

No. 745,434.

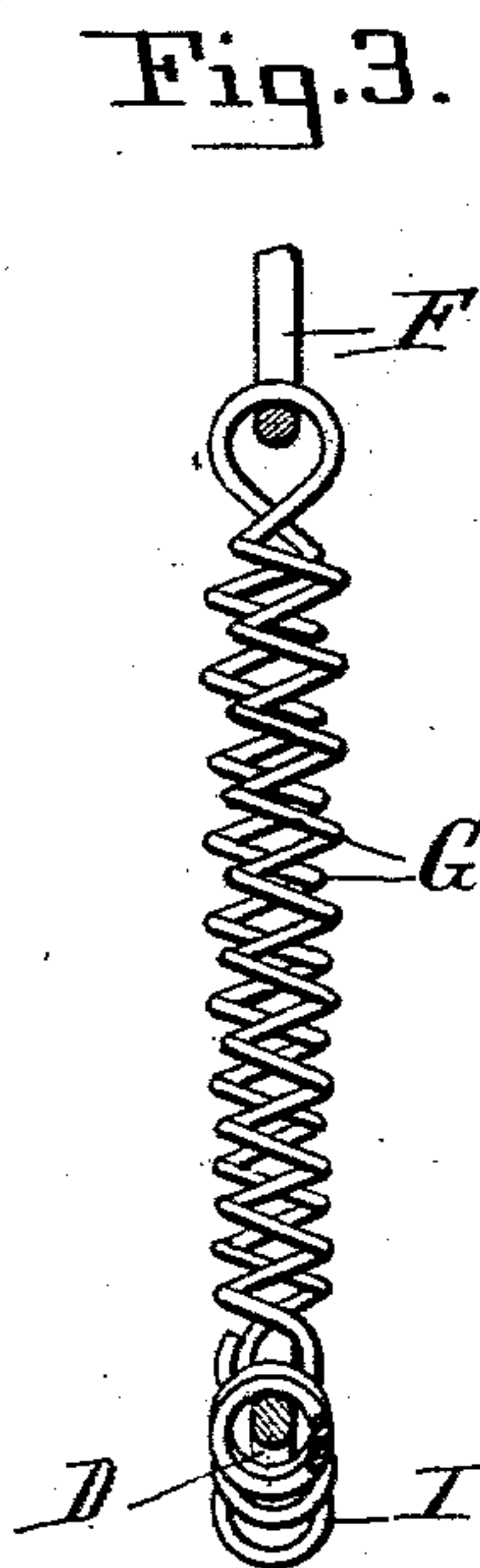
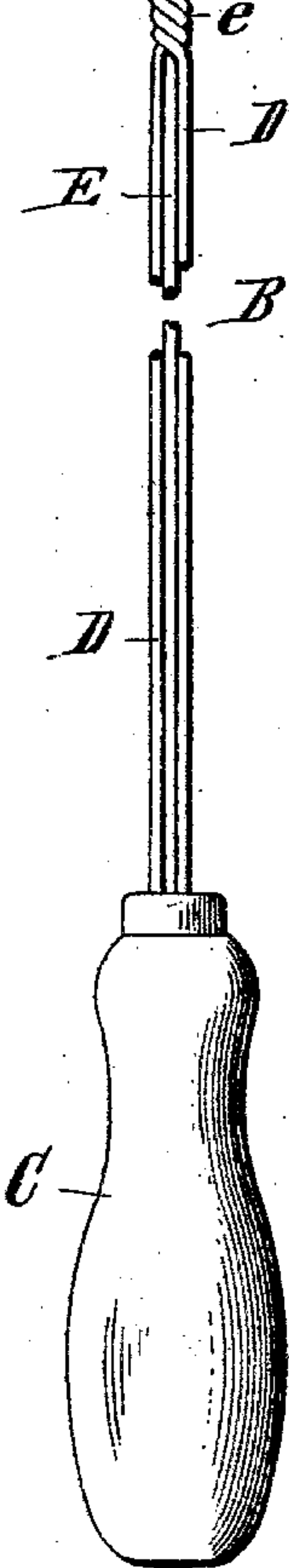
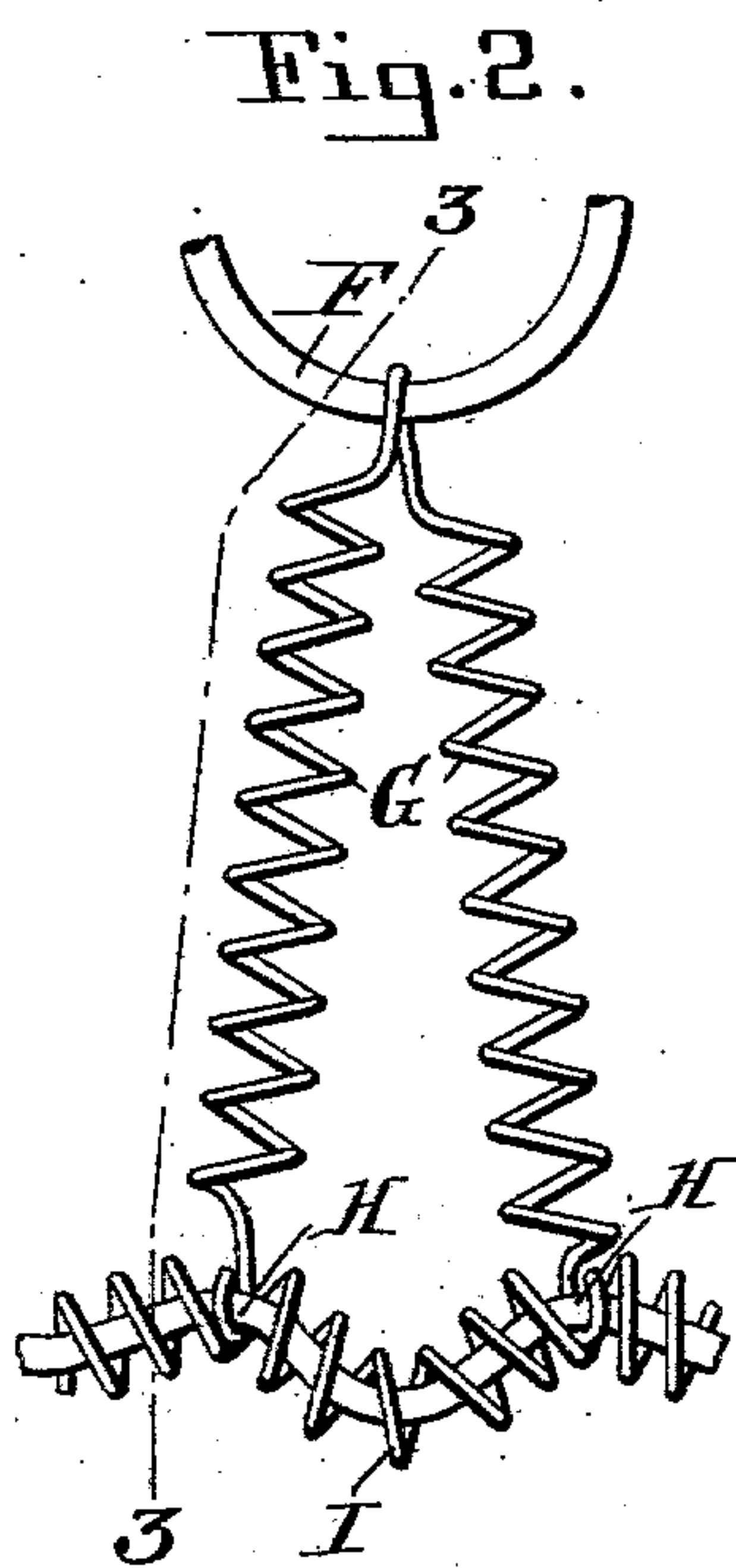
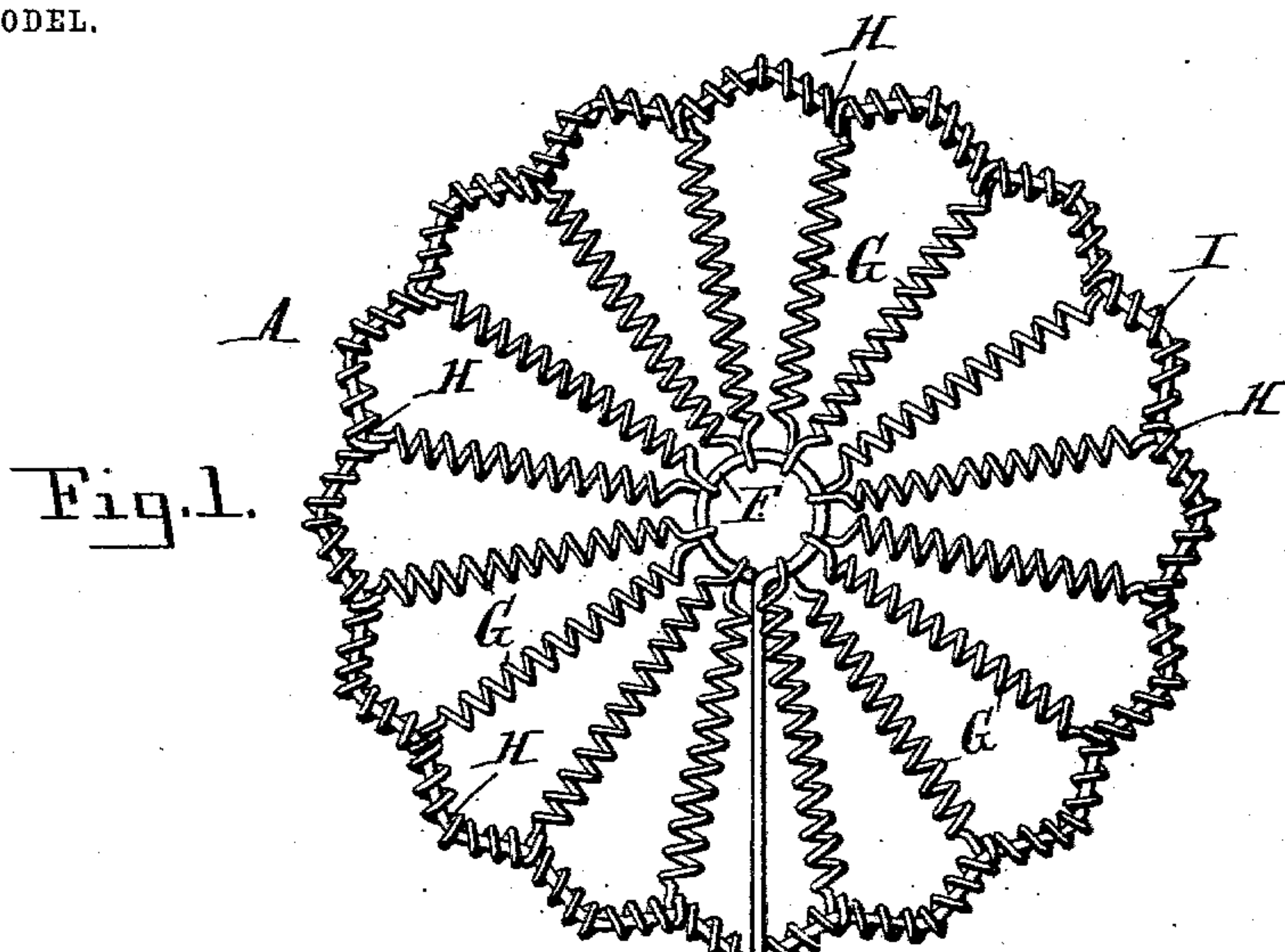
PATENTED DEC. 1, 1903.

R. O. HAMMOND.  
DUST BEATER.

APPLICATION FILED JULY 15, 1902. RENEWED AUG. 24, 1903.

NO MODEL.

4 SHEETS—SHEET 1.



Witnesses:

Julius Lanke  
Bert Mason

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By Neuhart & Burkhardt  
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4 SHEETS—SHEET 2.

Fig. 4.

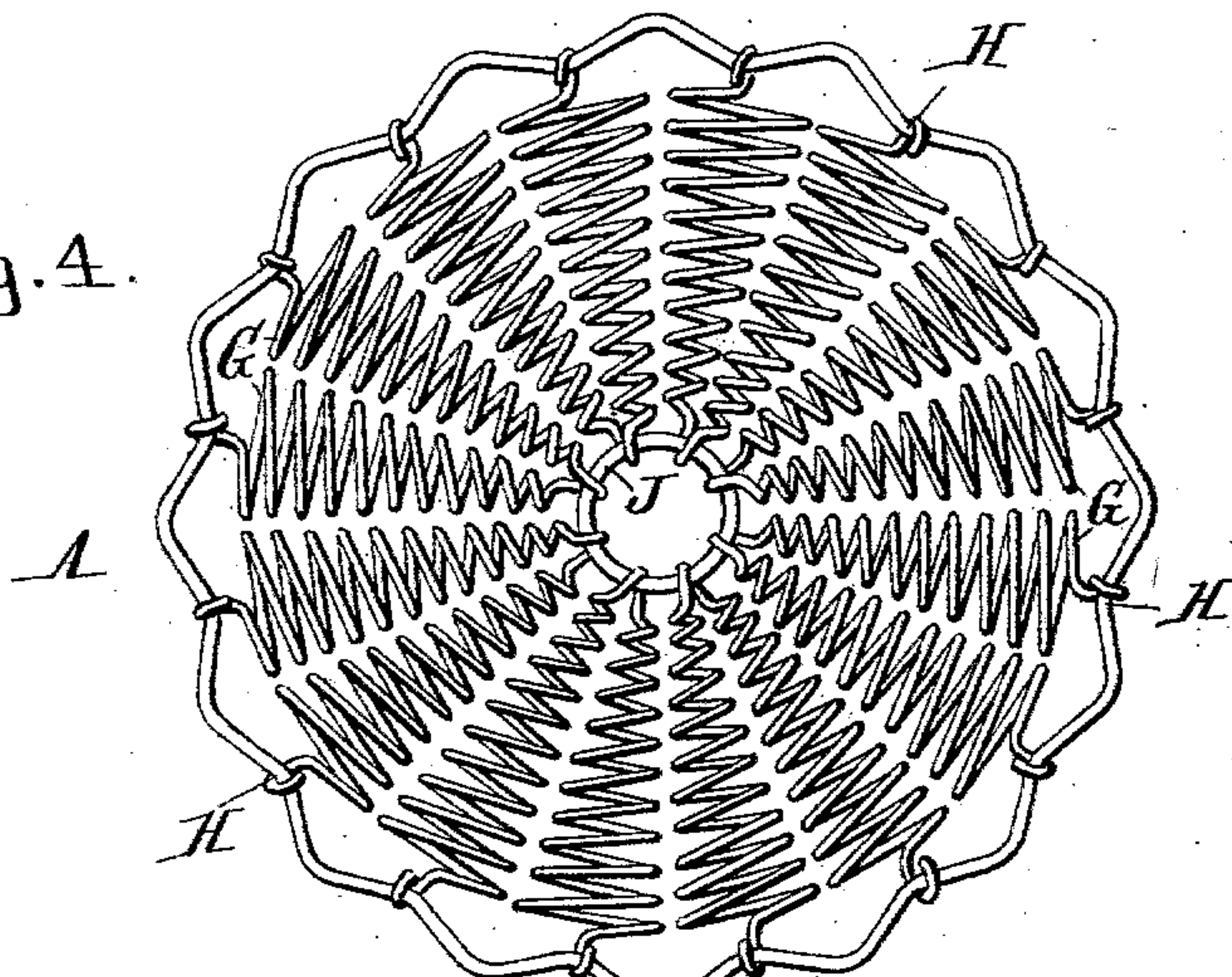


Fig. 5.

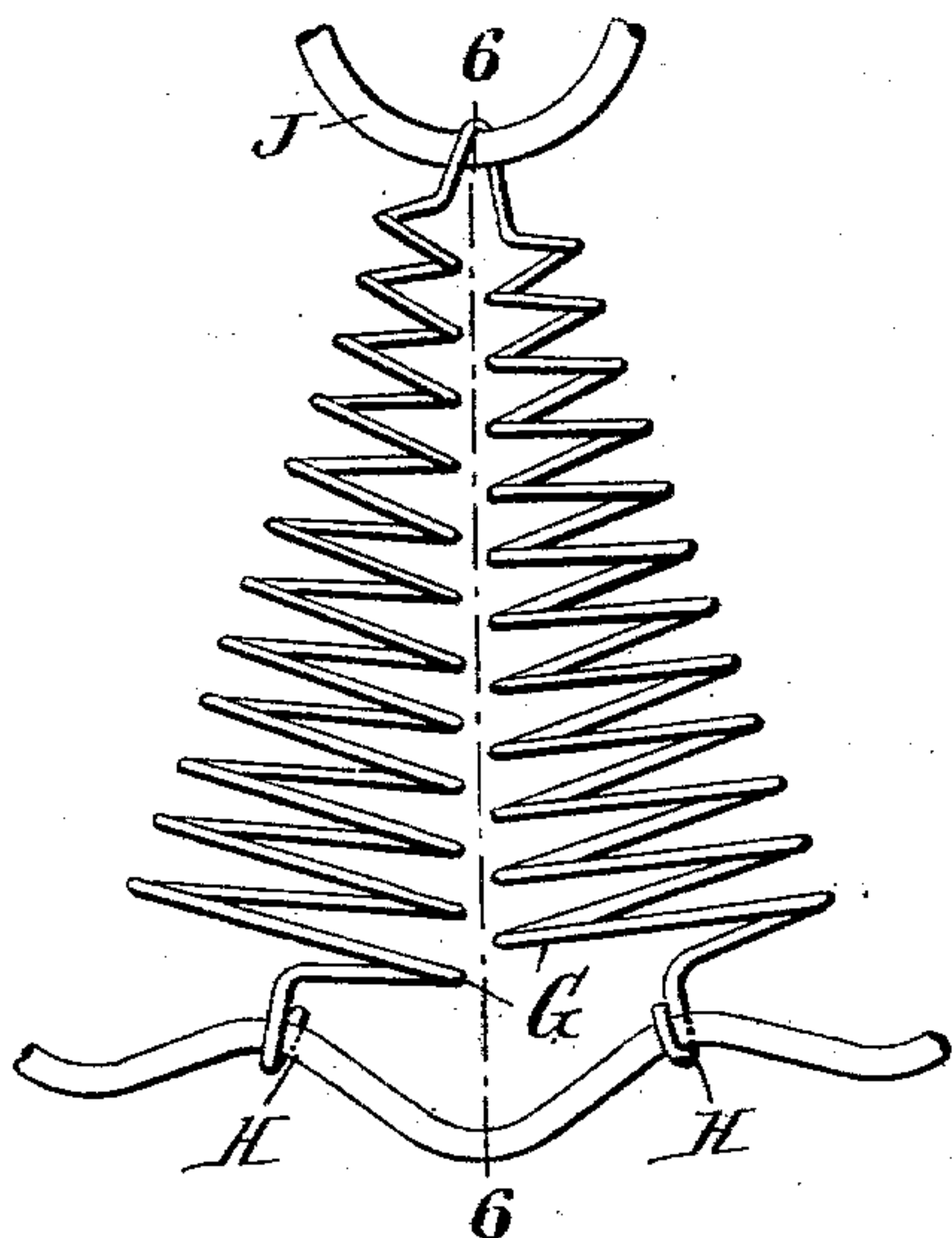
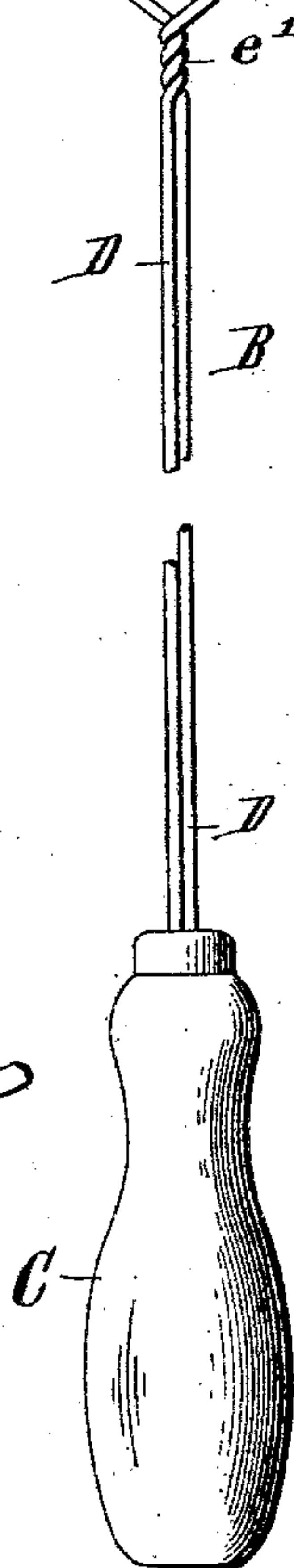


Fig. 6.



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4 SHEETS—SHEET 3.

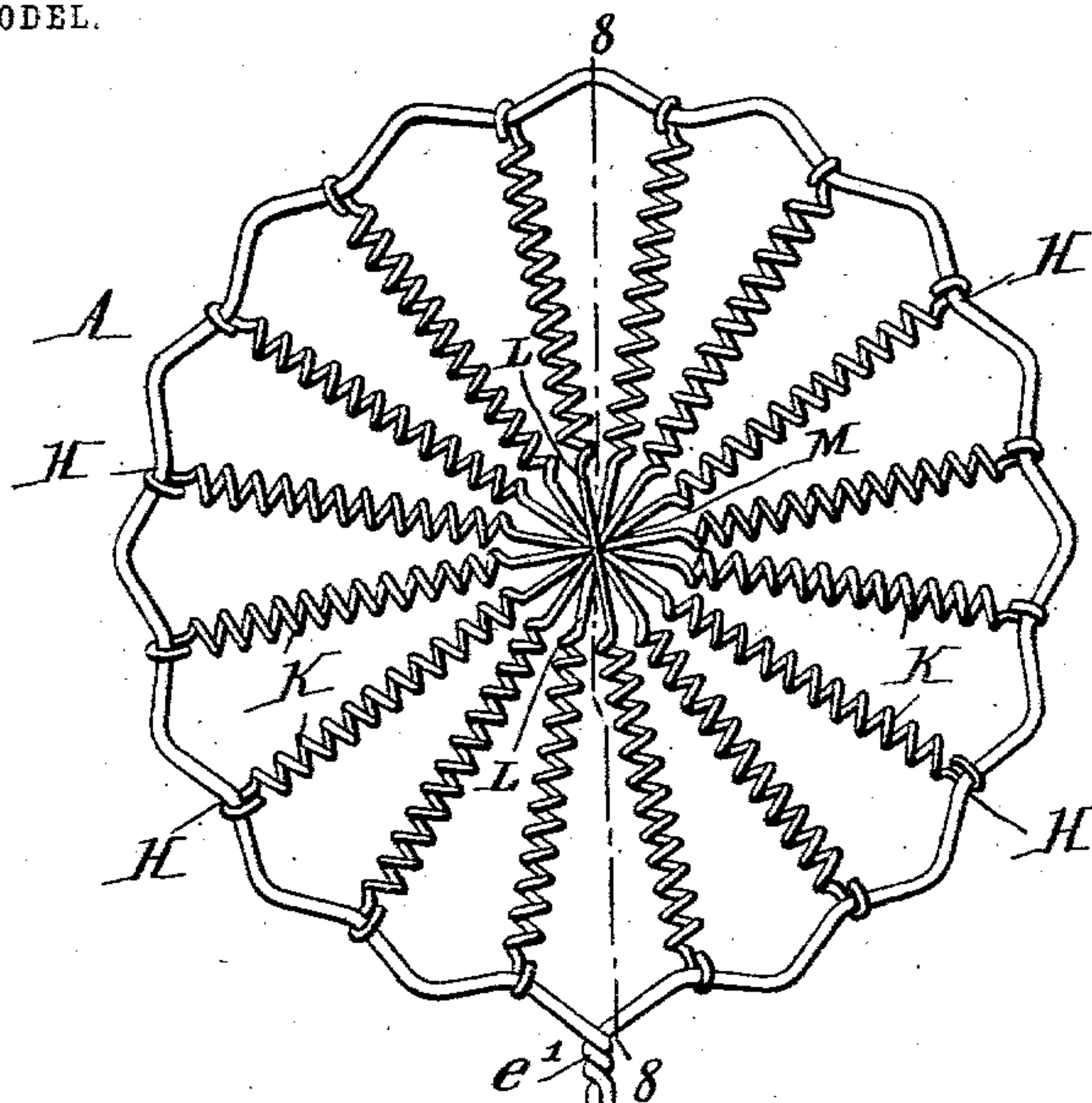


Fig. 7.

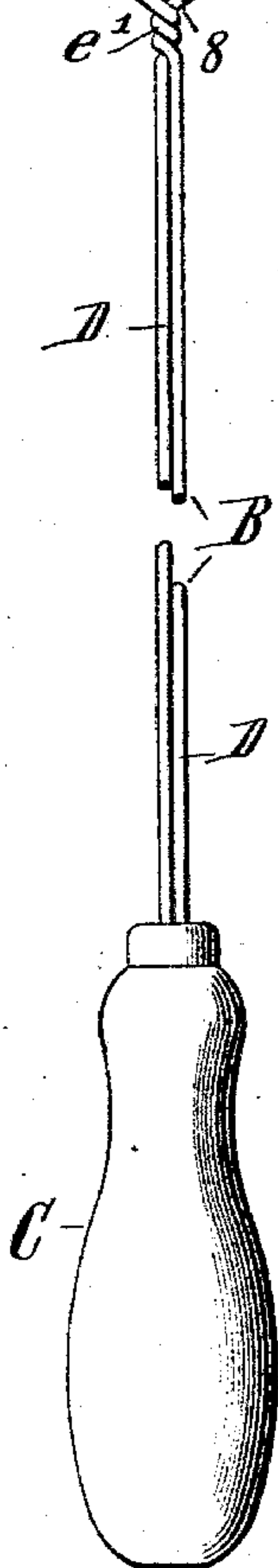
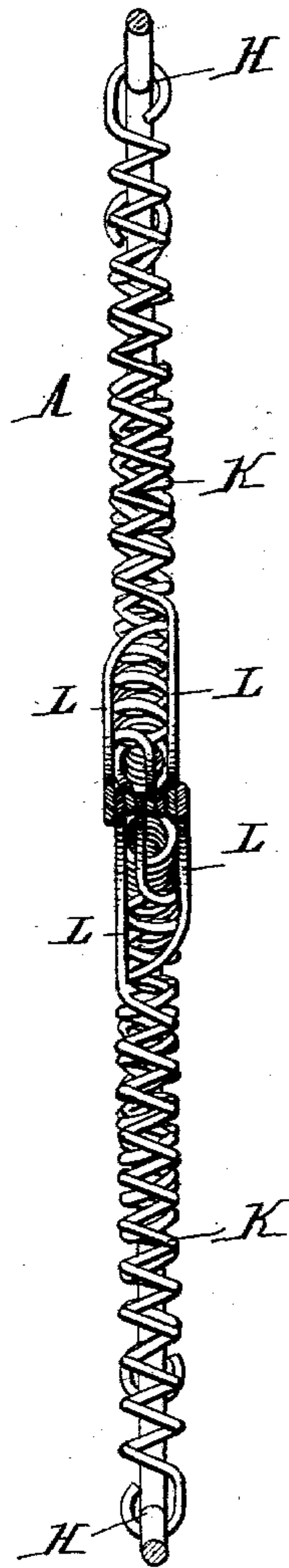


Fig. 8.



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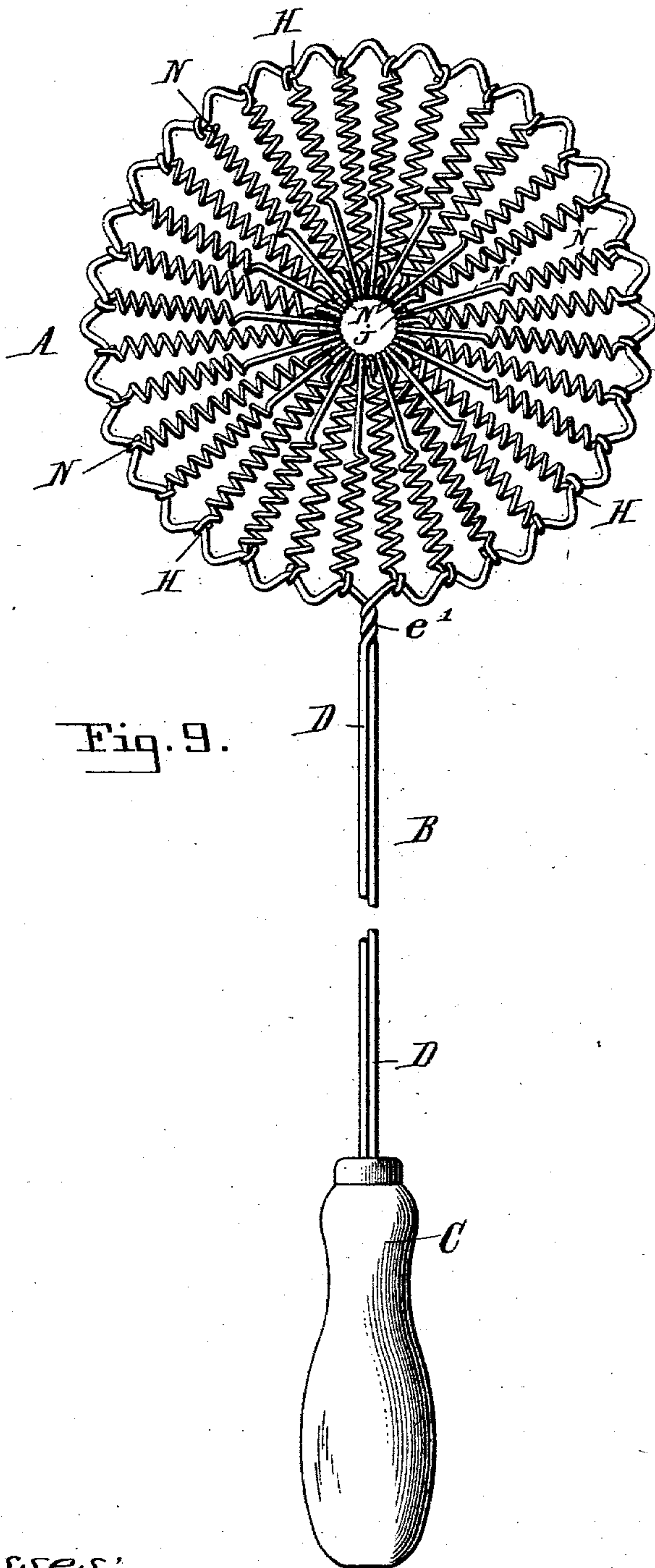
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NO MODEL.

4 SHEETS—SHEET 4.



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# UNITED STATES PATENT OFFICE.

ROBERT O. HAMMOND, OF BUFFALO, NEW YORK, ASSIGNOR TO HERBERT M. PEASE, OF BUFFALO, NEW YORK.

## DUST-BEATER.

SPECIFICATION forming part of Letters Patent No. 745,434, dated December 1, 1903.

Application filed July 15, 1902. Renewed August 24, 1903. Serial No. 170,541. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT O. HAMMOND, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Dust-Beaters, of which the following is a specification.

The invention relates to dust-beaters, and more particularly to a beater having a frame of stout wire with coils of finer wire secured thereto.

The objects of the invention are the production of a dust-beater which is cheap, durable, and positively effective in removing dust from plane, concave, or convex surfaces; to provide a beater of this class which will prevent the lodgment of dust therein and in which the beating-coils when worn can be conveniently replaced by new coils; to so arrange the beating-coils that they will vibrate and rebound against the object beaten, thus obtaining the maximum beating action with the minimum expenditure of force.

The invention in general terms consists of a frame within the bounds of which are arranged radial beating-coils.

It further consists in the new and novel arrangement and combination of parts, as will be hereinafter fully described, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of my improved dust-beater. Fig. 2 is an enlarged fragmentary view of the same. Fig. 3 is a section on line 3 3, Fig. 2. Fig. 4 is a side view of a beater, showing my invention in modified form. Fig. 5 is a fragmentary view of the same, on an enlarged scale. Fig. 6 is a section taken on line 6 6, Fig. 5. Fig. 7 is a side view of a dust-beater, showing a still further modified form of my invention. Fig. 8 is a section of the same, taken on line 8 8, Fig. 7, on an enlarged scale. Fig. 9 is a still further modified form of my invention.

Referring to the drawings in detail, like letters of reference refer to like parts in the several figures.

The letter A designates the beater-head, B the shank of the beater, and C the handle, which may be constructed of wood or other suitable material and be affixed to the shank B in any approved manner.

The beater in part is composed of stout wire preferably arranged into circular form between its ends to form the outer frame of the beater-head and having outwardly-projecting extensions or strands D, which, with a wire E, form the shank of the beater. The wire E extends into the outer frame of the beater-head and has an eye F formed on its inner end, which serves as the inner frame of the beater-head. The strands D are twisted around the wire E, as at e, to unite the same and retain the outer frame in proper form, both strands, with the wire E, entering the handle C.

G designates radial wire beating-coils arranged in pairs formed from one piece of wire, preferably of a finer grade than that forming the frame and shank of the beater. These coils are passed around the eye or center frame F midway between their ends and radiate to the outer frame, where the ends thereof are wound around the same or otherwise secured in any suitable manner, a sufficient number of these coils being used to provide a good beating-surface.

At the points of connection of the beating-coils to the outer frame the latter is crimped or curved inwardly, as at H, to prevent movement of the coils thereon, this being due to the fact that the coils are under tension, and therefore held against movement onto the ridges between the inwardly-curved portions H.

Around the outer frame of the beater-head a wire coil I is wound. This coil is of the same diameter as the coils G and greatly assists in the beating action.

If desired, the beating-coils G may be arranged singly and one end of each coil connected to the eye or inner frame F and the other end to the outer frame.

In the modification shown in Figs. 4, 5, and 6 the outer frame of the beater-head is similar in all respects to that shown in Fig. 1. The strands D, however, are twisted together, as at e', and form the shank of the beater. The inner frame consists of an eye J, around which the radial coils G' pass, said coils being tapered to provide a concave beating-surface, which is particularly desirable for beating cushions, car-seats, or any other convex sur-



faces. By providing tapering coils for the beater-head the entire space within the outer frame is converted into a beating-surface.

In the modification shown in Figs. 7 and 8  
5 each radial coil K is connected to the coil directly opposite by a strand L, and all the strands cross each other at the center, as at M. In this instance no inner frame is necessary to support the coils, and the outer frame  
10 and shank B are formed in like manner to that shown in Fig. 4.

In the modification shown in Fig. 9 the construction of the outer frame, the inner frame, and the shank is also similar to that shown  
15 in Fig. 4, with the exception that the number of the inwardly-curved portions H are increased. The radial coils N are made of different lengths, every alternate coil being about half the length of the coils next adjacent  
20 and having its inner end terminating in a connecting-strand N', which is secured to the center frame or eye J. By this means a very effective beater is obtained which will remove the dust from the article beaten when  
25 struck at all points within the bounds of the beater-head.

Having thus described my invention, what I claim is—

1. A dust-beater having a beater-head comprising a frame, and radial wire coils secured to said frame, substantially as set forth.  
30

2. A dust-beater having a beater-head comprising a circular outer frame, an inner frame, and radial wire coils secured to said frames,  
35 substantially as set forth.

3. A dust-beater having a beater-head comprising an outer frame, an inner frame, and

wire coils, each having its ends secured to said frames, substantially as set forth.

4. A dust-beater having a beater-head comprising an outer circular frame, an inner circular frame, and radial wire coils arranged in pairs formed from one piece of wire and having the ends thereof connected to said outer circular frame, substantially as set forth. 45

5. The combination of the outer circular wire frame having outwardly-projecting strands, an inner circular frame having an outwardly-projecting wire, said outwardly-projecting strands being twisted around the outwardly-projecting wire and with the same forming the shank of the beater, radial wire coils secured to said frames, and a handle secured to the lower end of the shank, substantially as set forth. 55

6. In a dust-beater, a beater-head comprising an outer frame having a wire coil around the same, an inner frame, and radial wire coils supported on said outer and inner frames, substantially as set forth. 60

7. In a dust-beater, a beater-head comprising a crimped outer circular frame, an inner frame, and radial wire coils supported on said outer and inner frames, substantially as set forth. 65

In testimony whereof I have affixed my signature in the presence of two subscribing witnesses.

ROBERT O. HAMMOND.

Witnesses:

BERT MASON,  
M. SERVET.