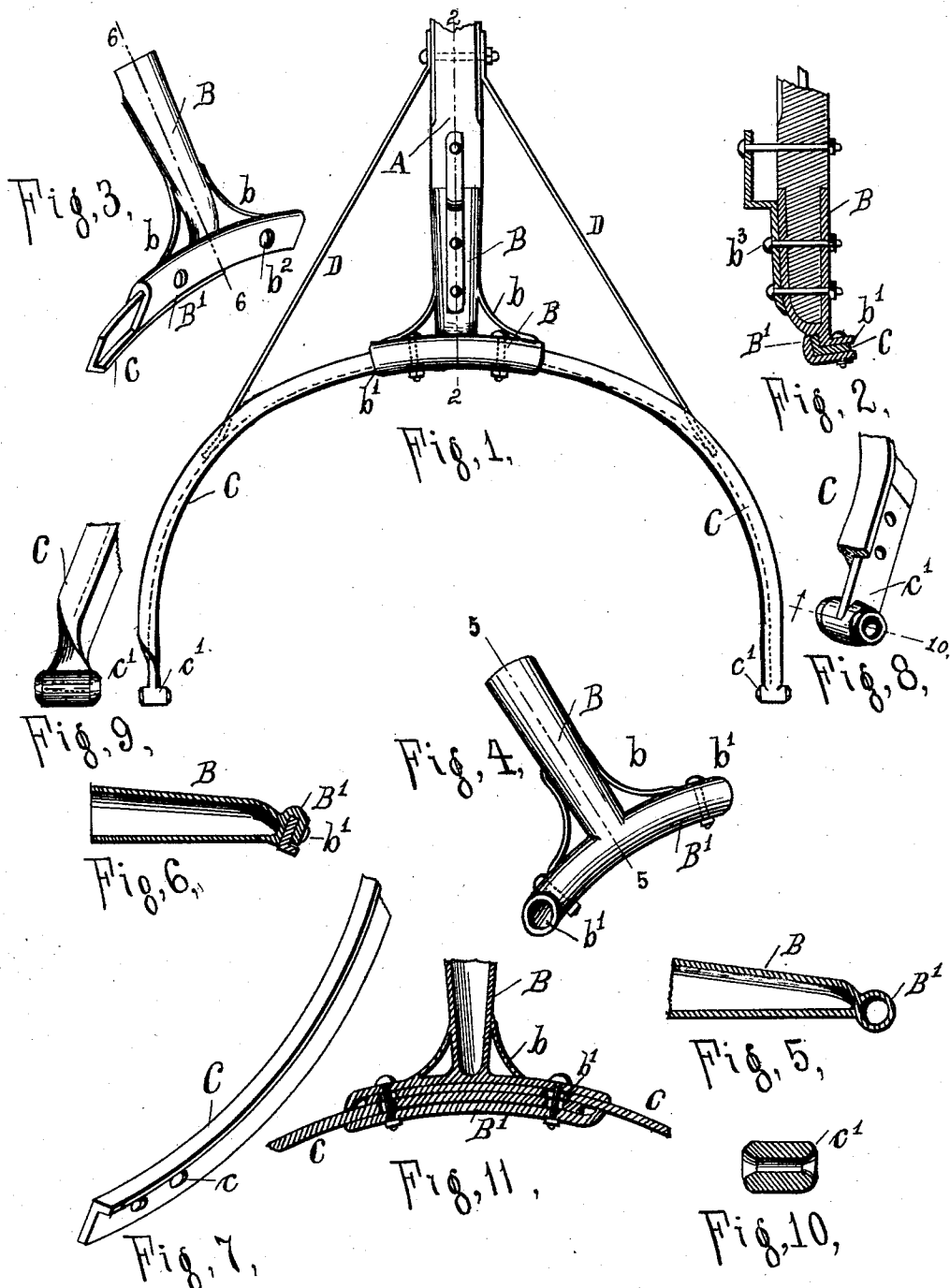


(No Model.)

J. P. JOHNSON.
VEHICLE POLE.

No. 481,619.

Patented Aug. 30, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES P. JOHNSON, OF SPRINGFIELD, ILLINOIS.

VEHICLE-POLE.

SPECIFICATION forming part of Letters Patent No. 481,619, dated August 30, 1892.

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To all whom it may concern:

Be it known that I, JAMES P. JOHNSON, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Adjustable Vehicle-Pole, of which the following is such a clear, full, and exact description as will enable those skilled in the art to make and use my said invention.

The purposes of my invention are to provide a vehicle-pole which will be cheap, light, strong, and durable and which may be easily adjusted to fit thill-couplings of different widths; to provide simple and effective means for holding the circle-bars in the pole-head; to provide circle-bars of improved construction adjustable in the pole-head; to provide eyes on the end of the circle-bars of a form adapting them to be conveniently connected with the clip member of the thill-coupling; to provide means for connecting the pole-head with the pole and the hammer-strap with the head.

My invention is fully shown in the accompanying drawings, in which—

Figure 1 is a top view of the complete pole. Fig. 2 is a partial longitudinal section on an enlarged scale on the line 2 of Fig. 1. Figs. 3 and 4 show, on an enlarged scale, alternative constructions of the pole-head. Fig. 5 is a vertical longitudinal section on line 5 of Fig. 4. Fig. 6 is a vertical longitudinal section on the line 6 of Fig. 3. Fig. 7 is an enlarged detached view of one of the circle-bars. Figs. 8 and 9 represent, on an enlarged scale, alternative constructions of the eyes on the ends of the circle-bars. Fig. 10 is a partial longitudinal section through the eyes on the line 10 of Fig. 8. Fig. 11 is a partial longitudinal section through the head, showing circle-bars of flat bar-iron lapped on each other within the channel in the head.

Similar letters indicate similar parts in all the views.

The wood part of the pole A is of ordinary construction, and its end is shaped to fit in the longitudinal hole in the head.

The head consists of a hollow conical stem B, having its taper end slightly turned downward, as shown. Integral with said stem is a cross-bar B', said cross-bar being curved in an arc of a circle to conform to the circle-bars, as hereinafter described. The stem B is curved

downward, so that when the wood tongue rests in a horizontal position the longitudinal channel or opening in the cross-bar will be in a position to receive the upper ends of the circle-bars without binding. The cross-bar B' is also provided with a longitudinal opening b', adapted to receive the circle-bars whether constructed of angle-iron or flat bar. If a circle-bar of round iron or gas-pipe is used, the cross-bar B' is preferably provided with a circular opening, as shown in Figs. 4 and 5. Braces b connect the stem B and the cross-bar B', giving rigidity to the head. The circle-bars C are preferably made of angle-iron or steel bent in the desired circle and having their ends bent downward, so as to connect with the thill-coupling. If preferred, however, flat circle-bars, solid round bars, or circle-bars of gas-pipe may be used. The circle-bars are provided with slots c, through which pass bolts b', by means of which the circle-bars are connected with the head. These bolts are horizontal. By placing the bolts horizontally the upper surface of the cross-bar is left smooth and unobstructed, thereby giving a better appearance to the pole and obviating the entanglement of the horse's tail on the ends of the bolts.

Where circle-bars of flat bar iron or angle-iron are used either the head shown in Figs. 1 and 2 or that shown in Figs. 3 and 6 may be used, and where a round or gas-pipe circle-bar is used a head as shown in Figs. 4 and 5 may be used. In practice I prefer to use the head shown in Figs. 1 and 2. If the head shown in Figs. 3 and 6 is used, the angle-bar is reversed, so that the vertical member of the bar fits in the longitudinal opening in the cross-bar B'. If circle-bars of flat bar-iron are used, I prefer to have them lap over each other within the channel in the cross-bar B', and in that case the ends of the channel or opening in the bars are contracted, so as to fit up against the sides of the circle-bar, as shown in Fig. 11. The hole b² through the concave face of the cross-bars is made sufficiently large to admit the washers and nuts, by means of which the circle-bars are clamped to the cross-bar of the head. At the lower ends of the circle-bars C are eyes c', by means of which the bars are connected with the clip member of the thill-couplings. I prefer to use an eye integral with the circle-bars,

the bars being twisted and the eye formed in the end thereof, as shown in Fig. 9. Said eye has its ends rounded and the hole in the eye rimmed out, so that if the eye is slightly awry while being inserted in the clip member the edge of the eye will not prevent the connecting-bolt from entering the eye. If a circle-bar of angle-iron is used, the eye may be made separate from the bar and placed so that the plate on which the eye is formed may be riveted or otherwise secured in the angle of the bar. Vertical bolts b^2 pass through the hammer-strap, the stem B, and the pole A, and securely connect all together. Braces D connect the circle-bars and the wood pole. When circle-bars of angle-iron are used, these braces are secured in the angle of the bars, thereby giving greater rigidity to the structure.

The operation is obvious from the description. To adjust the pole to the vehicle, the nuts on the bolts b' are loosened and the ends of the circle-bars are moved inward or outward in the channel of the cross-bar B' until the desired width is obtained. The bolts are then tightened and the ends of the circle-bars are securely held in place on the cross-bar B.

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

1. In an adjustable pole for vehicles, the combination of the tapering and downwardly-curved stem adapted to receive the end of the wood pole, the curved cross-bar integral with said stem and having a longitudinal L-shaped channel adapted to receive a circle-bar of either angle-iron or flat bar-iron, and provided with horizontally-transverse holes to receive bolts connecting said circle-bar with said cross-bar, the integral braces connecting said stem with said cross-bar, and the circle-bar of angle-iron having slots, whereby the upper ends of the segments of said circle-bar may be adjusted longitudinally within said cross-bar, said segments having at their lower ends eyes, as set forth, and for the purpose stated.

2. In an adjustable pole for vehicles, a circle-bar consisting of two segments of angle-iron so formed that the edge of one member of the angle-bar from which said segments

are made forms the outer convex edge of said circle-bar and the flat surface of the other member of the angle-bar forms the inner concave surface of said circle-bar, in combination with a stem adapted to receive the wood pole, a cross-bar adapted to adjustably support the upper ends of the segments forming said circle-bar, the integral eyes at the lower ends of said segments, formed by making a quarter-turn in said angle-bar, said eyes having externally-rounded ends and being rimmed out internally, and the braces connecting the wood pole with the circle-bar and adapted to fit in the angle of said circle-bar, as set forth, and for the purpose stated.

3. In an adjustable vehicle-pole, the combination of a circle-bar consisting of two segments adapted to longitudinal adjustment in the cross-bar by means of bolts passing horizontally through holes in said cross-bar and through longitudinal slots in said segment, the downwardly-curved stem adapted to receive a wood pole, the cross-bar supporting the circle-bar, and the braces connecting said circle-bar with said wood pole, as set forth, and for the purpose stated.

4. In an adjustable vehicle-pole, the combination of the stem, the cross-bar, and the braces integral with said stem, the L-shaped longitudinal channel in said cross-bar, the wood pole fitting in said stem, the hammer-strap, the bolts passing through the hammer-strap, the stem, and the wood pole, and connecting all together, the circle-bar consisting of two segments, having their upper ends longitudinally adjustable within the opening in said cross-bar and having at their lower ends eyes, the ends of said eyes being externally conical and rimmed out internally, and the braces connecting said segments with said wood pole, as set forth, and for the purpose stated.

In witness whereof I hereunto subscribe my name in the presence of two witnesses, at Springfield, Illinois, this 29th day of February, 1892.

JAMES P. JOHNSON.

Witnesses:

T. A. BAILEY,
SHIRLEY A. JONES.