

C. B. HOUSER, JR.
 FILTER.
 APPLICATION FILED NOV. 25, 1911.

1,037,145.

Patented Aug. 27, 1912.

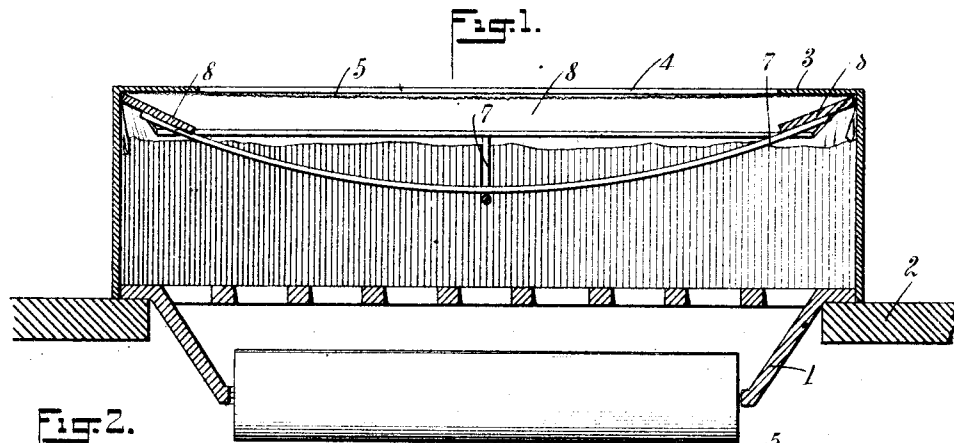
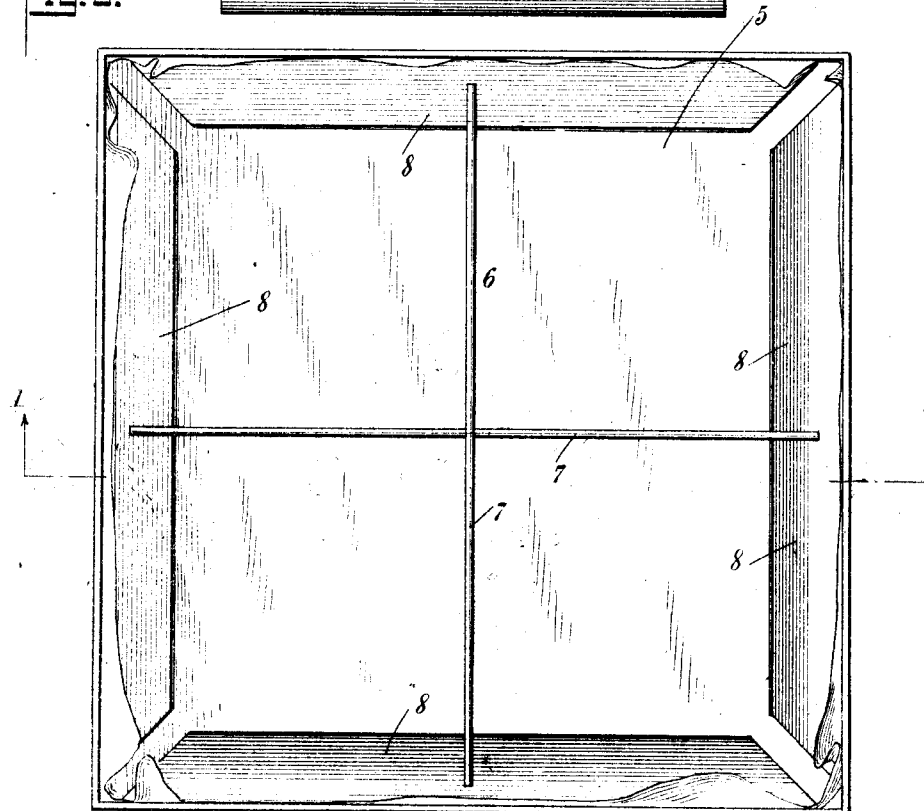
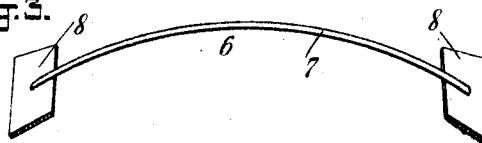


Fig. 2.



WITNESSES
Sidney Brooks
L. J. Gallagher.

Fig. 3.



INVENTOR
Charles B. Houser, Jr.
 BY *Merrill*
 ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES B. HOUSER, JR., OF ST. CHARLES, MISSOURI.

FILTER.

1,037,145.

Specification of Letters Patent.

Patented Aug. 27, 1912.

Application filed November 25, 1911. Serial No. 662,323.

To all whom it may concern:

Be it known that I, CHARLES B. HOUSER, Jr., a citizen of the United States, and a resident of St. Charles, in the county of St. Charles and State of Missouri, have invented a new and Improved Filter, of which the following is a full, clear, and exact description.

The principal object of my invention is to provide a new and improved hot air filter which may be applied to a register, the application and use of the filter not necessitating the removal of the register or any change in the construction thereof, the device being particularly adapted to be positioned on top of the register.

A further object of the invention is to provide a simple and effective device of this character which will efficiently perform the purpose for which it was designed, the construction and arrangement being such that it may be produced at a low cost.

Other objects and advantages of the invention will appear as the description thereof proceeds, all of which is particularly pointed out and included in the appended claim.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a sectional view on the line 1—1 of Fig. 2; Fig. 2 is a bottom plan view of the filter; Fig. 3 is a perspective view of one of the spring clamps.

The filter is adapted to be positioned on top of any suitable register 1 positioned in a wall or floor 2, the size of the filter being such that it may snugly embrace the sides of the register.

The filter is made up of a suitable frame of shape adapted to the register with which it is to be used, the bottom of the frame being open and the top 3 being provided with a central removed portion 4 whereby exit for the heated air coming from the register 1 is provided. Secured within the frame and removably held in position is a filter cloth 5 of suitable texture and material, the means for holding it being preferably clamps 6 of the form shown particularly in Fig. 3.

Each clamp comprises an intermediate resilient portion 7 having extended bearing members 8 secured at opposite ends thereof, the length of these members being determined by the dimensions of the frame so that when the filter cloth is positioned within the frame adjacent the opening 4 in the top thereof, the members 8 may engage opposite portions of the cloth, thereby holding the cloth securely in position. Since the usual form of the filter is rectangular, the removable clamps will be preferably two in number, arranged at right angles to each other, as shown in Fig. 2.

The filter cloth is secured in place within the frame and the frame is then positioned on top of the register whether it be in the floor or wall, as shown in Fig. 1; the heated air coming through the register will be filtered and the dust and impurities therein will be removed by reason of the air passing through the filter cloth, the foreign matter being retained on the under side of the cloth and within the frame.

The construction and arrangement is such that a very efficient article is produced at an extremely low price, the filter cloth being capable of easy removal and requiring but a very short time, so that the air supplied to a room may always be kept clean. The material of which the frame is made will depend largely upon the surrounding fixtures and the color or finish thereof to be determined by the finish of the room in which it is used, such changes, as well as those of size and shape, being included within the spirit of the appended claim.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:—

A structure of the class described comprising a frame adapted to be fitted over a register, a filter cloth within the frame, and of substantially greater size than the said frame and extending between the sides thereof, a plurality of clamps within the frame for holding the filter cloth in position, each clamp comprising a member having a flexible intermediate portion, and transversely extending bearing members at the ends of the said portion, the length of each clamp being substantially greater than the width of the frame, the clamps being

entered into the frame in bent condition with the said transversely extending bearing members in engagement with the filter cloth adjacent opposite sides of the frame, whereby the filter cloth will be secured in position within the frame.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

CHARLES B. HOUSER, JR.

Witnesses:

K. J. GUTHRIE,

W. D. EDDY.