(No Model.)

A. S. HELD.

DAMPER.

No. 541,162. Patented June 18, 1895.

Fig. 1.

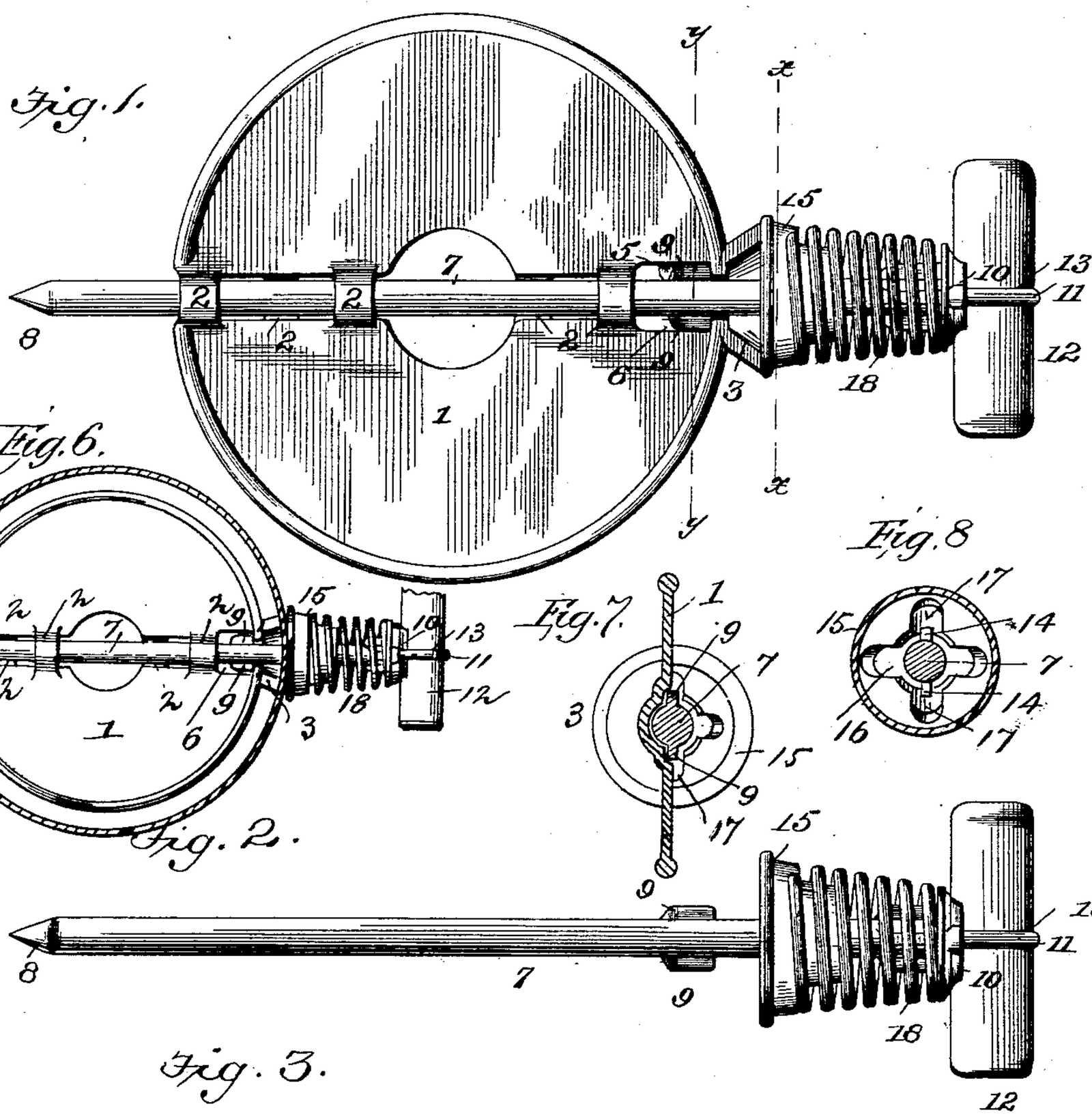


Fig. 6.

Fig. 2.

Fig. 7.

Fig. 8

Fig. 3.

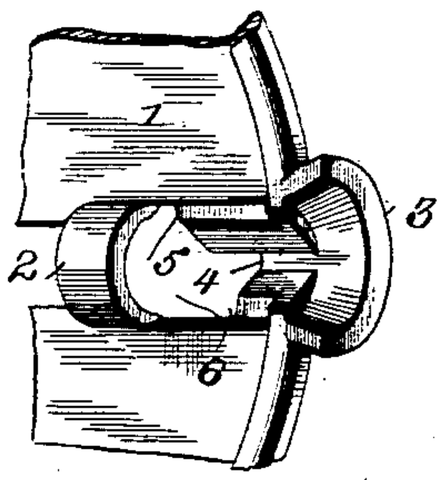


Fig. 4

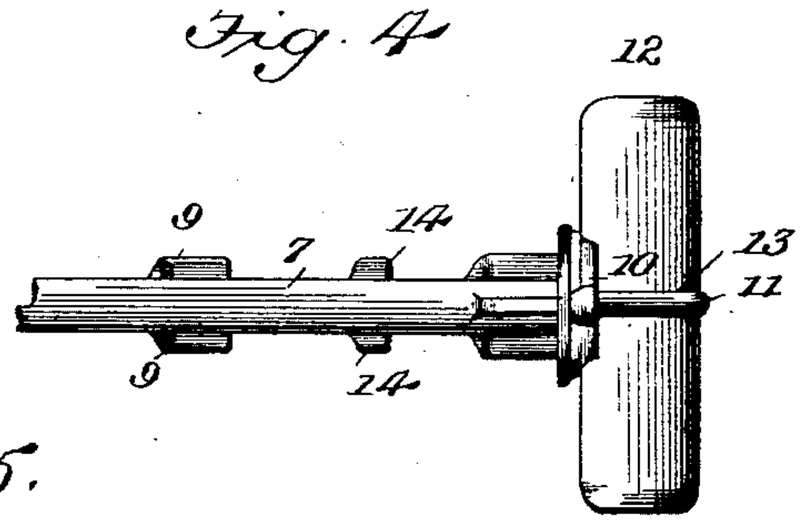
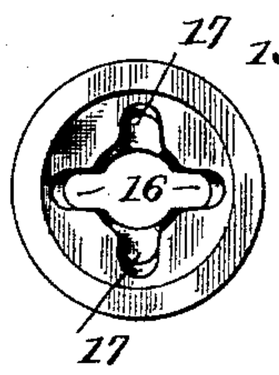
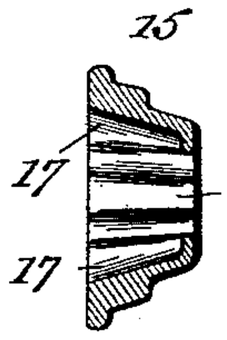


Fig. 5.





Witnesses

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UNITED STATES PATENT OFFICE.

AUGUST S. HELD, OF FREEPORT, ILLINOIS, ASSIGNOR TO THE STOVER MANUFACTURING COMPANY, OF SAME PLACE.

DAMPER.

SPECIFICATION forming part of Letters Patent No. 541,162, dated June 18, 1895.

Application filed August 25, 1894. Serial No. 521,336. (No model.)

To all whom it may concern:

Be it known that I, AUGUST S. HELD, a citizen of the United States, residing at Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Stovepipe-Dampers; and I do declare the following to be 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention consists in a new and improved stove-pipe damper, which will be hereinafter fully described and claimed, and its practical advantages set forth in detail.

Referring to the accompanying drawings, in which the same numerals of reference indicate corresponding parts in the several figures, Figure 1 is a side elevation of my novel stovepipe-damper. Fig. 2 is a similar view of the detachable spindle. Fig. 3 is a detail view, on an enlarged scale, of the outer locking-bearing of the damper-blade. Fig. 4 is a similar view of the handle end of the spindle and its washer or collar. Fig. 5 shows, respectively, an elevation and cross-section of the collar or washer mounted on the spindle exterior to the pipe. Fig. 6 is a view showing the application of the invention to a stovepipe. Fig. 7 is a section on the line *y y* of Fig. 1. Fig. 8 is a section on the line *x x* of Fig. 1.

In the drawings, 1 indicates the damper blade, which is formed with the usual central opening and spindle bearings 2, these bearings being curved or semi-circular in form so that the round spindle can turn freely in them when locking and unlocking it.

3 indicates the outer bearing of the blade, which is formed with the central groove 4 to enable one of the lugs of the spindle to pass through said bearing, and with the shouldered recesses 5, lying in the plane of the blade and adapted to receive the locking lugs of the spindle. The inner end of the bearing 3 is cut away to one side of the groove 4, at 6, for the purpose hereinafter described.

The detachable spindle, 7, is sharp pointed, to adapt its pointed end, 8, to readily penetrate the stove pipe; while at a point registering with the bearing 3 when in position it is formed with the two opposite locking lugs 9, 9, running longitudinally on the central line of the spindle, and having their inner ends sharp pointed, to adapt them to penetrate the stove pipe. In the enlarged end 10 of the spindle is cast one end of a wire, 11, which is bent around a wooden handle-bar 12, formed with a central groove, 13, to receive said retaining wire. By this construction the handle is securely held, while there is the minimum of metal about it, so that it always keeps cool.

The outer end of the spindle is formed with the two opposite lugs 14, 14, which form guide and locking lugs for the washer or collar 15. This collar has the central opening through which the spindle passes, and is formed with the two opposite slots 16 running through it and the two deep opposite recesses 17 extending in from its inner end, as shown. These recesses are of such width and depth as to form seats for the lugs 14, which enter said recesses and rest against their outer ends; the open slots 16 enabling the collar to be slid on the spindle past the lugs, which pass through said slots; the collar being pushed up against the coiled spring 18, which is mounted on the outer end of the spindle as shown, and then given a quarter turn to cause the outer lugs 14 to enter the deep recesses 17; when the pressure of the spring holds the collar in place so that it will not become disengaged during the operation of removing the spindle from the damper blade.

To secure the damper in its operative position, it is only necessary to push the spindle through the pipe, which its pointed end and pointed inner lugs readily penetrate, requiring no punch or other tools, and in passing through the bearings of the damper blade either of the lugs 9 can enter the groove 4 in the outer bearing 3, when by pushing the spindle in against the pressure of the spring 18, as the collar at the inner end of the latter comes against the exterior of the pipe, until the lug passing through the groove 4 clears the cut-away part 6 of the bearing, a quarter turn of the spindle will clear the lug from the line of the groove and enable both lugs to be

drawn by the pull of the spring into the shouldered recesses 5, where they lie in the center and in the plane of the damper blade; the coiled spring 18, pressing the collar 15 against the exterior of the stove pipe, holding the lugs 14 pressed, locked, in said recesses, and thus securely and firmly locks the spindle and blade together, by a very simple and effective construction; at the same time holding the damper in the position to which it is turned.

It will be seen that by forming the recesses 17 in the collar of the width and length shown, so that the lugs 14 will enter the same and be drawn against their outer ends by the "pull" of the spring 18, admits of pressing the spindle inward, to lock or unlock the inner lugs 9 from the damper, without bringing the outer lugs 14 in contact with the pipe through which the spindle passes; and when the damper is secured in position these lugs 14, resting back in the deep recesses 17, are far away from the pipe and entirely clear of the same, and cannot come in contact therewith to interfere with the free operation and turning of the damper.

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

1. A stove pipe damper comprising the damper blade having the outer bearing formed with the central groove and the shouldered recesses, and having the inner end of the outer bearing cut away to one side of the central groove, and the spindle formed with the opposite lugs adapted to pass through said groove and enter said recesses as specified, and a spring mounted on the outer end of the spindle to hold said lugs normally engaged in said recesses, substantially as set forth.

2. In combination a stove pipe damper having an end bearing provided with shouldered recesses and a guide groove between the said shoulders, a collar having opposite slots and recesses, a spindle having two sets of opposite lugs near one end, one set to engage with the said shouldered recesses and the other with the recesses in the collar, and a spring mounted on the outer end of the spindle and confined between the said collar and an enlargement of the spindle, substantially as specified.

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

AUGUST S. HELD.

Witnesses:
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