

No. 714,299.

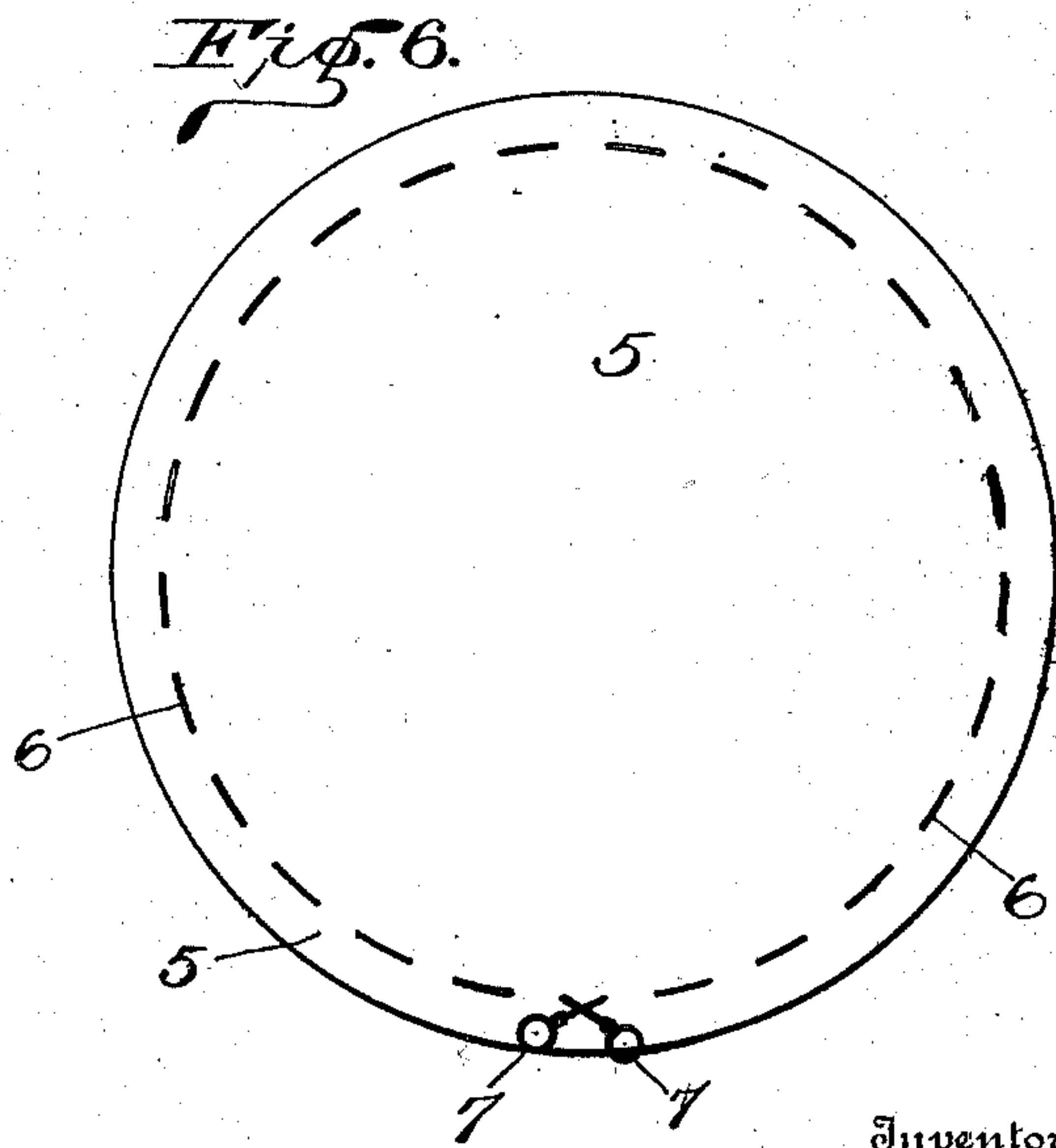
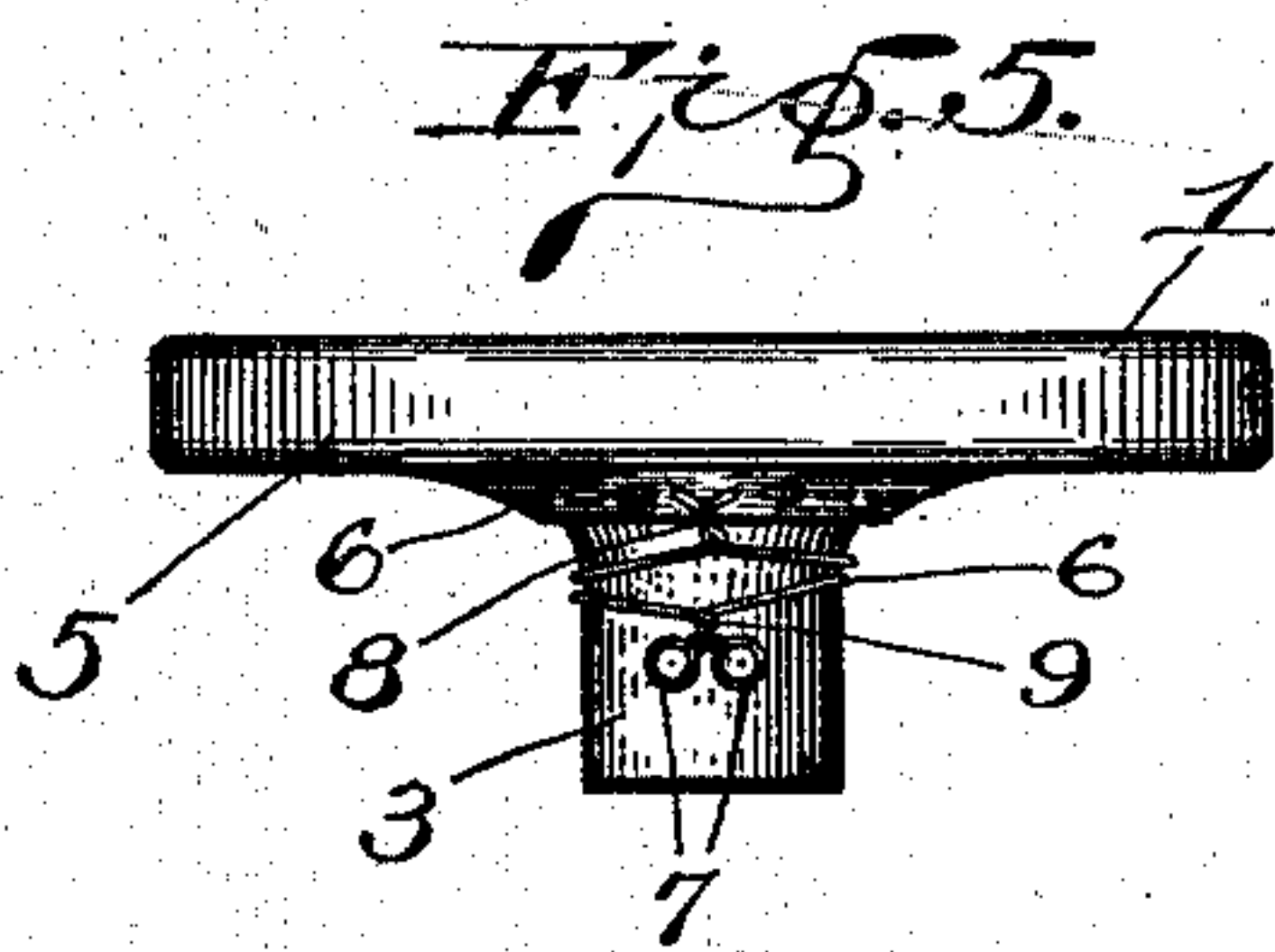
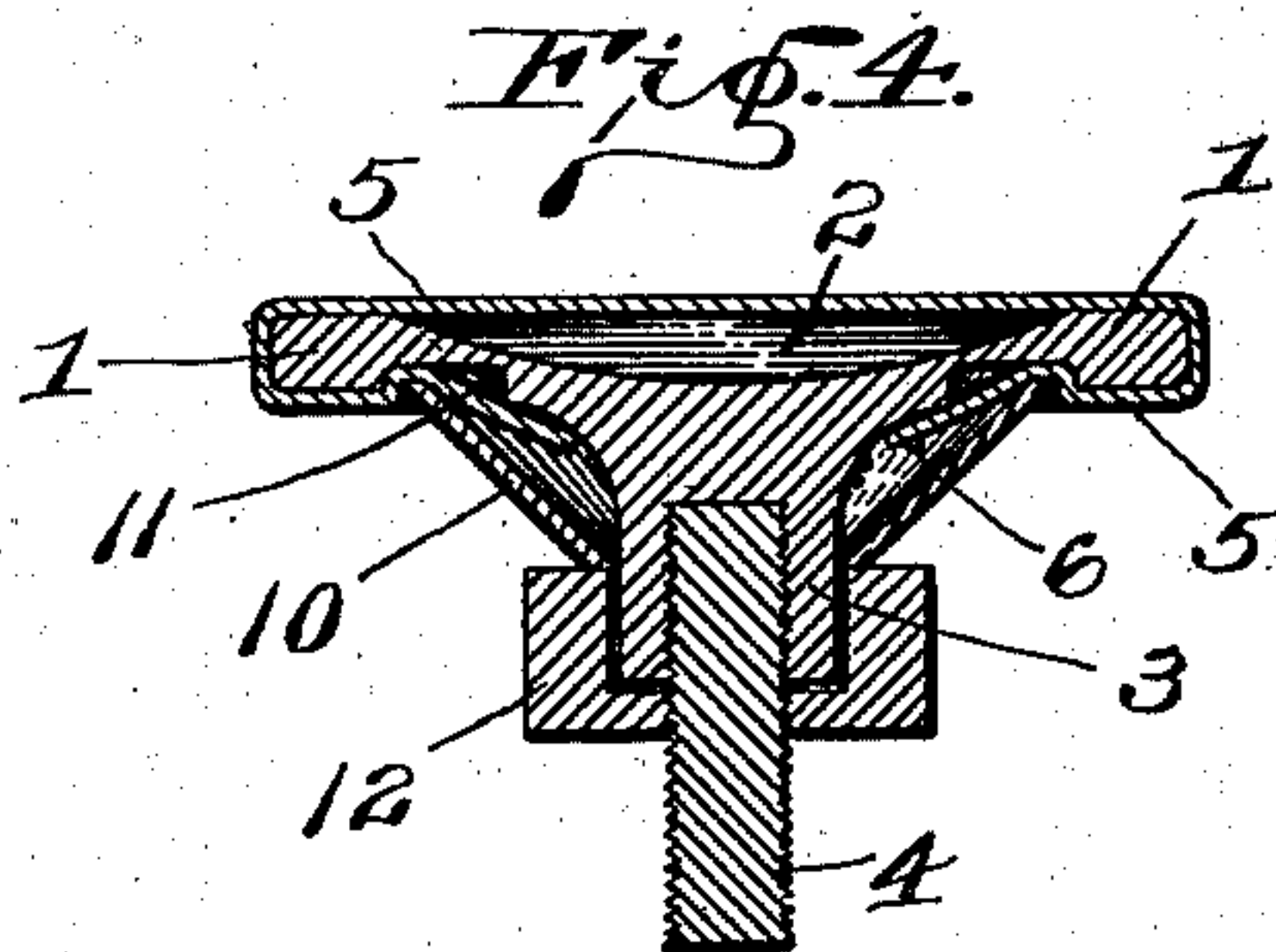
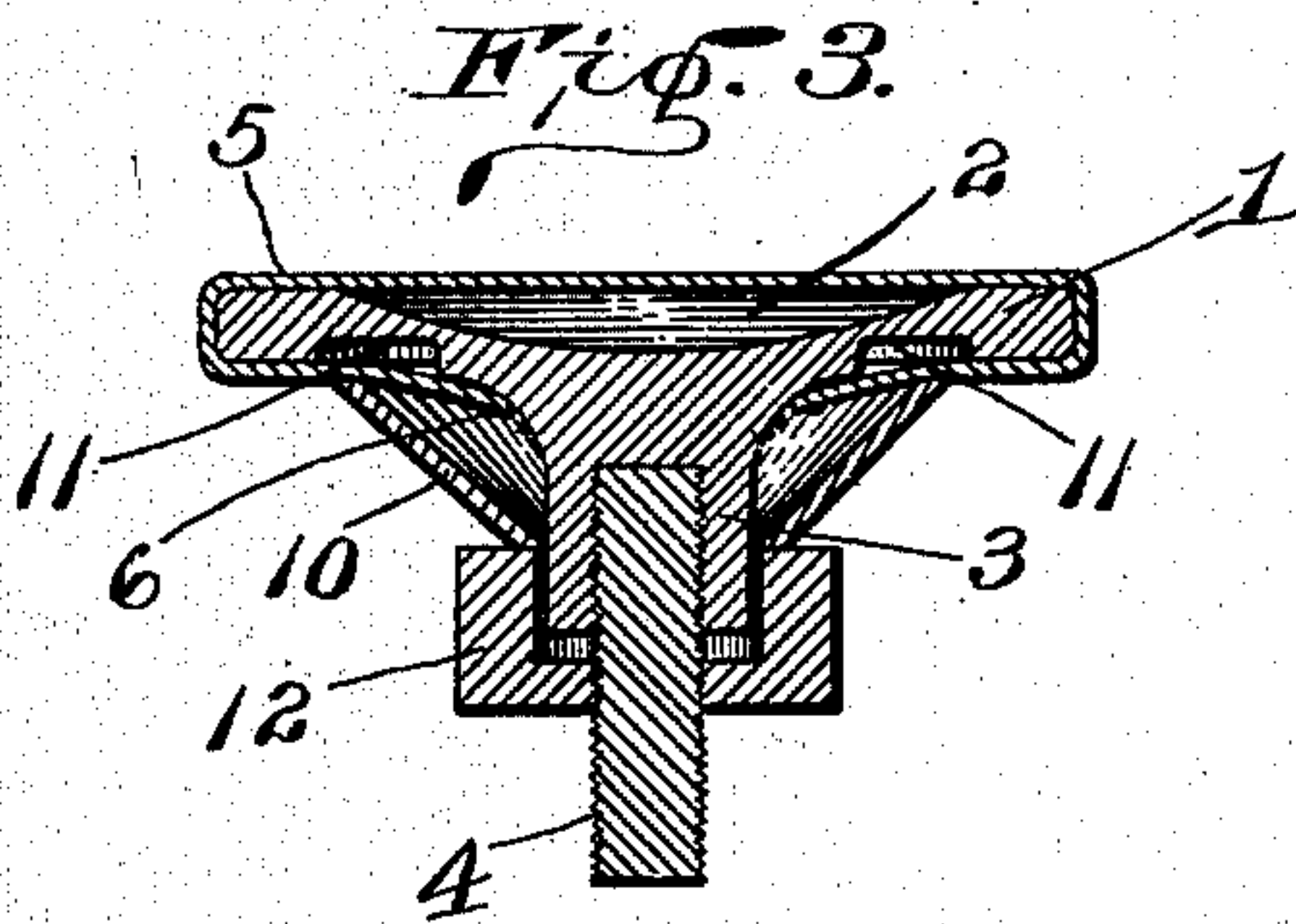
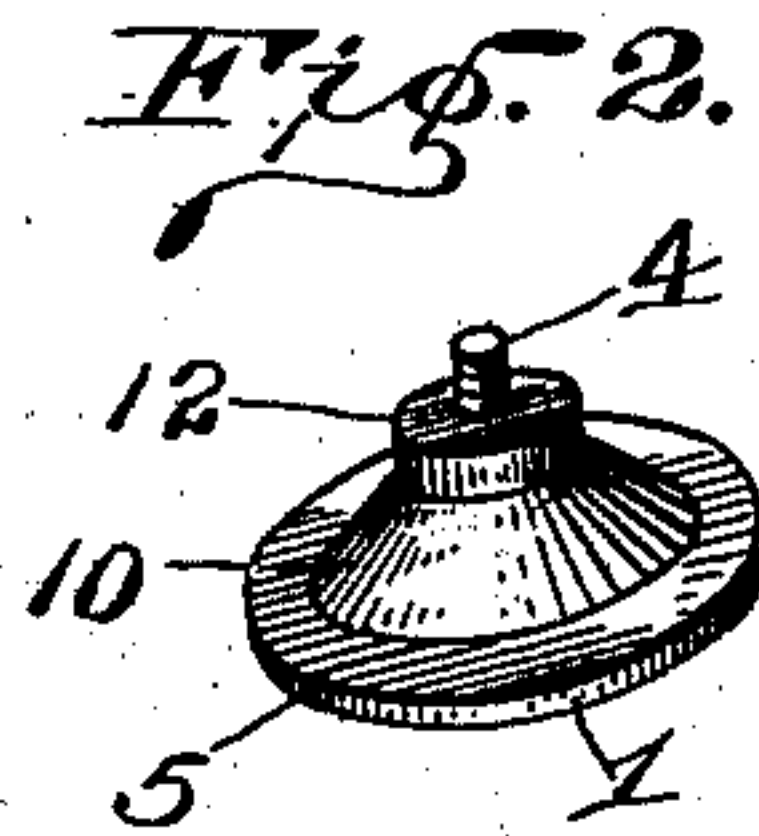
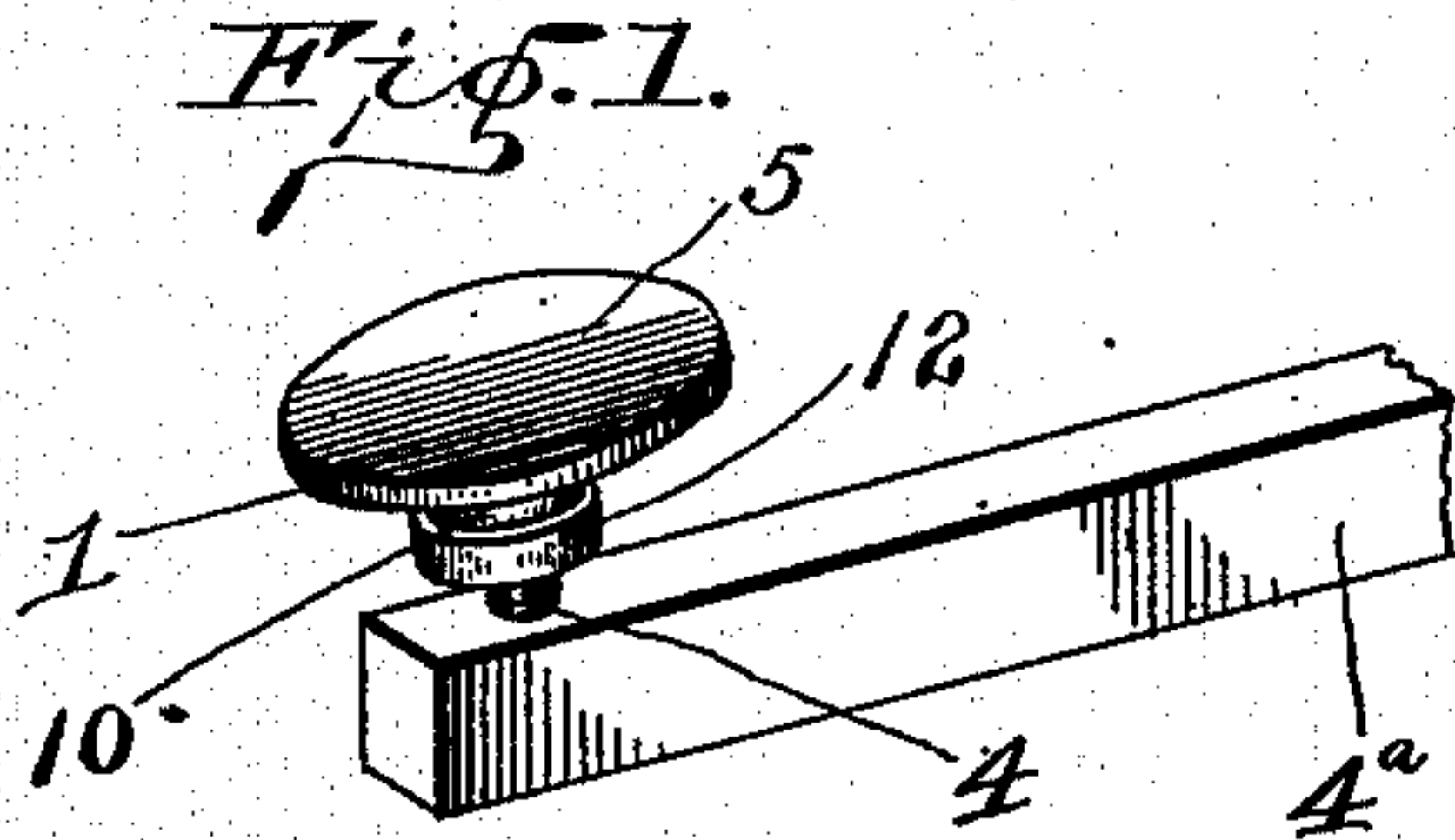
Patented Nov. 25, 1902.

H. J. GREULE.

BUTTON FOR TELEGRAPHERS' KEYS, &c.

(Application filed Mar. 4, 1902.)

(No Model.)



Witnesses

C. S. Frye.  
A. G. Miller.

Inventor,  
H. J. Greule,

By  
W. S. Fitzmaurice  
Attorneys



# UNITED STATES PATENT OFFICE.

HERMAN J. GREULE, OF MASON CITY, IOWA.

## BUTTON FOR TELEGRAPHERS' KEYS, &c.

SPECIFICATION forming part of Letters Patent No. 714,299, dated November 25, 1902.

Application filed March 4, 1902. Serial No. 96,609. (No model.)

*To all whom it may concern:*

Be it known that I, HERMAN J. GREULE, a citizen of the United States, residing at Mason City, in the county of Cerro Gordo and State of Iowa, have invented certain new and useful Improvements in Buttons for Telegraphers' Keys, &c.; 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.

My invention relates more especially to that class of buttons used in connection with telegraphers' keys or sounders; and my object is to provide a button or grasp that can be attached to any variety of telegraph instruments or the like and one that will present to the operator a soft cushioned surface and that will be responsive to the lightest touch.

It is also my object to provide a covering that may be replaced when the old one becomes worn or soiled. Other objects and advantages will be hereinafter made fully apparent, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved button and a portion of a key-lever. Fig. 2 is an inverted perspective view of the button removed from the lever. Fig. 3 is a central vertical section of the button, showing the relative position of the several parts prior to the driving home of the conical washer. Fig. 4 is a similar view showing the conical washer driven home. Fig. 5 is an elevation of the button proper, showing the manner of securing the covering thereto. Fig. 6 is a view of the covering removed from the button.

Referring to the drawings, in which similar reference-numerals designate corresponding parts, 1 indicates the button proper or disk portion of my improved key and is provided upon its upper side with a concavity 2 and upon the other side thereof with the downwardly-extending portion or stem 3, the said stem having a threaded orifice to receive one end of the insulated metal supporting-stud 4. This stud is of the class commonly used in securing the button portion of the key to the key-lever 4<sup>a</sup>.

As it is necessary to grip the button firmly in forming certain telegraphic characters, it

becomes a very arduous task, as the buttons now commonly used are composed of hard rubber or the like, presenting an unpliant slippery surface to the fingers of the operator, requiring an unusual amount of strength to firmly grip the button, especially so should the operator's fingers be perspiring or chilled, and owing to the overstraining of the muscles in an endeavor to tightly grip the slippery surface of the button results in what is known as "loss of grip," "telegraphers' cramp," or partial paralysis of the arm.

To insure a firm grip upon the button without any undue exertion or tension of the muscles and at the same time provide a surface that will readily respond to the slightest touch of the operator, I have provided a covering for the button to be made of any firm flexible material, such as kid, chamois-skin, specially-prepared rubber, or the like.

As shown in Fig. 6, the covering 5 is circular in form and carries a fine wire 6 or the like near the outer edge thereof, the said wire being stitched through the material, the ends being formed into loops 7. In placing the covering 5 upon the button 1 the button is placed centrally under the covering and by pressing the outer edge of the covering down the wire 6 will pass beneath the edge of the button, when by pulling upon the ends of the wires the covering will assume the position shown in Figs. 3 and 5.

To facilitate the pulling of the wire, a nail, lead-pencil point, or any article of sufficient strength may be inserted through the loops 7, when the covering may be pulled very taut. In order to prevent the covering from becoming loosened after it has been pulled taut, the wire 6 is twisted together immediately adjacent to the covering, as shown at 8 in Fig. 5, the free ends thereof then being passed around the stem 3, when the wire is again twisted together, as shown at 9 in Fig. 5.

In case the covering 5 should not be stretched sufficiently tight by means of the wire 6 I have provided a conical-shaped washer 10, the upper or larger end thereof registering with an annular groove or way 11 on the under side of the button 1 and the lower or smaller end thereof resting upon the rim of the cup-shaped nut 12, the said nut



being designed to snugly receive the lower end of the stem 3.

A threaded orifice of sufficient size to receive the stud 4 is formed in the bottom of the nut 12, so that by revolving the nut upon the stud the washer 10 is forced against the covering 5, carrying the same up into the annular groove or way 11, so that when the washer 10 is driven entirely home within the groove 11 a high degree of tension is given to the covering 5.

The washer 10 also serves as a covering for the lower portion of the button 1, thereby imparting a neat and pleasing appearance. It will now be seen that I have provided a button that will afford the operator a firm hold thereon in whatever condition his fingers may be without requiring any undue pressure, and by having a portion of the upper surface of the button concave, as indicated at 2, with the covering 5 drawn thereover, a soft pliable surface is presented to the fingers.

When the covering 5 becomes soiled or worn, it is only necessary to remove the old one and replace it with a new one, thereby attaining the results of a new button at a minimum cost.

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

1. In a button for a telegrapher's key or the like, the combination of the button proper having a concave upper surface and a stem depending upon its lower side, said button also having an annular groove surrounding the upper end of said stem, of a flexible covering adapted to surround the button proper; an exteriorly-threaded stud seated in said stem; a cup-shaped nut carried by said stud and means intermediate said nut and annular groove adapted to engage and secure the

inwardly-directed edge of said covering, as set forth.

2. A button, comprising the button proper 1, having a concave upper surface and a stem depending upon its lower side, in combination with a flexible covering, a wire having looped terminals interwoven in said covering and adapted to contract the edge of the covering around the stem, as and for the purpose set forth.

3. In a button of the character described, comprising the button proper 1, having a concave upper surface and a stem depending upon its under side, said button also having an annular groove surrounding the upper end of said stem in combination with a flexible covering adapted to surround the button proper; an exteriorly-threaded stud seated in said stem; a cup-shaped nut carried by said stud and a conical housing or washer intermediate said nut and annular groove adapted to be driven into the groove by the nut, whereby the flexible covering will be additionally tightened and secured, as and for the purpose set forth.

4. The combination with the button proper of a stem secured to the under side thereof; a flexible covering having a wire interwoven in its edge said wire having a loop at each end, whereby when the ends of the wire are crossed and drawn away from each other, the edge of said covering will be constricted or gathered around the stem of the button as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HERMAN J. GREULE.

Witnesses:

ALBERT H. SHELDON,  
GAINS. S. THOMPSON.