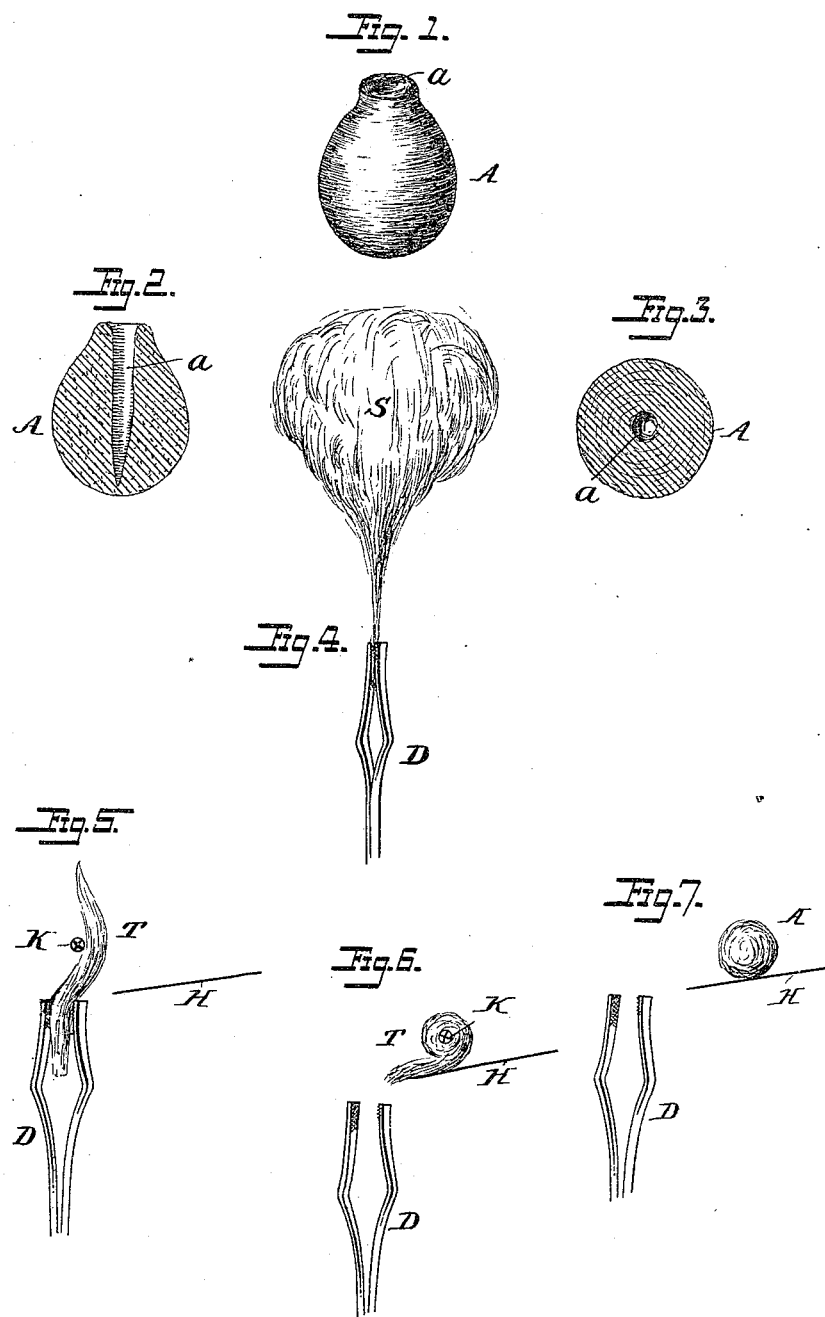


(No Model.)

G. B. RICHMOND.
DENTAL PELLET.

No. 525,797.

Patented Sept. 11, 1894.



Witnesses
Geo. G. Hinkel
Allen K. Dobson

Inventor
G. B. Richmond.
by *Ly Foster Freeman*
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE B. RICHMOND, OF LANSING, MICHIGAN.

DENTAL PELLET.

SPECIFICATION forming part of Letters Patent No. 525,797, dated September 11, 1894.

Application filed September 15, 1893. Serial No. 485,608. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. RICHMOND, a citizen of the United States, residing at Lansing, Ingham county, State of Michigan, have
5 invented certain new and useful Improvements in Dental Pellets, of which the following is a specification.

My invention relates to dental pellets, and it has for its object to provide an improved
10 pellet, and it consists in the improved article having the general features substantially as hereinafter more fully set forth.

Referring to the accompanying drawings, Figure 1, is an enlarged, perspective view of
15 my improved pellet. Fig. 2, is an enlarged, vertical section of the same. Fig. 3, is a transverse section of the same. Fig. 4, is a representation of one of the steps; and Figs. 5, 6, and 7 are other views, showing the various
20 steps of one way of producing the article.

In the practice of dentistry every dentist is in the habit and of necessity is constantly using small pellets or balls of some absorbent material, usually of absorbent cotton, with
25 which to wipe out and dry the cavities of the teeth, and for various other uses in the ordinary practice of the art. These balls or pellets are now usually prepared by hand, by drawing from a mass of cotton or other material small amounts which are pressed or
30 formed into small wads or masses between the fingers of the operator, and are placed in convenient position for ready use in the ordinary operations. These wads or masses are
35 necessarily of irregular shape, are more or less compressed, and are not of a uniform or desirable consistency, and it is exceedingly difficult and almost impracticable to make them satisfactorily by this method. More
40 than that, they are unavoidably more or less tainted or soiled from the perspiration of the hand, or other uncleanness, notwithstanding the great care that is taken in preparing them, as they are highly absorbent and are exceedingly delicate and subject to impurities.

It is the object of my present invention to provide an improved pellet in which the fiber is uniformly wound or spun about the center, so that the body of the pellet shall be of a
50 proper consistency and density, and of such a shape or form that it will be in the most satisfactory condition for uses for all pur-

poses in connection with the art, and to be enabled to supply the profession with such pellets in quantity at reasonable rates, and
55 in such condition that they are perfectly clean and best adapted for immediate use, they being elastic and pliable, so that they can be pressed into various shapes to fit the cavities, and capable of being condensed or elongated,
60 without actual separation of the fibers, and further to be able to supply these pellets in various sizes to meet every want which is likely to arise in the ordinary dental practice.

The pellet, which is preferably made of absorbent cotton, consists essentially of a body
65 of fibers which are wound or spun upon themselves so as to make practically a pear or similar formed pellet, having a central opening which permits the pellet to be compressed
70 or condensed into different shapes, and the fibers of which are also loosely laid with reference to each other, which permits further condensation or elongation and separation, to a greater or less extent, and the whole
75 forms a neat, compact, clean pellet, which is always ready for use, and which may be supplied in quantities at a reasonable cost. In this way a great deal of the time of the operator is saved, which is now spent in forming
80 the ordinary masses or wads of cotton ordinarily used, and moreover, there can always be a sufficient quantity of pellets ready for immediate use, for any operation, no matter how complicated. Thus, referring to the
85 drawings, A represents the pellet, which has an opening *a*, extending practically through the same, and in which the fibers are wound or spun spirally, as best shown in Fig. 3, so that they lie loosely upon each other, forming
90 thereby the mass or body of the pellet.

In order to produce these pellets, having the above characteristics, I proceed in the following manner, as represented in a graphic way in Figs. 4 to 7 inclusive. In said figures, S, represents a mass or body of fibrous material,
95 from which by any suitable means, as by the pliers D, a certain portion is drawn therefrom, substantially in the manner indicated in Fig. 4, by catching hold or gripping some of the
100 fibers, and withdrawing them from the body or mass of fibers, they being thereby caused to form a substantial filament or fillet T (Fig. 5), the separate and individual fibers arrang-

ing themselves more or less parallel to each other, and the end of the fillet tapering to a greater or less extent. By grasping a suitable number of fibers, the size of the fillet
5 may be determined, to make a pellet of the desired size and consistency, and it is preferable to so draw the fibers as to make the fillet somewhat thinner than it is wide, and if the pliers are flat, this is readily accomplished.
10 The next step is to form the pellet from the fillet, and this is accomplished by winding or spinning the fibers upon themselves, so as to form a pellet of substantially spherical or pear-like shape. This is accomplished by
15 any suitable means, as for instance, a rotating needle K, which is provided with suitable points, and is brought in contact with the side of the fillet between its ends, so that the fillet is doubled over the rotating needle.
20 To more effectively do this, it is desirable to have a surface H against which a portion of the fibers of the fillet may bear, and by carrying the rotating spindle in connection with the fillet over such surface, and at a distance
25 therefrom, the fibers are caused to be wound spirally upon each other, and upon the needle, substantially as indicated in Fig. 6, and

by further rotating the needle in connection with the bearing surface, a perfect pellet may be formed, as shown in Fig. 7. The fibers
30 will naturally assume substantially the form shown in Fig. 1, being superposed upon each other in layers, as more clearly indicated in Fig. 3, and when the pellet is withdrawn from the needle, there will be a central opening α ,
35 extending practically through the body of the pellet.

What I claim is—

As a new article of manufacture, a dental pellet, consisting of a loose, ball-like mass of
40 spirally-spun, fibrous, absorbent material, having a central opening, the fibers being pliable so that the shape of the pellet can be readily changed to adjust any portion of it to the cavity to which it is to be applied, sub-
45 stantially as described.

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

GEORGE B. RICHMOND.

Witnesses:

F. L. FREEMAN,
ALLE N. DOBSON.