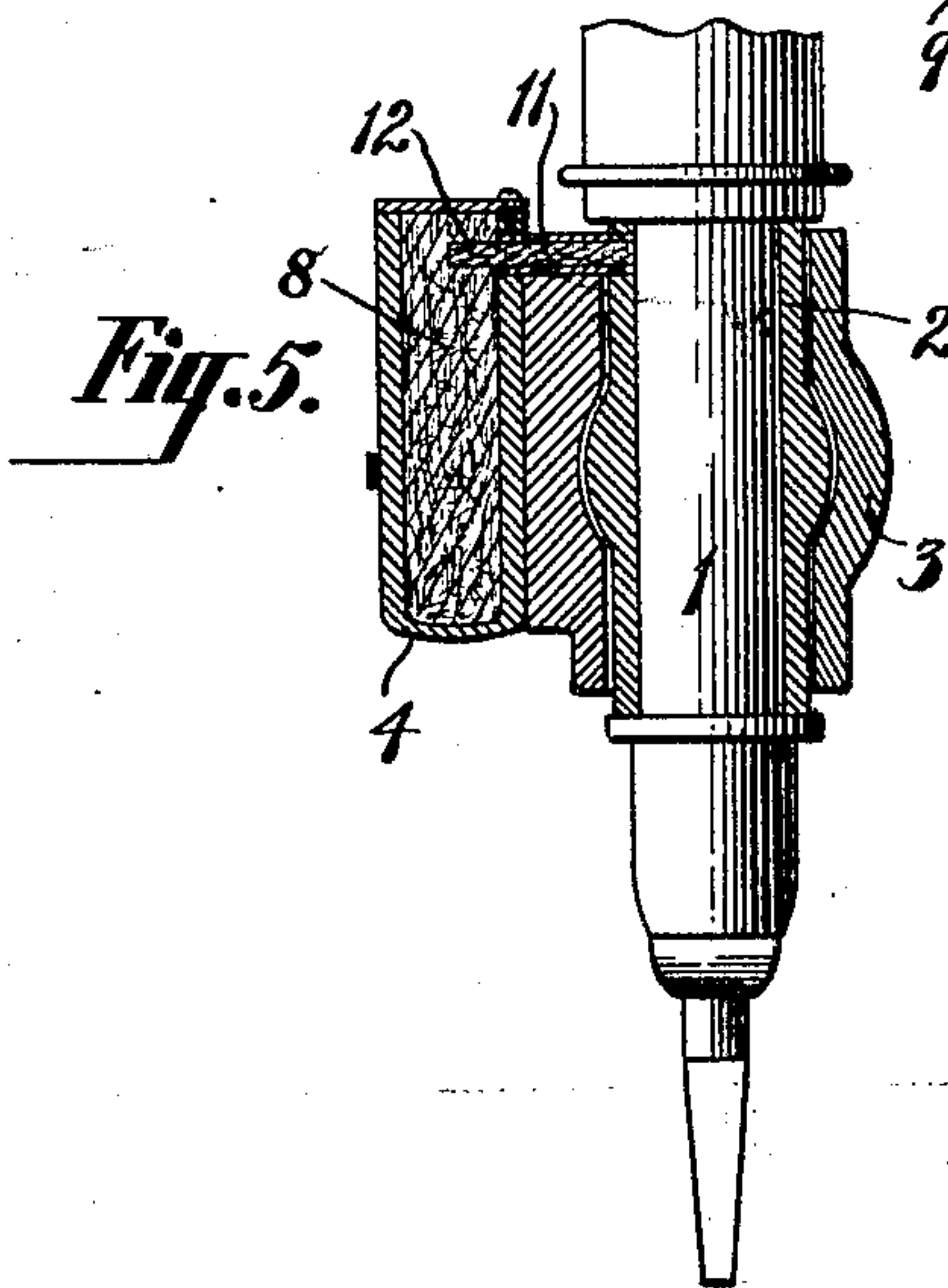
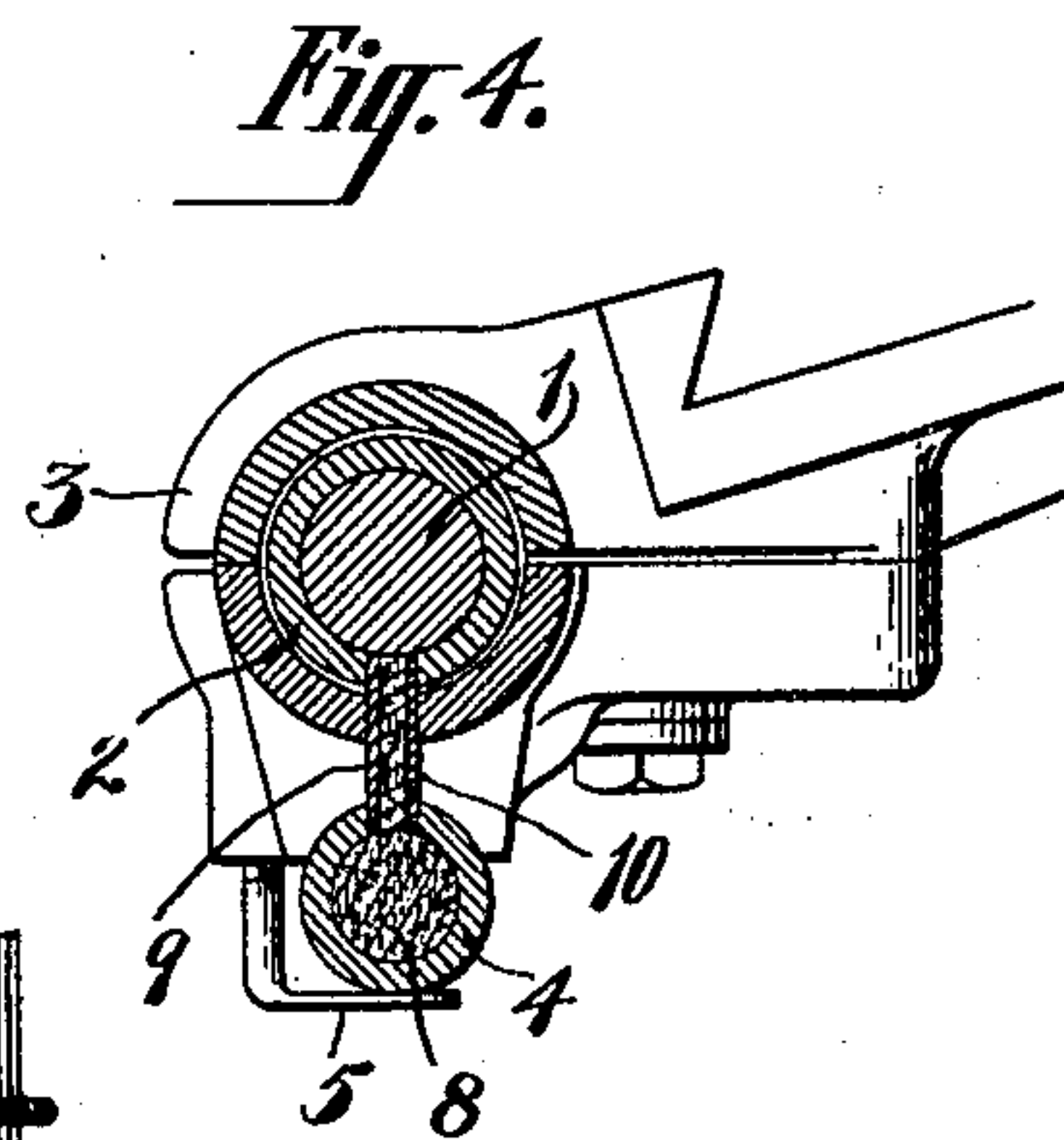
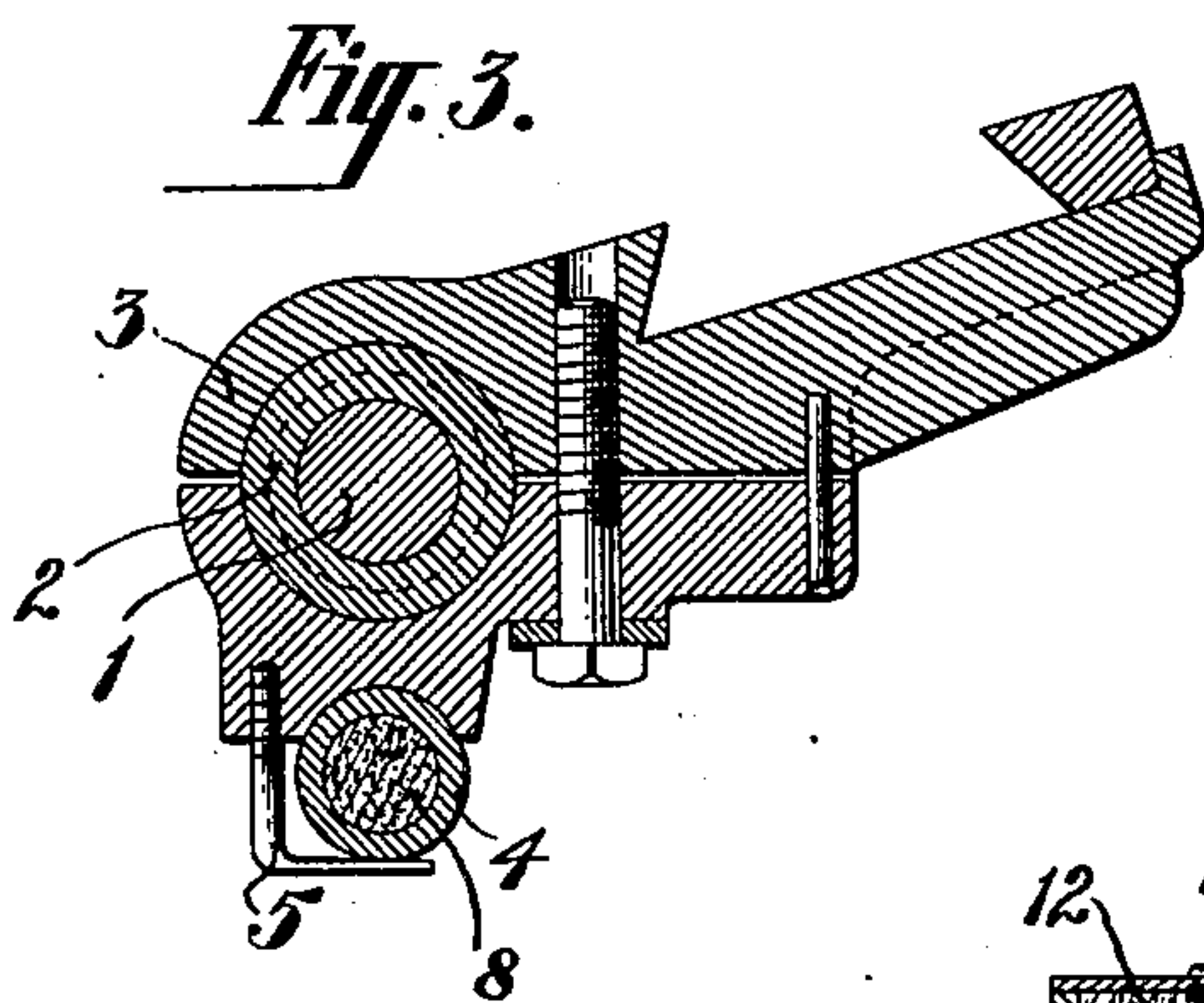
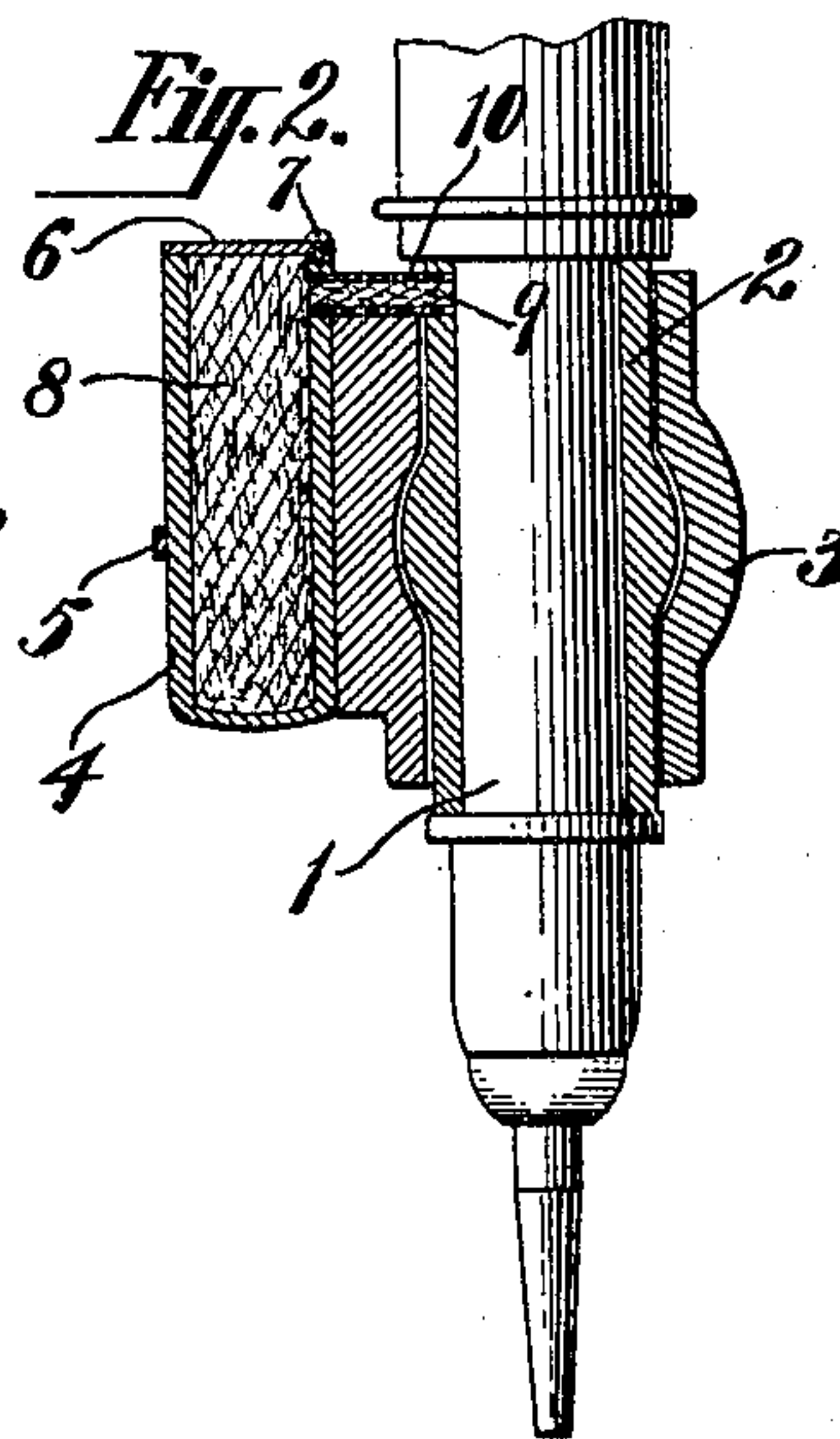
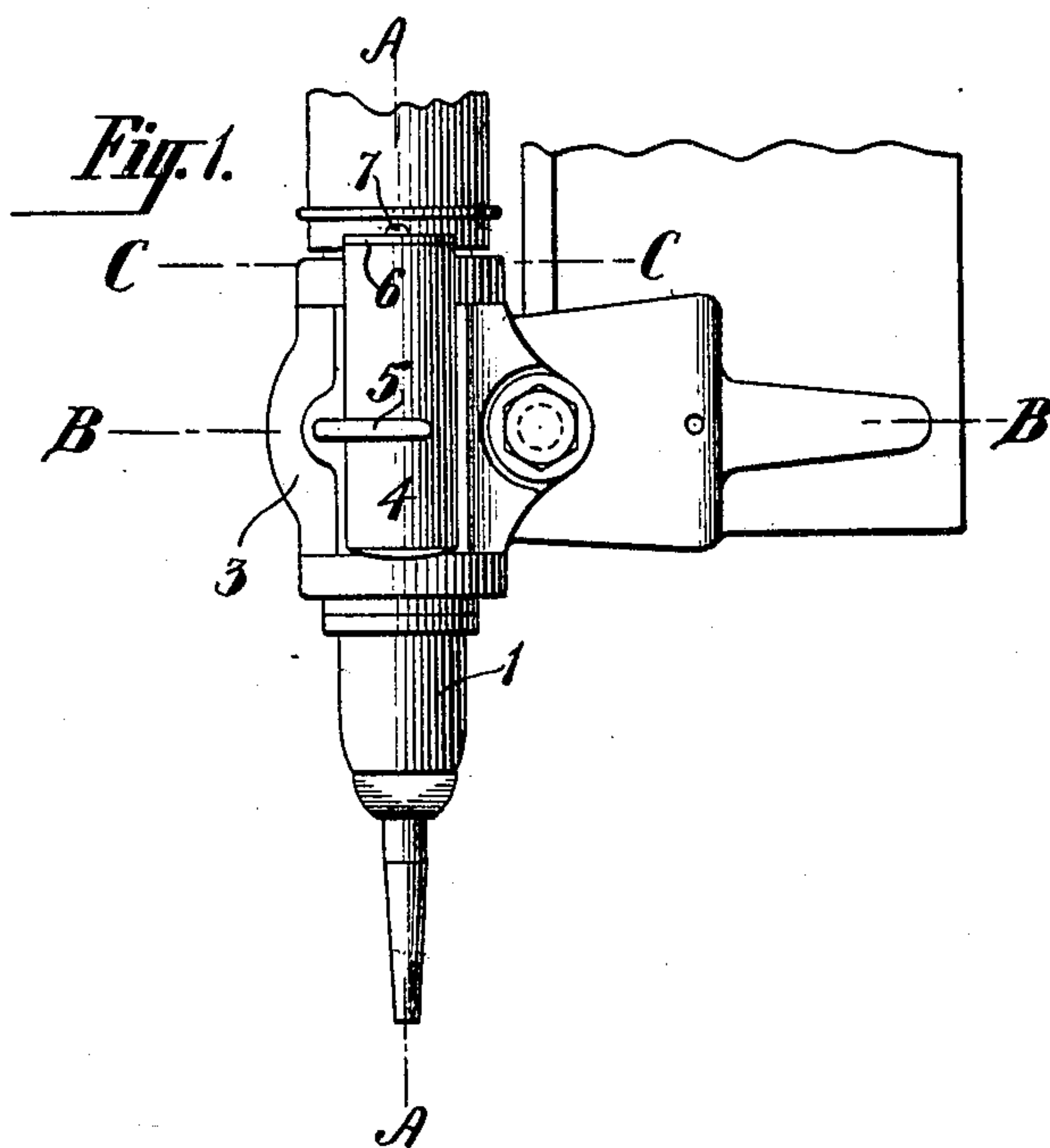


No. 784,280.

PATENTED MAR. 7, 1905.

V. ROYLE.  
OIL CUP.

APPLICATION FILED JULY 11, 1904.



**Witnesses:**

F. G. Hachenberg.

Henry Ohme.

**Inventor:**

Vernon Royle  
By Brown & Ward  
his Attorneys



# UNITED STATES PATENT OFFICE.

VERNON ROYLE, OF PATERSON, NEW JERSEY.

## OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 784,280, dated March 7, 1905.

Application filed July 11, 1904. Serial No. 216,025.

*To all whom it may concern:*

Be it known that I, VERNON ROYLE, a citizen of the United States, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Oil-Cup, of which the following is a specification.

My invention relates to oil-cups, and more particularly to a cup for distributing oil in a predetermined quantity to a spindle running at a high speed.

In my pending application, Serial No. 203,219, filed April 14, 1904, allowed June 10, 1904, I showed, described, and claimed an oil-cup comprising a suitable casing provided with a body of absorbent material fitted to the interior of the casing, the body of absorbent material having an opening for the reception of a charge of lubricant of predetermined size. My present invention is directed to a modified form of cup in which the body of absorbent material is fitted to the interior of the cup and has such density that its pores will hold the proper quantity of lubricant, so that the cup may be charged by permitting the body of absorbent to gradually absorb the charge without providing the said body of absorbent material with a charging-opening for measuring the charge, the said lubricant being led from the body of absorbent material by a rod of absorbent material in engagement with the charged body of absorbent material in the casing, the relation of the rod of absorbent material in its capacity for transmission being properly determined, so that the oil shall be distributed in the desired minute quantity to the spindle.

In the accompanying drawings, Figure 1 is a view in side elevation of the oil-cup as it appears when applied to a routing-spindle. Fig. 2 is a longitudinal section in the plane of the line A A of Fig. 1. Fig. 3 is a transverse section in the plane of the line B B of Fig. 1. Fig. 4 is a transverse section in the plane of the line C C of Fig. 1, and Fig. 5 is a longitudinal section showing a modified form in which the rod for transmitting the oil from the cup to the spindle is inserted in the body of absorbent material in the casing.

It is to be understood that the spindle and

its bearing form in themselves no part of my present invention, except so far as the bearing forms a suitable support for the oil-cup which I have chosen to illustrate my invention and which is adapted to feed oil to the spindle of a routing-machine. The said spindle is denoted by 1, the box in which it rotates by 2, and the bearing which supports the box by 3.

The casing of the oil-cup is denoted by 4 and is here shown as cylindrical in form and adapted to be held clamped to the bearing 3 by means of a spring-arm 5, which may be swung into and out of engagement with the cup-casing to lock and release it. The cup 4 has a horizontally-swinging cover 6, pivotally secured to the casing at 7, so that it may be swung laterally to expose the top of the body of absorbent material 8 within the cup. This body of absorbent material 8 is to be distinguished from a loose mass of fibrous packing—such, for example, as cotton-waste—and consists of a well-defined body of absorbent material—such, for example, as felt—cut to fit the interior of the casing 4, so as to completely fit it, and, furthermore, it is selected with regard to its porosity, and the cup is made of such size with respect to the body of absorbent material therein that the body of absorbent material will absorb a predetermined amount of lubricant before reaching saturation. This body of absorbent material may be charged because of its known capacity for absorption, by filling a small measure with the lubricant, a measure which corresponds to the charge which the body of absorbent material will absorb, and then slowly pouring the contents of the measure onto the top of the body 8 of absorbent material, the cover 6 being swung aside for this purpose until the charge has been absorbed.

The lubricant from the body of absorbent material 8 is transmitted to the spindle 1 by means of a rod 9 of absorbent material contained within a tube 10, leading through the wall of the casing 4 and through the box 2 to expose the rod 9 of absorbent material at both ends of the tube, and leave it at one end in engagement with the body 8 of absorbent material and at the other end in engagement with the spindle 1. This rod of absorbent material 9



may rest, as shown in Fig. 2, or it may enter the body of absorbent material, as shown in Fig. 5, where the rod of absorbent material for discharging the lubricant is denoted by 11, 5 and its end toward the body 8 of absorbent material in the casing enters the perforation 12, formed in the side of the body 8. The diameter of the rod 9 or 11 and its capacity for transmission are both taken into account 10 in order to determine the rate at which the lubricant shall be conveyed from the body 8 to the spindle, the object being to convey it in very minute quantities, so that a drop or two of lubricant shall serve for a ten hours' 15 run of the spindle.

By the above construction the spindle may be run at a high speed without any annoyance from overheating and the trouble which has hitherto been experienced where the lubricant has been applied to the spindle freely or 20 without careful restriction as to the amount is entirely avoided.

What I claim is—

The combination with a suitable casing, of a body of absorbent material fitted to the interior of the casing and inclosed by the casing 25 and a rod of absorbent material engaged with the body of absorbent material within the casing and leading thence to the point where the lubricant is to be applied, the capacity of the body of absorbent material for holding the 30 lubricant and the capacity of the rod of absorbent material for transmitting the lubricant having a predetermined relation to one another whereby the lubricant is transmitted in 35 minute and predetermined quantities to the part to which it is to be applied.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two witnesses, this 27th day of June, 1904. 40  
VERNON ROYLE.

Witnesses:

GEO. F. RAWLEE,  
ELIAS BROWN KING.