

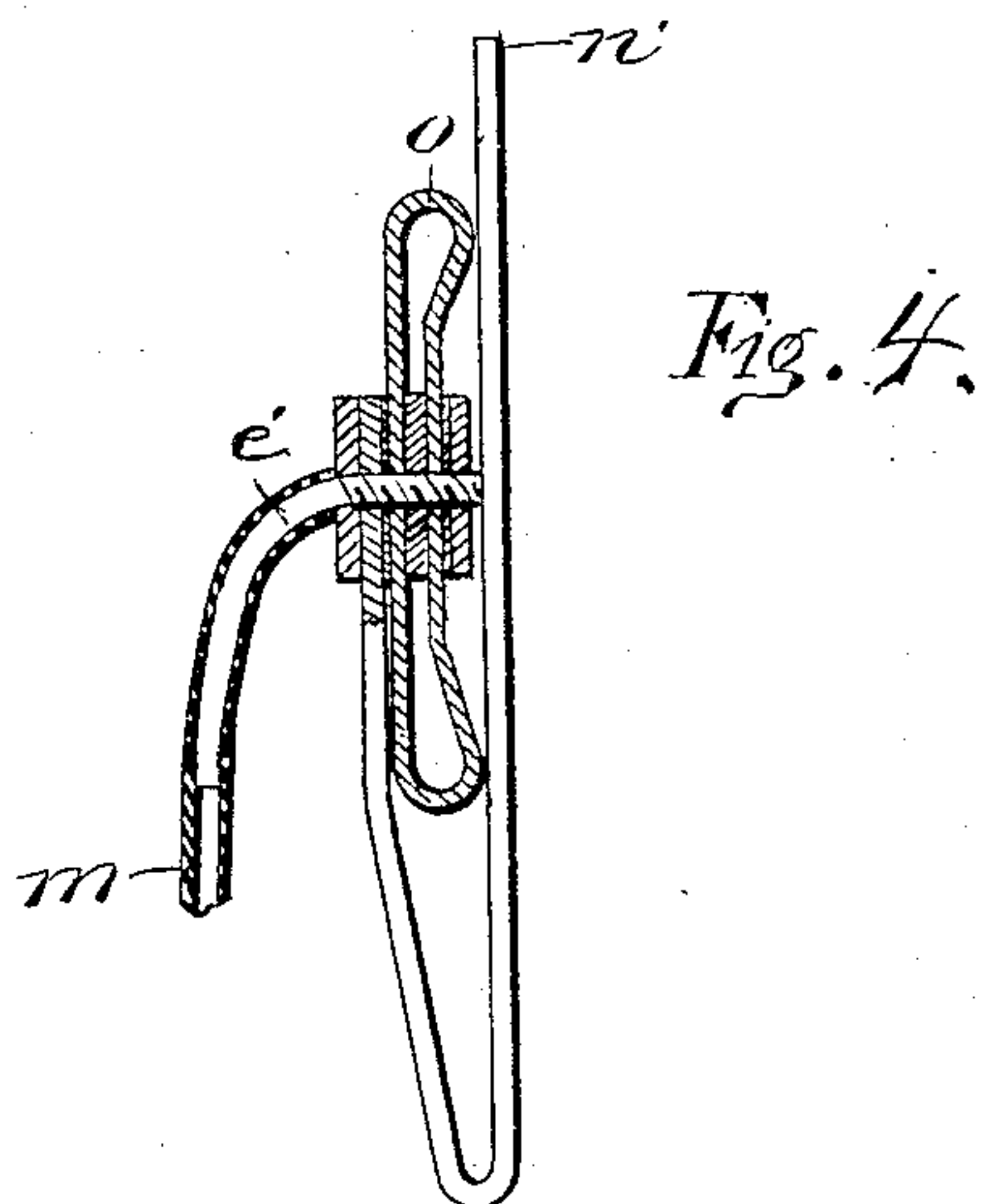
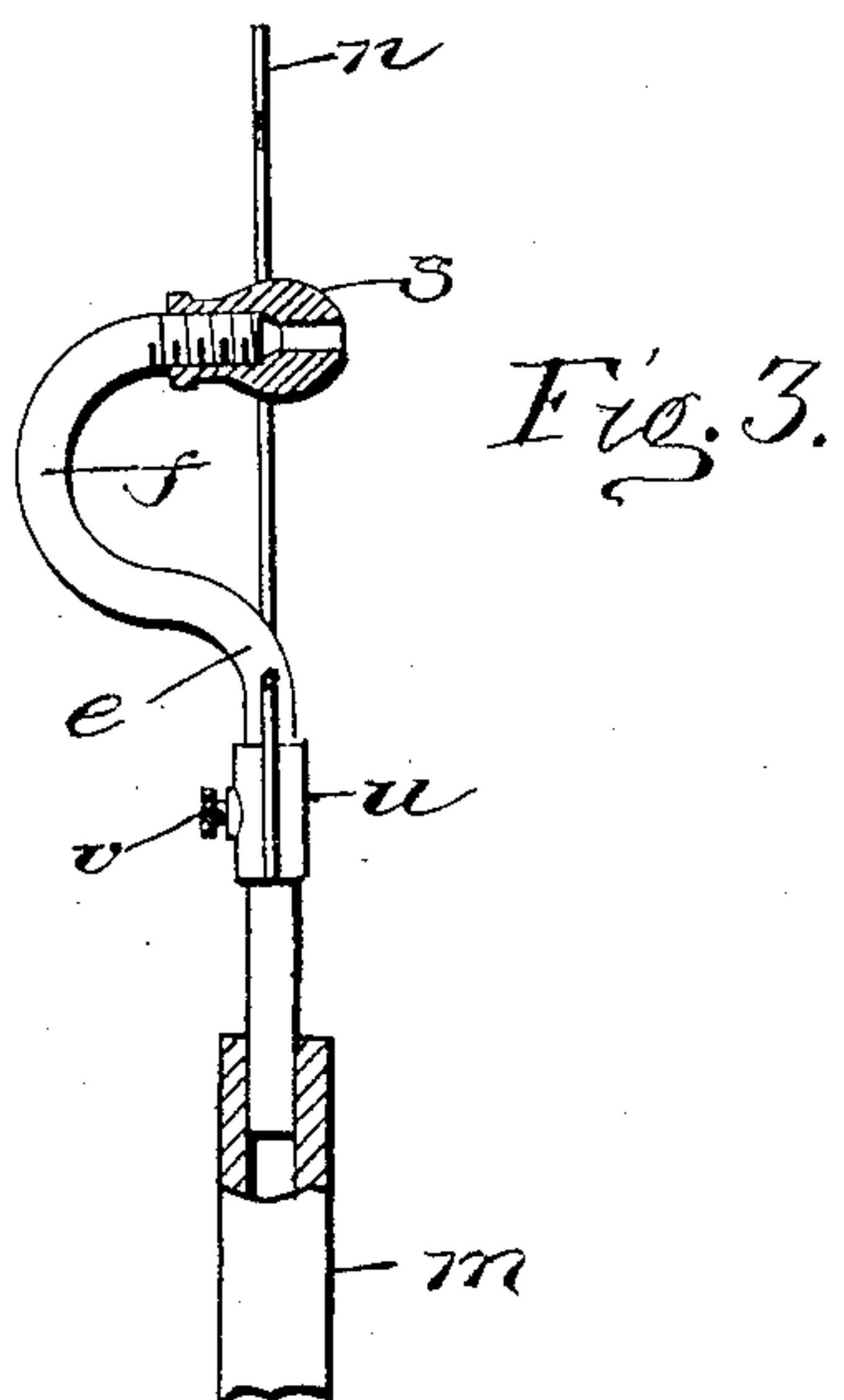
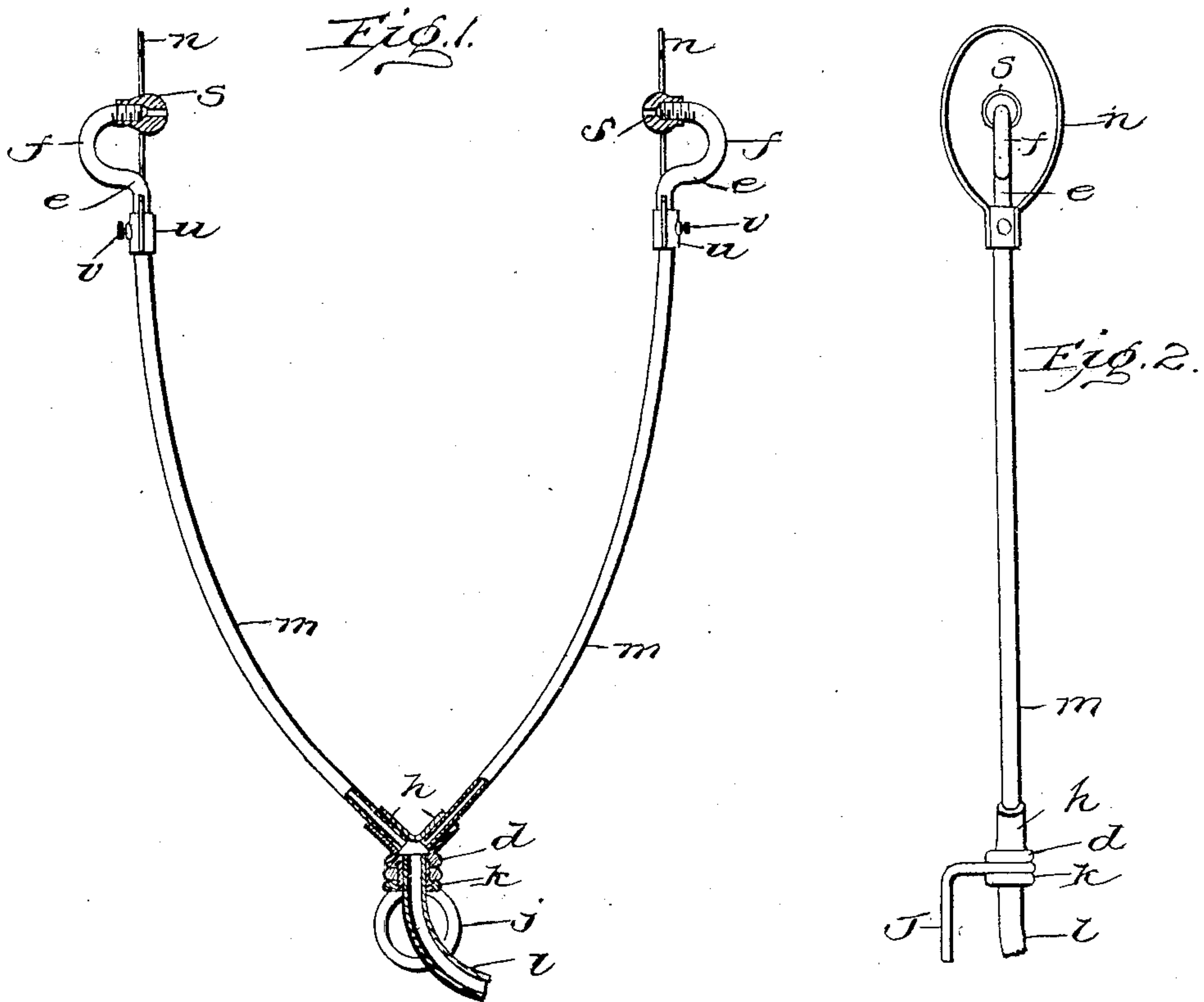
No. 862,016.

PATENTED JULY 30, 1907.

S. J. PORT.

MEANS FOR CONVEYING SOUNDS TO THE EARS.

APPLICATION FILED SEPT. 26, 1904.



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UNITED STATES PATENT OFFICE.

SAMUEL JAMES PORT, OF BIRMINGHAM, ENGLAND.

MEANS FOR CONVEYING SOUNDS TO THE EARS.

No. 862,016.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed September 26, 1904. Serial No. 226,008.

To all whom it may concern:

Be it known that SAMUEL JAMES PORT, secretary of Limited Company, residing at 314 Hagley road, Birmingham, in the county of Warwick, England, a subject of the King of Great Britain, has invented certain new and useful Improvements in and Relating to Means for Conveying Sounds to the Ears, of which the following is a specification.

This invention relates to improvements in means for suspending on the ears of an operator sound conducting tubes, and also relates to the particular construction and arrangement of the tube so suspended.

The invention comprises the production of an ear piece, means for suspending the same in position, and a flexible tube for conveying sounds to the ear piece.

The invention further comprises the production of a crank shaped tube adapted to fit into the cavity of the ear, a clip for suspending the same in position, and tubes for conveying sounds from any desired place to the crank shaped member.

The object in view is the provision of means for conveying sound from any desired point to the ear, and for suspending the sound conducting means upon the ear.

With these and other objects in view the invention comprises certain novel constructions, combinations, and arrangements of parts as will be hereinafter described and claimed.

In the accompanying drawing:—Figure 1 is a plan view of a sound conducting device formed according to the present invention, the ear pieces being shown in section to better disclose the invention. Fig. 2 is an edge view of Fig. 1. Fig. 3 is an enlarged detail, fragmentary view of one of the sound conducting tubes forming part of the present invention, parts being broken away to better disclose the invention. Fig. 4 is a slightly modified form of my invention, the same being shown in section to better disclose the invention.

I provide by my invention a light weight attachment which can be suspended from the ears of an operator for conveying sound from any preferred point to the operator.

My improved appliance when used by telephone exchange annunciator board operators as a substitute for the metallic head gear and breast plate harness, renders the operation less exhausting and therefore assist the operator in being continually in that bright, wakeful and active condition, so necessary in attending to the duties of a telephone exchange call-girl.

I will now proceed to describe with reference to the accompanying drawings the manner in which the various parts of my invention are constructed, assembled and used.

At the lower end of the tubes $m-m$, I provide a suspending ring j to which is secured a Y-shaped member d . To the Y-shaped member d is secured a pipe l

which is adapted to convey sound from any desired point to the interior of the Y-shaped member d . A suitable binding ring or nut k is provided for holding the tube l in correct position. Secured to the arms h of the Y-shaped member d are flexible tubes $m-m$ which are adapted to convey sound from the interior of the Y-shaped member d to the crank shaped member or tube e .

The upper ends of the tubes $m-m$ are adapted to receive the end of the crank shaped member e as clearly seen in Fig. 3 of the drawing. The member e is threaded at its upper end and has secured thereon an ear cavity nozzle s which is adapted to enter the ear cavity and have the sides thereof impinge against the sides of the ear so as to prevent any sound from entering the ear except that which comes through the tubes $m-m$ and through the aperture in the ear cavity nozzle s . It will be observed that the member e has a deep bend at f in its upper end which permits the device to allow the ear cavity nozzle s to snugly fit in the ear without pressing the lower part of the ear which will be accommodated in the bent-out portion f .

In order to suspend the member e in proper position for permitting the ear cavity nozzle s to snugly fit in the ear, I provide a clip n . The clip n is preferably made in a loop shape, and is secured to a reciprocating sleeve u . The sleeve u is positioned on the lower part of the member e and adapted to reciprocate thereon so as to permit the positioning of the loop u in any desired position for accommodating various sized ears. A suitable securing means as set screw v is used to hold the sleeve u and clip n in proper position after having been properly adjusted. As seen in Fig. 4, I may provide a slightly modified form of means for conveying sound into the ear. Instead of using the ear cavity nozzle s , I provide a cushion o which impinges against the ear and thus prevents any sound from entering the ear cavity except that which passes through the crank shaped member e' . The upper end of the crank shaped member e' is threaded similarly to the crank shaped member e for adjusting the position of the cushion l , and also the position of the clip n' . It will be observed that in the modification shown in Fig. 4 that the clip n' is secured to the upper end of the crank shaped member e and adapted to be moved back and forth for adjusting the same.

In operation the user would suspend the device upon his ears by passing the two ear loops n over his ears, the ear cavity nozzle s would then gently press against the inner surface of the ears, so that sound reaching the member e from the tubular arms m enters the ears of the operator. A person by the suspension of the U-shaped frame on his ears, would be able to receive a message, and yet have both hands free for use in recording the received message or for other use.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed what I claim is;—

1. In a receiver, a rigid tube bent at one end and having
5 its other end attached to a flexible tube which is adapted to communicate with a receiver, a rigid clip adapted to pass over and rest upon the ear, said clip being provided with means that is adapted to slide over the rigid tube and is
10 adjustable thereon for holding the end of the rigid tube directly opposite the cavity of the ear, and an extension reaching into the cavity of the ear for conveying sound into the inner part of the ear.

2. In a receiver, an ear cushion, an adjustable crank-shaped conduit stem passing through said cushion, a flexible tube connecting said conduit stem and said re- 15 ceiver, and an ear clip adjustably secured to said conduit stem for supporting the same in position.

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

SAMUEL JAMES PORT.

Witnesses:

ALFRED WILLIAM TURNER,
ARTHUR R. GILL.