

(No Model.)

J. T. MACKAY.
FLUE CLEANER.

No. 449,080.

Patented Mar. 24, 1891.

Fig. 1.

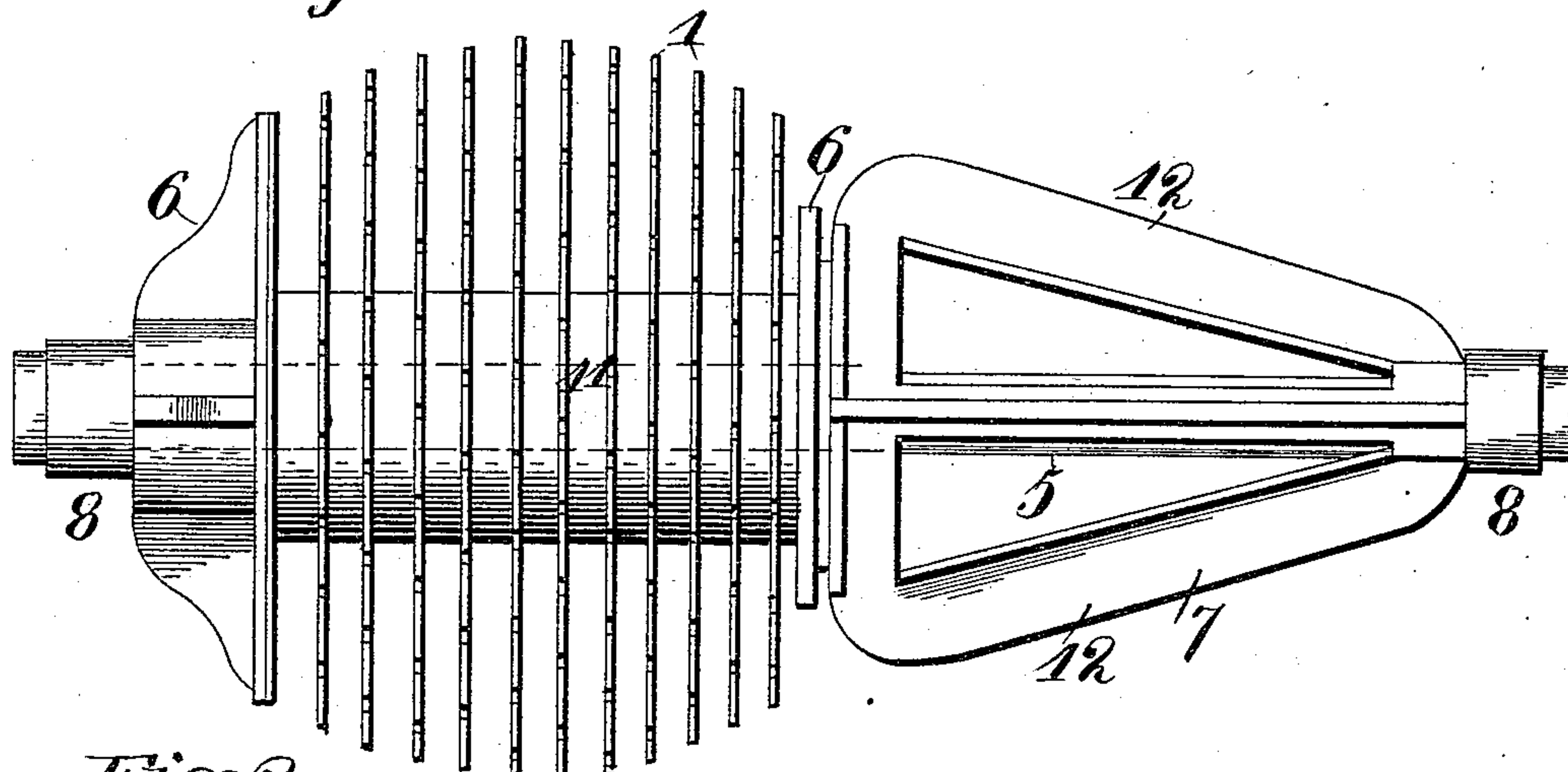


Fig. 2.

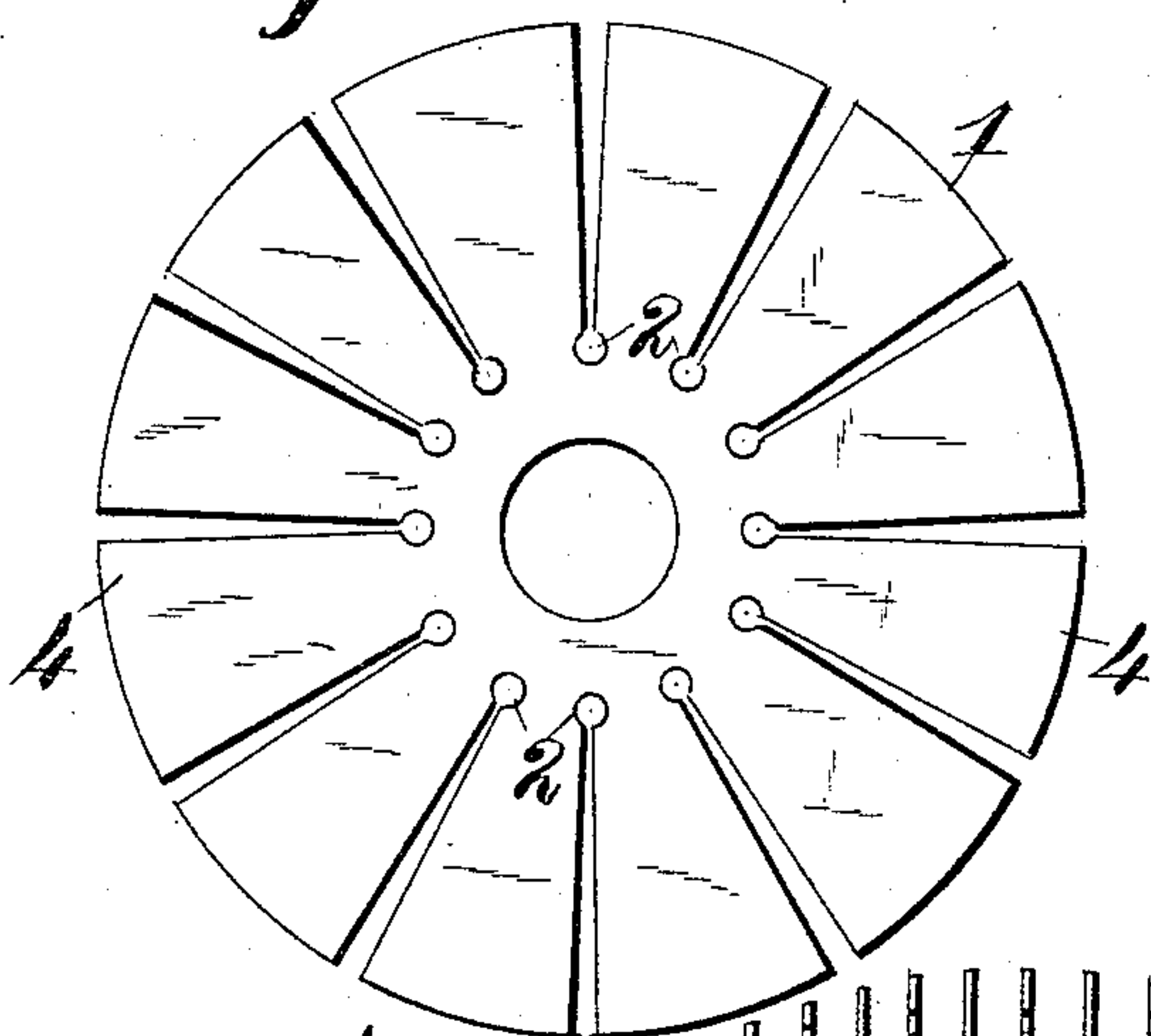
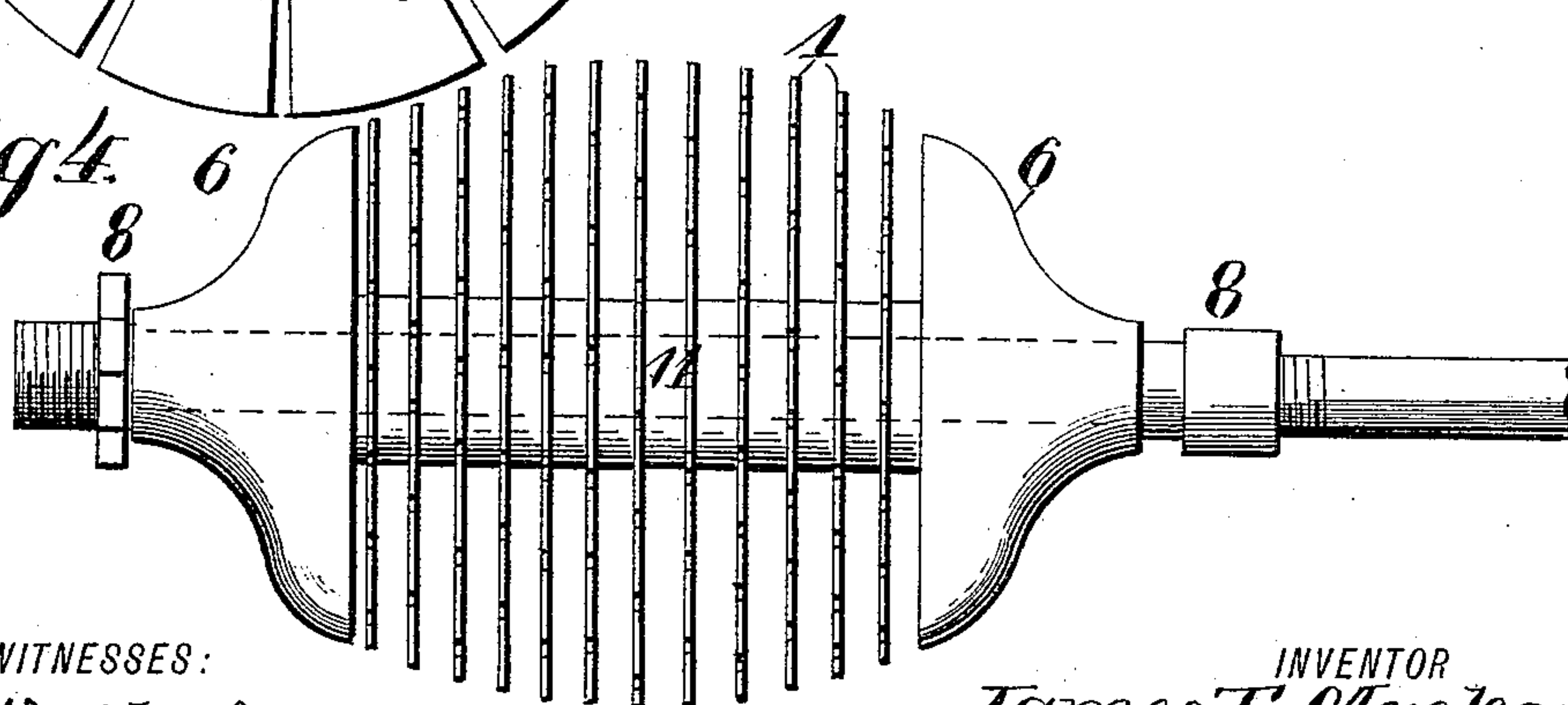


Fig. 3.



Fig. 4.



WITNESSES:

L. S. Stollert.
H. C. Johnson

INVENTOR

James T. Mackay.
BY Higdon & Higdon
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES T. MACKAY, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
JOHN A. SCOTT, OF SAME PLACE.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 449,080, dated March 24, 1891.

Application filed December 27, 1890. Serial No. 375,957. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. MACKAY, of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Flue-Cleaners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in flue-cleaners; and it consists in the novel arrangement and combination of parts hereinafter more fully described, and designated in the claims.

In the drawings, Figure 1 is a side elevation of my complete invention. Fig. 2 is a side elevation of one of the improved scraping-disks employed in the invention. Fig. 3 is an edge view of one of these disks, showing the sections thereof bent at angles relative to the positions of the others; and Fig. 4 is a side elevation of a modified form of my invention.

The object of my invention is to construct and provide a device for cleaning flues, durable and easy in its application.

Referring again to the drawings, 1 represents a series of disks which are preferably of thin sheet steel or brass. Said disks are slotted from their peripheries inwardly, and the slots terminate in circular apertures 2. These slots are approximately V-shaped and have their widest opening at the peripheries of the disks. They produce in the disks a series of sections or vanes 4. The disks are made of different diameters and when applied in operation the larger ones occupy a central position in the body of the cleaner, and thereby produce a curved or oval form of cleaner, the curvature being in the direction of the length of the brush in contradistinction to the transverse curvature observed when looking at the end of the said cleaner.

5 indicates a spindle on which the disks are mounted, between which a series of leather washers 11, or washers made of any other suitable material, are interposed. Said disks, and also said interposed washers, are held and secured in position by means of metallic disks or washers 6. The front disk, or the one that occupies the forward position when the cleaner is inserted in the flue, acts as a guide for the

cleaner. The rearward washer, or the one nearest the operator, has only the function of a washer, and said disk is held in proximity to the leather washer by means of a skeleton guide 7. Said guide is provided with curved ribs 12, curved forwardly and rearwardly, so as to guide the cleaner in both its forward and rearward movements when in operation.

8 indicates nuts by which disk 6 and skeleton guide 7 are held on the spindle 5, or by which both of the disks 6 are clamped on the spindle. (See Fig. 4.) Said nuts are provided at both their ends with internal screw-threads, and in one end of which the operating-rod is adapted to be screwed.

The washer 6, as well as the skeleton guide 7, may be made in a conical form, as shown in Fig. 4, in which construction they act as guides, and also to hold the disks 1 and the interposed washers in position.

The sections or vanes 4 of disks 1 are bent at angles relative to each other, thereby producing a zigzag outline, as shown in Fig. 3, so that the edges of said sections will overlap each other when the cleaner is inserted in a flue of a smaller diameter than said disks, and also by the zigzag position of the disks some of said sections are free to move exclusive of the rest.

The disks that occupy the central position of the cleaner are of larger diameter than the others, as hereinbefore stated, and are principally used when the cleaner is used in a horizontal position.

Having fully described my invention, what I claim is—

1. A flue-cleaner consisting of a series of disks of different dimensions, the larger of which are situated in the center of said cleaner and adapted to be removed therefrom, thereby reducing the diametrical dimensions of said cleaner, substantially as set forth.

2. A flue-cleaner consisting of a series of circular plates of different diameters mounted upon a spindle, each of the said plates being radially slotted, forming a series of sectors, each of the said sectors being bent at an angle to the body of the plate and to the length of the spindle, as described.

3. A flue-cleaner consisting of a spindle, a

series of circular plates of different diameters mounted thereon, each of the said plates being radially slotted, forming a series of sectors, each of the said sectors being bent at an angle to the body of the plate, and the length of the spindle and skeleton guide having outwardly and rearwardly inclined ribs mounted upon the said spindle at one end of the said series of plates, as described.

10 4. A flue-cleaner having a series of metallic disks provided with slots terminating in circular perforations, substantially as set forth.

5. A flue-cleaner having a series of metallic disks provided with V-shaped slots terminat-

ing in circular perforations, substantially as 15 set forth.

6. A flue-cleaner having a series of metallic disks of different diameters, the larger of which are situated in the center of the said cleaner and adapted to be removed therefrom, 20 thereby reducing the diameter of said cleaner, substantially as set forth.

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

JAMES T. MACKAY.

Witnesses:

C. F. A. MUELLER,

JNO. C. HIGDON.