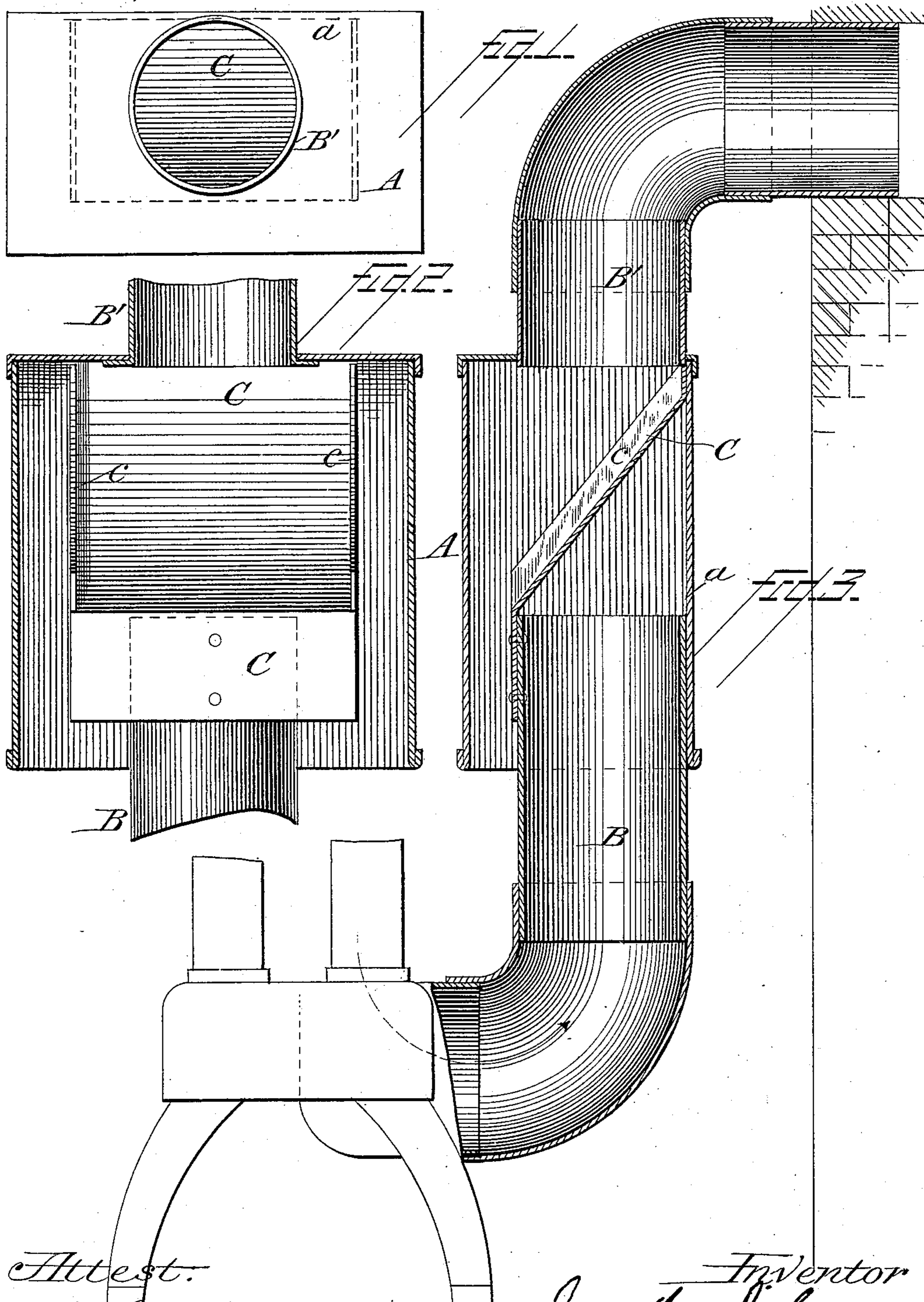


(No Model.)

J. JOHNSON & E. H. PACKER.
FENDER FOR STOVE PIPES.

No. 420,999.

Patented Feb. 11, 1890.



Attest.

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UNITED STATES PATENT OFFICE.

JONATHAN JOHNSON AND EDMUND H. PACKER, OF LOWELL, MASSACHUSETTS.

FENDER FOR STOVE-PIPES.

SPECIFICATION forming part of Letters Patent No. 420,999, dated February 11, 1890.

Application filed September 25, 1889. Serial No. 324,994. (No model.)

To all whom it may concern:

Be it known that we, JONATHAN JOHNSON and EDMUND H. PACKER, citizens of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Fenders for Stove-Pipes; and we 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 letters of reference marked thereon, which form a part of this specification.

This invention relates to a fender whereby flames in stoves and other heating devices which are connected with a chimney by an ordinary stove-pipe are protected from back-drafts.

Where stove-pipes of the ordinary kind are used, it has been found that when back-drafts are created in the chimney by the opening or closing of doors or other means the products of combustion are forced into the room. These drafts are sometimes of sufficient force to extinguish the flame, especially immediately after it has been kindled. This is especially so in heat-radiators where gas is used as a fuel. This causes much inconvenience, and in case of the radiator is dangerous on account of the gas escaping.

The invention relates to a device for overcoming this difficulty; and it consists, essentially, in a main chamber inclosing a deflector and having short sections of pipe protruding from both ends for connecting it with the portions of pipe between which it is to be placed.

It further consists in certain details of construction and arrangement of parts, hereinafter more fully described.

In the accompanying drawings, in which similar letters of reference designate corresponding parts, Figure 1 is a plan view of the device. Fig. 2 is a transverse cross-section. Fig. 3 is a longitudinal cross-section.

Referring to the drawings by letter, A designates the main chamber, preferably rectan-

gular in shape, and has projecting from both end sections of pipes B'B for connecting it with the two portions of the pipe between which it is to be inserted. The upper end of the chamber is closed, having the pipe B' inserted in it in any suitable manner. The lower end of the chamber is left open and has projecting from it the pipe B, which extends upward into the main chamber a considerable distance—about one-third of the length of said chamber—and is fastened in place by being riveted to the side *a* of the main chamber. The diameter of this pipe is shorter than the width of the chamber.

From the periphery of the lower pipe, opposite to where it is riveted to the side *a*, extends the deflector C to the top of the chamber, and is riveted to the side *a*. The deflector, when so fastened, will pass at an inclination over the upper opening of the pipe B. The lower end of the deflector is bent, so as to be parallel to the side of the pipe to which it is attached, and extends a short distance below the mouth of the same. The deflector is in width a mean between the breadth of the chamber and the diameter of the pipe B. The outer edges *c c* of the deflector are turned up at right angles to the main surface for the purpose which will be stated further on.

After the fender has been placed in position for operation and a fire started, the smoke from the same will ascend and pass through the pipe B and strike against the deflector, passing around it into the upper pipe B'. It has been found that the deflector presents but a slight impediment to the passage of the smoke. If, however, a back-draft should be created, it would strike against the deflector, and pass along between the same and the walls of the chamber out into the room. The upturned edges *c c* of the deflector prevent the smoke from passing under the same and entering the lower pipe.

Having described our invention, what we claim, and desire to secure Letters Patent for, is—

1. In a fender for stove-pipes, the chamber A, the pipes B and B', projecting from the

ends of said chamber, the lower of said pipes
extending into the chamber, and the deflector
C, extending from one edge of the lower pipe
diagonally across its opening to the side of
5 the chamber, substantially as set forth.

2. In a fender for stove-pipes, the chamber
A, the deflector C, having its edges *c c* turned
upward at right angles to the main surface,
and the pipes B and B', projecting from the
10 ends of said chamber, the lower of said pipes

having an annular opening around its upper
end, substantially as set forth.

In testimony whereof we affix our signatures
in presence of two witnesses.

JONATHAN JOHNSON.
EDMUND H. PACKER.

Witnesses:

ALBERT S. GUILD,
AUSTIN K. CHADWICK.