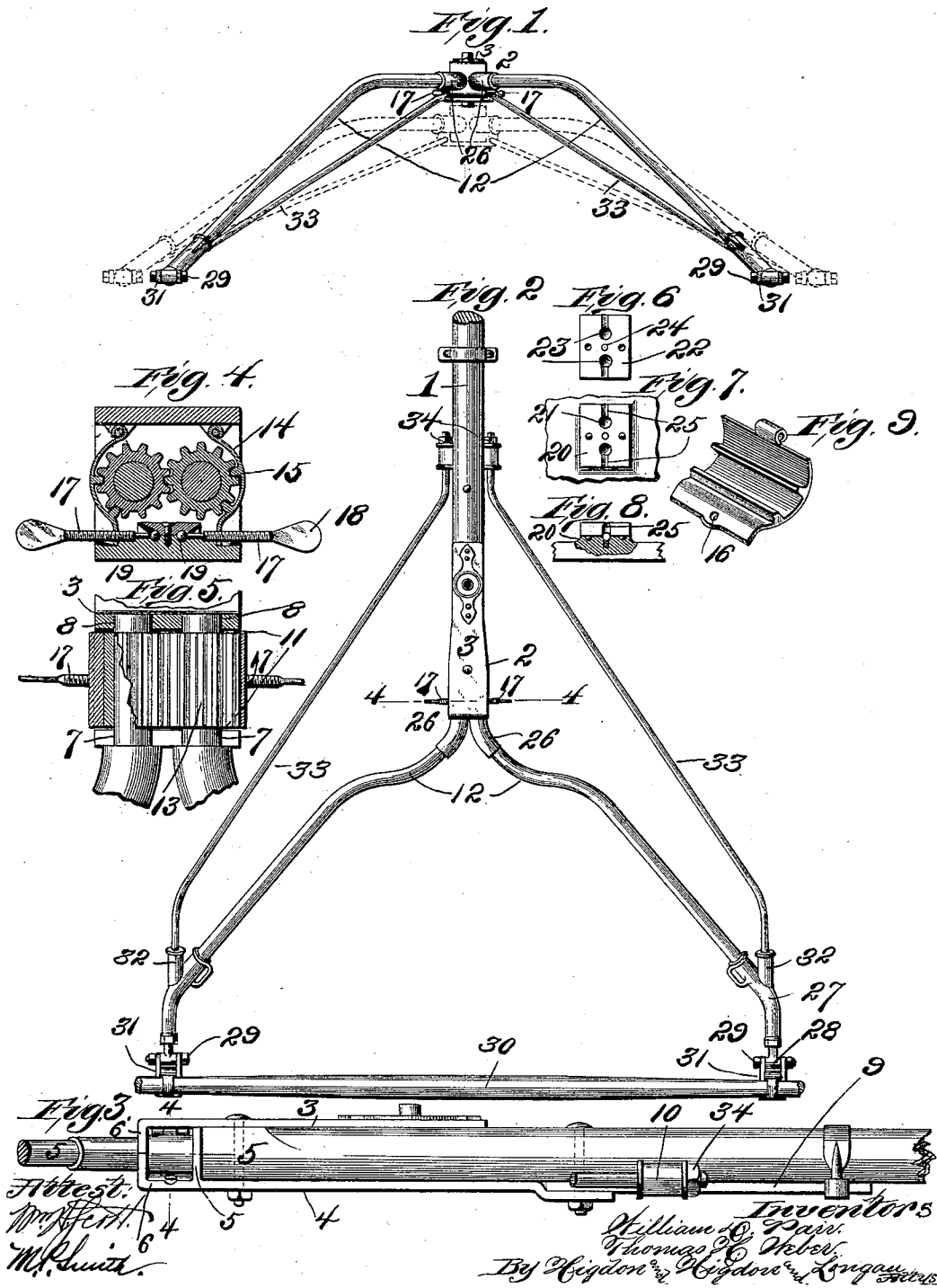


(No Model.)

W. D. PARR & T. H. WEBER.
ADJUSTABLE VEHICLE POLE.

No. 536,818.

Patented Apr. 2, 1895.



UNITED STATES PATENT OFFICE.

WILLIAM D. PARR AND THOMAS H. WEBER, OF COLLINSVILLE, ILLINOIS.

ADJUSTABLE VEHICLE-POLE.

SPECIFICATION forming part of Letters Patent No. 536,818, dated April 2, 1895.

Application filed November 12, 1894. Serial No. 528,581. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM D. PARR and THOMAS H. WEBER, of the city of Collinsville, Madison county, State of Illinois, have invented certain new and useful Improvements in Adjustable Vehicle-Poles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to an adjustable vehicle pole, and consists in the novel construction, combination and arrangement of parts, hereinafter described and claimed.

The object of our invention is to construct an adjustable vehicle pole that possesses superior advantages in point of simplicity, durability and general efficiency.

In the drawings: Figure 1 is an elevation of our invention. Fig. 2 is a top plan view of the rear portion of a pole constructed in accordance with our invention. Fig. 3 is a side elevation of a portion of the rear end of a vehicle pole, the same being constructed in accordance with our invention. Fig. 4 is a cross-sectional view taken approximately on the indicated line 4—4 of Fig. 3. Fig. 5 is a horizontal sectional view taken approximately on the indicated line 5—5 of Fig. 3. Fig. 6 is a plan view of a cap forming part of a socket used in our invention. Fig. 7 is a plan view of the other portion of this socket. Fig. 8 is an end elevation of said socket, a portion thereof being broken away. Fig. 9 is a view in perspective of the inner side of a segmental locking-plate of which we make use in carrying out our invention.

1 indicates the vehicle pole, which has rigidly bolted to its rear end a casing 2, comprising the top-plate 3, and bottom-plate 4, there being a partition 5 formed integral with the bottom-plate 4 that extends vertically between said bottom-plate and top-plate a slight distance from the ends 6 of said top and bottom plates. These ends are turned at right angles to the main body portions of the plates, and have formed in their meeting edges journal-bearings 7. Directly in front of these journal-bearings 7 and in the partition 5 are formed journal-bearings 8.

Mounted upon or formed integral with the top-plate 3 is the lower half of the ordinary

turn-table that is used between the double-tree and the pole.

Formed integral with the plate 9 that is bolted to and in front of the bottom-plate 4 are tubular ears 10. Passing through the oppositely arranged journal-bearings 7 and 8 are the forward ends 11 of divergently bent rods 12.

Mounted upon the forward ends 11 and between the ends 6 of the top and bottom plates and the partitions 5, which is integral with the bottom-plate, are meshing pinions 13, the same having a length greater than the diameter.

Hinged to the under side of the forward end of the top-plate 3 and above the meshing pinions 13, are a pair of segmental locking-plates 14, the same being provided on their inner faces with lugs or projections 15.

Passing through circular apertures 16 formed in the lower edges of these locking-plates 14 are horizontally positioned screw-rods 17, the outer ends of which are provided with wings 18, whereby said screw-rods are manually manipulated. The forward ends of these screw-rods 17 are turned to a diameter smaller than that of the screw-threaded portions, and have formed integral with their ends, balls 19. These balls are adapted to be located in sockets comprising the lower portion 20 having hemispherical depressions 21 therein, and the cap-plate 22 of the socket, the same having hemispherical depressions 23 therein to coincide with the hemispherical depressions 21 in the lower portion 20 when said plate 22 is positioned upon said lower portion 20 by means of an ordinary screw 24.

The semi-circular grooves 25 leading from the hemispherical depressions 21 and 23 to the edges of the socket are adapted to receive the turned down ends of the screw-rods 17. The semi-circular grooves in the plate 22 are inclined from the edges thereof to the hemispherical depression 23, in order that the screw-rods 17 may move in a vertical plane, as the locking-plates 14 move outwardly and away from the pinions 13. The rods 12 after passing through the journal-bearings 7, have mounted thereon collars 26. From this point the rods 12 extend rearwardly a like distance and in divergent lines. On the ends of said

rods are mounted in any suitable manner, the inner forks of Y-connections 27, the rear ends of which have swiveled therein T-connecting bolts 28, the same adapted to be mounted in any of the ordinary thill-couplings by means of bolts 29.

30 designates the front axle of a vehicle, and 31 the thill-couplings mounted upon said axle.

Mounted in each of the smaller arms 32 of the Y-connections 27 are the rear ends of bent rods 33, the forward ends of which are passed through the ears 10 on the opposite sides of the plate 9, and held in said ears by means of nuts 34.

The operation is as follows: When it is desired to secure said pole to the axle of a vehicle, the screw-rods 17 are manually manipulated in order to cause the lugs 15 on the locking-plates 14 to disengage from the pinions 13, which allows the pinions to move freely, and with each movement of either end of the diverging rods 12 upon which said pinions are rigidly mounted. The pinions thus being unlocked, the rods 12 are so manipulated as that the T-connections 28 carried by the Y-connections 27 mounted on the rear ends of said rods can be easily positioned between the ears of the thill-couplings 31. The bolts 29 are now passed through the ears of said couplings and through the T-connections, thus firmly and efficiently connecting said parts. The forward ends of the rods 33 moving freely in the ears 10 allow the diverging rods 12 to move as desired. By rigidly mounting the pinions on the forward ends of said diverging rods, they will move in unison with one another, so that the T-connections 28 will always occupy the same plane. The movement of the diverging rods is clearly illustrated by dotted lines in Fig. 1. It necessarily follows that if the T-connections 28 be moved away from one another, the pole 1 will be drawn into a lower plane than it formerly occupied. If the couplings are moved toward one another, said pole will be raised into a higher plane. This deviation of the pole is so slight that it is of no consequence to the correct positioning of the double-tree upon the pole.

When the T-connections 28 have been securely bolted to the ears of the thill-couplings 31, the screw-rods 17 are so manipulated by means of their handles 18 that the semi-circular locking-plates 14 carrying the lugs or projections 15 will be brought adjacent the teeth of the pinions 13, and the lugs 15 of said plate be located between the teeth of said pinions. This firmly locks said pinions 13, consequently locking and preventing the di-

verging rods 12 from any movement whatever. Thus it will be seen how we have constructed a vehicle pole that is adapted to be adjusted to vehicles of various sizes, and vehicles upon the front axle of which the thill-couplings are mounted unequal distances apart. It will also be seen that a vehicle pole of this construction is simple, easily adjusted, may be locked at whatever position set, is inexpensive, practical and durable.

What we claim is—

1. In an adjustable vehicle pole, the combination with the pole, of adjustable arms pivoted to the pole and provided at their pivoted ends with toothed pinions, the teeth of which are in contact, a curved locking-plate 14 pivotally connected at one edge to the said pole and provided with a locking-lug 15 which engages the teeth of one of said pinions, and a screw-bolt 17 connected to said pole and threaded through said locking-plate at a point adjacent the free edge thereof, whereby when said screw-bolt is turned in one direction said locking-lug will be caused to engage the teeth of one of said pinions, and when said screw-bolt is turned in an opposite direction said locking-lug will be withdrawn from said teeth, substantially as herein specified.

2. In an adjustable vehicle-pole, the combination with the pole, of adjustable arms pivoted to the pole and provided at their pivoted ends with two meshing toothed-pinions, semi-circular locking-plates 14 pivotally connected at their upper edges with said pole and provided upon their inner surfaces with projecting locking-lugs for engaging the teeth of said pinions, a casing 2 in which said pinions are located, two hemispherical depressions or sockets 21 in said casing, and screw-bolts 17 having balls upon their inner ends which are mounted in said hemispherical depressions, the body of said screw-bolts being threaded through the adjacent locking-plates near the free edge of the latter, whereby when said screw-bolts are turned in one direction the locking-lugs on said semi-circular locking-plates will be brought into engagement with the teeth of said pinions, and when said screw-bolts are turned in an opposite direction said locking-lugs will be disengaged from said teeth, substantially as herein specified.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM D. PARR.
THOMAS H. WEBER.

Witnesses:

H. C. MOSS,
J. F. SEMITZ.