No. 842,914. PATENTED FEB. 5, 1907.

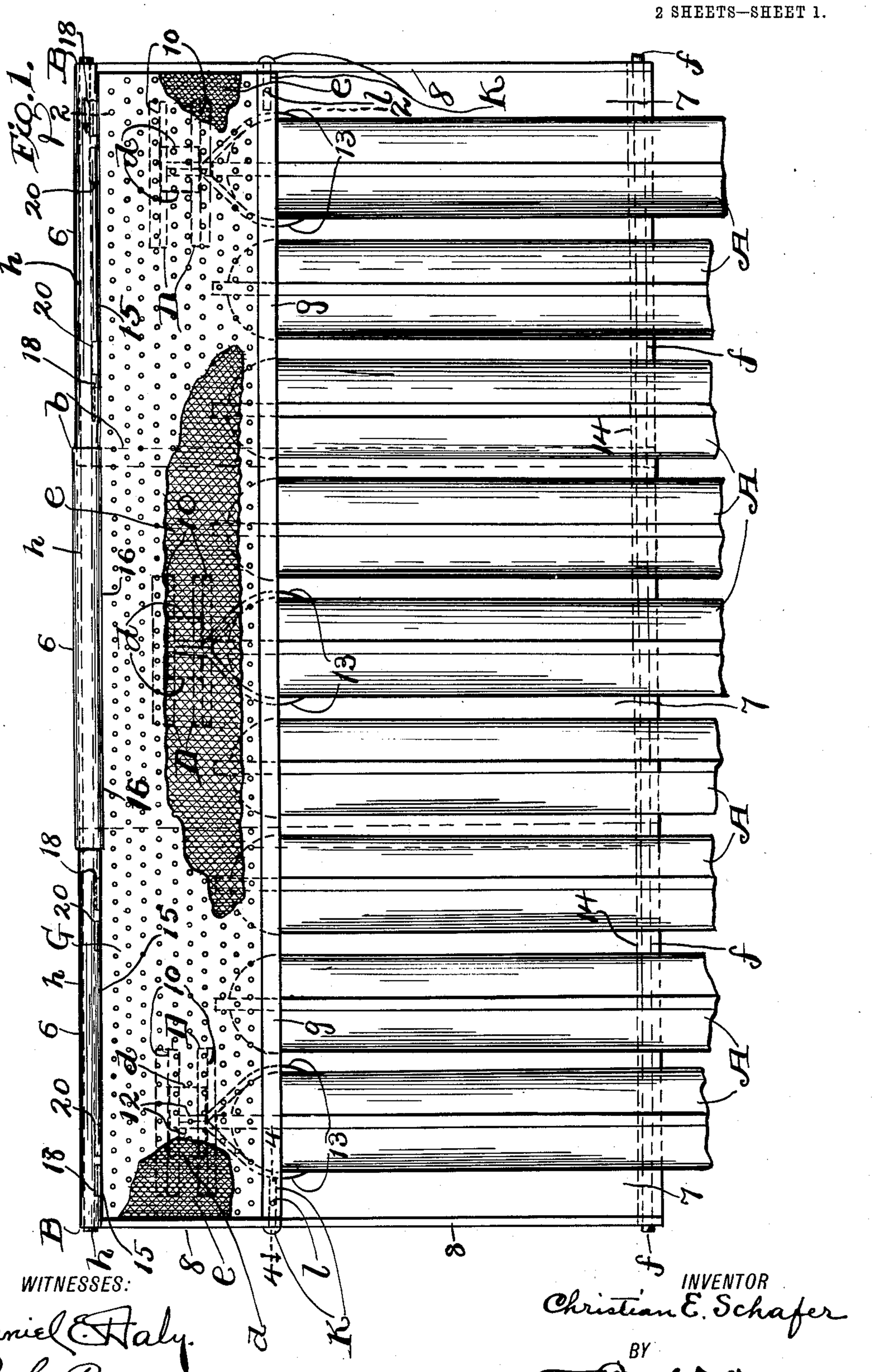
C. E. SCHAFER.

HOT AIR DEFLECTOR AND DUST COLLECTOR FOR RADIATORS.

APPLICATION FILED JAN. 26, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 1.

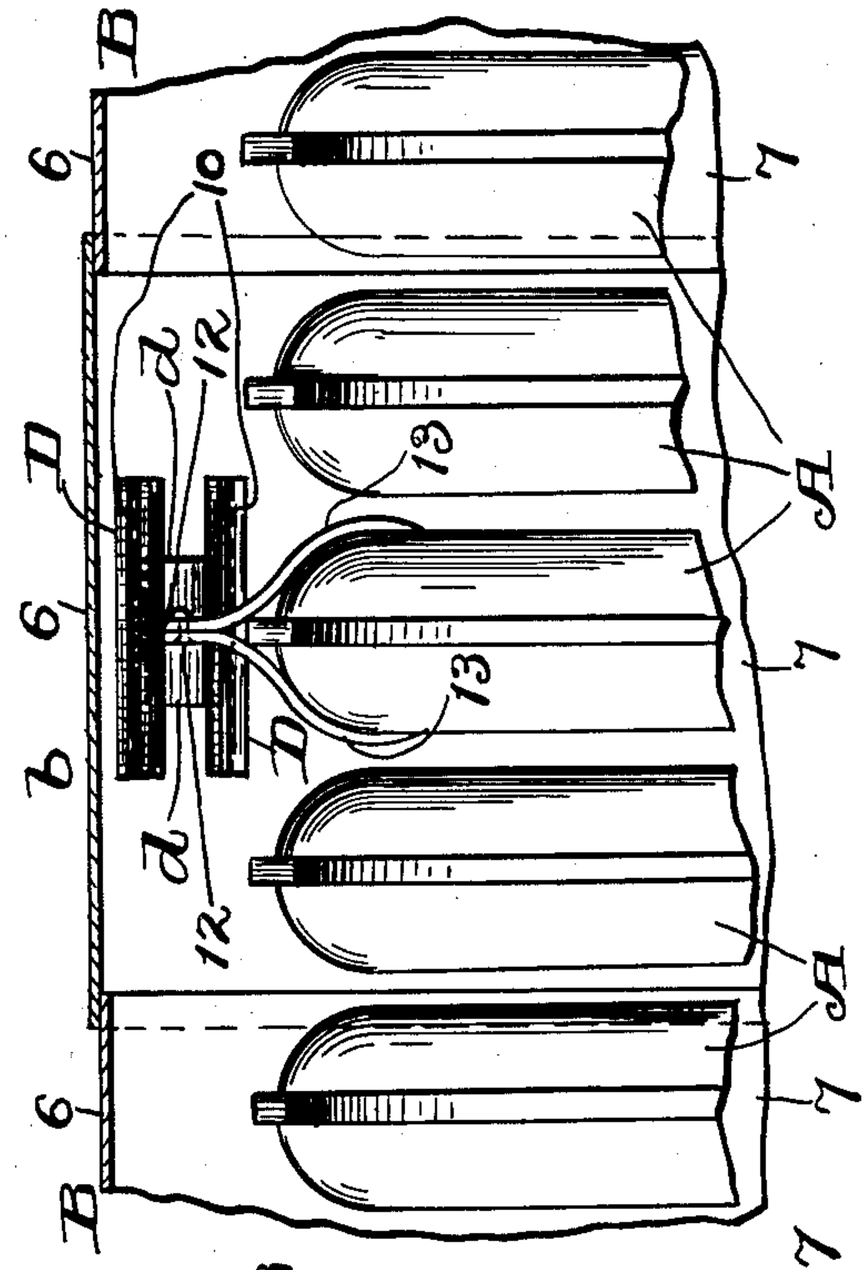


Fig. 4.

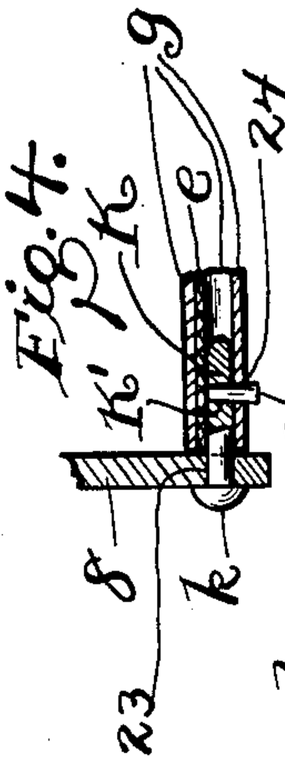


Fig. 5.

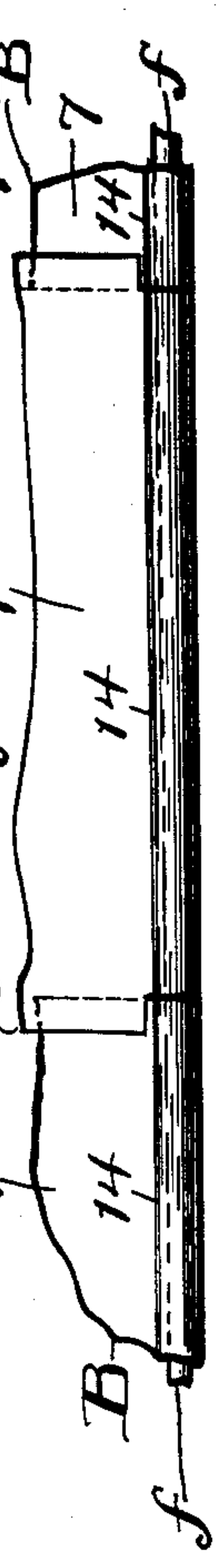


Fig. 2.

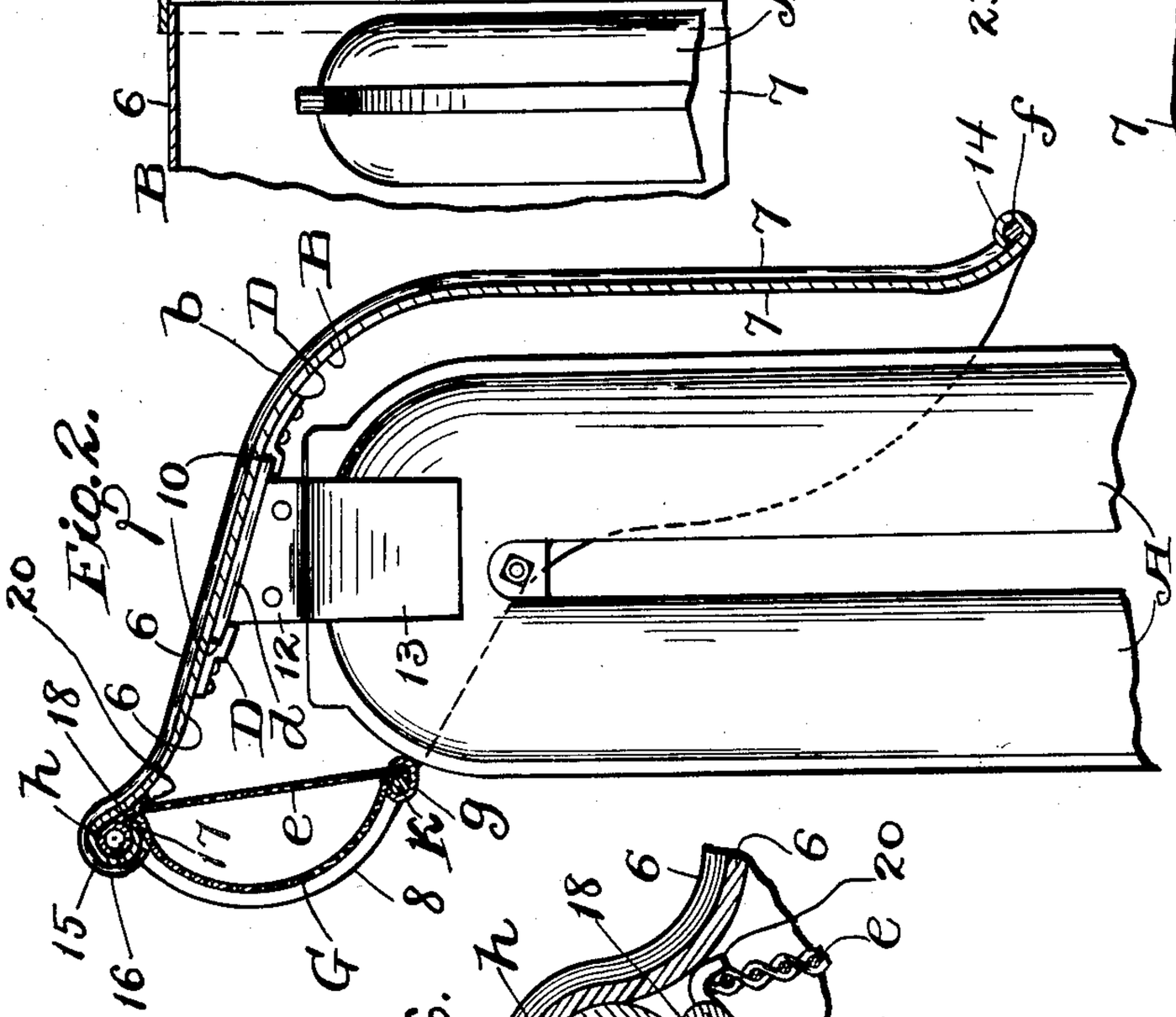
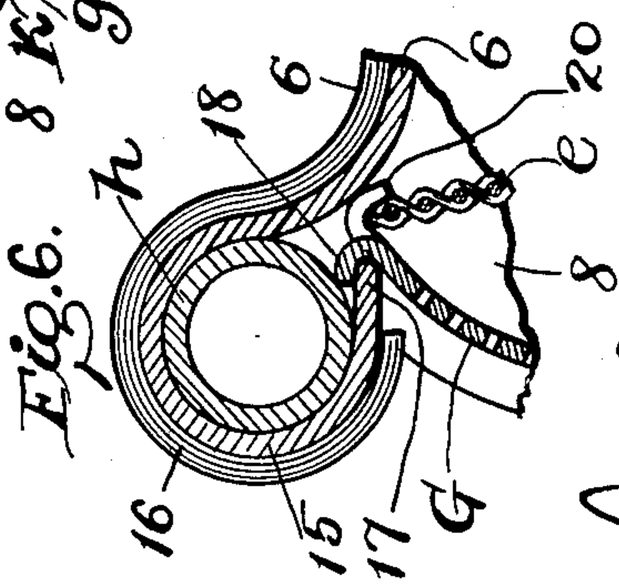


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHRISTIAN E. SCHAFER, OF CLEVELAND, OHIO.

HOT-AIR DEFLECTOR AND DUST-COLLECTOR FOR RADIATORS.

No. 842,914. Specification of Letters Patent. Patented Feb. 5, 1907.

Application filed January 26, 1906. Serial No. 297,961.

To all whom it may concern:

Be it known that I, CHRISTIAN E. SCHAFER, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Hot-Air Deflectors and Dust-Collectors for Radiators; and I 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 pertains to make and use the same.

This invention relates to an improved hot-air deflector and dust-collector for radiators.

One object of this invention is to construct a combined deflector and dust-collector of the character indicated which will deflect the hot air from over the radiator forwardly and arrest and collect dust and dirt carried by the air.

Another object is to construct the air-deflecting hood of the device in three sections, with the central section overlapping the adjacent ends of the end sections, so that the latter can be used in connection with any radiator, and the central section employed will vary in length with the size of the radiator in connection with which my improved device is to be used.

Another object of this invention is to provide a combined air-deflector and dust-collector which is simple and durable in construction and readily applied to and removed from the radiator and which can be conveniently cleaned.

With these objects in view and to the end of realizing other advantages hereinafter appearing this invention consists in certain features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front side elevation of the upper portion of a radiator provided with a combined hot-air deflector and dust-collector embodying my invention, and portions are broken away in this figure to more clearly show the construction. Fig. 2 is a vertical section on line 2 2, Fig. 1, looking in the direction indicated by the arrow. Fig. 3 is a vertical longitudinal section taken through the central portion of the air-deflecting hood looking rearwardly. Fig. 4 is a horizontal section in detail on line 4 4, Fig. 1, and drawn on a larger scale than Figs. 1, 2, and 3. Fig. 5 is a rear side view of the central portion of the back of the air-deflecting hood. Fig. 6 is an enlarged vertical transverse section showing the manner of supporting the dust-collecting screen from the air-deflecting hood.

Referring to the drawings, A represents the upper portion of the upright heater forming sections of a radiator.

My improved combined hot-air deflector and dust-collector comprises an air-deflecting hood which is helmet-shaped and preferably composed of two end sections B and B and a central section *b*. Each hood-section is provided with a top 6, which is spaced a suitable distance above the radiator. The said top is provided at the rear of the radiator with a depending portion 7, which forms the back of the hood. The space within the hood has two end walls 8, formed at opposite ends, respectively, of the hood on the outer end of opposite end sections B, respectively—that is, each end section B of the hood is provided at its outer end with an end wall 8, depending from the top of the said section. The central hood-section *b* is large enough longitudinally of the hood to render it capable of overlapping the outer sides of the end sections B of the hood. The hood is supported from the radiator in any approved manner. Preferably each hood-section is provided at the under side of its top 6 with a slideway 10, which is arranged longitudinally of the hood and formed by plates D, which are suitably secured to and spaced transversely of the said hood-section.

The slideway 10 is engaged by a slide which is shiftable or adjustable endwise of the slideway 10, and consequently longitudinally of the hood, which slide is formed by a pair of plates *d*, engaging the said slideway and arranged end to end longitudinally of the slideway. Each plate is provided at its inner end with a depending arm 12. The arms 12 of each pair of plates *d* are suitably secured together. The slideway-forming plates D are arranged far enough apart forwardly and rearwardly of the hood to accommodate the location of the arms 12 between the said plates. Each arm 12 terminates in a spring clamping member 13, and the clamping members 13 of the said plates are adapted to straddle and clamp the upper end of one of the radiator-sections A. In other words, the

hood is provided with spring-clamps adapted to removably attach the hood to the upper portions of the sections A of the radiator, while the said clamps are adjustable longitudinally of the hood to accommodate variations or irregularities in the size or configuration of the radiator-sections.

I prefer to provide the central hood-section *b*, as well as the end hood-sections B, with means for removably attaching the hood to the radiator; but obviously the said central section, overlapping the outer sides of the end hood-sections, is supported upon the latter. However, the provision of means employed in directly supporting the central hood-section from the radiator is important to positively prevent sagging of the top of the said hood-section.

My improved hot-air deflector and dust-collector is shown provided at the forward side of the air-space formed between the end walls 8 of the hood with a forwardly-facing wire screen *e*, having fine meshes. A stiff or self-sustaining screen *e* is preferably employed. The screen *e* is supported, preferably, from a forwardly-bulging foraminated or perforated sheet-metal plate G, which extends between the end walls 8 at the front of the hood.

The space formed between the rear or inner side of the plate G and the forward or outer side of the screen *e* forms a chamber for collecting any dust or dirt which may pass through the screen. The outward curvature or bulge of the plate G enlarges the aggregate air capacity of the perforations formed in the plate. The screen-holding plate G is supported from the hood-sections B and *b* in any approved manner. Preferably the three sections of the hood are connected together at the lower ends of their backs 7 through the medium of a rod *f*, which is embraced by cylindrical bends 14, formed on the lower ends of the said backs—that is, the backs 7 of the hood-sections, or, at least, portions of the said backs, are bent in under and around a rod *f*, as shown very clearly in Figs. 2 and 5. The rod *f* and the embracing-bends 14 hold the hood-sections at the lower ends of their backs 7 properly assembled and reinforce the hood.

A tube *h* is arranged at the forward end of the tops 6 of the hood-sections and extends longitudinally of the hood, and the tops 6 of the end hood-sections B are bent, as at 15, over and forwardly around and in under the said tube. The top 6 of the central hood-section *b* terminates at its forward end in a bend 16, which extends over and forwardly around the bends 15 of the hood-sections B. The tube *h* and the bends 15 and 16 of the tops of the hood-sections are instrumental in holding the said hood-sections properly assembled and reinforce the hood. The bend 15 of each end hood-section B at the bottom of the tube *h* projects rearwardly in a horizontal plane, as at 17, and the plate or screen-holder G at its upper edge is provided with hooks 18, overlapping the upper side of and removably mounted on the said rearwardly-projecting portions 17 of the bends 15 of the hood-sections B, as shown very clearly in Fig. 6. The plate or screen-holder G is therefore removably supported at the top from the hood-sections. The hooks 18 are rounded, as shown in Fig. 6, so as to accommodate the swinging of the plate or screen-holder G forwardly; but the latter can be readily detached from the hood by moving it rearwardly to disengage its hooks 18 from the engaging portions of the hood-sections B.

The plate or screen-holder G is bent at its lower end, as required, to form a channel-bar *g*, arranged to form a pocket which is open at the top, as shown in Fig. 2, and extends longitudinally and from end to end of the screen-holder. The member *g* affords a bottom bearing to the screen *e*, which extends longitudinally of the hood into close proximity to both end walls 8 and is held in position at the top by hooks or projecting members 20, which are formed on the plate G and extend over the upper edge of the screen, as shown very clearly in Fig. 6, and overlap the rear or inner side of the screen. Obviously the back or inner side of the screen is rendered readily accessible to be wiped upon swinging the screen-holder forwardly or outwardly, and upon detaching and removing the screen-holder from the hood the screen can be slid endwise and withdrawn from the screen-holder to be thoroughly cleaned, if necessary.

Means for locking the screen-holder G to the end walls 8 is provided, and comprises, preferably, the following: Each end wall 8 is provided at the adjacent end of the screen-supporting member *g* of the screen-holder with a lateral perforation 23, as shown very clearly in Fig. 4. A pin K extends loosely through the said perforation into the space formed within the member *g* at the forward side of the screen *e*, which pin is provided at its outer end with a head *k*, arranged to abut against the outer surface of the said end wall. A pin *l* (see Fig. 4) engages a hole K′, formed in and arranged transversely of the aforesaid pin K and extends through a hole 24, formed in the screen-supporting member *g* of the screen-holder G. It will be observed, therefore, that the pins *l* and K effectually hold the screen-holder to the end walls 8 of the hood, but that the screen-holder is rendered free to be swung forwardly and removed from the hood upon withdrawing the pins K after a withdrawal of the pins *l*.

What I claim is—

1. In a hot-air deflector and dust-collector for a radiator, the combination, with an air-deflecting hood adapted to cover the top of the radiator and arranged to discharge air

forwardly, of a foraminated or perforated plate supported from the forward portion and at the top of the hood as required to render it capable of being swung forwardly, which plate extends longitudinally of the hood, and a screen arranged at the inner side and extending longitudinally of the said plate, which screen is supported from the plate.

2. The combination, with an air-deflecting hood adapted to cover the top of a radiator and discharging forwardly, of a suitably-supported forwardly-bulging foraminated or perforated plate arranged in front and extending longitudinally of the hood; and a screen arranged at the inner side and extending longitudinally of the said plate, which screen is supported from the plate.

3. The combination, with an air-deflecting hood arranged to discharge forwardly, with the space formed within the hood having end walls, of a forwardly-bulging foraminated or perforated plate supported from the forward portion and at the top of the hood, which plate extends between the aforesaid walls, and a screen arranged at the inner side and extending longitudinally of the said plate, which screen is supported from the plate.

4. The combination with an air-deflecting hood arranged to discharge forwardly, with the space formed within the hood having end walls; a forwardly-bulging foraminated or perforated plate detachably supported from the forward portion of and at the top of the hood, and a screen arranged at the inner side and extending longitudinally of the said plate, which screen is detachably supported from the plate.

5. The combination, with a forwardly-discharging air-deflecting hood for the top of a radiator, with the space formed within the hood having end walls; a forwardly-bulging foraminated or perforated plate detachably supported from and at the top of the forward portion of the hood, which plate extends between the aforesaid walls; a screen arranged at the inner side and extending longitudinally of the said plate, which screen is supported from the plate, and means for detachably fastening the plate to the aforesaid walls a suitable distance below the top of the hood.

6. The combination, with a forwardly-discharging air-deflecting hood, with the space formed within the hood having end walls, of a forwardly-facing screen extending between and in close proximity to the said walls, and a holder supporting the screen and arranged in the main forwardly of the screen, which holder is removably supported at the top from the hood and provided at the bottom with a member affording a bottom-bearing to the screen.

7. The combination, with a forwardly-discharging air-deflecting hood, with the space formed within the hood having end walls, of a forwardly-facing screen extending between the said walls, and a holder supporting the screen and removably supported at the top from the hood and provided at the bottom with a member extending in under and supporting the screen.

8. The combination, with a forwardly-discharging air-deflecting hood, with the space within the hood having end walls, of a forwardly-facing screen extending between the end walls, and a holder arranged in the main forwardly of the hood and removably supported from the hood and having hooks or projecting members which extend over the upper edge of the screen and overlap the rear or inner side of the screen, said holder extending under and supporting the screen.

9. The combination, with a forwardly-discharging air-deflecting hood, with the space formed within the hood having end walls, of a forwardly-facing screen extending between the said walls, and a holder supporting the screen and removably supported at the top from the hood, and means for locking the screen-holder to the aforesaid walls adjacent the lower edge of the screen.

10. A forwardly-discharging air-deflecting hood comprising a central section and two end sections, with the central section overlapping adjacent portions of the outer surfaces of the adjacent ends of the end sections, and with the end sections provided interiorly with spring clamping members arranged to straddle and clamp the upper portions of radiator-sections.

11. A forwardly-discharging air-deflecting hood provided at the under side of the top of the hood with a slideway arranged longitudinally of the hood, and two plates forming a slide engaging the slideway, said plates being provided with members arranged to support the hood from the upper portion of a radiator-section.

12. The combination, with a forwardly-discharging air-deflecting hood, with the space formed within the hood having end walls, of a forwardly-facing screen extending between the said walls, a holder supporting the screen and removably supported from the hood, and means for looking the screen-holder to the aforesaid walls.

13. The combination, with a forwardly-discharging air-deflecting hood, with the space formed within the hood having end walls, of a forwardly-facing screen extending between the said walls, and a holder supporting the screen and supported from the hood as required to render the holder capable of being swung outwardly to afford access to the screen.

14. The combination, with a forwardly-discharging air-deflecting hood, with the space formed within the hood having end walls, of a forwardly-facing screen extending between the said walls, and a holder support-

ing the screen and supported from the hood as required to render the holder capable of being swung outwardly to afford access to the screen, said holder being detachable from the hood, and the screen being removable endwise from the holder upon the detachment of the latter from the hood.

In testimony whereof I sign the foregoing specification in the presence of two witnesses.

CHRISTIAN E. SCHAFER.

Witnesses:
C. H. DORER,
B. C. BROWN.