

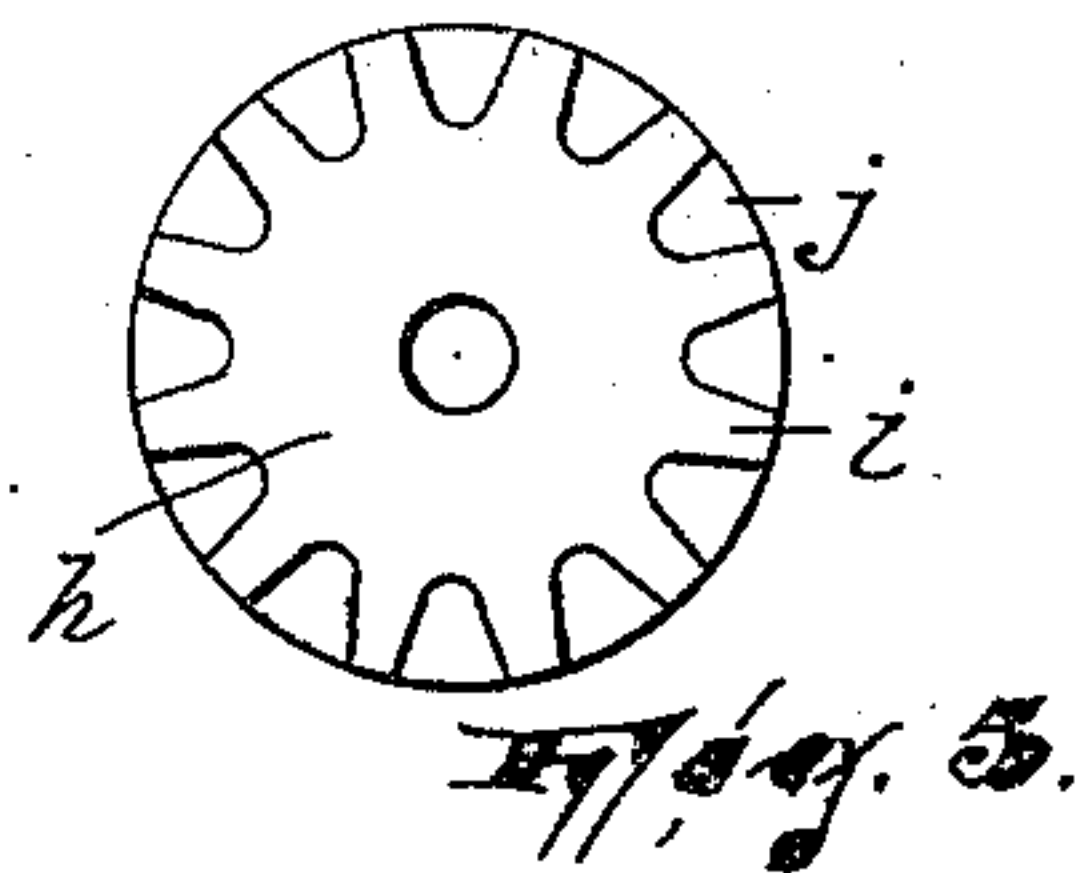
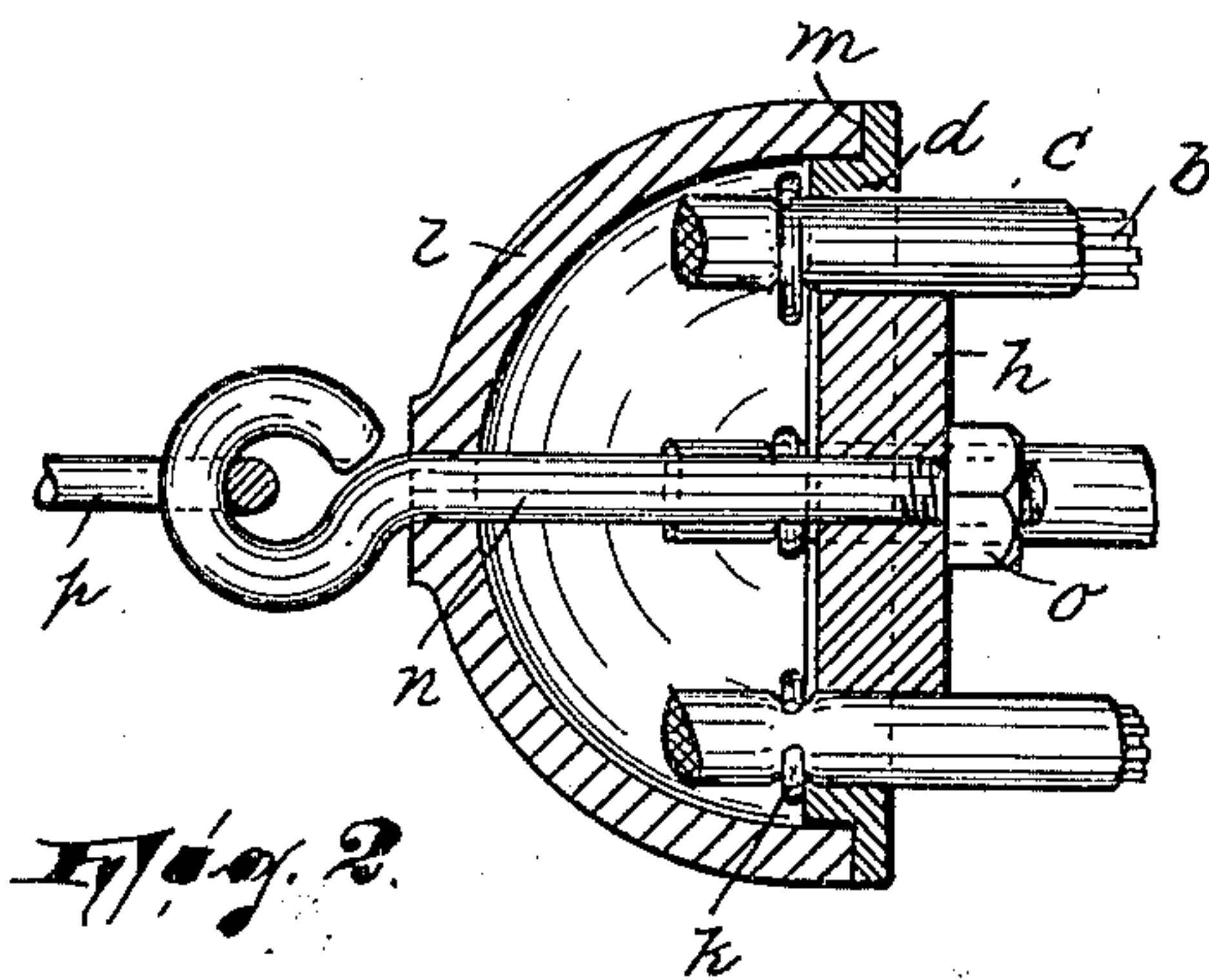
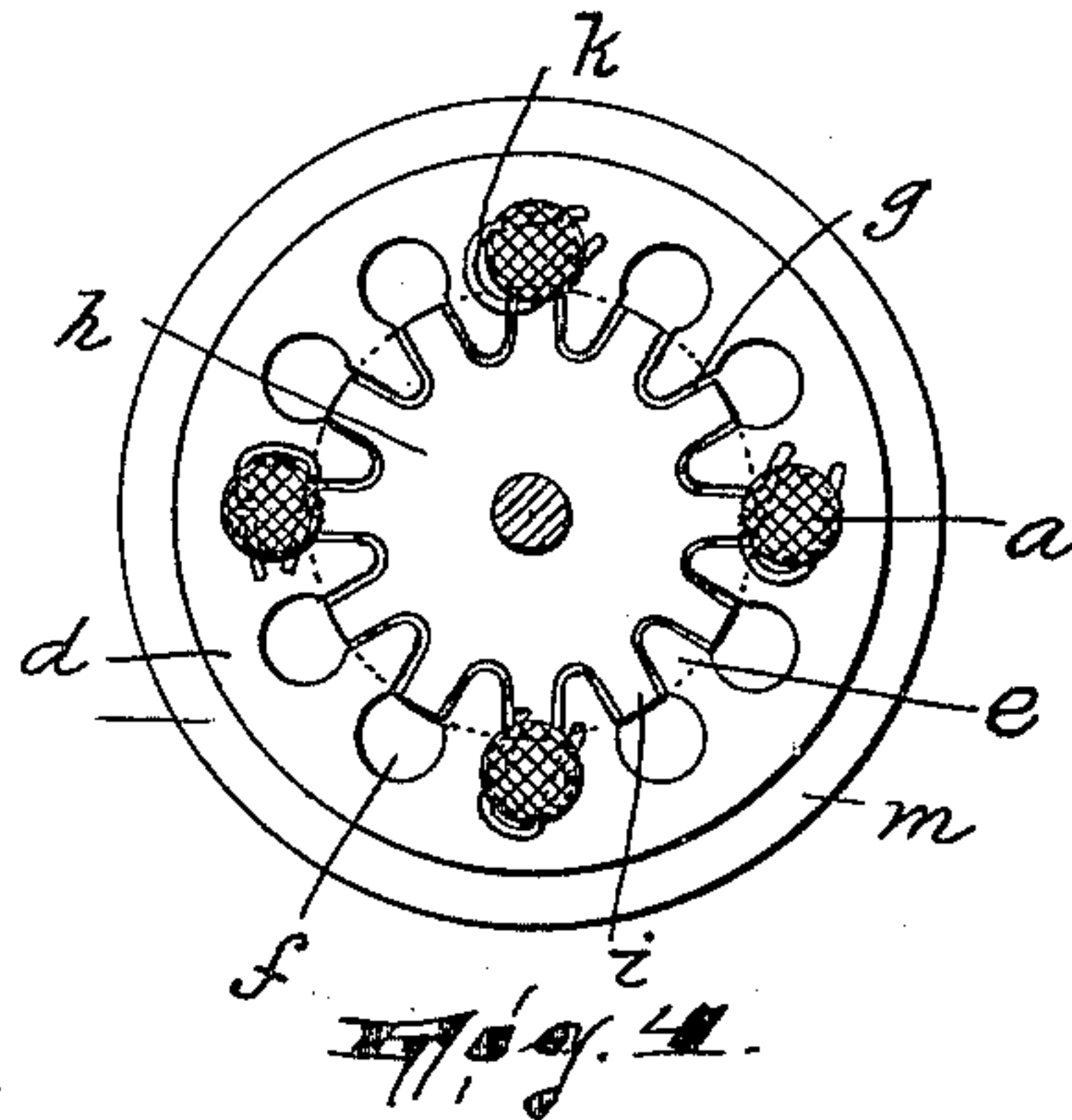
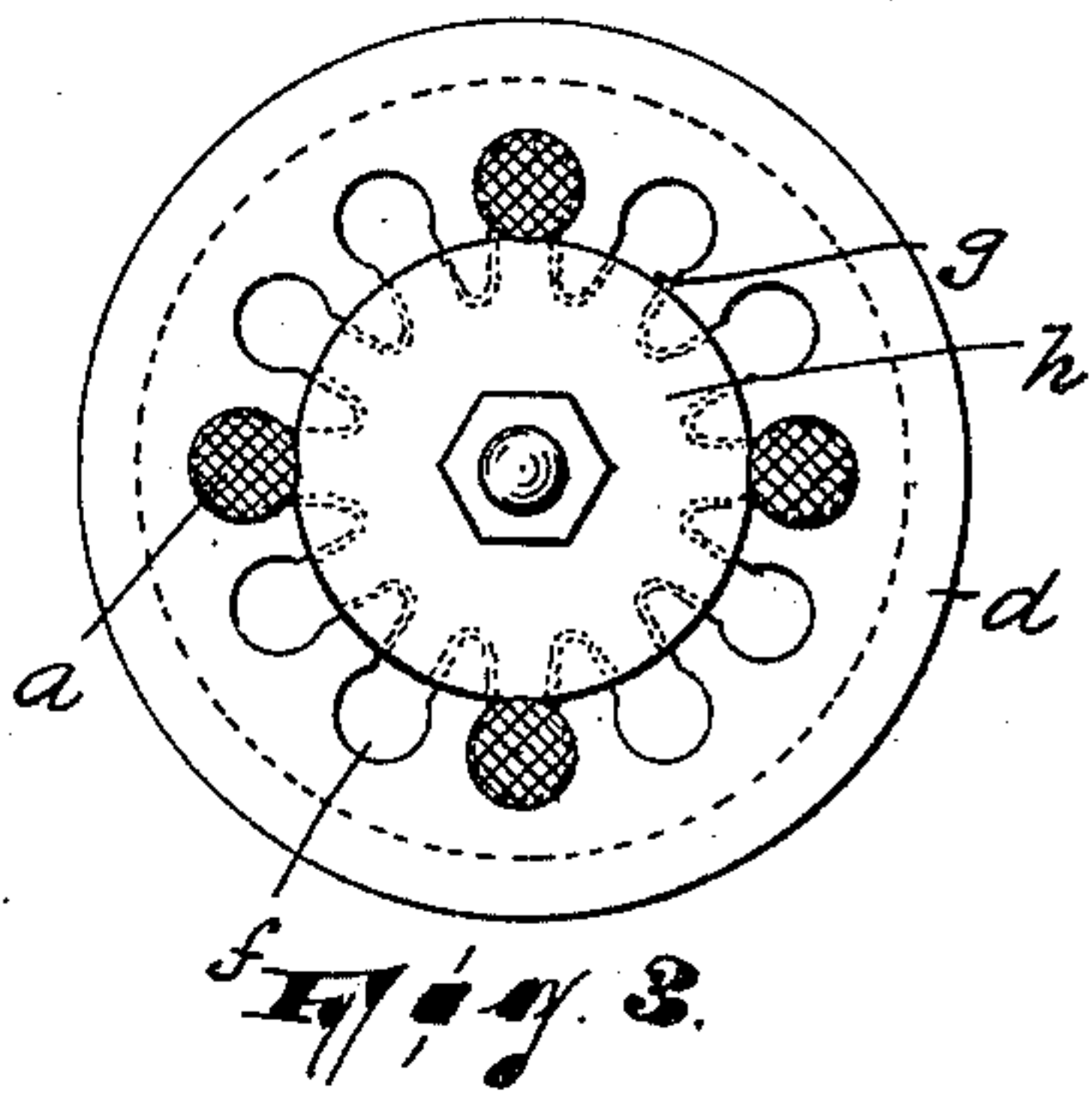
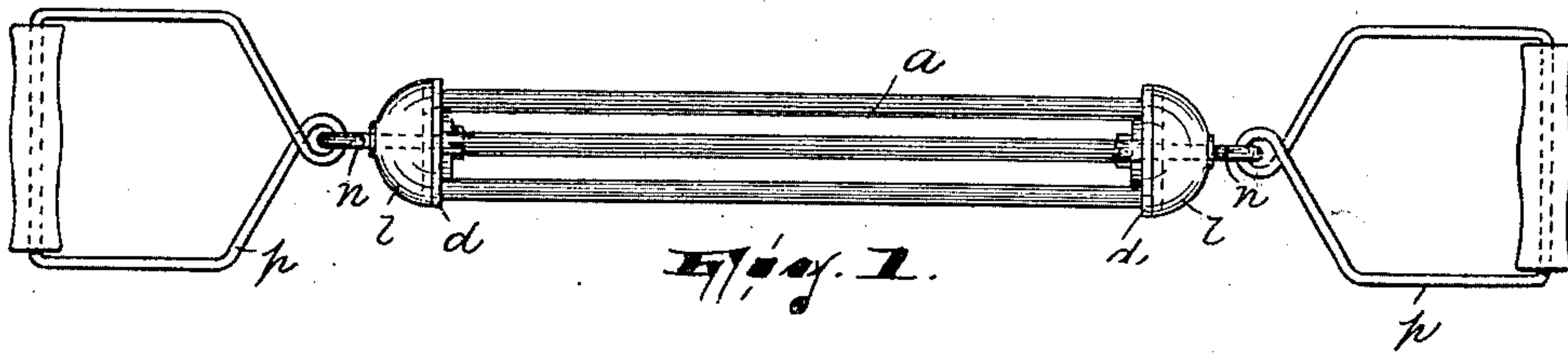
No. 652,617.

Patented June 26, 1900.

H. HOTZ.
EXERCISING APPARATUS.

(Application filed Mar. 30, 1900.)

(No Model.)



WITNESSES:

Wm. S. Bell.
Robert J. Pollitt

INVENTOR,

Henry Hotz.

BY

Garner & Steward,
ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY HOTZ, OF PATERSON, NEW JERSEY.

EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 652,617, dated June 26, 1900.

Application filed March 30, 1900. Serial No. 10,725. (No model.)

To all whom it may concern:

Be it known that I, HENRY HOTZ, a citizen of the United States, residing in Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Exercisers; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to exercising apparatus, and it has reference particularly to that class of such contrivances which embraces elastic pulls.

The object of the invention is to provide a device of the kind above indicated which shall be so constructed that it may be readily adjustable to offer various degrees of resistance and require various amounts of energy to operate it, and at the same time be simple, durable, and inexpensive in construction.

The invention consists in the improved elastic pull and in the combination and arrangement of its various parts, substantially as will be hereinafter pointed out and finally embodied in the clauses of the claim.

In the accompanying drawings, Figure 1 is a view in elevation of my invention. Fig. 2 is a sectional view of one of the securing members for the ends of the elastic devices employed in the apparatus. Figs. 3 and 4 are respectively a front and a rear face view of a certain pair of coacting parts which directly engage the elastic devices, and Figs. 5 and 6 are a plan view and a side view, respectively, of one of said parts.

In the accompanying drawings the reference character *a* designates several elastic devices, preferably consisting of strands of india-rubber *b*, made up into a single band or cord and held together by a braided or other textile cover *c* in the ordinary manner. I prefer to use devices of this character instead of metal springs principally because since they can be crowded into openings considerably less than their own diameter I find them more readily adaptable for connecting

their ends to suitable holders or securing means hereinafter described.

The holders or securing means above referred to may be described as follows:

d designates a disk, preferably of metal, having its central portion cut out and provided with a series of radial inwardly-projecting lugs or projections *e*. These lugs are separated by substantially-circular orifices *f*, to each of which there is a restricted entrance *g*. Each orifice *f* and entrance *g* together form, therefore, a recess.

h designates a keeper, which consists of a circular block having a series of peripheral lugs or projections *i*, adapted to fit into the recesses above described, extending therein slightly into or almost into the circular orifices *f* thereof, as best shown in Figs. 2 and 3. The block *h* is provided on one face with a flange *j*, which extends as far as the ends of its lugs.

The elastic devices above described are adapted to be secured in place by means of the disk *d* and the keeper *h* by forcing their ends into the orifices *f* of the disk and then placing the keeper in position, with the ends of its lugs fitting into the recesses of said disk and bearing against said devices. It should be remarked that the cord composing said elastic devices should be thick enough so that it will be crowded into said recess and so that the lugs of the keeper will crowd it when said keeper is in place. If the cord is thick enough, there will be no possibility of its pulling out of place, but to further insure against the latter U-shaped wire grips *k* may be secured upon the protruding end of each cord, as shown in Figs. 2 and 4.

l designates a semispherical cover whose edge seats in a peripheral recess *m*, formed in the rear face of the disk *d*. This cover *l* and the keeper *h* are centrally penetrated by a hook-bolt *n*, whose inner end is adjacent the keeper and is threaded, receiving a nut *o*. When the nut is secured in place, it contacts with the hook-shaped head of the bolt to clamp the cover and the keeper against the opposite faces of the disk.

It should be remarked that the combination of devices comprised in the keeper and

the disk, the cover, and the bolt and nut for securing these parts together is duplicated at both ends of the set of elastic devices *a*. (Shown in Fig. 1.)

5 To the hook-shaped head of the bolt *n* may be secured a handle *p*, such as is shown in Fig. 1, or said hook-shaped head may be secured to some suitable fixture permanently fastened to the wall in an apartment. In the
10 one of these cases two handles would be employed, whereas in the other but one handle.

It will be apparent that in order to alter the apparatus so that it will require various amounts of energy to operate it it will be only
15 necessary to employ more or less of the elastic devices.

I do not wish to be limited to providing the lugs in the keeper and the recesses in the disk, for the arrangement may be reversed, so that
20 the recesses would be in the keeper, while the coacting lugs project from the disk.

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

25 1. In an exercising apparatus, the combination of a plurality of elastic cords, a disk and keeper disposed at the end portions of said cords, the one having recesses receiving said cords and the other engaging said cords,
30 and means for securing said disk and the keeper together, substantially as described.

2. In an exercising apparatus, the combination of a plurality of elastic cords, a disk and keeper disposed at each end portion of
35 said cords, the one having recesses receiving said cords and the other having lugs project-

ing into the recesses and engaging said cords, and means for securing said disk and the keeper together, substantially as described.

3. In an exercising apparatus, the combination of a plurality of elastic cords, a disk having recesses, a flanged keeper abutting against one face of said disk and provided with projections extending into said recesses, the end portions of said cords being crowded
45 into said recesses and engaged by the projections, a cover abutting against the other face of said disk, and means for clamping said cover, the disk and the keeper together, substantially as described. 50

4. In an exercising apparatus, the combination of a plurality of elastic cords, a disk having recesses, a flanged keeper abutting against one face of said disk and provided with projections extending into said recesses, 55 the end portions of said cords being crowded into said recesses and engaged by the projections, a cover abutting against the other face of said disk, and a clamping-bolt penetrating said cover, the disk and the keeper, said bolt 60 being provided with a nut and a hook-shaped head, and said hook-shaped head being adapted to engage a handle or other device, substantially as described.

In testimony that I claim the foregoing I 65 have hereunto set my hand this 24th day of March, 1900.

HENRY HOTZ.

Witnesses:

JOHN W. STEWARD,
LOUISE NUSSBOUNNER.