

A. WOEBER.
TIP FOR VEHICLE SHAFTS, POLES, AND THE LIKE.
APPLICATION FILED FEB. 17, 1912.

1,061,436.

Patented May 13, 1913.

Fig. 1.

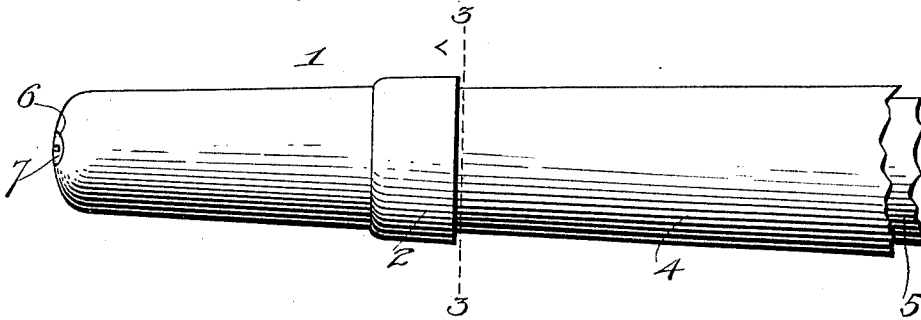


Fig. 2.

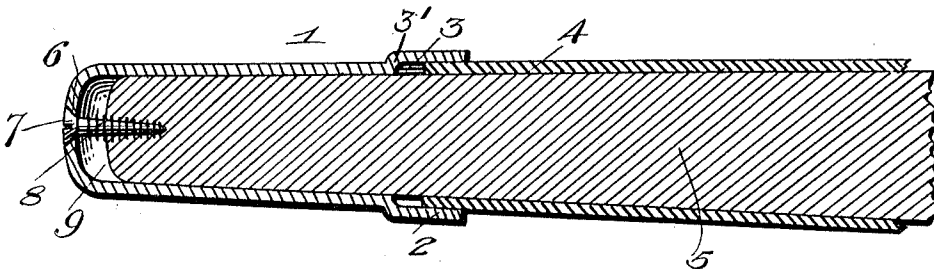


Fig. 4.

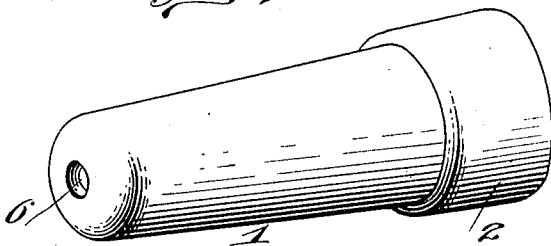
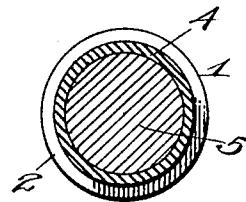


Fig. 3.



Witnesses
C. E. Hunt.
O. W. Somers

Inventor
Adam Woerber
by *A. B. Wilson & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

ADAM WOEBER, OF DENVER, COLORADO.

TIP FOR VEHICLE SHAFTS, POLES, AND THE LIKE.

1,061,436.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed February 17, 1912. Serial No. 678,202.

To all whom it may concern:

Be it known that I, ADAM WOEBER, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Tips for Vehicle Shafts, Poles, and the Like; and I do 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.

This invention relates to improvements in tips for the shafts and poles of vehicles.

One object of the invention is to provide a tip or ferrule for the ends of vehicle shafts, poles, neck yokes and the like having means whereby the tip may be adjusted to compensate for the shrinkage of the end of the shaft or other object to which it is applied thereby keeping the tip tight and preventing noise which occurs from the rattling of the tip when loose.

Another object is to provide a tip of this character having means whereby the same will engage and protect the outer end of the leather covering of the shaft or pole.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings; Figure 1 is a side view of the outer end of a vehicle shaft showing the invention applied thereto; Fig. 2 is a central longitudinal section thereof; Fig. 3 is a cross section on the line 3—3 of Fig. 1; Fig. 4 is a detail perspective view of one of my improved tips.

Referring more particularly to the drawings, 1 denotes my improved tip or ferrule which may be formed of any suitable material and the outer surface of which may be of any desired shape or configuration. The tip or ferrule is here shown and is preferably of tapered or frusto-conical form and is closed at its outer end, and has on its inner end an annular enlargement 2 which may be of any desired length and which provides between its inner expanded wall and the adjacent side of the shaft or pole an annular space 3 to receive the outer end of the leather covering 4 of the shaft or pole whereby said end of the covering is effectively protected and prevented from becoming worn or torn and which will hold said end of the cover in tight engagement

with the shaft. The enlargement 2 has a shoulder 3' which is adapted to contact with the inner end of the covering 4, when the ferrule is adjusted its full length on the shaft.

The tapered inside diameter of the tip or ferrule is slightly less than the diameter of the end of the shaft, pole or the like with which the tip is engaged, thus preventing the tip from being pushed entirely onto the end of the shaft. In the outer end of the sleeve or ferrule is formed a screw hole 6 with which is engaged the head 7 of a tip adjusting screw 8. The screw hole 6 is preferably reamed out and the head of the screw is preferably tapered to fit the reamed out hole 6 whereby the outer end of the head is flush with the adjacent surface of the ends of the tip. The screw 8 when thus arranged is adapted to be screwed onto the end of the shaft or other object to which the tip is applied, thus forcing the tip back forcibly onto the end of the shaft so that, should the tip become loose from the shrinkage of the parts engaged thereby, this looseness may be quickly and easily taken up and the tip again tightened by means of the screw 8 as will be readily understood. It will be also understood that in order to permit this adjustment of the tip, a sufficient space 9 will be left between the outer end of the shaft and the inner wall of the outer end of the tip and that the space between the end of the leather cover and the inner end of the enlarged portion of the tip will also be sufficient to permit the tip to be forced back onto the end of the shaft or pole.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as claimed.

Having thus described my invention, what I claim is;

The combination with a shaft or the like of a vehicle having a leather covering secured a suitable distance from the outer end of the shaft, of a ferrule mounted directly on the shaft and provided on its inner end with an enlargement which is of greater diameter than that of the ferrule,—the outer

end of the ferrule being spaced from the
outer end of the shaft and also spaced from
the outer end of the covering so as to ad-
just the ferrule and its enlargement respec-
5 tively on the shaft and on the covering, said
enlargement having a shoulder at its inter-
section with the ferrule which is adapted
to contact with the inner end of the cover-
ing when the ferrule is adjusted its full
10 length on the end of the shaft, and means
inserted through the end of the ferrule and

into the end of the shaft whereby to hold
the ferrule and its enlargement in an ad-
justed position.

In testimony whereof I have hereunto set 15
my hand in presence of two subscribing
witnesses.

ADAM WOEBER.

Witnesses:

HUGO C. BUERGER,
G. E. POLSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
