

No. 784,367.

PATENTED MAR. 7, 1905.

A. F. WILLIAMS.

DUMB BELL.

APPLICATION FILED AUG. 10, 1904.

Fig. 1,

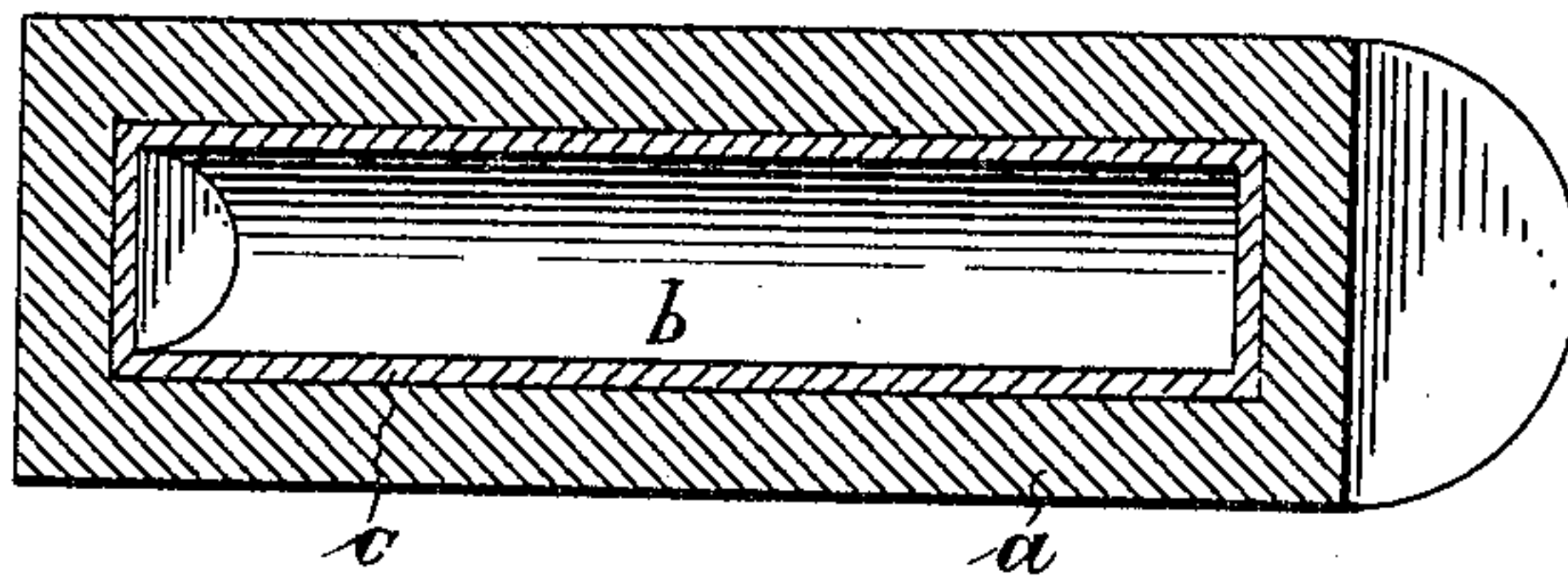


Fig. 2,

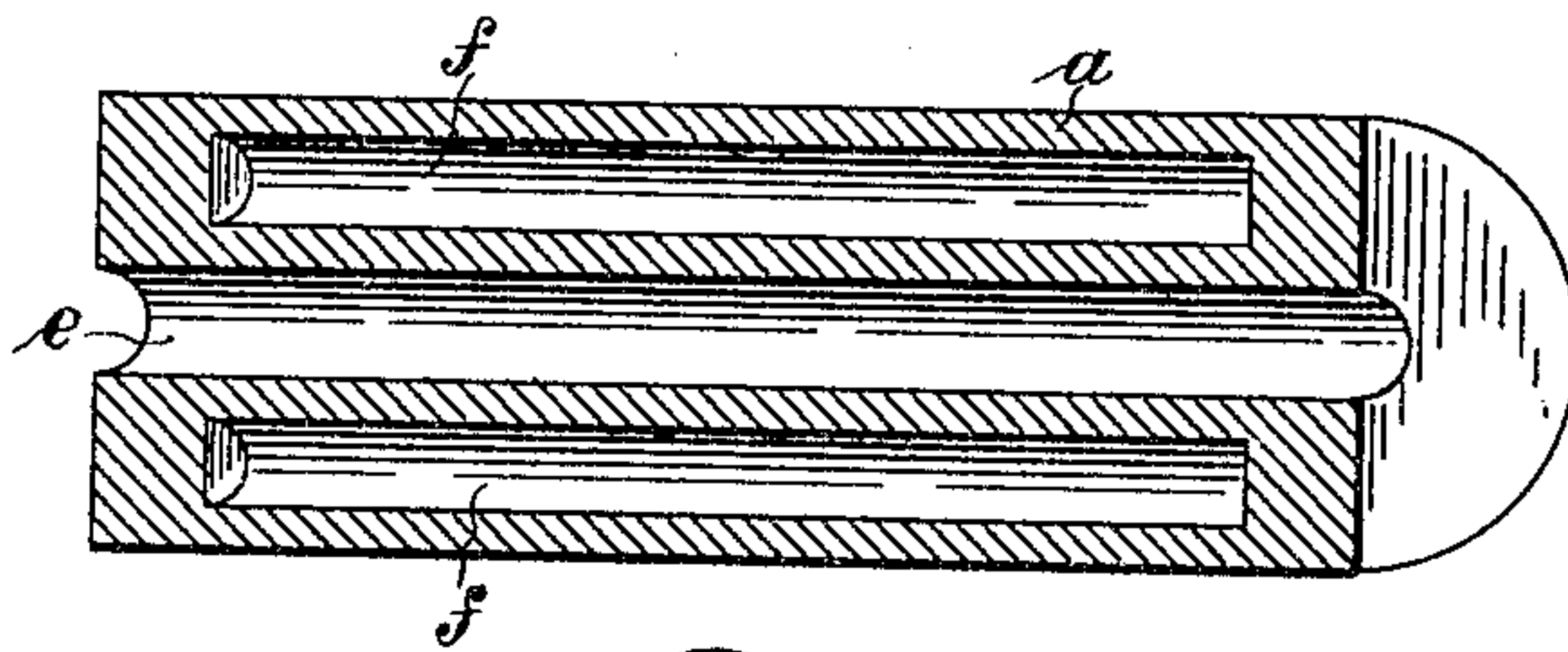


Fig. 3,

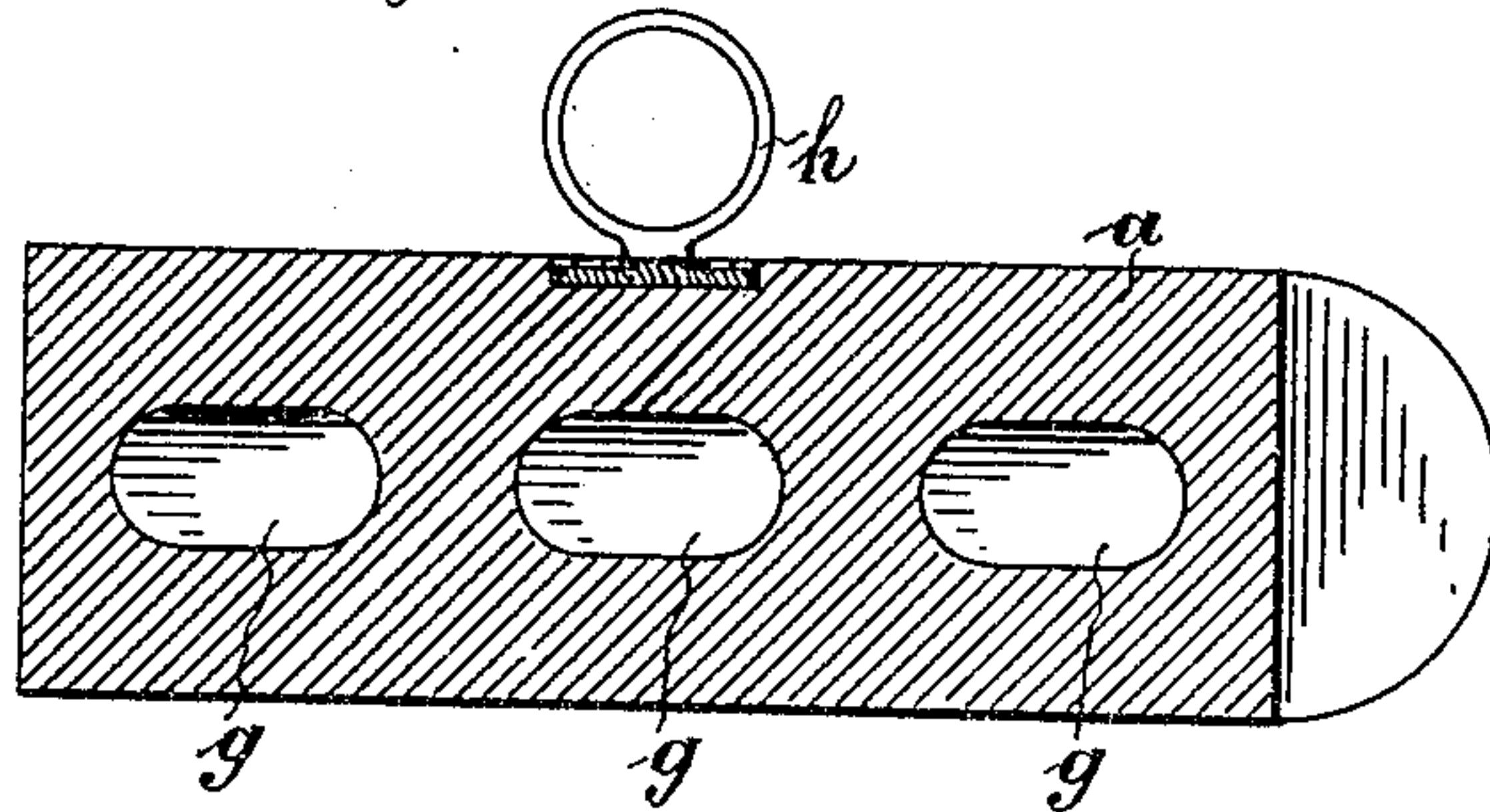


Fig. 4,

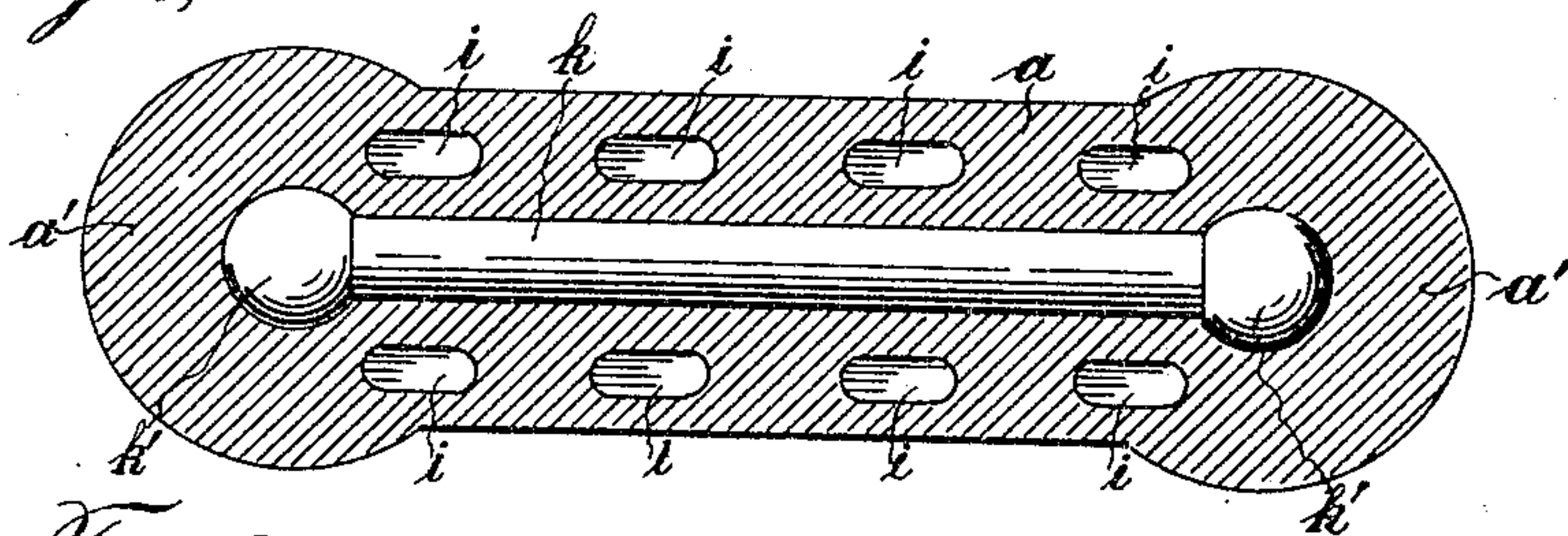
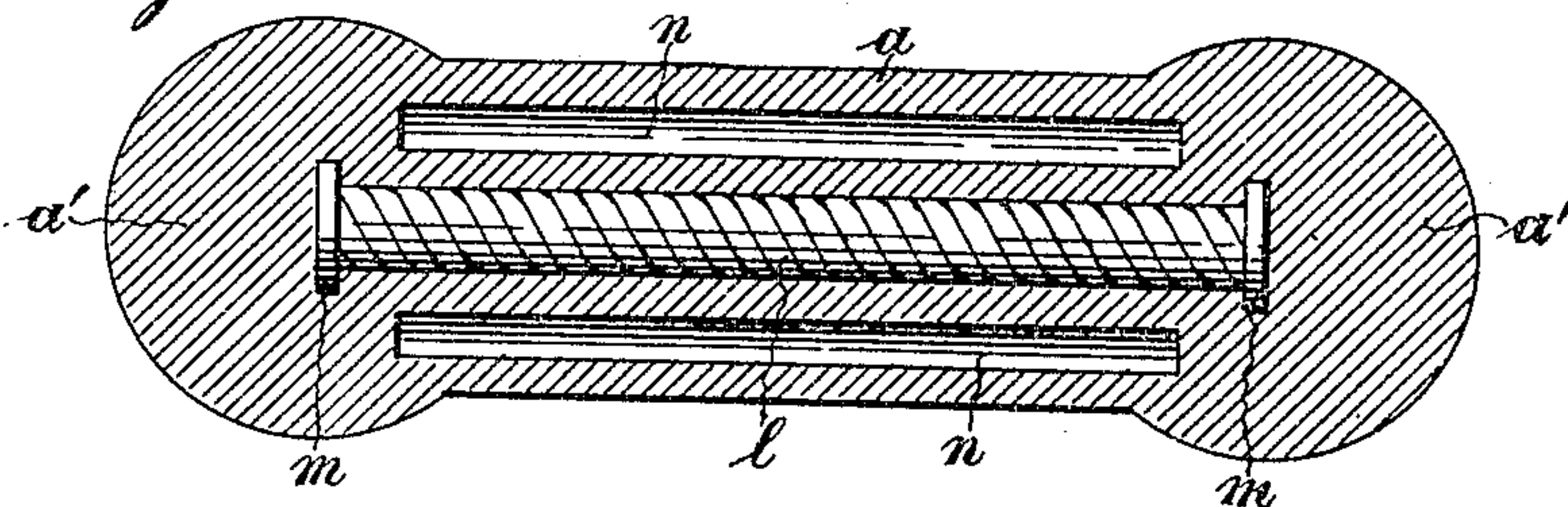


Fig. 5,



Witnesses
Max D. Spring.
Hattie B. Dueder

Inventor
Augustine F. Williams
By his Attorney
L. C. Schmitt

UNITED STATES PATENT OFFICE.

AUGUSTINE F. WILLIAMS, OF NEW YORK, N. Y.

DUMB-BELL.

SPECIFICATION forming part of Letters Patent No. 784,367, dated March 7, 1905.

Application filed August 10, 1904. Serial No. 220,165.

To all whom it may concern:

Be it known that I, AUGUSTINE F. WILLIAMS, a citizen of the United States of America, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Dumb-Bells, of which the following is a specification.

This invention has reference to improved dumb-bells for in and out door exercise.

The novel dumb-bells are so constructed and of such weight that they may be easily carried in the pocket.

It is the special object of this invention to provide a simple flexible bell which leaves the hands after use in about the same condition as they were before exercising.

Heretofore dumb-bells have been made of wood or iron. My novel dumb-bells are made of resilient and flexible material. In addition thereto they are provided with interior cells, channels, or air-tight tubes which increase their resiliency.

Exercise with these novel bells imparts the same vigor to the body as the old style heavy dumb-bells without overstraining the muscles in the hands and wrists.

In some instances an iron core may be inserted within the bell. This core will slightly increase the weight of the bell, but not to such an extent as in the old-style bells.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents in longitudinal section a cylindrical dumb-bell which embodies my invention and is provided with an air-tight cell running longitudinally through its center. Fig. 2 represents a cylindrical dumb-bell, showing two air-tight longitudinal cells and a central longitudinal channel open at both ends. Fig. 3 illustrates a cylindrical dumb-bell, showing three small air-tight cells and being provided with a ring in its center portion for inserting the middle finger. Fig. 4 represents a cylindrical dumb-bell having an enlarged ball at each end, a metal core in its center, and a series of small air-tight cells surrounding said metal core; and Fig. 5 illustrates a cylindrical dumb-bell with an enlarged ball at each end, having a spiral metal core and longitudinal air-tight cells surrounding same.

Similar letters of reference denote like parts in all the figures.

In Fig. 1 a dumb-bell is shown in longitudinal cross-section. It comprises a cylindrical body *a* made of elastic or resilient material, preferably rubber. In the center of the rubber body *a* there is a longitudinal air-tight cell *b* running through almost its entire length. In order to add strength or firmness to the interior portion of the cell, a canvas lining *c* is provided, which, however, does not diminish the resiliency of the bell.

The dumb-bell illustrated in Fig. 2 comprises the cylindrical rubber body *a*. This bell is provided with a central longitudinal channel *e*, which is open at both ends and extends through the entire length of the bell. Surrounding the channel *e* there are several longitudinal air-tight cells or tubes *f*, two of which are shown in Fig. 2. A canvas lining may be provided on the interior of said air-tight tubes or channels, but this is not shown in the drawings.

In Fig. 3 a cylindrical dumb-bell is shown having a rubber body *a*. This bell is provided with a number of air-tight longitudinal cells *g*, located in its center. Three such cells are shown in this figure.

The three bells so far described are lightweight bells. They may be provided with a ring for permitting the middle finger to pass through. Such a ring is shown in Fig. 3. The ring *h* is provided in the center portion of the rubber body *a* and securely anchored therein or attached thereto in any suitable manner. This ring may be made of rubber or metal and permits of getting a firm hold on the bell.

A modified form of bell is illustrated in Fig. 4. Its rubber body *a* is provided with a series of small air-tight cells *i* near the outside and a metal core *k* in its center. This core is preferably solid and adds weight to the bell. The rubber body *a* is provided at each end with an enlarged ball *a'*, made of the same material and integral therewith. The solid metal core likewise has at each end an enlarged metal ball *k'*, conforming in shape to the balls *a'*.

Another modification of the bell is shown in Fig. 5. The rubber body *a* has at each end an enlarged ball *a'*. This bell is provided with

a spiral metal core *l*, which runs longitudinally through the center of same. The spiral is made of wire or a narrow strip of metal. It is secured at each end to a circular disk *m*,
5 embedded in the balls *a'*. Surrounding the metal spiral there are longitudinal air-tight tubes *n* in any desirable number, two of which are shown in Fig. 5.

The dumb-bells are preferably manufactured
10 in two or more parts, which are cemented together or assembled in any suitable manner. The single parts are made of rubber compositions of various stiffness or hardness and molded so as to form the air-tight cells, tubes,
15 and channels. The cloth or canvas is molded in directly when the single parts are shaped, thereby preventing the breaking of the bell. The bell provided with the metal spiral bends sidewise, although this spiral adds weight to
20 same.

The weight of the bell is relatively small and may range upward from the fraction of a pound to any reasonable weight. In some instances the exterior of the rubber body *a* may
25 be corrugated; but this is not shown in the drawings. Fine corrugations on the surface will prevent the bell from slipping during use.

In the described manner a dumb-bell is produced which is light, flexible, and resilient, and adapted for in and out door exercise. 30

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

1. A light dumb-bell comprising a cylindrical body of elastic and resilient material, air-tight spaces formed therein, and a canvas
35 lining on the interior of said air-tight spaces.

2. A light dumb-bell comprising a cylindrical body of elastic and resilient material having an enlarged ball at each end, a spiral metallic core embedded in its center, a disk at
40 each end of said spiral, and air-tight tubes between said spiral and the surface of the body.

3. A light-weight dumb-bell comprising a cylindrical body made of elastic and resilient material, air-tight spaces formed within said
45 body, and a ring provided in the center portion of same.

Signed at New York, N. Y., this 28th day of July, 1904.

AUGUSTINE F. WILLIAMS.

Witnesses:

GEORGE H. BRUCE,
WILLIAM MEYER.