

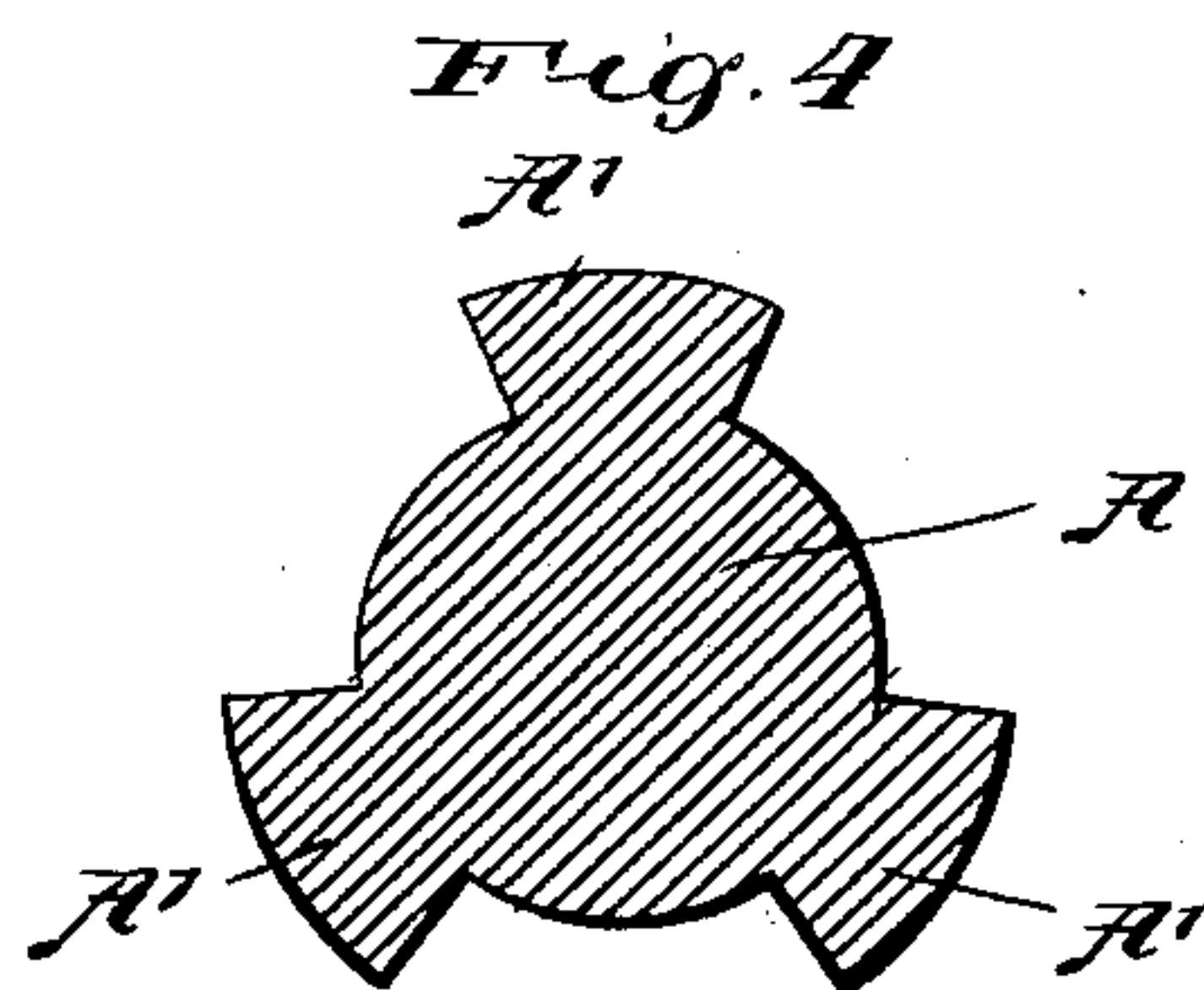
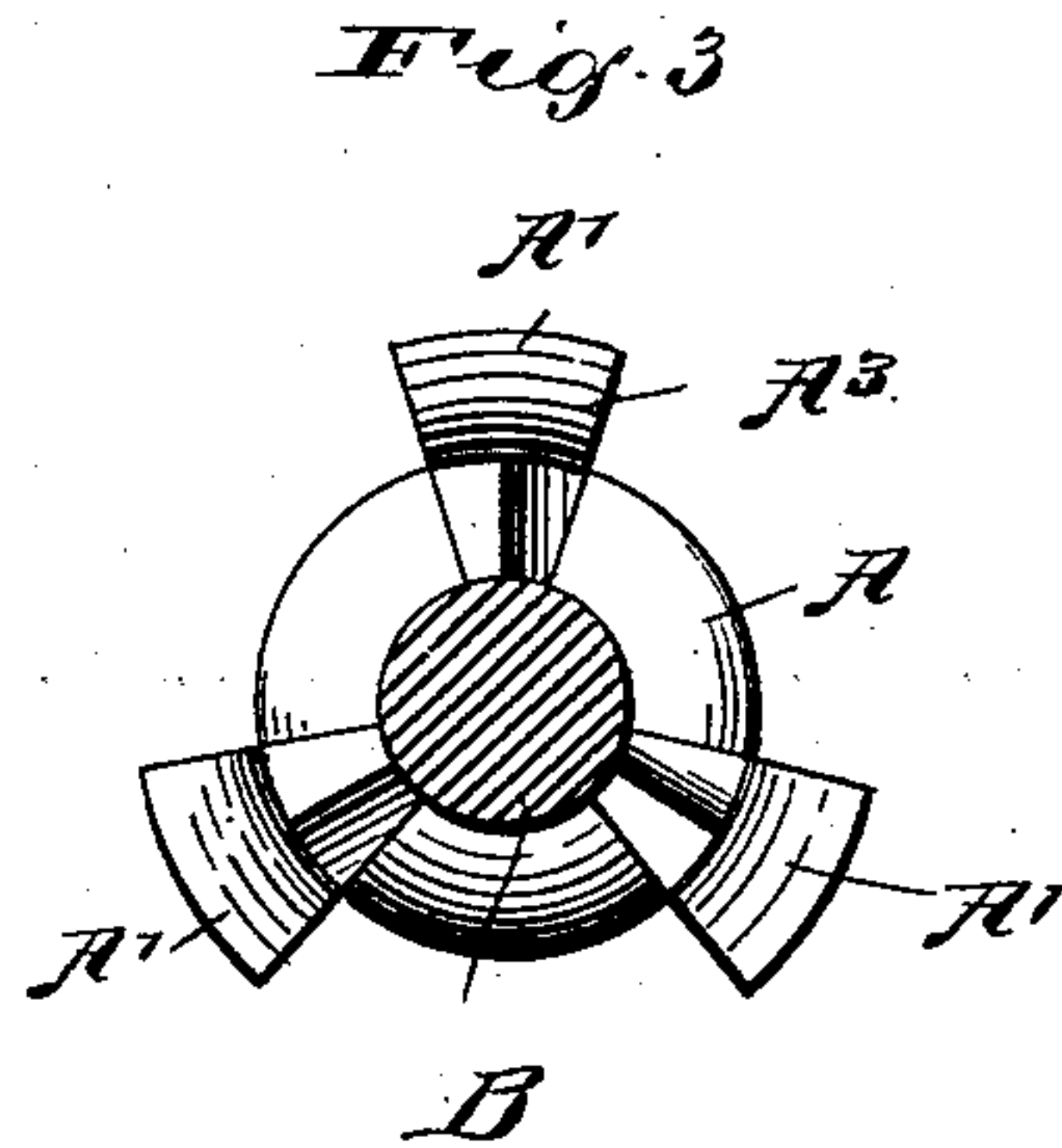
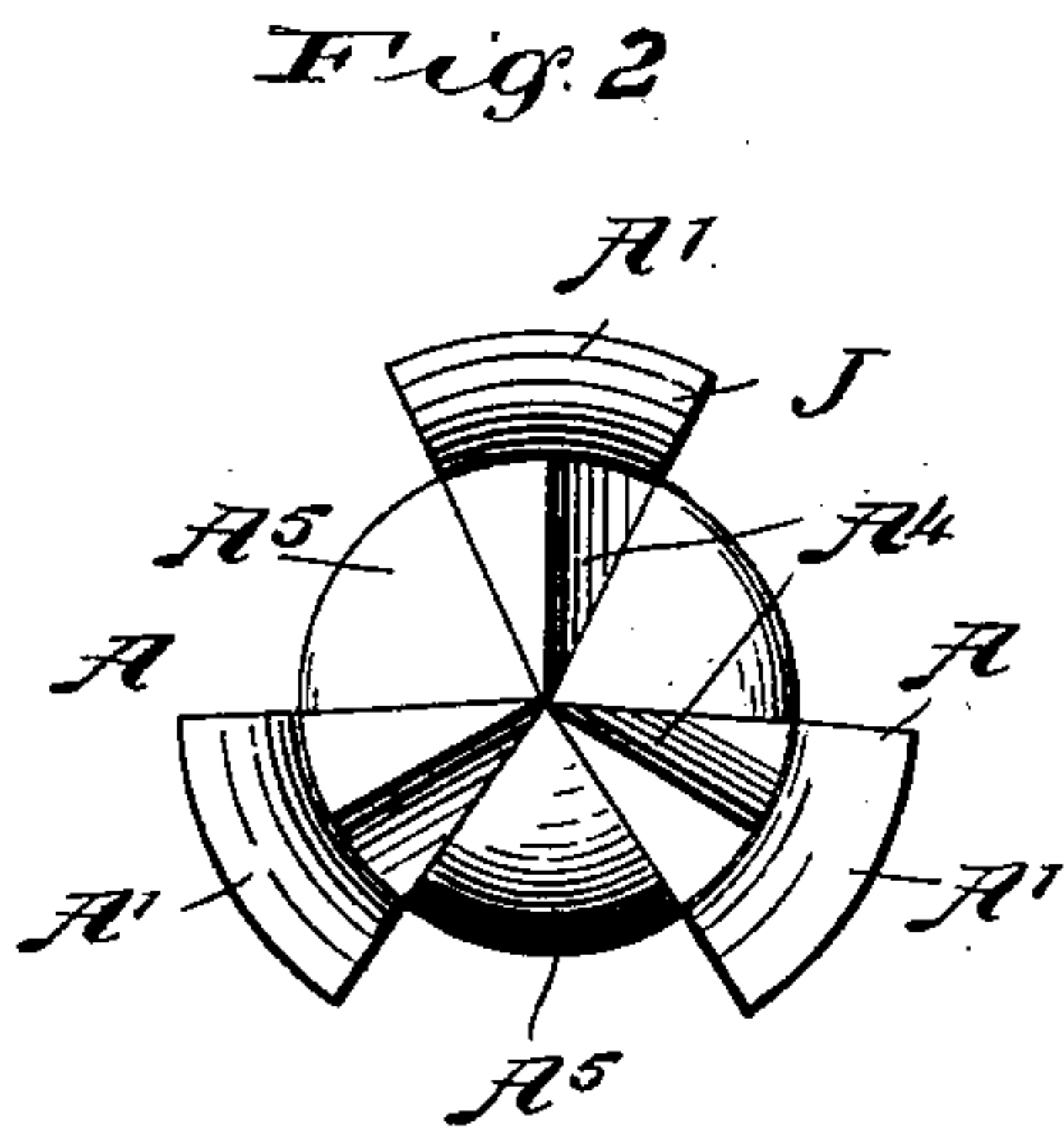
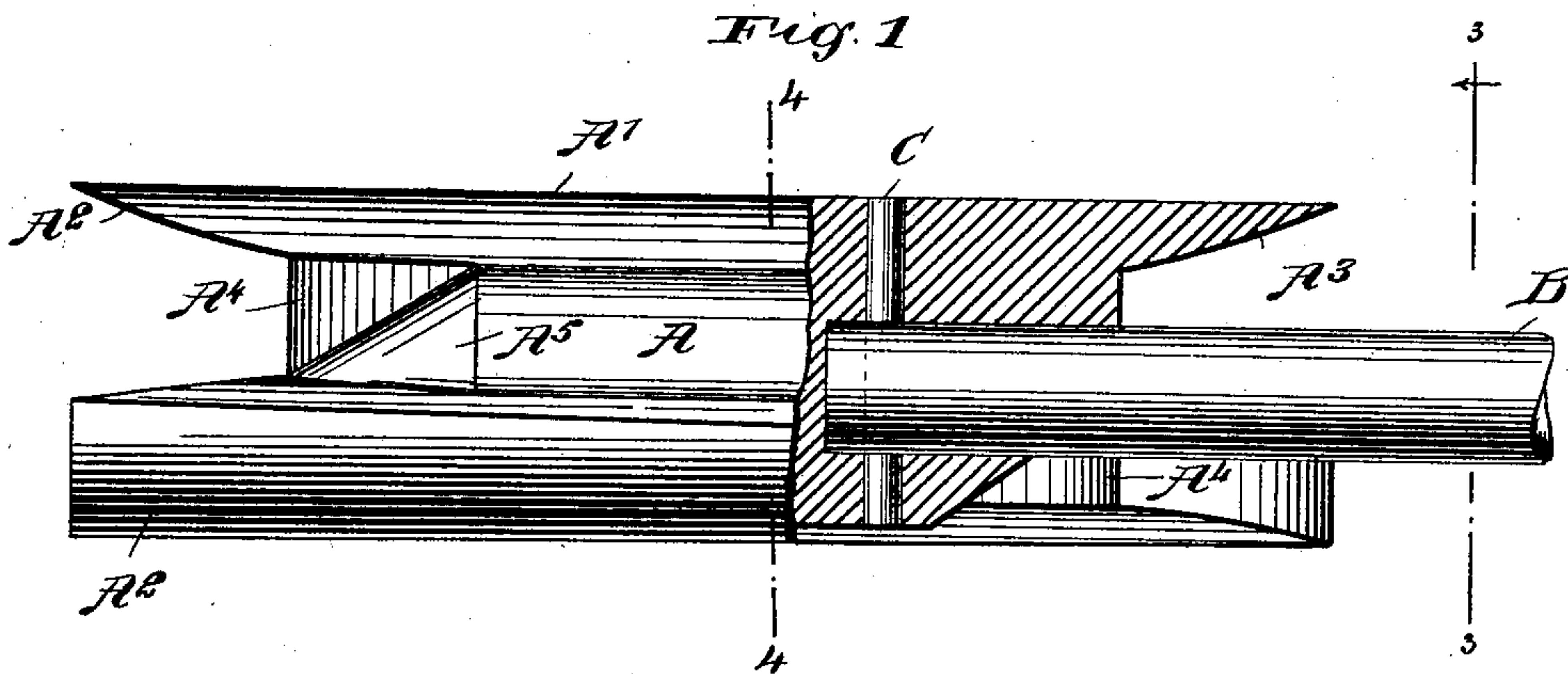
No. 697,331.

Patented Apr. 8, 1902.

C. T. DEMAREST.
BOILER TUBE CLEANER.

(Application filed Apr. 22, 1901.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

CORNELIUS T. DEMAREST, OF HACKENSACK, NEW JERSEY.

BOILER-TUBE CLEANER.

SPECIFICATION forming part of Letters Patent No. 697,331, dated April 8, 1902.

Application filed April 22, 1901. Serial No. 56,873. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS T. DEMAREST, a citizen of the United States, and a resident of Hackensack, in the county of Bergen and State of New Jersey, have invented a new and Improved Boiler-Flue Cleaner, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved boiler-flue cleaner which is simple and durable in construction, very effective in operation, and easily manipulated to thoroughly cut the soot or scale clean from the interior surface of the flue without much physical exertion on the part of the operator.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement with parts in section. Fig. 2 is a front end view of the same. Fig. 3 is a transverse section of the same on the line 3 3 in Fig. 1, and Fig. 4 is a like view of the same on the line 4 4 in Fig. 1.

The improved boiler-flue cleaner consists, essentially, of a body A, preferably made cylindrical and secured at one end to a rod B by a pin C or other suitable means, said rod B being adapted to be taken hold of by the operator to push the body A and the parts thereon into and through the flue to be cleaned and at the same time turn the body while moving it through the flue.

On the body A are integrally formed longitudinally-extending cutters A', preferably three in number and spaced apart, the cutters decreasing in width from the front to the rear, as will be readily understood by reference to the drawings. The forward ends A² of the cutters A' extend beyond the body A, and the rear ends A³ similarly project beyond the rear of the body, and the edges of said projecting ends A² A³ as well as the side edges of the cutters A' are formed with cutting edges, so as to readily cut into the soot or scale held on the inside of the boiler tube or flue at the

time the body A is pushed through the tube or flue and turned at the same time by the operator correspondingly manipulating the rod B.

The forward and rear ends of the body A are preferably formed with radially-disposed cutters A⁴, leading to the centers or middle portions of the projecting ends A² A³, and the sides of said cutters A⁴ slope or taper outwardly to the peripheral surface of the body A, as indicated at A⁵ in the drawings, so that the material cut from the flue by the cutting edges of the projecting ends A² and the cutting edges A⁴ readily passes rearwardly to the space between the adjacent cutters A', so as to allow a ready forward movement of the instrument without danger of clogging the tube or flue by the soot or scale cut loose during the forward movement of the body. By the arrangement described it is immaterial in which direction the body A is turned, as both sides of the cutters are provided with cutting edges. When the operator pulls the body A backward after it has been pushed through a tube, then the projecting and overhanging ends A³ come into action and clean off any scales or soot that may have been left during the forward movement of the tool through the tube or flue.

From Fig. 1 it may be seen that the cutters A², being thick at their bases, convex upon their external surfaces, and tapered off sharp at their ends, are substantially tongue-shaped.

The body A, with its cutters, can be very cheaply constructed and made of cast iron or steel or other suitable material, and as it has no movable parts it is evident that it is not liable to easily get out of order.

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

1. A flue-cleaner, comprising a horizontal head provided with a plurality of spaced cutters projecting from the respective front and rear ends thereof, said cutters being braced by V-shaped webs connecting said cutters with the main body of said head, said webs being partially cut away at the rear end of said head so as to admit the end of a rod for the purpose of manipulating the head.

2. A flue-cleaner, comprising a longitudinal head provided with a plurality of substan-

tially tongue-shaped cutters, spaced apart and projecting from the respective front and rear ends thereof, said cutters alternating with slots which extend throughout the length of the head and communicate with each other by means of undercut recesses extending beneath the cutters.

3. A flue-cleaner, comprising a longitudinal head provided with a plurality of substantially tongue-shaped cutters projecting from the respective front and rear ends thereof,

the said cutters at their bases being joined to the main body of the head, and the middles of said cutters standing asunder from said main body but connected thereto by webs. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CORNELIUS T. DEMAREST.

Witnesses:

WALTER B. CHRISTIE,
EDWIN C. IRION.