

C. KIESS.
VALVE STEM OR ROD.
APPLICATION FILED JULY 17, 1909.

947,593.

Patented Jan. 25, 1910.
2 SHEETS—SHEET 1.

Fig. 1.

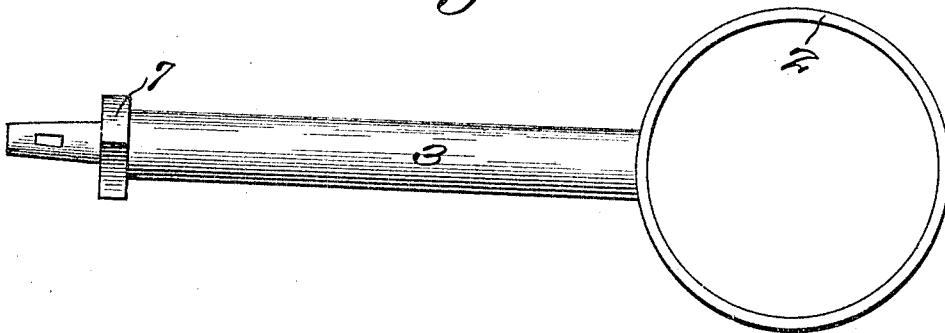


Fig. 2.

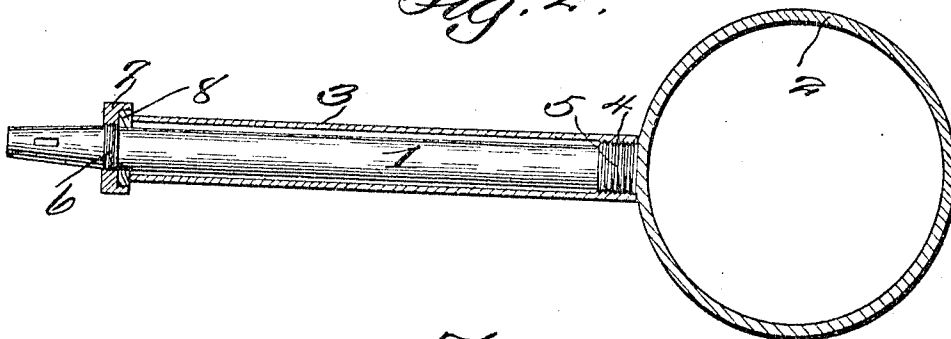
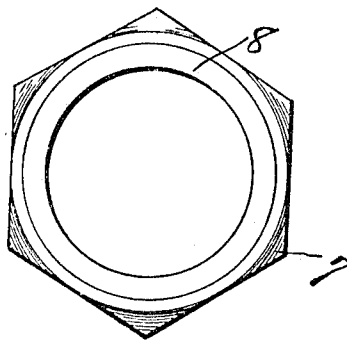


Fig. 3.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

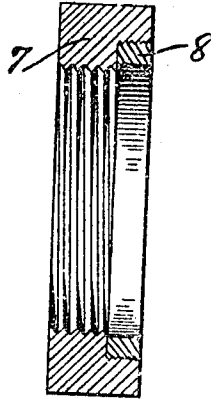


Fig. 5.

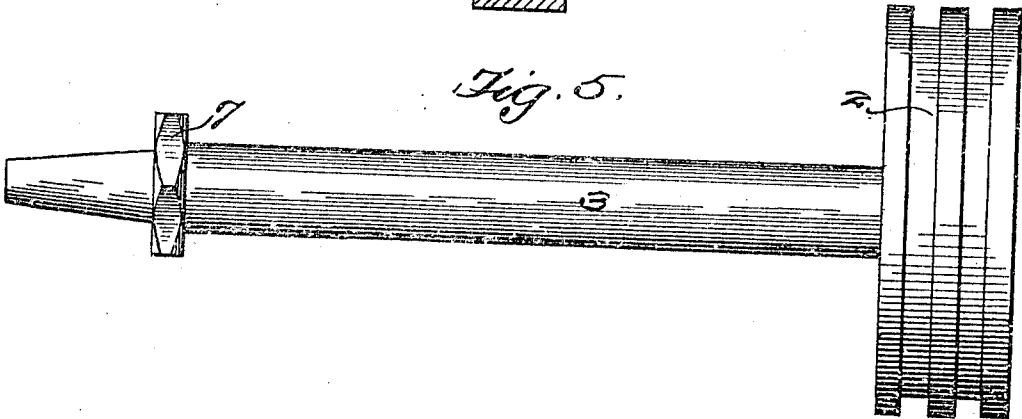
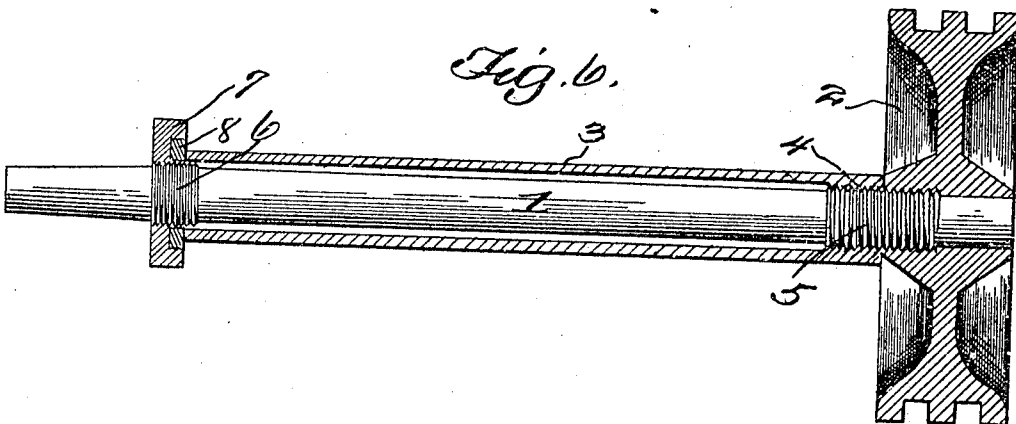


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHRIST KIESS, OF SEIBERT, WEST VIRGINIA.

VALVE STEM OR ROD.

947,593.

Specification of Letters Patent.

Patented Jan. 25, 1910.

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To all whom it may concern:

Be it known that I, CHRIST KIESS, a citizen of the United States, residing at Seibert, in the county of Pocahontas and State of West Virginia, have invented a new and useful Valve Stem or Rod; 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.

The invention relates to steam engines and has for its object to provide an improved rod, such as is used as a piston rod or valve stem. It is well known that the packing which surrounds these articles after wearing awhile, causes a certain amount of leakage which finally necessitates the replacing of a new piston rod or a new valve stem. It is also well known that these rods and stems cannot be tempered to the hardest degree, because of their liability to snap.

The essential object of this invention is to provide a valve stem or rod having a removable casing which when the same is worn can be readily replaced, without replacing the old rod or stem.

Another object of the invention is to provide a member of this character consisting of a rod surrounded by a removable casing, said casing being of a harder temper than the rod which it surrounds.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described and shown and particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a side elevation of a valve stem constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a plan view of the nut. Fig. 4 is a vertical sectional view of the nut. Fig. 5 is a side view of the piston rod and head. Fig. 6 is a longitudinal sectional view through Fig. 5.

Referring to the drawings 1 designates a rod which is rigidly connected with a member 2. The rod 1 is adapted to be engaged by a cylindrical casing 3 which is provided with threads 4 on the interior of one end. The rod 1 is also provided with threads 5 of a harder temper than the rod, which are engaged by the threads 4 of the cylindrical member 3. The outer end of the rod 1 is also provided with a threaded portion

6 which is engaged by a screw threaded nut 7. The screw threaded nut 7 is provided in its periphery with an annular recess in which is inserted an annular copper member or ring 8.

The parts are assembled as follows: The casing 3 is screwed on to the rod 1 as tightly as possible and then the nut 7 is screwed on the threads 6 which causes the annular ring 8 to press against the casing 3. Then if there should be an interior leakage through the threads 4 and 5 the outlet of the same will be effectively prevented by the pressure of the annular member 8 which is more resilient than the metal of which the ordinary nut is made.

It will be seen that as the packing engages the casing 3 which in the course of time causes the same to become worn thereby causing a leakage of steam, the casing can readily be removed without replacing the rod and at the same time to all intents and purposes the piston rod or the valve stem becomes practical and new.

The casing 3 is movable with the rod 1, and being of a harder temper it is adapted to more effectively resist wear than if it was made of the same hardness as the rod, which should be adapted to withstand considerable strains and vibrations, and therefore should not be made of highly tempered metal. When the casing 3 becomes worn out it can easily be replaced without requiring the renewal or repairing of the rod 1.

Having thus described the invention, what is claimed is:—

1. A valve stem or rod having a cylindrical casing adapted to engage the packing which surrounds the same, said casing being removably secured thereto.

2. A device of the class described consisting of a rod, a member 2 connected thereto, said rod being provided with threads adjacent to the member 2, a cylindrical casing having interior threads in one end thereof adapted to engage said first named threads, and a nut adapted to engage the outer end of said rod by which said casing is forced against the member 2.

3. A valve stem or rod, a cylindrical casing mounted on the exterior thereof, said casing being removable on said rod, and means for preventing the escape of steam through the interior of said casing.

4. In combination with a valve stem or
rod, a wear protecting casing composed of
harder metal than said rod secured thereon
and a nut having an annular member of re-
5 silient metal embedded therein threaded on
the rod against the outer end of the casing.
In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

CHRIST KIESS.

Witnesses:

DEAN SWIFT,
W. M. HOFFMAN.