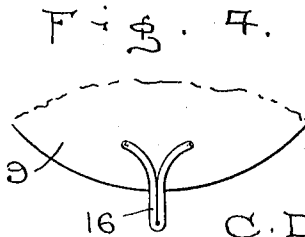
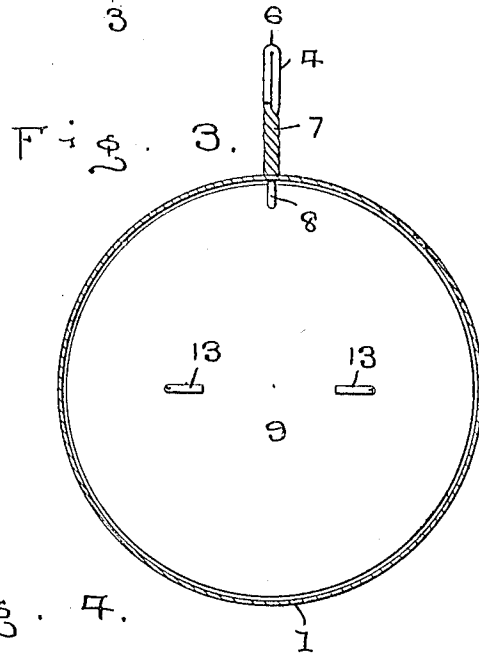
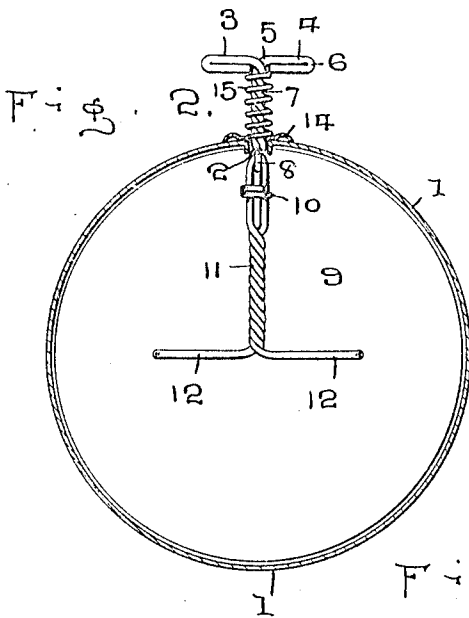
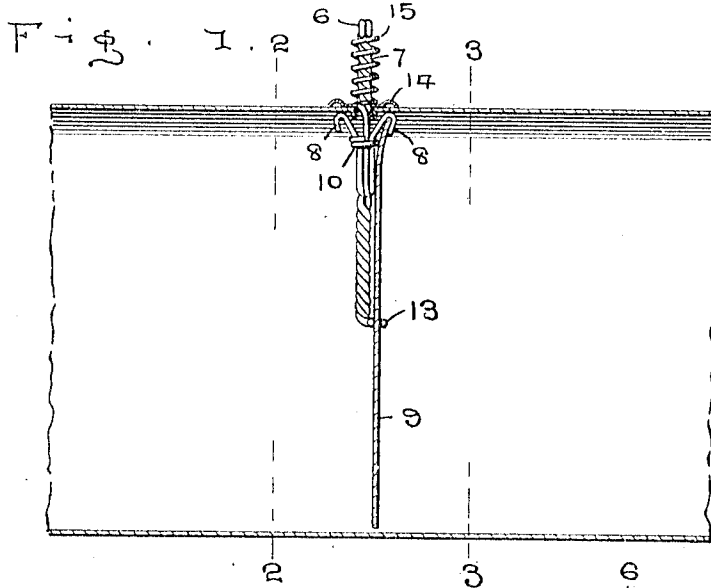


C. DE W. WAGNER.
DAMPER CLIP.
APPLICATION FILED JUNE 15, 1909.

947,505.

Patented Jan. 25, 1910.



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UNITED STATES PATENT OFFICE.

CLINTON DE WITT WAGNER, OF CEDAR RAPIDS, IOWA.

DAMPER-CLIP.

947,505.

Specification of Letters Patent.

Patented Jan. 25, 1910.

Application filed June 15, 1909. Serial No. 502,272.

To all whom it may concern:

Be it known that I, CLINTON DE WITT WAGNER, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Damper-Clips; and I do hereby 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.

My invention relates to new and useful improvements in attachments for stoves, furnaces and the like, and especially to that class designated as dampers which are adapted to operate in pipes.

It has for its object to provide a simple, inexpensive mechanism which may be readily secured to a pipe in a very simple manner.

A further object is to provide an article of manufacture which when constructed will consist of a sheet of thin metal to which is attached a turning mechanism formed of strands of twisted wire.

Referring to the drawings which form a part of these specifications, Figure 1 is a vertical, longitudinal sectional view. Fig. 2 is a horizontal sectional view taken on the line 2—2 in Fig. 1. Fig. 3 is a horizontal sectional view taken on the line 3—3 in Fig. 1. Fig. 4 is a detailed plan view of a device used for anchoring one end of the damper to a pipe.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 is a pipe of any preferred dimensions connecting with a furnace or stove, not shown here for convenience, in which is an opening 2, through which may be inserted a portion of my damper clip which consists of strands of any preferred metallic wire, which before they are inserted in the pipe, the wires are bent in their length at 6 so that the bent portions are superimposed upon the main portion of the wire. Before bending the handle portions 3 and 4 at 5 away from each other and at right angles to the main portions of the wire, a washer 14 and a spring 15 are put upon the main strands after they have been looped. The various main portions of the strands of wire are twisted upon each other to form loops 7, the combination of these loops making a solid, rigid strand of wire. These loops are continued to a point below the handle portion which will

carry the looped portion within the opening 2 of the pipe 1, at which point the strands of wire have a substantially U shaped strand of wire 8 inserted so as to form a catch and shoulders for the damper 9, in which is cut a notch for the purpose of permitting the U shaped member to engage the damper. The U shaped member is inserted between the looped portion so that its closed end is away from and below the handle portion, said U shaped member being bent upwardly and outwardly on the line of the looped portion to form the compound curved portions which engage the damper 9. In order to secure a more rigid structure any preferred loop of metal, such as is disclosed by the structure shown at 10, may be twisted around the portion of the looped section which engages the compound curved catch members 8. Below the closed end of the catch members 8 the looped portions of the damper clip are continued as in the looped portions above where the V shaped member is engaged by the looped portions in their length, this lower looped portion 11 terminates preferably at a line which may be designated as a horizontal diameter of the damper. The looped portions extending laterally with the horizontal diameter of the damper in the straight portions 12 and adapted to enter openings in the damper, thus being bent downwardly to enter said openings, after which they are turned toward each other so as to form securing lips 13 which are bent so as to rest immediately on the damper.

In placing my damper with its clip attachment into a pipe, the handle portions 3—4 as previously described are not bent apart as shown in Fig. 2 but are superimposed one upon the other and in the same line with the looped portion of the clip. After the handle portions and the looped portion extending as far as the V shaped member 8 is inserted through the opening 2, a washer 14 and spring 15 are placed on the looped portion, after which the superimposed portions of the wire are bent away from each other as shown in Fig. 2.

When this damper is used in conjunction with a pipe of large dimensions the various parts of the damper are correspondingly constructed so as to be in proportion, also I utilize a substantially V shaped anchoring device as shown in Fig. 4. This consists of two strands of wire closed at one end, bent

parallel in their length for a certain portion thereof, at which point they are bent outwardly and away from each other and enter into suitable openings where they are bent downwardly against the under face of the damper to insure a securing means substantially similar to the lips 13—13 in Fig. 3.

It will be seen from the device described herein that I have provided a damper with a clip attachment which does not require rivets or bolts but one which consists simply of a plurality of twisted wires which may be easily applied or detached, when it is so desired. It will also be seen that I have provided a rigid, substantial structure which is preferably used, although not necessarily so, in pipes that are used in connection with hot air furnaces and the like.

What I claim is:

1. The herein described device comprising the combination with a pipe having an opening therein and a damper, of an adjusting device coöperating with said damper, said adjusting device comprising a plurality of strands of wire looped one upon the other to form a main portion, one end of said main portion having a handle member, said handle member carrying a yielding member, a washer, said washer adapted to prevent said yielding member from wearing upon said pipe, intermediate parallel spaced apart portions in the length of said main portion, a substantially V shaped member in engagement with said spaced apart portions, a securing portion, a securing member for said spaced apart portion, whereby said V shaped member is held in rigid engagement with said spaced apart portions, straight portions at the terminal of said looped portion, said straight portions extending at right angles to said looped portion and bent downwardly and inwardly in engagement with said damper.

2. The herein described device comprising the combination with a pipe having an opening therein and a damper, of an adjusting device, said adjusting device comprising a plurality of strands of wire looped upon each other forming a main portion, intermediate parallel spaced apart portions in the length of said main portion, a substantially V shaped member having a curved portion in its terminals, said curved portion adapted to engage in a slot in said damper, said V shaped member being secured in the spaced apart portions by a compound looped strand of wire, said main portion terminating in straight portions, said straight portions being in the horizontal radius of said damper, and at right angles to said looped portion, said straight portions bent downwardly and inwardly whereby said damper

is held in engagement with said main portion.

3. The herein described device comprising the combination with a pipe having an opening therein and a damper, of an adjusting device, said adjusting device comprising a plurality of strands of wire looped upon each other forming a main portion, intermediate parallel spaced apart portions in the length of said main portion, a substantially V shaped member having a curved portion in its terminals, said curved portion adapted to engage in a slot in said damper, said V shaped member being secured in the spaced apart portions by a compound looped strand of wire, said main portion terminating in straight portions, said straight portions being in the horizontal radius of said damper, and at right angles to said looped portion, said straight portions bent downwardly and inwardly whereby said damper is held in engagement with said looped portion, an anchoring member, said anchoring member in engagement with said damper and in alinement with said looped portion, adapted to enter an opening in said pipe whereby said damper may be adjustably secured.

4. The herein described device comprising the combination with a pipe having an opening therein and a damper, an adjusting device, said adjusting device comprising a plurality of strands of wire looped upon each other forming a main portion, intermediate parallel spaced apart portions in the length of said main portion, of a substantially V shaped member having a curved portion in its terminals, said curved portion adapted to engage in a slot in said damper, said V shaped member being secured in the spaced apart portions by a compound looped strand of wire, said main portion terminating in straight portions, said straight portions being in the horizontal radius of said damper, and at right angles to said main portion, said straight portions bent downwardly and inwardly whereby said damper is held in engagement with said looped portion, an anchoring device in engagement with said damper and consisting of a substantially V shaped member one end thereof formed by the bend of a strand of wire, said strand of wire curved in its length and adapted to coöperate with said looped portion, when the damper is adjusted.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLINTON DE WITT WAGNER.

Witnesses:

W. J. ELLIOTT,
FRANK BATES.