

June 19, 1923.

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J. W. BOSSHART ET AL

DUST COLLECTOR

Filed Oct. 24, 1921

Fig. 1.

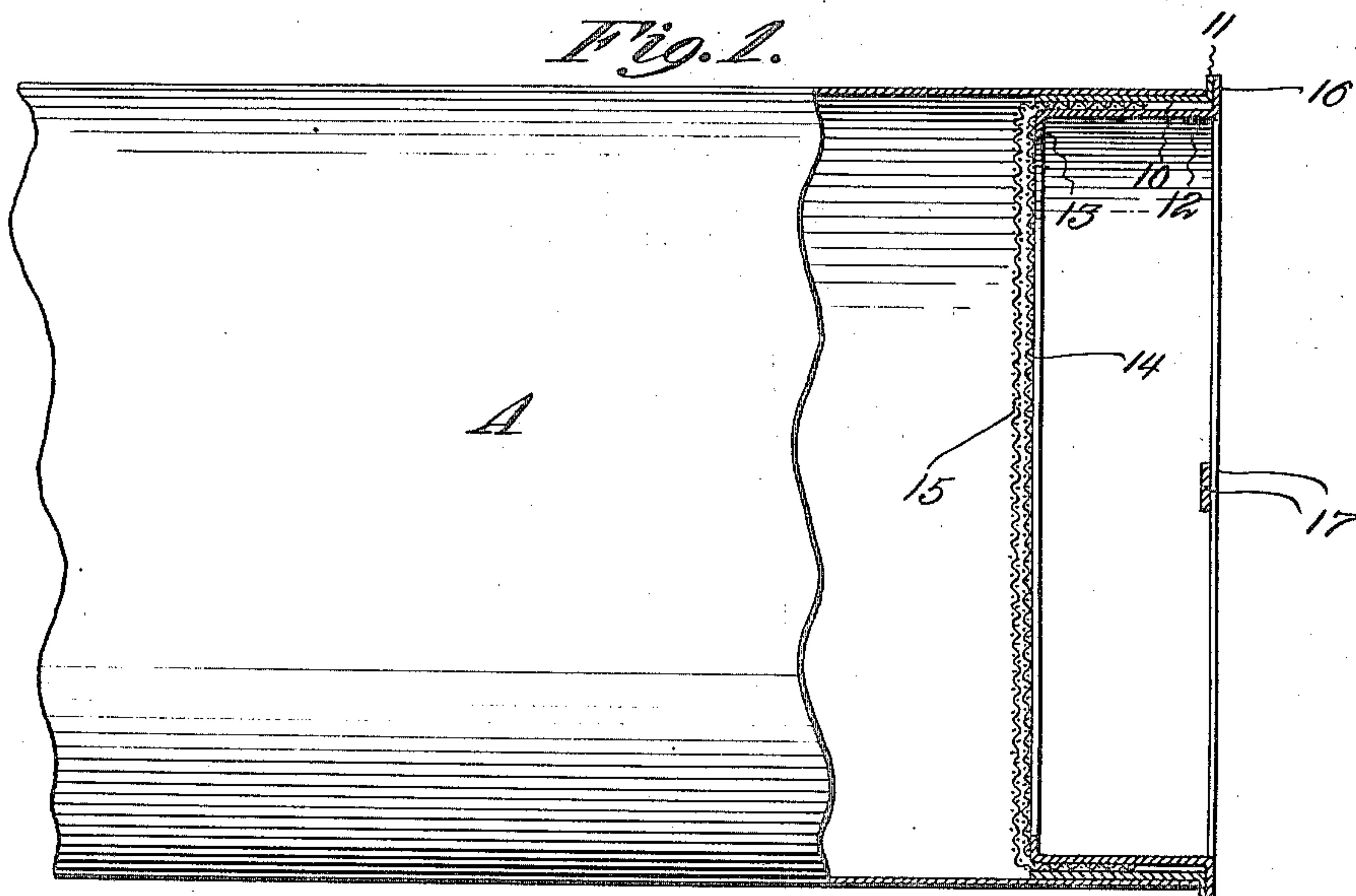
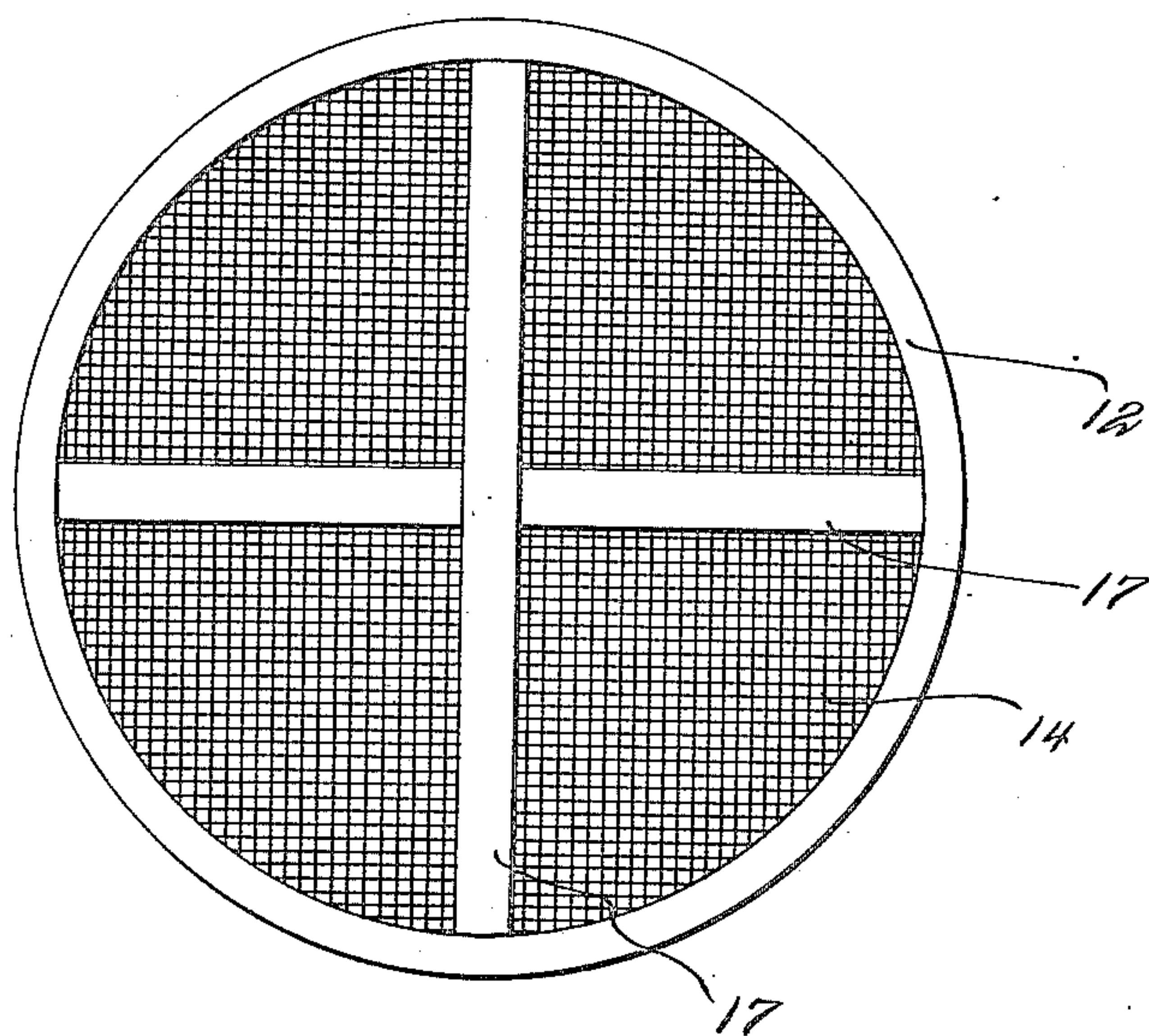


Fig. 2.



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WITNESS:

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UNITED STATES PATENT OFFICE.

JOHN W. BOSSHART AND ELMER W. MACKISON, OF LOUISVILLE, KENTUCKY.

DUST COLLECTOR.

Application filed October 24, 1921. Serial No. 509,911.

To all whom it may concern:

Be it known that we, JOHN W. BOSSHART and ELMER W. MACKISON, citizens of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented new and useful Improvements in Dust Collectors, of which the following is a specification.

This invention relates to attachments for hot air furnaces and has for its object the provision of a novel straining device adapted to be inserted within a pipe of a hot air furnace whereby to prevent the passage therethrough of dust of all kinds.

An important object is the provision of a strainer of this character which is formed of telescopically engaged sections which cooperate to hold a straining medium such as a wire gauze alone or combined with fabric, this construction permitting separation of the parts so that the straining medium may be removed and replaced or cleaned.

Another object is the provision of a device of this character which is formed with an outwardly extending flange engageable with the end of the pipe with which it is associated whereby to prevent the strainer slipping excessively far into the pipe, the innermost telescopic section being also provided with intersecting brace members which make a rigid construction and which also serve as a handle.

An additional object is the provision of a device of this character which will be simple and inexpensive in manufacture, easy to install, highly efficient in action durable in service and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawing in which,

Figure 1 is a longitudinal sectional view through a furnace pipe showing our device in position therein.

Figure 2 is a front elevation of our device.

Referring more particularly to the drawings the letter A designates the pipe of a hot air furnace within which our device is adapted to be used. In carrying out our invention we provide a straining device which consists of an outer ring member 10 formed of sheet tin, galvanized iron or the like and having one edge formed with an

out-turned flange 11. The device further includes an inner ring member 12 which has one end formed with an internally extended flange 13 to which is soldered a disk 14 of wire screen or the like. It is further designed in some instances, or if preferred at any time to make use of a sheet of fabric 15 such as cheese cloth or the like which is disposed against the outside of the wire gauze 14 and which is disposed between the inner and outer ring members whereby to be held stretched taut. The opposite edge of the inner ring member is formed with an outwardly extending flange 16 which engage against the flange 11 of the outer ring member whereby to hold the two ring members in properly assembled relation.

In order to strengthen the structure and to provide means for handling the same conveniently, we make use of a pair of brace rods 17 which are soldered or otherwise secured at their ends to the inside of the inner ring member and which are arranged in crossed relation as shown. It will be observed that these brace rods 17 serve to prevent collapsing, bending or warping of not only the inner ring member but also the entire device and that they also serve as handles whereby the whole device may be easily inserted within or removed from a furnace pipe.

From the foregoing description and a study of the drawings it will be apparent that we have thus provided a very simple and consequently inexpensive strainer which may be readily inserted within the hot air conducting pipe of a furnace for the purpose of excluding all dust and dirt or rather removing the dust and other foreign matter from the air so that the dust cannot get into the building being heated. It will also be observed that when it is necessary the device may be readily removed and the inner and outer ring members separated so as to remove the fabric between the two and also to permit cleaning of the wire gauze.

While we have shown and described the preferred embodiment of the invention it is of course to be understood that we reserve the right to make such changes in the form, construction and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claim.

Having thus described the invention we claim;

In combination with the hot air conduct-

ing pipe of a furnace, a dust removing device comprising an outer ring member formed at one edge with an outwardly extending flange engageable against the outer
5 edge of the pipe, an inner ring member formed at one edge with an outwardly extending flange engaging said first named flange and having its other edge formed with
10 an internally extending flange, a sheet of wire gauze soldered to said internally ex-

tending flange, a sheet of fabric stretched over said wire gauze and clamped between said ring members, and a pair of brace rods arranged in intersecting relation and having their ends secured to the outwardly
15 flanged edge of the inner ring member.

In testimony whereof we affix our signatures.

JOHN W. BOSSHART.
ELMER W. MACKISON.