

No. 630,741.

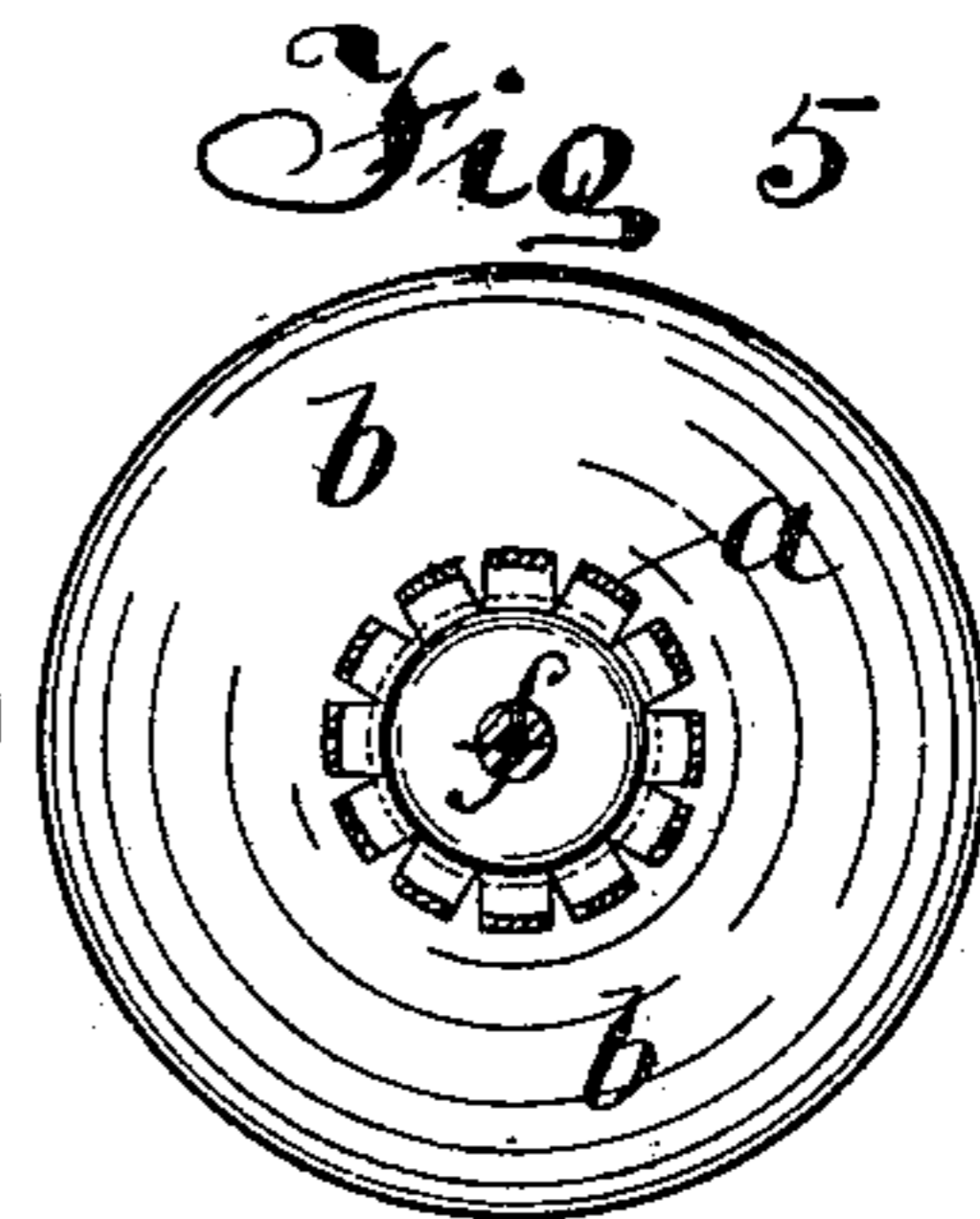
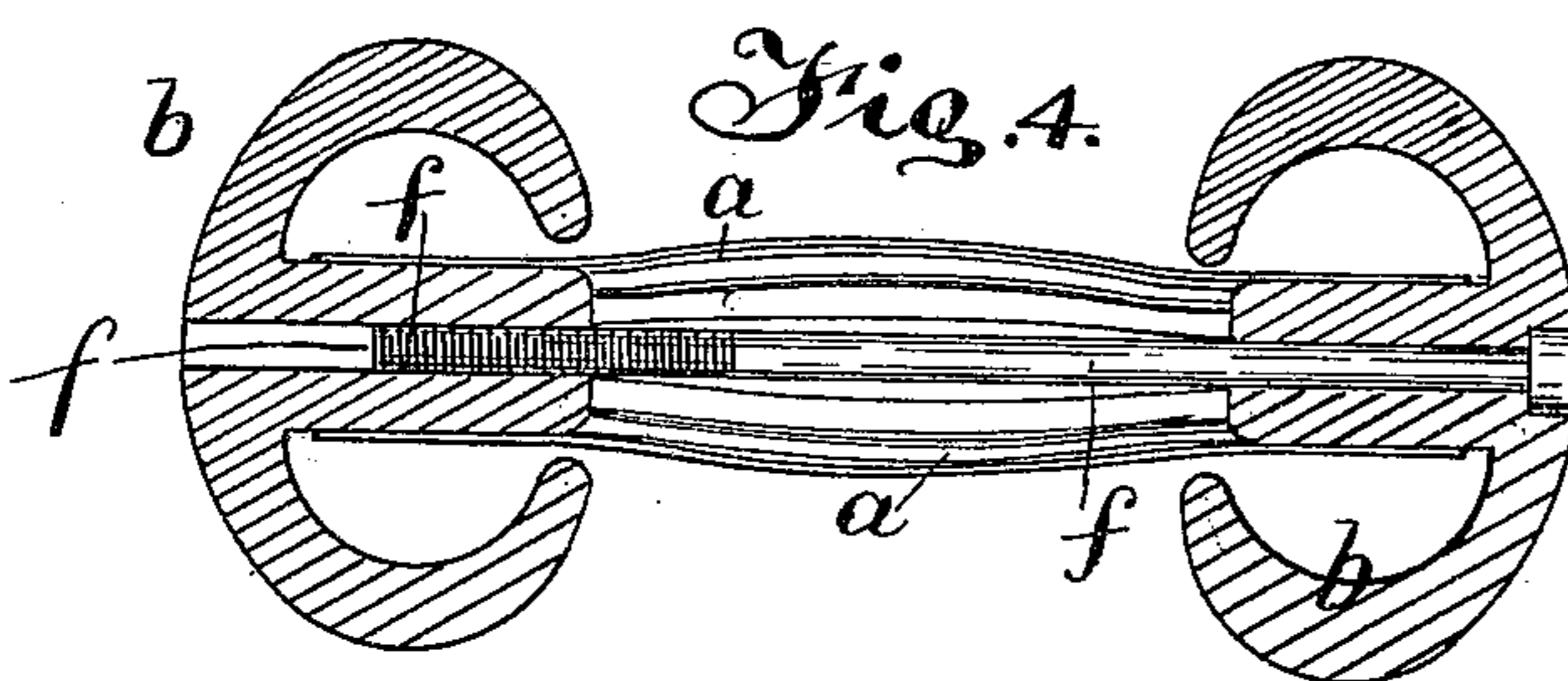
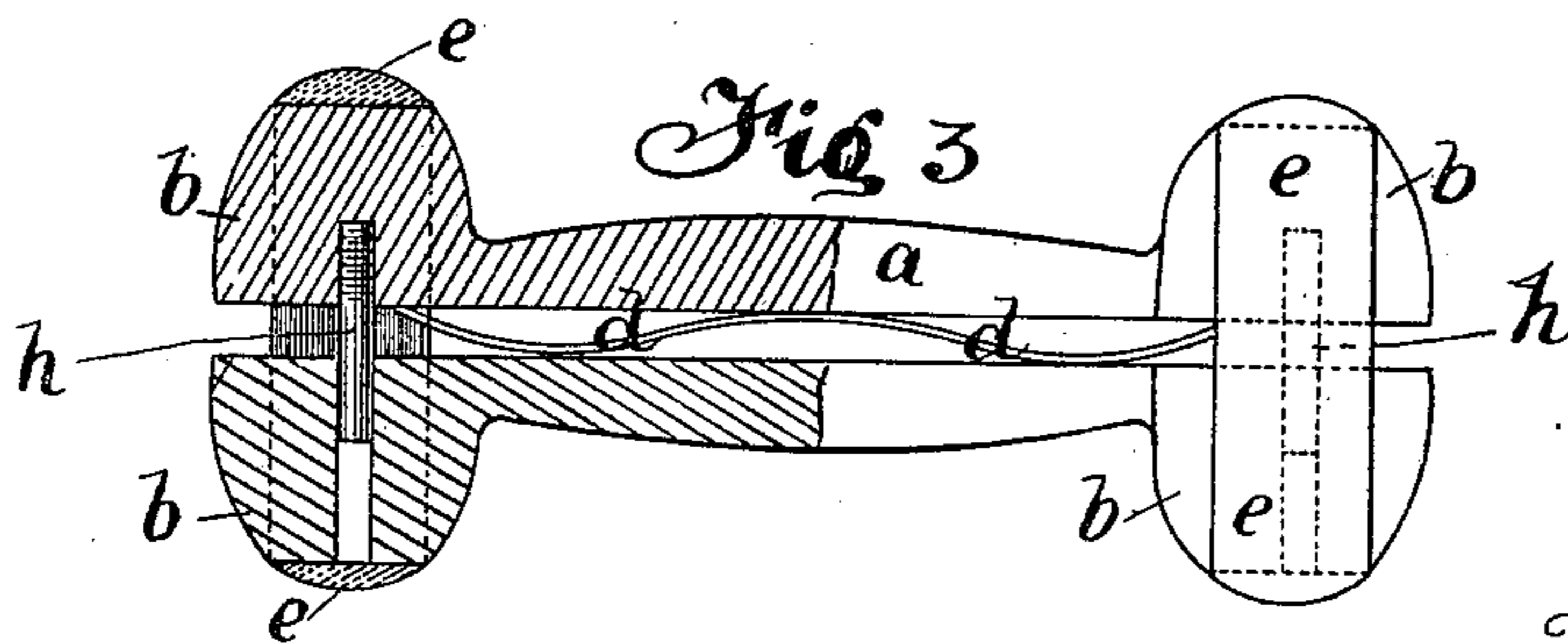
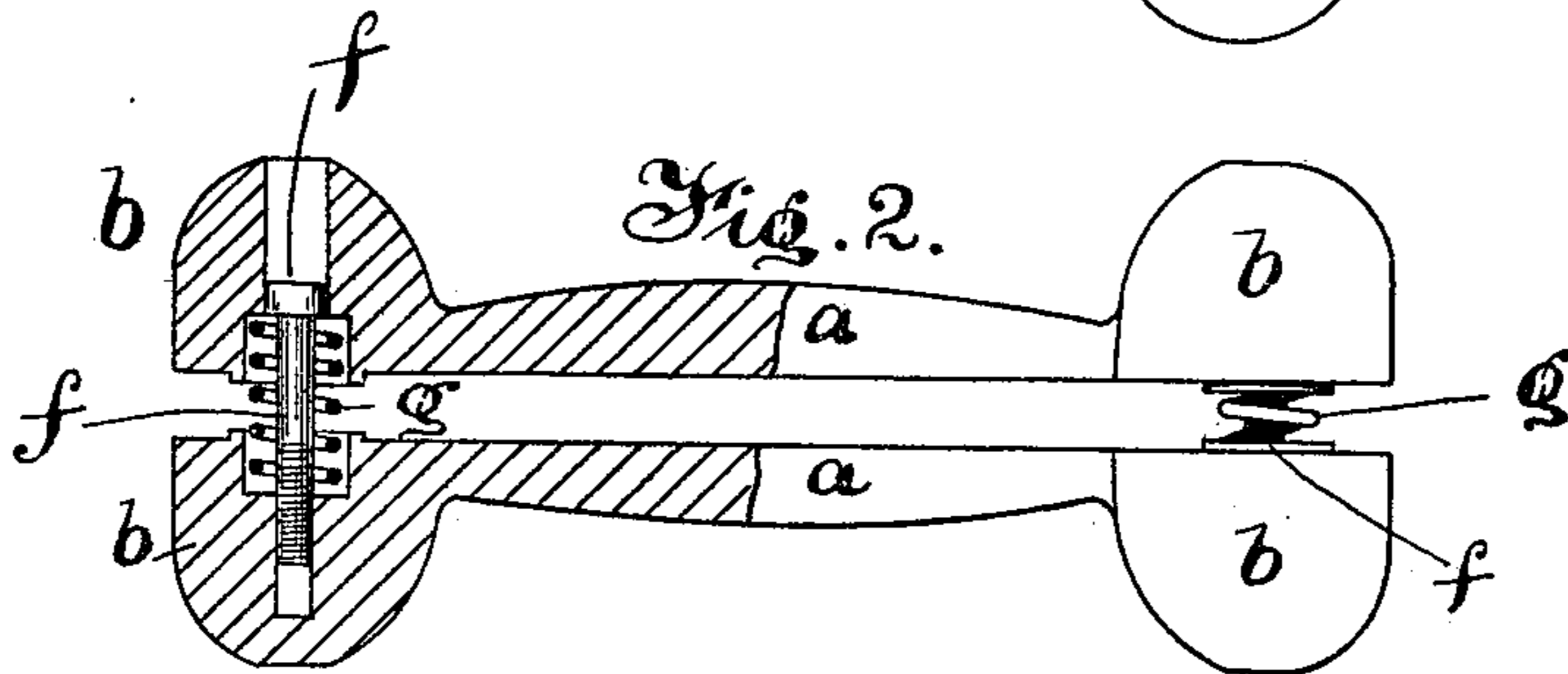
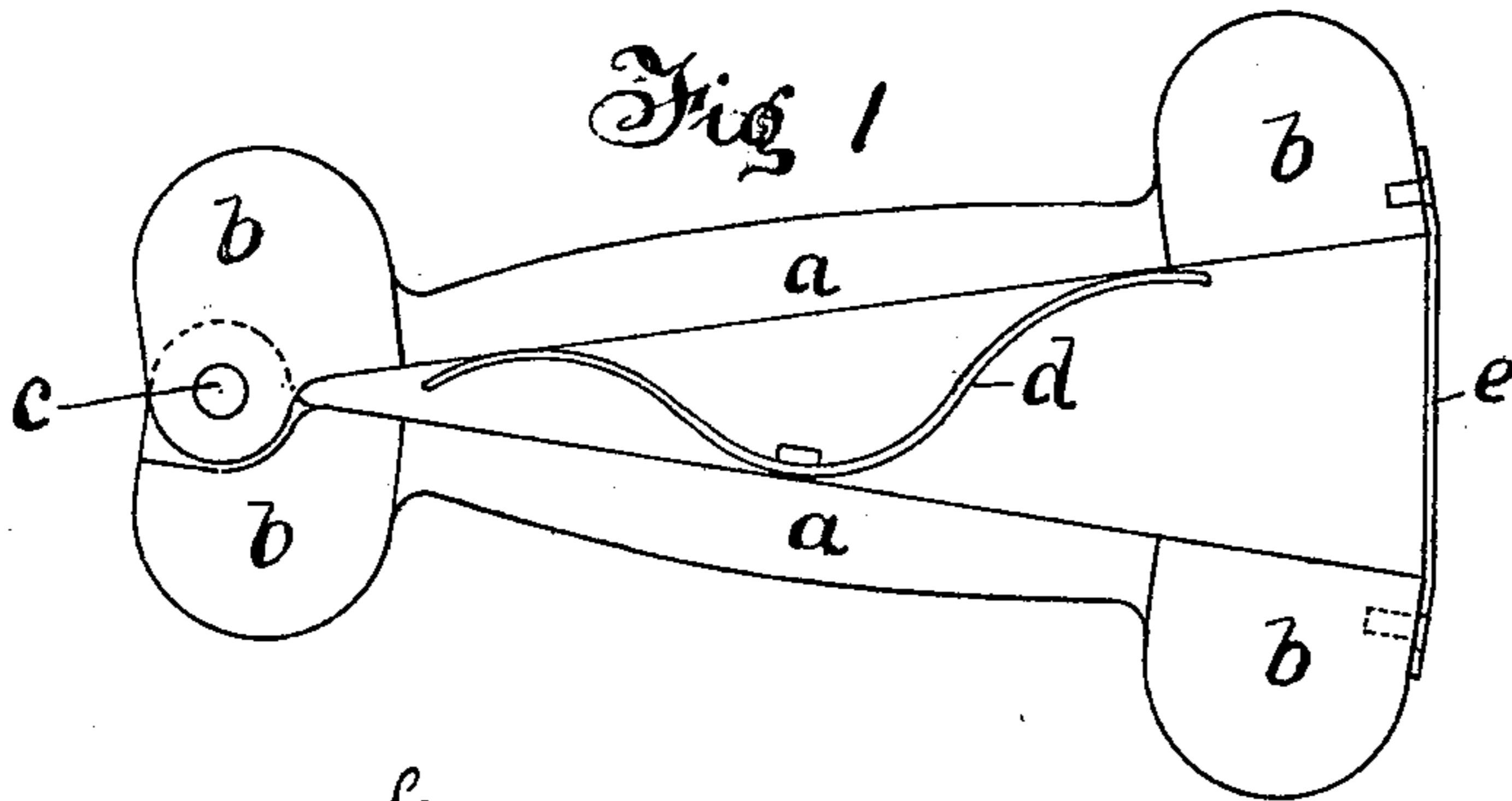
Patented Aug. 8, 1899.

J. ROBINSON.
DUMB BELL.

(Application filed Mar. 9, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:
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JOSEPH ROBINSON
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2 Sheets—Sheet 2.

Fig. 6.

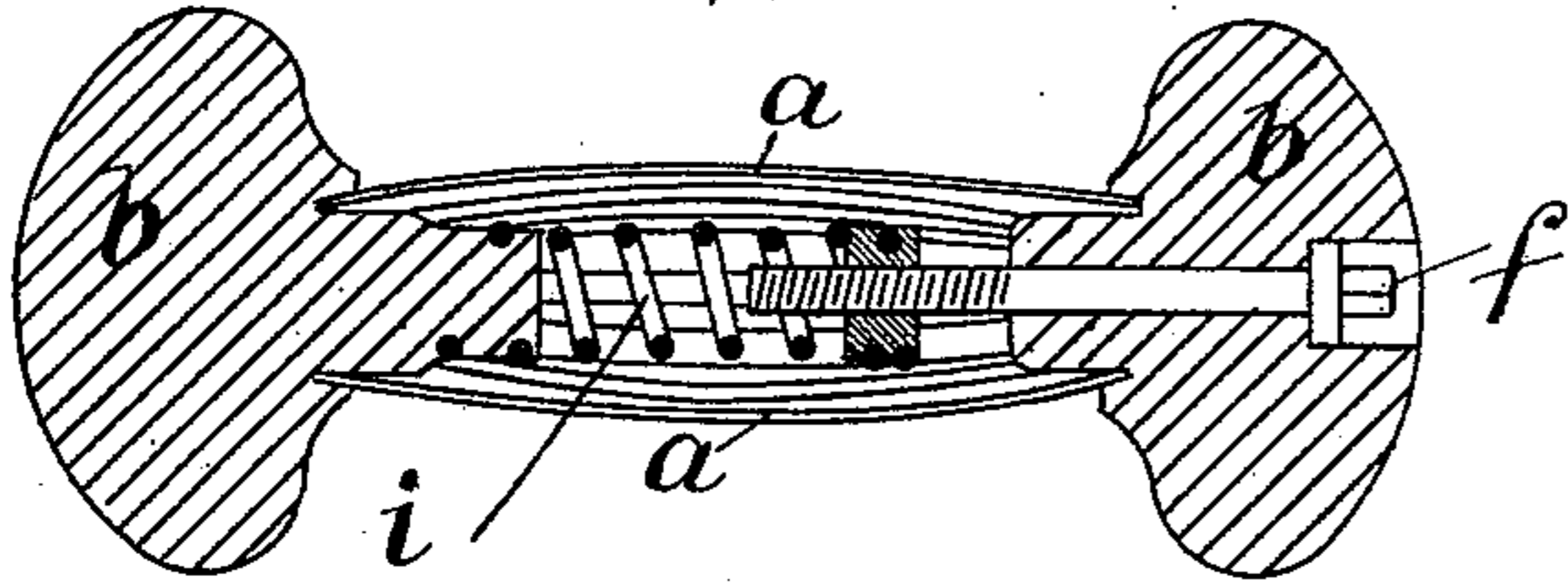


Fig. 7.

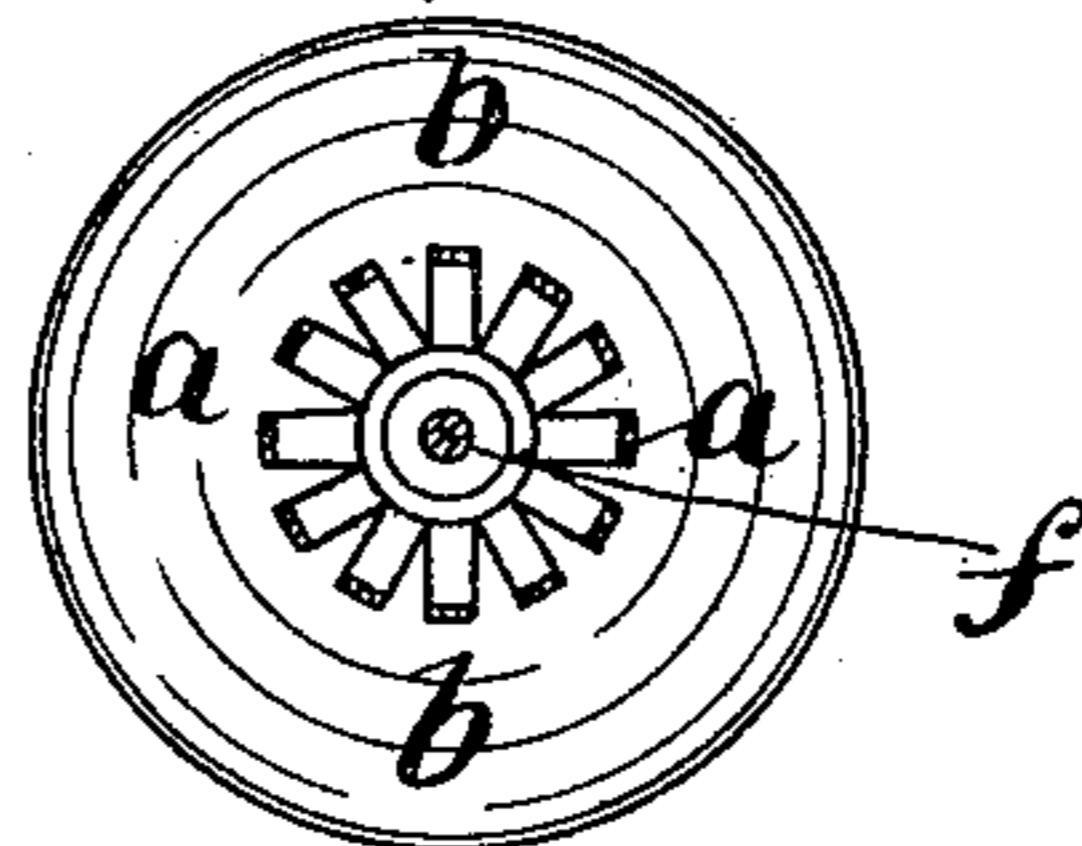


Fig. 8.

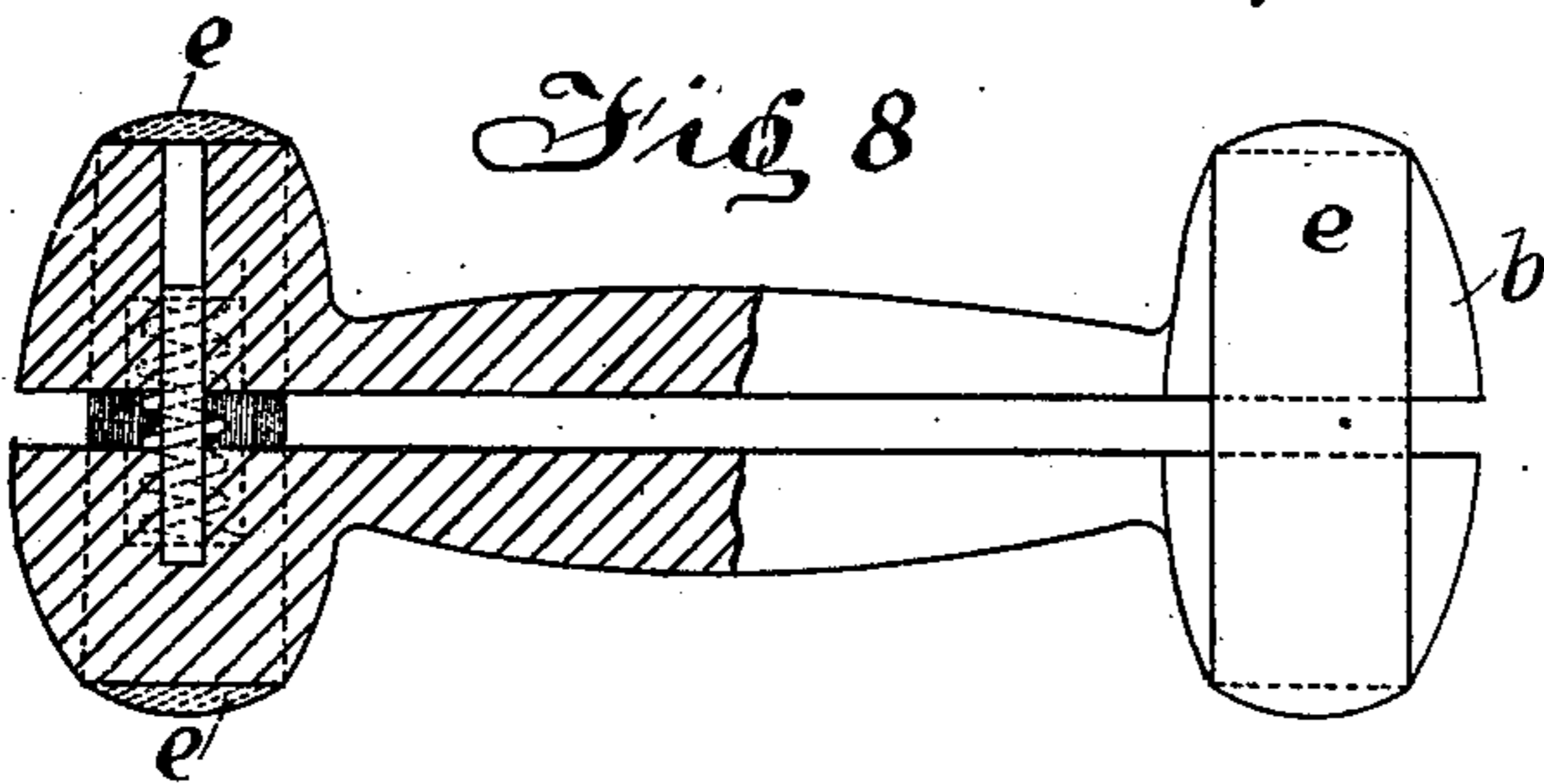


Fig. 9.

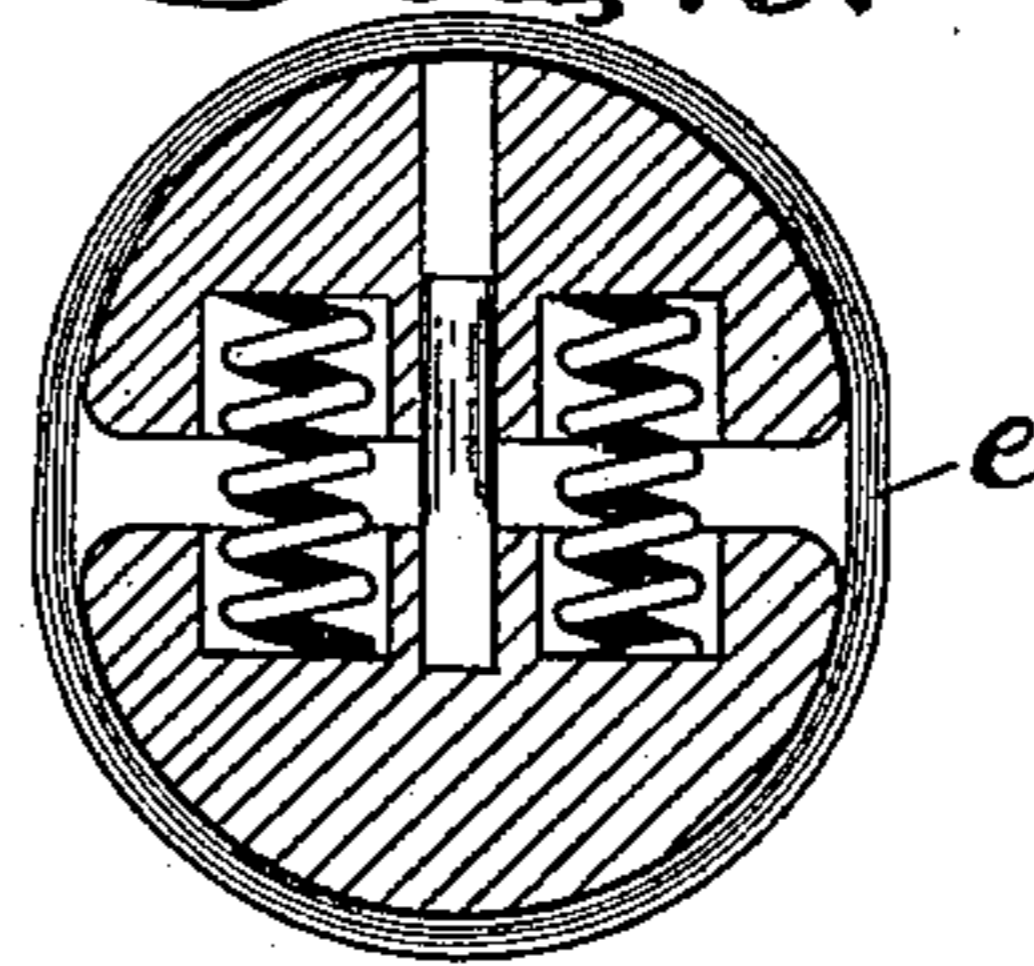


Fig. 10.

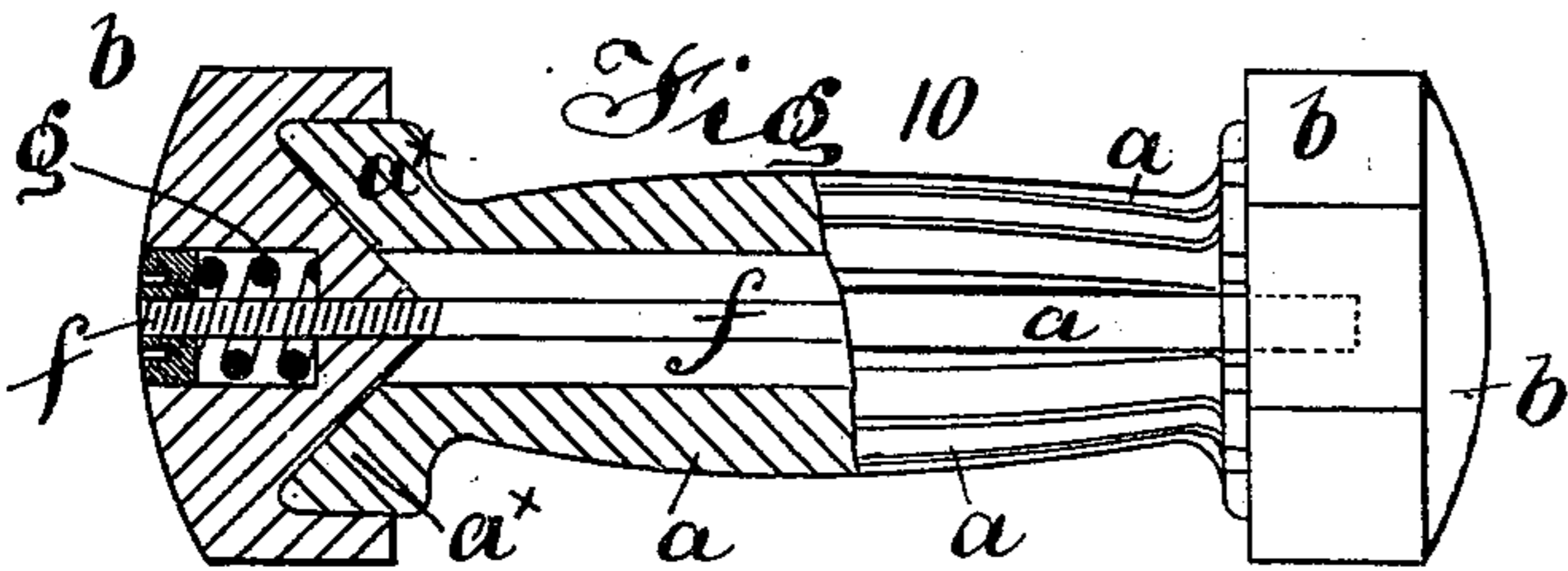


Fig. 11.

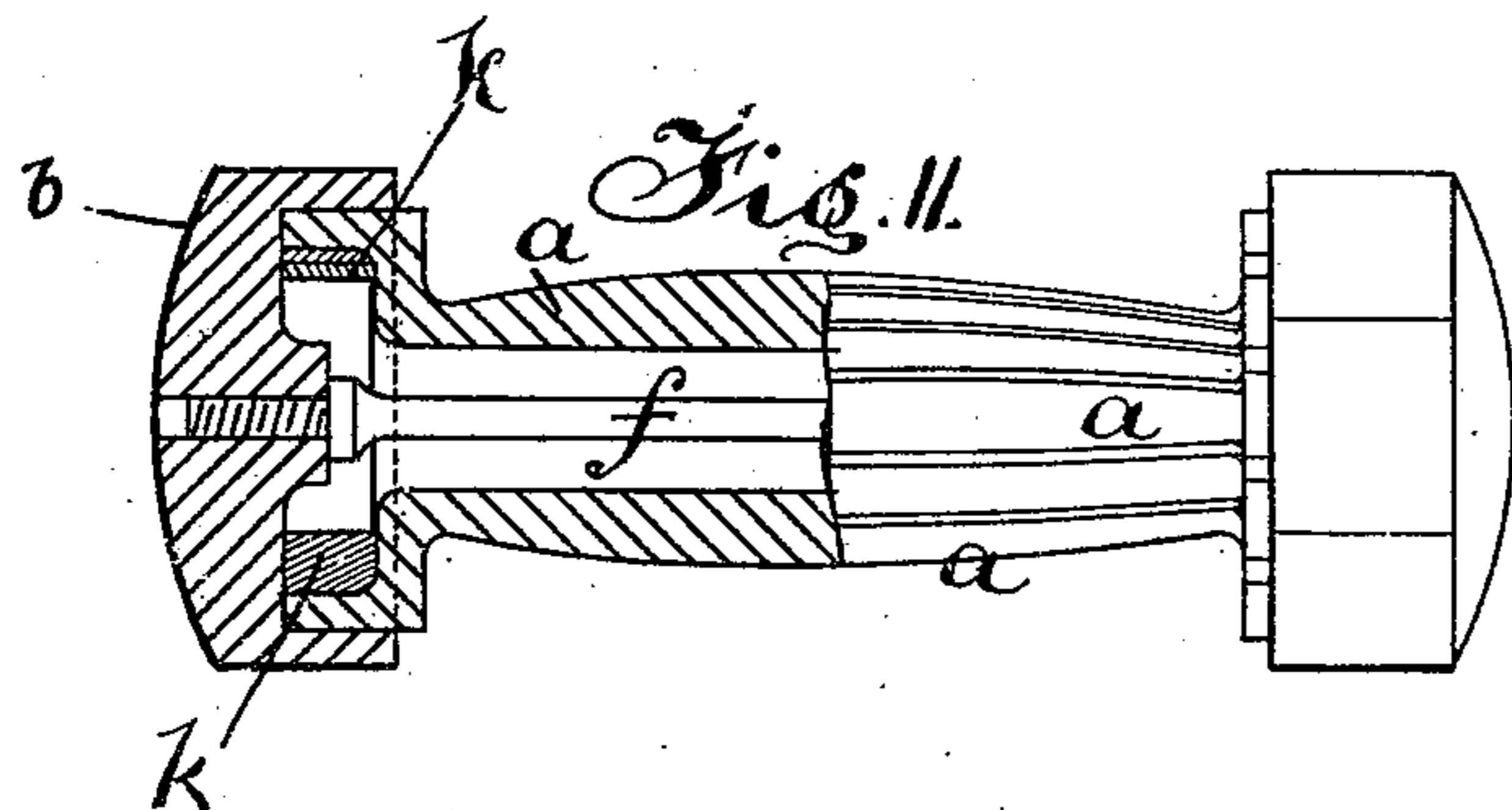
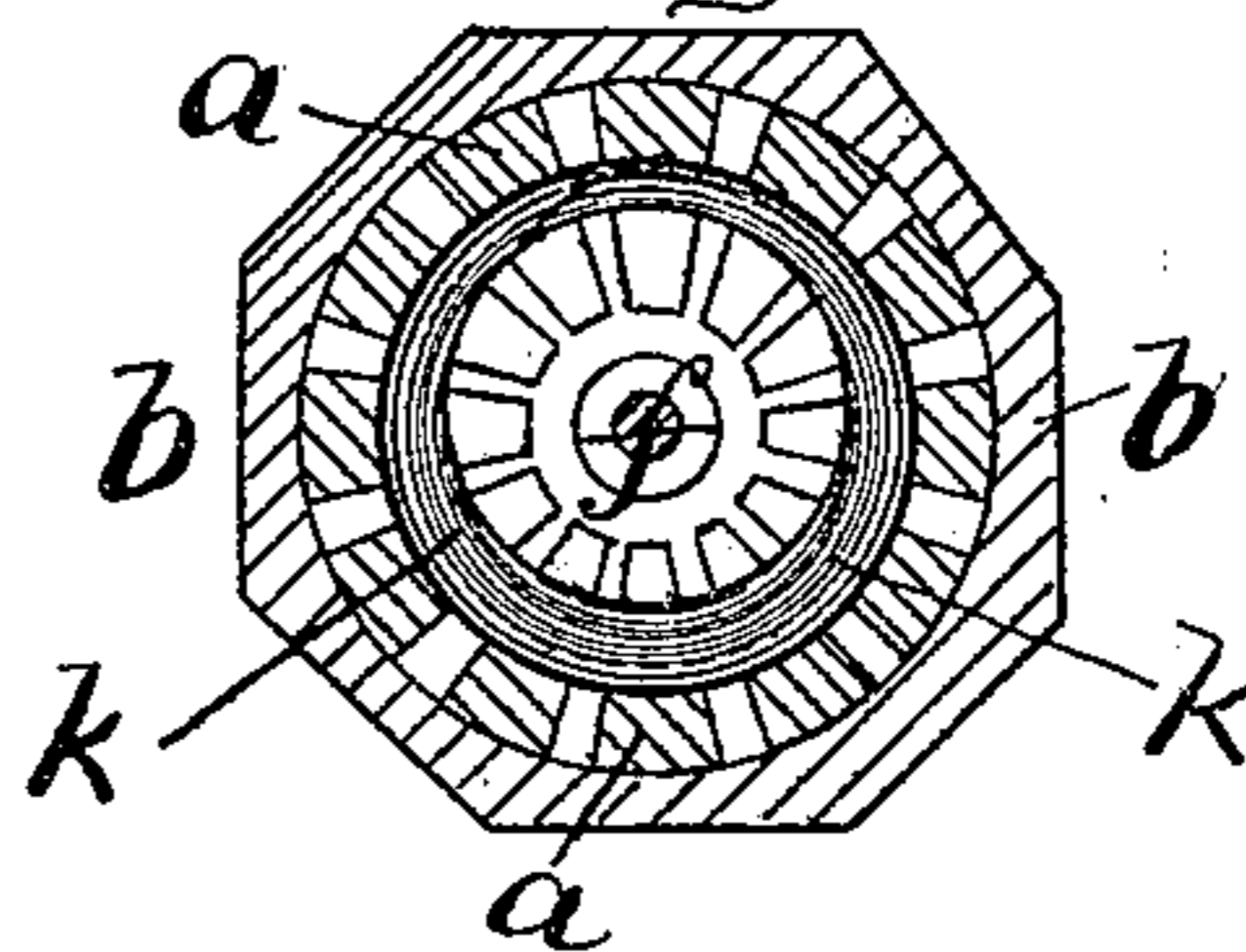


Fig. 12.



WITNESSES:

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INVENTOR

JOSEPH ROBINSON

BY *Horsman and Horsman*
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UNITED STATES PATENT OFFICE.

JOSEPH ROBINSON, OF LONDON, ENGLAND, ASSIGNOR TO EUGEN SANDOW,
OF SAME PLACE.

DUMB-BELL.

SPECIFICATION forming part of Letters Patent No. 630,741, dated August 8, 1899.

Application filed March 9, 1899. Serial No. 708,390. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ROBINSON, a subject of the Queen of Great Britain, residing at Hammersmith, London, England, have invented new and useful Improvements in Dumb-Bells for Physical-Culture Exercises, of which the following is a specification.

My invention relates to improvements in dumb-bells; and it consists in the application of one or more springs to the dumb-bell, so as to cause the same to require a firm grip when held in the hand. This firm grip of the dumb-bell is intended to and does cause a continuous tension of the muscles of the arms, wrists, hands, and fingers when used for physical-culture exercises.

The invention consists principally in the application of flat, curved, or spiral springs or rubber or compressed-air springs or a combination of several springs to the interior or to the handle portion of the dumb-bell in such a position and manner that when in use the grasp on the handle will cause the spring or springs to be compressed.

The dumb-bells may be constructed of wood, compressed pulp, metal, or other suitable material.

The manner in which my invention is to be performed or carried into practical effect will be readily understood on reference to the two sheets of drawings hereunto annexed and the following explanation thereof.

It will be obvious that various ways of giving the expansive action to the bar or handle may be adopted without departing from the distinctive features of my invention; but for the sake of illustration I have shown on the drawings various different forms which the invention may take.

In the modification shown at Figure 1 the bar *a* and the two "bells" *b* are divided into two parts longitudinally, being hinged together at *c* at one end, and a bow-spring *d* fixed between the two to keep the two sections apart when not being held in the hand, the open ends being prevented from being extended too far apart by a band *e* of leather or other suitable material.

In the modification shown partly in section at Fig. 2 the two sections are held together by screws and are distended by coiled springs *d*.

In Fig. 3 the two sections are separated by a bow-spring *d*, as in Fig. 1, and are kept in place by steady-pins *h*, and are prevented

from expanding too much by india-rubber rings *e*.

In the modification shown in longitudinal section at Fig. 4 and transverse section at Fig. 5 the bells *b* are hollow and are divided transversely instead of longitudinally. They are held together by a screw *f*. The handle consists of a series of spring-bars *a* bowed out in the center, which must be compressed when the handle is grasped.

The modification shown at Figs. 6 and 7 is somewhat similar, with the addition of a spiral spring *i* inside, the tension of which can be increased or diminished by turning the screw *f*.

Figs. 8 and 9 resemble Fig. 2, with the exception that two coiled springs *g* are used at each end instead of one and the sections are kept from expanding too much by india-rubber bands *e*.

In the modification shown partially in section at Fig. 10 the bells *b* are made hollow, with conical centers inside. The handle is made of a series of bars *a*, bowed in the center and with their ends *a*^x beveled to fit against the cones inside the bells. The latter are held together by the screwed rod *f* and the cones are forced inward, so as to expand the handle, by coiled springs *g*.

In the modification shown in partial sectional elevation at Fig. 11 and transverse section at Fig. 12 the interior of each bell *b* is made in a box form and the ends of the curved bars *a*, which form the handle, fit inside the same, being expanded by split circular springs *k* inside their cranked ends.

I claim as my invention—

1. A dumb-bell having a handle part composed of a plurality of parts adapted to be compressed together by the hand, as and for the purpose described.

2. A dumb-bell having a handle consisting of a number of parts and resilient means for expanding said parts, adapted to be compressed by the hand, as and for the purpose described.

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

JOSEPH ROBINSON.

Witnesses:

CHAS. ROCHE,
G. W. SMITH.