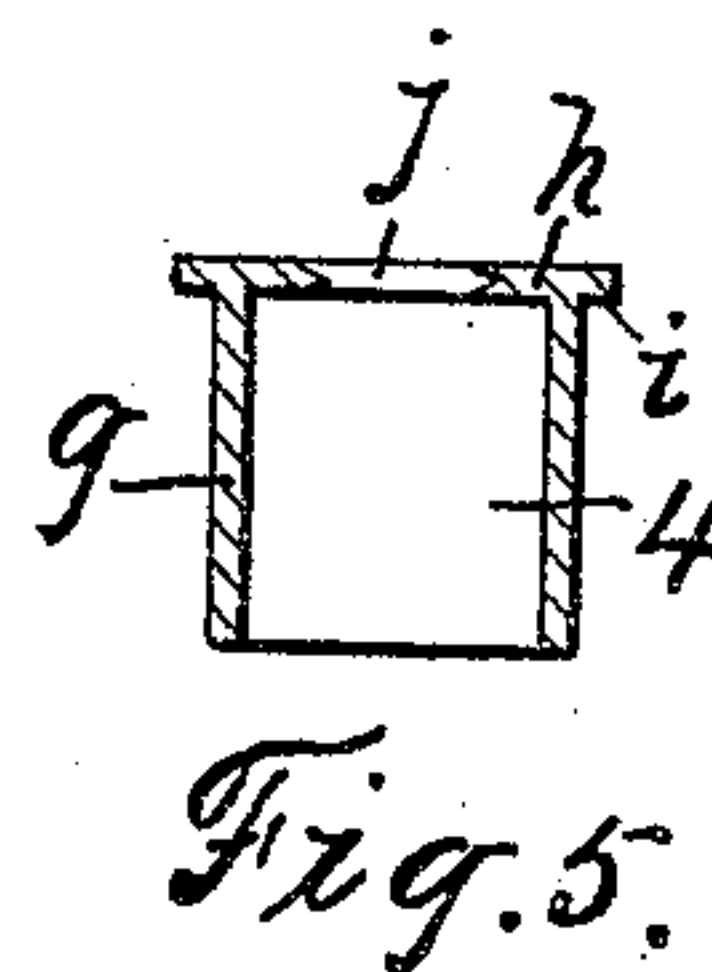
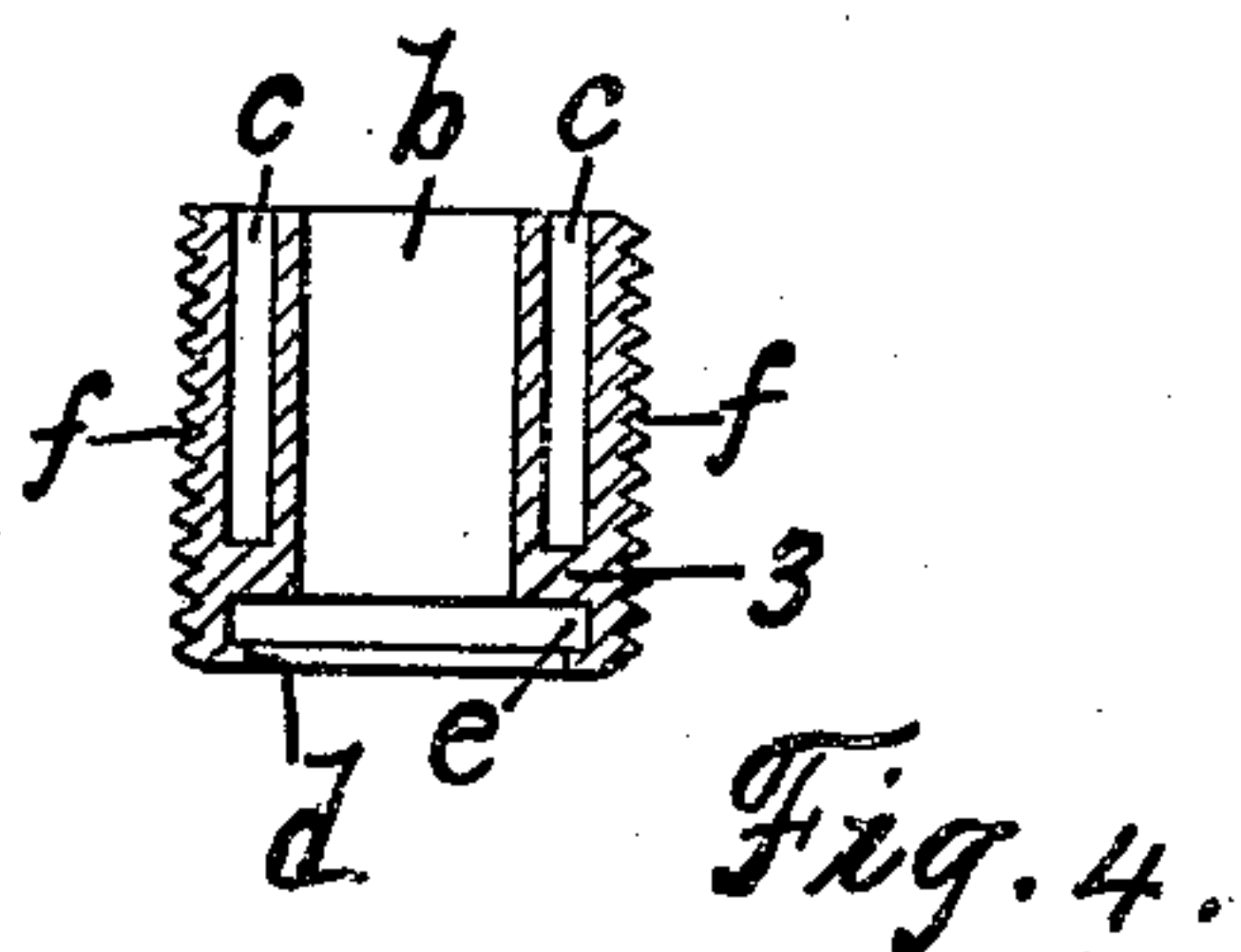
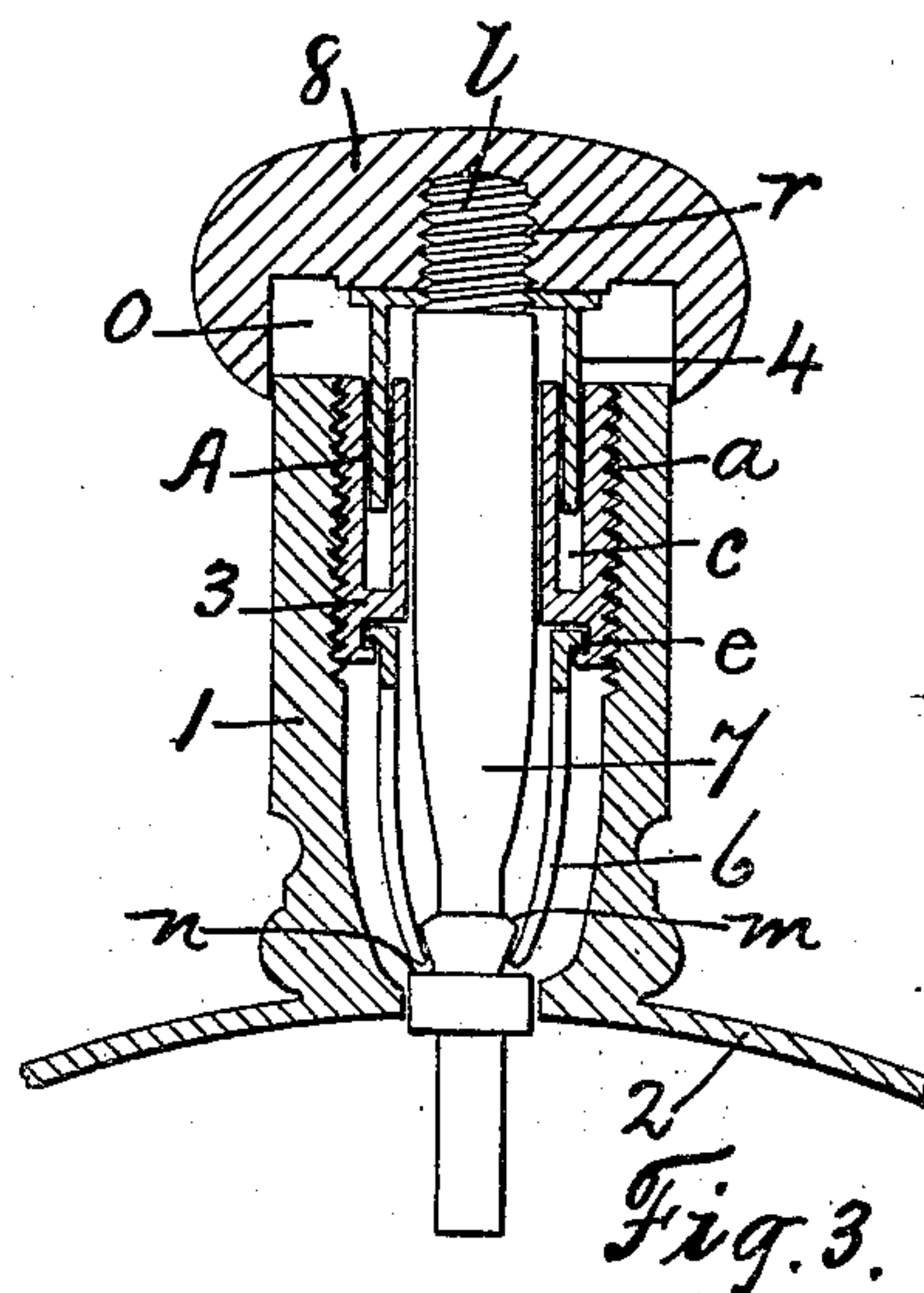
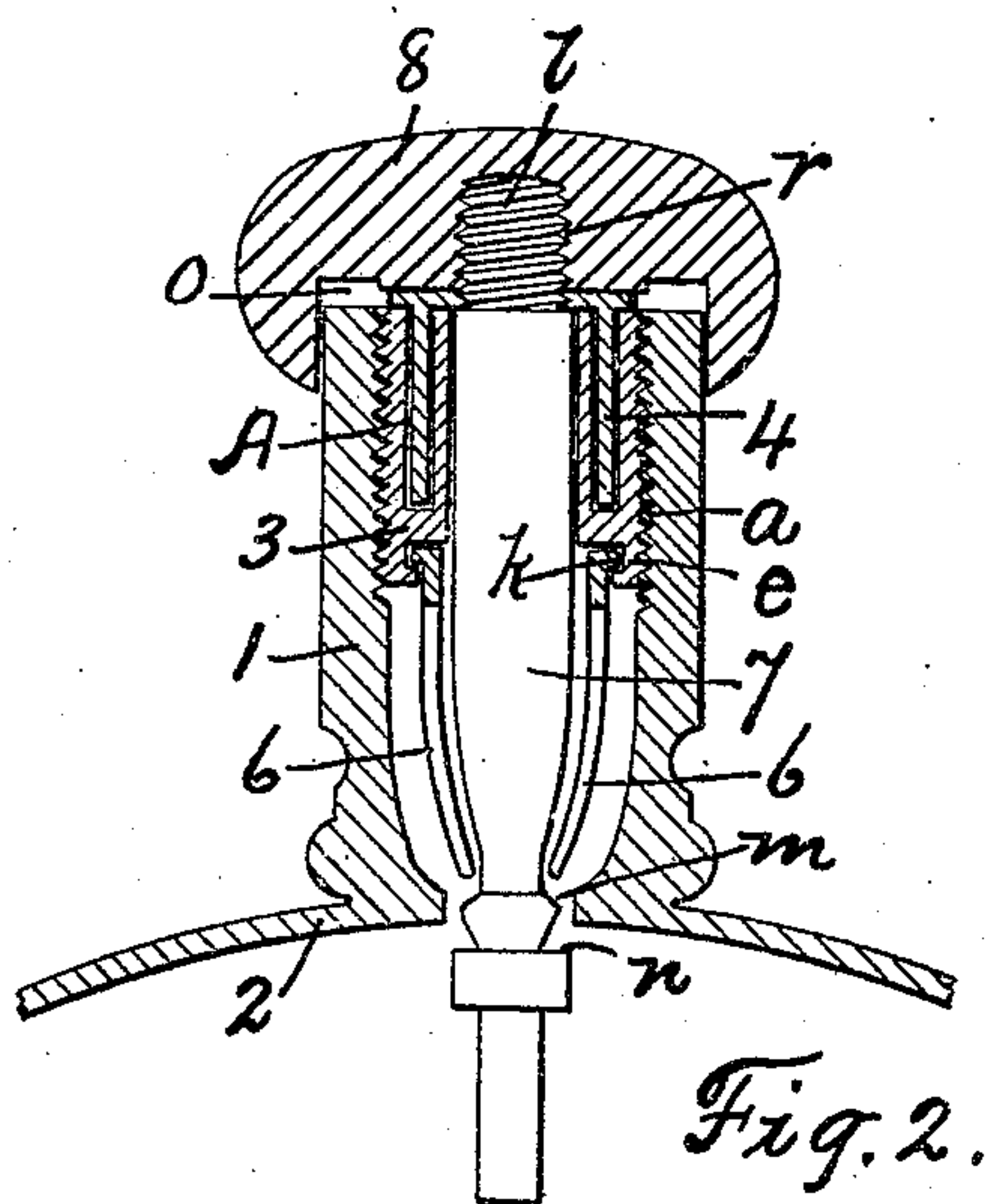
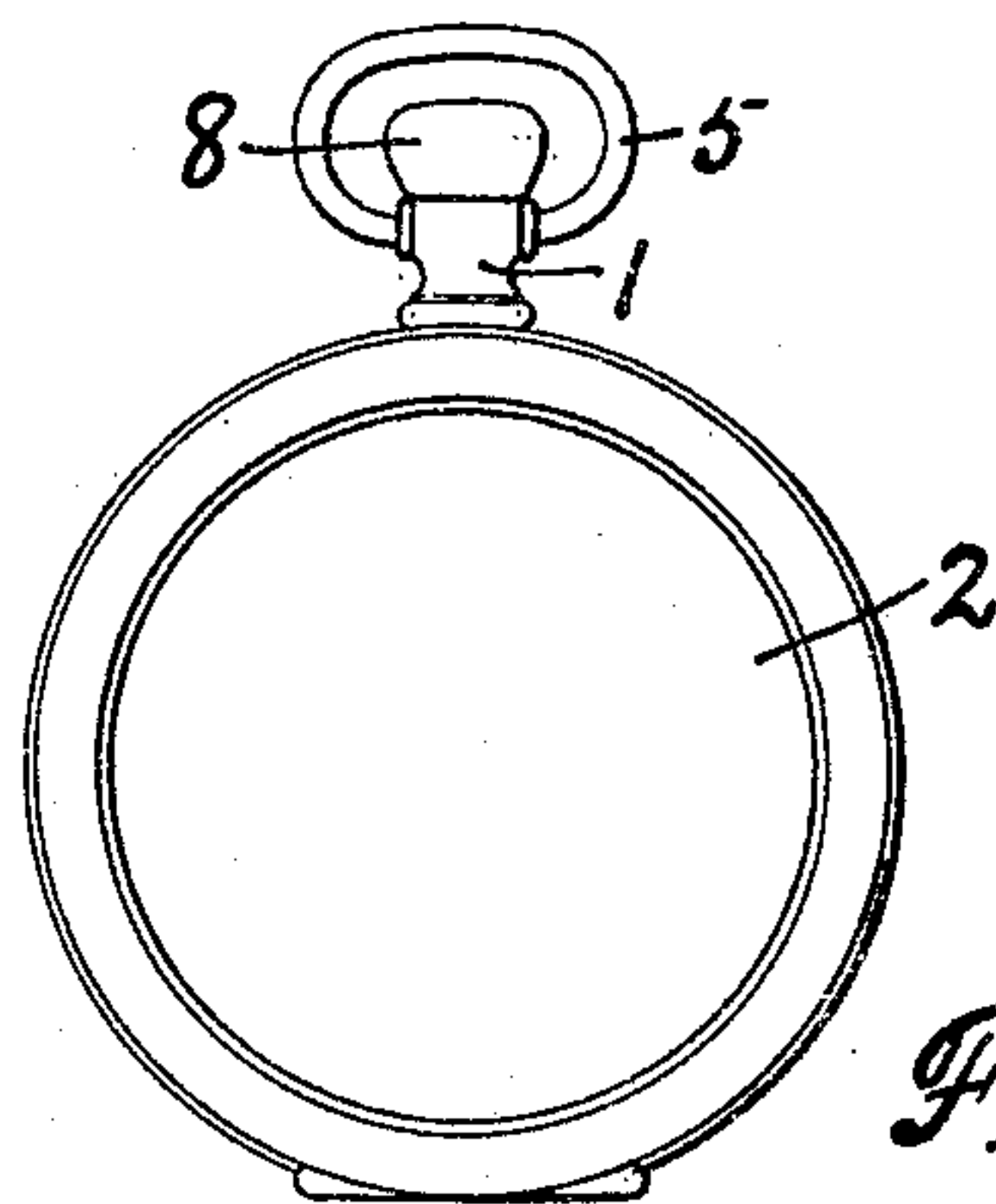


F. J. HUGHES.
DUST PROOF SLEEVE FOR STEM WINDING WATCHES.
APPLICATION FILED MAY 9, 1908.

935,028.

Patented Sept. 28, 1909.



Witnesses
J. S. Edmunds
Carl O. Edmunds

Inventor
Frederick J. Hughes
By P. J. Edmunds
Attorney

UNITED STATES PATENT OFFICE.

FREDERICK J. HUGHES, OF WATFORD, ONTARIO, CANADA, ASSIGNOR TO CARL A. CLASS,
OF WATFORD, CANADA.

DUST-PROOF SLEEVE FOR STEM-WINDING WATCHES.

935,028.

Specification of Letters Patent.

Patented Sept. 28, 1909.

Application filed May 9, 1908. Serial No. 431,968.

To all whom it may concern:

Be it known that I, FREDERICK J. HUGHES, a subject of the King of Great Britain, and a resident of Watford, in the county of Lambton, in the Province of Ontario, Canada, have invented a new and useful Dust-Proof Sleeve for Stem-Winding Watches, of which the following is a specification.

This invention relates to the prevention of the ingress of dust into watches.

The object of this invention is to provide a simple, strong, durable, inexpensive and efficient device, that will completely prevent any possibility of dust getting into the watch at or around the stem particularly at or around the stem of stem winding watches, and a device the use of which will not interfere in any way whatever with the adjustment for setting or winding the watch or with the setting or winding of the same. And this invention consists of a dust proof sleeve extending around the stem of the watch, and of the improved construction and novel combination of parts of the same as will be hereinafter first fully set forth and described, and then pointed out in the claims.

Reference being had to the accompanying drawings forming part of this specification wherein;—

Figure 1 is a side view of a watch embodying my invention. Fig. 2 is an enlarged detail central vertical sectional view of the crown and pendant of said watch. In this view these parts are shown in position to wind the watch. Fig. 3 is another view of same showing the stem adjusted or drawn out and in position to set the hands. Fig. 4 is an enlarged detail central vertical sectional view of the outer section of the sleeve. Fig. 5 is an enlarged detail vertical central sectional view of the inner section of the sleeve.

In the accompanying drawings: the numeral, 1, indicates the pendant of a watch which is secured to the case 2, and on the inner face of said pendant, 1, a screw thread, *a*, is formed.

A, indicates the dust proof sleeve formed in two sections 3, 4.

3 indicates the outer section of the dust proof sleeve, in which a central opening, *b*, and an annular groove or recess *c*, is formed.

d, indicates a portion of the central opening, *b*, which is formed of greater diameter

in cross section that said opening, *b*, and on the inner face of said section 3, above the opening, *d*, a groove, or recess, *e*, is formed.

f, indicates a screw thread formed on the outer face of said section 3 which is fitted to and adapted to engage with the screw threaded inner face, *a*, of the pendant 1.

4 indicates the inner section of the dust proof sleeve, A, the body portion, *g*, of which is fitted to and inserted in the annular groove or recess, *c*, of the section 3.

h, indicates a cover formed on one end of said section 4, and a portion, *i*, of said cover extends beyond the tubular body portion, *g*, in the form of a surrounding rim flange.

j, indicates a central opening formed in said cover, *h*, and in said cover opposite said opening, *j*, a screw thread is formed.

5 indicates the bow of the watch secured to the pendant 1, of the watch.

6 indicates a split setting sleeve and, *k*, an annular rim flange or shoulder formed on the outer face thereof, which shoulder, *k*, is fitted to and inserted in the groove or recess, *e*, in the inner face of the outer section 3, of said dust proof sleeve.

7 indicates the stem of the watch, which is fitted to and adapted to be adjusted freely back and forth within certain limits in the opening, *b*, of the section 3 of the dust proof sleeve, A.

l, indicates a screw thread formed on the upper end of said stem 7 which is fitted to and adapted to engage with the screw thread in the cover, *h*, opposite the opening *j*; and *m*, and, *n*, indicate shoulders formed on said stem 7 with which shoulders the lower end of the spring setting sleeve 6 is adapted to engage.

8 indicates the crown or cap of the watch in which the sockets, *o*, and, *r*, are formed, the socket, *o*, is plain and fitted to and adapted to extend downward over the upper end of the pendant, 1, and the socket, *r*, is screw threaded, and to this screw threaded socket, *r*, in said crown 8 the screw threaded end portion, *l*, of the stem 7 is fitted and with which it is adapted to engage.

When the parts herein described are assembled as shown particularly in Figs. 2 and 3, the outer section 3 of the dust proof sleeve, A, is screwed into the watch pendant 1; and the screw thread, *f*, on the outer face of said section 3 engaging with the screw thread, *a*, on the inner face of said pendant, and the

crown 8, extending down over the upper end of said pendant, there is no possibility of the finest dust gaining access, between said pendant 1, and said sleeve, A, to the works, not, shown, of the watch contained in the watch case 2. And the cover, *h*, of the section 4 is closely fitted to and rests on the upper end face of the section 3 of the dust proof sleeve, A, within and beyond the groove or recess *c*, and the body, *g*, of said section 4 being inserted and telescoping in the groove or recess, *c*, in the section 3 prevents any possibility of dust gaining access to the inside of the watch between the sections 3 and 4 of said dust proof sleeve, A. And the cover, *h*, being screw threaded opposite the opening, *j*, and engaging with the screw threaded end, 1, of the stem 7 there is no possibility of the dust gaining access to the watch between the stem 7 and the dust proof sleeve, A. So that when a sleeve A, is constructed of the sections 3 and 4, and as described, and the body, *g*, of the section 4 is telescoped or inserted in the groove, *c*, of the section 3, the passing of the finest dust down the annular groove or recess, *c*, between the adjacent face of the section 3 and the outside face of the body, *g*, then across the end of and then up on the inside of the body, *g*, between the latter and the adjacent face of the section 3, is a practical impossibility; a dust proof sleeve for stem winding watches is, therefore, provided, which is simple, strong and durable in construction, inexpensive to manufacture and efficient in practical use. And the body, *g*, of the section 4 of the dust proof sleeve A, which is secured to and rotates with the stem 7 and crown 8, being annular and fitted to and revolving perfectly free in the annular groove or recess, *c*, in the section 3, of the dust proof sleeve, A, secured to the pendant 1, the winding of the watch is not interfered with in any way whatever; and said body, *g*, of the section 4 being adapted to be adjusted lengthwise in the groove, *c*, of said section 3, the adjustment of the stem 7 lengthwise to engage with the mechanism to set the hands of the watch is not interfered with in any way whatever.

Having thus described my invention, I claim:—

1. A dust proof sleeve for stem winding watches, comprising an outer section in which an opening and an annular groove or recess is formed, and an inner section provided with a cover in which a screw threaded opening is formed, and the body of said inner section fitted to and adapted to be inserted

in said annular recess or groove in said outer section, in combination with a stem provided with a screw thread on its outer face, and the screw thread on said outer face of said stem fitted to and adapted to engage with said screw threaded socket in said cover to secure said inner section of said dust proof sleeve to said stem.

2. A dust proof sleeve for stem winding watches, comprising an outer section in which an opening and an annular groove or recess is formed, and an inner section provided with a cover in which an opening is formed, and the body of said inner section fitted to and adapted to be inserted in said annular groove or recess in said outer section, in combination with a stem provided with a screw thread on its outer face, and adapted to extend through said opening in said cover, and a crown provided with a screw threaded socket to which the screw thread on said stem is fitted and with which it is adapted to engage.

3. A dust proof sleeve for stem winding watches, comprising an outer section in which an opening and an annular groove or recess is formed and on the outer face of which a screw thread is formed, and an inner section provided with a cover in which a screw threaded opening is formed, and the body of said inner section fitted to and adapted to be inserted in said annular groove or recess in said outer section, in combination with a pendant in the inner face of which a screw thread is formed and a stem on the outer face of which a screw thread is formed.

4. A dust proof sleeve for stem winding watches, comprising an outer section in which an opening and an annular groove or recess is formed and on the outer face of which a screw thread is formed, and an inner section provided with a cover in which a screw threaded opening is formed, and the body of said inner section fitted to and adapted to be inserted in said annular groove or recess in said outer section, in combination with a pendant in the inner face of which a screw thread is formed, a stem on the outer face of which a screw thread is formed, and a crown provided with a screw threaded socket to which the screw threaded end of said stem is fitted and with which it is adapted to engage.

In testimony whereof, I have signed in the presence of the two undersigned witnesses.

FREDERICK J. HUGHES.

Witnesses:

FRED. A. TAYLOR,
T. ALBERT ADAMS.