of a cylindrical damper-sleeve, a circumferential band attached thereto, a vertical strap crossing said band, and a handle attached to said band.

2. In a pipe-damper, the combination of a cylindrical damper-sleeve having a circumferential reinforcement, a vertical reinforcement crossing the same, and a handle attached to said sleeve at one or more points of said reinforcements and extending laterally therefrom.

3. In a pipe-damper, the combination of a cylindrical damper-sleeve having a circumferential reinforcement, and a bail-shaped handle straddling said sleeve and attached at its ends to said reinforcement.

4. In a pipe-damper, the combination of a cylindrical damper-sleeve, and a bail-shaped handle projecting laterally therefrom and straddling the same and attached at its two ends thereto.

5. In a pipe-damper, the combination of a cylindrical damper-sleeve having an aperture, and a bail-shaped handle extending circumferentially of said sleeve and having its two ends attached to separated points thereof so as to straddle the same.

6. In a pipe-damper, the combination of a cylindrical damper-sleeve having an aperture, a bail-shaped handle extending circumferentially of said sleeve and having its two ends attached to separated points thereof so as to straddle the same, and a handle-roller mounted on said handle, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

LEWYN FRANK CUTTEN.

Witnesses:

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