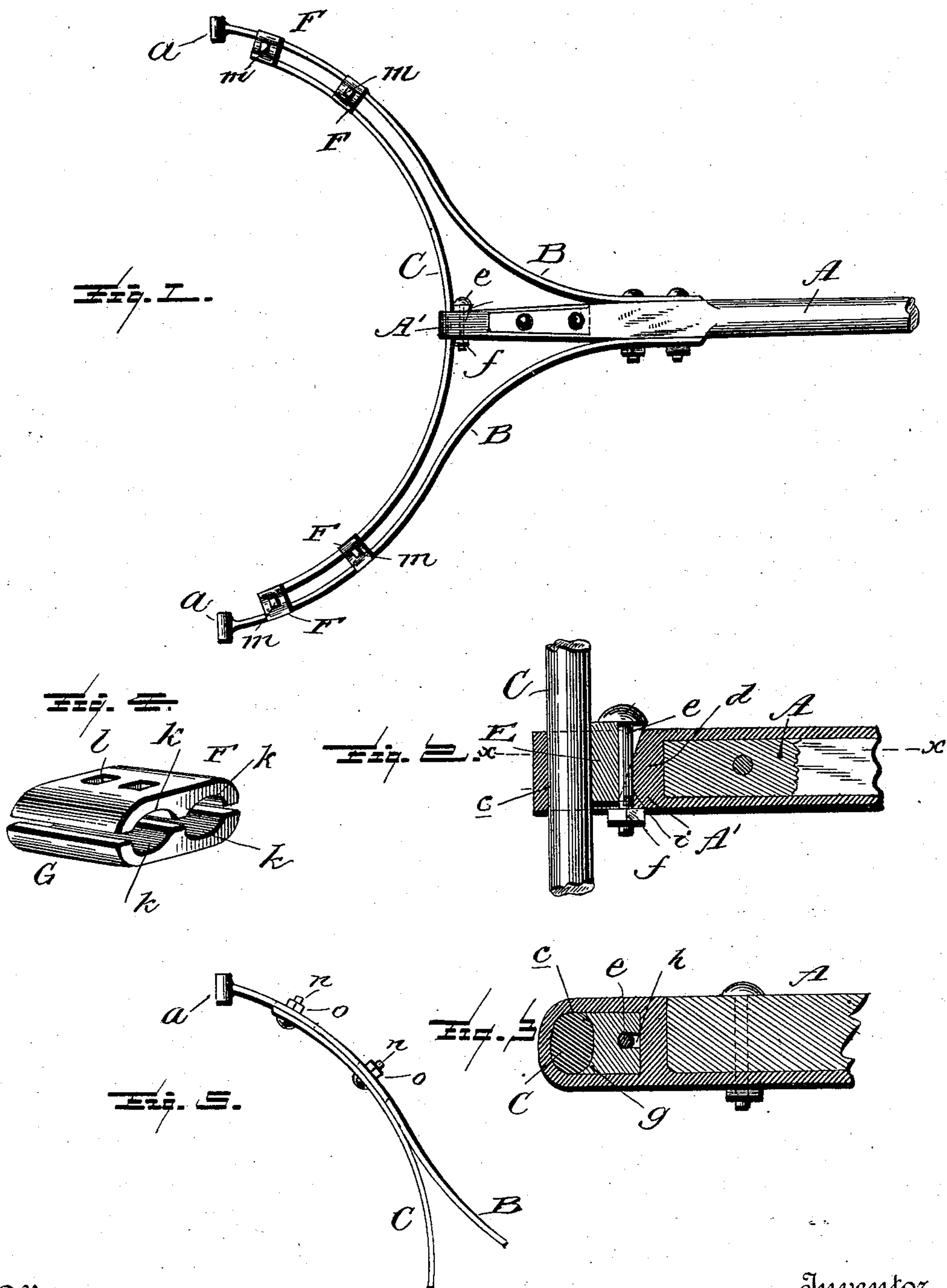


(No Model.)

G. WHITE.  
VEHICLE POLE.

No. 456,181.

Patented July 21, 1891.



Witnesses:

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# UNITED STATES PATENT OFFICE.

GEORGE WHITE, OF ROCK ISLAND, ILLINOIS.

## VEHICLE-POLE.

SPECIFICATION forming part of Letters Patent No. 456,181, dated July 21, 1891.

Application filed March 16, 1891. Serial No. 385,260. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE WHITE, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Vehicle-Poles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

Figure 1 of the drawings represents a plan view of my improved vehicle-pole constructed in accordance with my invention; Fig. 2, a detail sectional plan view of the pole with metal tip, showing the manner of connecting thereto the usual bow-rod; Fig. 3, a similar view looking toward the side of the vehicle-pole, taken on line  $x x$  of Fig. 2; Fig. 4, a detail view in perspective of the two plates constituting one of the clamps which connect the ends of the bow-rod and ends of the brace-rod together. Fig. 5 is a detail view showing a modified form thereof.

The present invention has relation to that class of vehicle-poles wherein is provided means for adjusting the brace-rods thereof so as to bring the eyes upon the ends of the rods nearer together or farther apart and in the required position to correspond with the relative position of the coupling-clips upon the vehicle to which the pole is to be used, and thus adapt the pole to wide or narrow vehicles.

It is the purpose of the invention to provide means that will be both simple and effective, with a material increase in strength without increasing the cost of manufacture, and a stronger and more durable connection made between the end of the pole and bow-rod, admitting of a ready adjustment with relation to the pole when found desirable, and in many ways enhancing the value of the vehicle-pole. These several objects and advantages above enumerated will be hereinafter described, and subsequently set forth in the claims.

In the accompanying drawings, A represents the vehicle-pole of any well-known form and construction and composed of wood, and to the inner end thereof is secured in any suitable manner the coupling-tip A', which is of

metal, and will be specifically described hereinafter. To the pole, or, if preferred, the coupling-tip, is connected, in the usual manner, the ends of the brace-rods B, which terminate at their free ends in the usual eyes  $a$  for connecting with the coupling-clips upon the vehicle.

The bow-rod C, which may be of two separate pieces or a single piece, as shown, is adjustably connected to the coupling-tip A' in the following manner: The coupling-tip, as will be noticed, is cast with a slot  $c$  through it and an inclined wall  $d$ , which forms the outer wall of the slot. Through this slot extends the bow-rod C, and in order to firmly secure the rod in place there is provided a wedge-shaped key E, which is locked in position by a bolt  $e$  and nut  $f$ , engaging with the screw-threaded end thereof. Now it should be understood that the wedge-shaped key is especially adapted to coact with the retaining-bolt, which holds it in place and also press with the required frictional contact against the bow-rod to firmly hold it from working loose. In order to make provision for the perfect holding action of the key, there is formed on one side of it a groove  $g$ , in size and shape to fit snugly against the bow-rod C. Upon the opposite side of this key is a smaller groove  $h$ , its diameter corresponding with that of the bolt  $e$ , and in the inclined wall  $d$  of the slot  $c$ , as hereinbefore described, is a similar groove  $i$ , which takes in the opposite half of the bolt. When the bolt is in place, as shown, the construction above described will enable the wedge-shaped key to be firmly locked in place, and also the bow-rod, against lateral movement. Should the bow-rod require adjustment, it may be readily done by loosening the bolt and key, which will admit of the rod being set to the required position with relation to the vehicle-pole, after which the key and bolt are tightened. This provides a very simple and secure means of firmly and rigidly holding the bow-rod in place and admit of adjustment, when required. The grooved incline wall of the slot and the grooved wedge-shaped key are all essential in forming a lock for the rod, through the instrumentality of the confining-bolt, independent of the means of coupling the free ends of the brace-rods and bow-rod together, and therefore I do not



wish to be confined to the couplings shown, and consequently a modified form is illustrated in Fig. 5 to that shown in Figs. 1 and 4, the construction of which will be now described.

The clamps for connecting the rods together consist of two plates F G, formed with grooves *k* upon their inner sides in shape and size to conform to the rods B C, which are seated therein. Each of these clamping-plates may be provided with one or more bolt-holes *l* to receive bolt *m* to draw the plates tightly against the rods and hold them in the position placed. These clamps above described serve an additional purpose aside from that of holding the two rods together, in that the brace-rods can be made a uniform size throughout its length, except the ends, which have to be flattened to bolt them to the sides of the vehicle-pole, thus saving the necessary forging and drilling of holes as commonly practiced in general pole construction. The clamps, being formed of two plates and entirely independent of the rods, can be removed by loosening the bolts and nuts that hold them together, or can be readily adjusted to bring them nearer to or farther from the end of the bow-rod C, as circumstances may require.

In coupling the eyes *a* at the ends of the rods B, the clamping-plates F G are loosened and the eyes made to engage with the slots in the coupling-clips upon the vehicle. The plates being loosened will admit of this adjustment, so that the rods B will be brought into the required position to have the eyes thereon in line with the slots of the coupling-clips. Now, this adjustment being made, the plates of the clamps are tightened against the rods to hold them in their adjusted position, thus providing a perfectly-adjustable vehicle-pole.

A further advantage of the clamps, of which any number may be used, is in the fact that a truss-brace is formed which makes the strongest possible attachment that is both light and simple in construction.

So far as relates to the construction shown upon the end of the coupling-tip A' and the means employed for holding the rod C thereto, I do not wish to be understood as confining my invention to any special device for attaching the rods B C together, as any suitable and well-known means may be employed so long as the adjustment of the brace-rods can be effected, and therefore I have shown a modification of the means shown in Figs. 1 and 4. This con-

struction consists in providing elongated slots in the rods, which are flattened for the purpose, and the employment of bolts *n* and nuts *o* to hold the rods B in their adjusted position. Other means of adjustment may be substituted so far as relates to the means employed for holding the rod C to the coupling-tip upon the end of the vehicle-pole.

Every provision has been made to insure the perfect adjustment of the brace-rods by means of the clamps herein described, which are both simple in construction, strong, durable, and easily operated, and forms one of the essential features of the invention, as does also the means used for holding the bow-rod C to the coupling-tip on the end of the vehicle-pole, all of which have been clearly and fully described.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A vehicle-pole provided with a coupling-tip having a slot with an inclined wall, a wedge-shaped key, and a retaining bolt and nut as a means for holding the bow-rod in position, substantially as set forth.

2. The combination, with a vehicle-pole and a coupling-tip connected thereto and having a slot and inclined wall with groove therein, of a wedge-shaped key having grooves upon its sides, and a bolt and nut for retaining the key in position against the bow-rod to hold it to the coupling-tip, substantially as and for the purpose described.

3. The combination, with a vehicle pole and the brace-rods and bow-rods thereof, of the means for coupling them together, consisting of clamps constructed of two plates having grooves upon their inner sides and bolts which pass through the plates to draw them together against the rods, substantially as and for the purpose specified.

4. The combination, with the brace-rods and bow-rod and the grooved clamping-plates for connecting them together, of the vehicle-pole having a coupling-tip connected thereto and constructed as described, and the wedge-shaped key and retaining bolt and nut, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEO. WHITE.

Witnesses:

F. HAMMAR,  
J. C. MILLER.