

No. 618,439.

Patented Jan. 31, 1899.

A. SCHAFFER.
SOOT ARRESTER.

(Application filed Jan. 8, 1898.)

(No Model.)

Fig. 1.

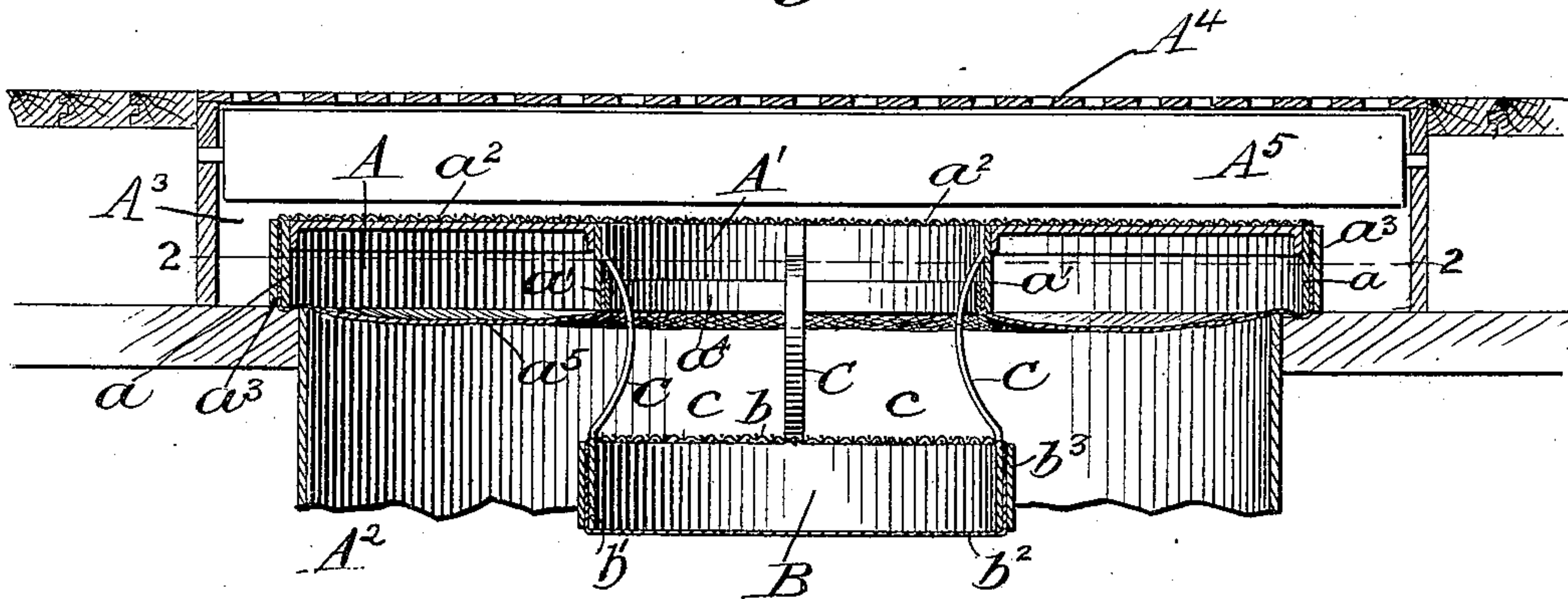
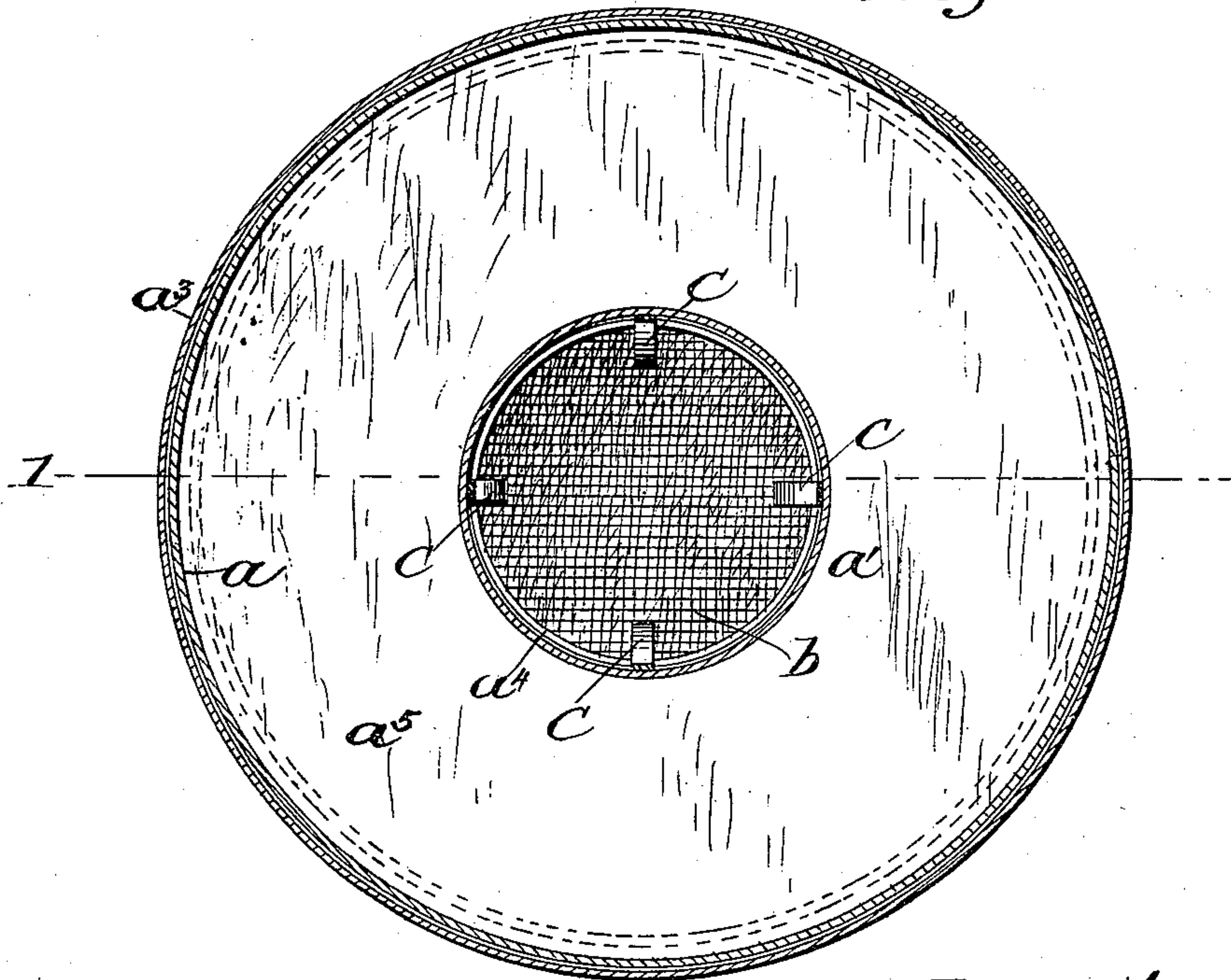


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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SOOT-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 618,439, dated January 31, 1899.

Application filed January 8, 1898. Serial No. 666,003. (No model.)

To all whom it may concern:

Be it known that I, AUGUST SCHAFFER, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Soot-Arresters; 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.

This invention relates to soot-arresters for hot-air flues; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

The invention is illustrated in the accompanying drawings, as follows:

Figure 1 shows a vertical section of the device on the line 1 1 in Fig. 2. Fig. 2 shows a section on the line 2 2 in Fig. 1.

A² marks the hot-air flue; A³, the register-box into which it enters; A⁴, the registering, and A⁵ the slats for opening and closing the register. I have found that these flues as now constructed carry a considerable quantity of soot or other matter into the rooms into which they open, and the matter so carried is of such a nature as to adhere to the walls of the rooms and so discolor them. It is to arrest the matter so carried, which matter may be designated by the general term "soot," that this invention is provided.

In brief, the invention consists of an arrester through or by which the air is made to pass, which arrester is provided with a fibrous soot-catching surface. Preferably the arrester is so arranged that the fibrous surfaces prevent a direct passage of the air through the flue, but allow its free movement by deflecting the air through lateral passages in the arrester. A preferable form is shown. It is formed of a larger disk A, having an opening A' in the center, and a smaller disk B, placed opposite the opening A' and being preferably of the same size or larger than the opening A'. The larger disk is formed of the outer ring and an inner ring a', and these are preferably connected at the top or outer surface by a wire mesh a². A ring a³ encircles the outer ring, and a ring a⁴ fits into the inner ring. A cloth a⁵ of fibrous material is secured to the outer and inner rings by the rings a³ and a⁴, between which and the outer

and inner rings, respectively, the rings a³ and a⁴ pinch the cloth. A wire mesh b is preferably placed over the lower ring b', and a cloth b² is secured to the under or flue side of the disk by a ring b³, which encircles the ring b', so that the cloth is pinched between the rings. The disks are connected by hangers C.

This device is preferably placed over the flue at its opening into the room. When so arranged, the larger disk is made somewhat larger than the flue and the smaller disk extends back into the flue. There is usually room in the register-box below the slats to allow of this arrangement. It will readily be seen that the air coming from the flue is deflected by the disks, so that the air which does not pass through the cloths passes through the lateral opening c and the opening A'. The soot carried by the air is not so readily deflected and is impelled by its momentum against the cloths, where it is caught. The fibrous nature of the cloths renders the catching of the soot more perfect than would be the case with other surfaces.

The purpose of the wire mesh is to prevent the escape of the cloth should it become ignited. By the construction shown the cloths can be readily changed or removed for cleaning.

What I claim as new is—

1. A soot-arrester comprising a larger part provided with a surface of fibrous material and arranged with an opening therein, and a smaller part arranged opposite the opening and away from the larger part.

2. A soot-arrester comprising a larger part provided with a surface of fibrous material and arranged with an opening therein, and a smaller part arranged opposite the opening and away from the larger part, said smaller part being provided with a surface of fibrous material.

3. In a soot-arrester the combination of the larger part A having the opening A'; the cloth a⁵ covering said part; the part B; the cloth b' covering said part; and hangers C connecting the parts.

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

AUGUST SCHAFFER.

Witnesses:

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