MRS. BRIDGET FRENCH.

Stovepipe-Damper.

117,762. Patented August 8, 1871.

Fig. 1.

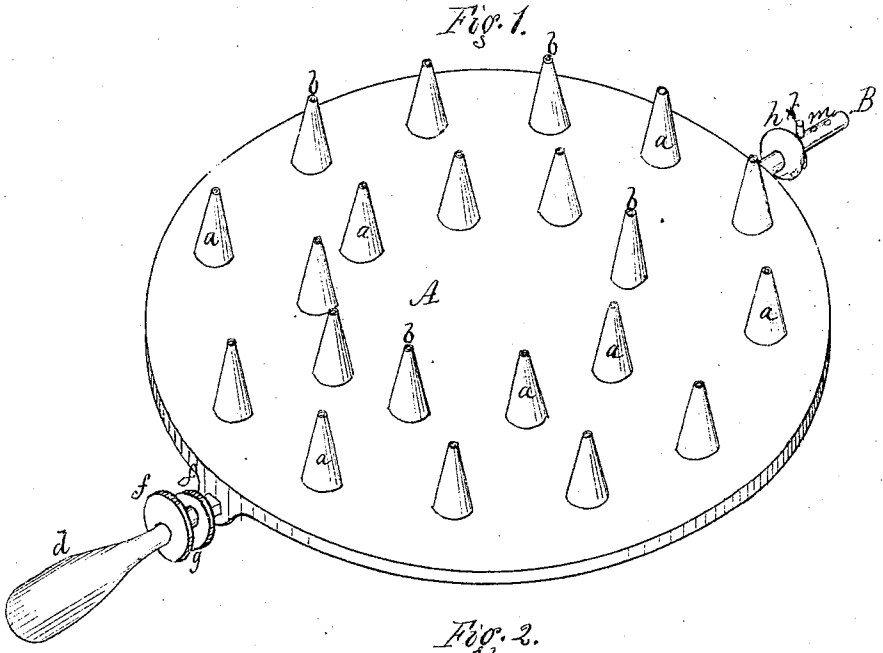


Fig. 2.

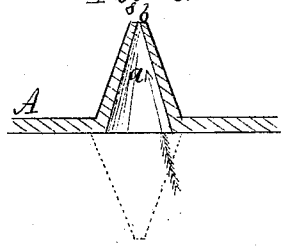
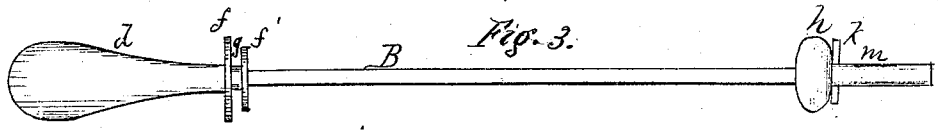


Fig. 3.



Witnesses.
Archd. Baird
Charley Englehardt

Inventor:
Mrs. Bridget French,
By Burke Fraser & Hopgood,
attys.
Rochester, N.Y.

UNITED STATES PATENT OFFICE.

BRIDGET FRENCH, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN STOVE-PIPE DAMPERS.

Specification forming part of Letters Patent No. 117,762, dated August 8, 1871.

To all whom it may concern:

Be it known that I, BRIDGET FRENCH, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Dampers for Stove-Pipes, of which the following is a specification:

The object of my invention is to facilitate the escape of gas; and consists in constructing the damper with conical nipples on one side.

In the drawing, Figure 1 is a perspective view of my improved damper; Fig. 2, a section through one of the conical nipples; Fig. 3, a view of the axis of the damper.

A represents the damper-plate, which is of the usual circular form to fit in the pipe. On one side it has a series of conical nipples *a a*, which is distributed over the whole surface. These nipples are made hollow, and at the apex or top are small perforations *b b*, which establish constant communication between the spaces above and below the damper.

The special object of these conical nipples is to facilitate the escape of gas without at the same time allowing a free draught, which occurs when the damper is partially or wholly open. When the apexes are turned upward, as in Fig. 1, the tendency is to concentrate in the cones the products passing upward and allow them to escape more readily by such concentration, especially as a kind of auxiliary draught is produced by the cones, which act to a certain degree as chimneys when the currents through the pipe are varied by wind or otherwise.

When turned down, as shown by the dotted lines in Fig. 2, the apexes produce the opposite effect, by diffusing instead of concentrating; and by projecting a distance below the surface of the damper prevent a rapid escape and deaden the action of the fire, but at the same time allow the gas to escape by its tendency to pass upward rapidly. In the first-named position the cones prevent gusts of wind from affecting the fire, by diffusing the currents. They also equalize the draught from below, and prevent any counter-currents that might arise by concentrating on one side more than the other. The disk of the damper is provided with lugs, through which passes the axis B. This axis has a handle, *d*, and two disks or enlargements, *f f'*, with a space, *g*, between, at one end, and at the other it has a loose ball, *h*, held in place by a pin, *k*, which fits in any of a series of holes, *m m*, of the axis.

When the damper is located between two joints of pipe one edge of the pipe rests between the disks *f f'*, which keep the axis firmly in place and prevent any end movement. When located intermediately in a single length, however, the axis is run through, and the side of the pipe rests inside the inner disk *f'*. The opposite end of the axis is passed through the opposite side of the pipe, and the ball *h* is then slipped up on the outside and held by the pin, as before described.

This arrangement of the axis, with the two disks *f f'*, and with the loose ball *h* held by the pin in the adjusting-holes, is new as far as I am aware, and forms one feature of my invention. By this means it is specially adapted to insertion either at the joints of the pipe or inside the separate lengths. The ball enables the axis to be removed at pleasure, and the adjusting-holes allow it to be placed in large or small pipes. This device is applicable both to coal and wood-stoves.

I do not claim simple holes formed near the rim of the damper, as I am aware that the same are not new; but

What I claim, and desire to secure by Letters Patent, as a new article of manufacture, is—

The damper A, provided with the projecting conical nipples *a a*, distributed over the surface, arranged as described, and operating in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

BRIDGET FRENCH.

Witnesses:
R. F. OSGOOD,
ARCHD. BAINE.