(No Model.) 2 Sheets—Sheet 1.

N. L. HOLMES.

CARRIAGE POLE.

No. 524,826. Patented Aug. 21, 1894.

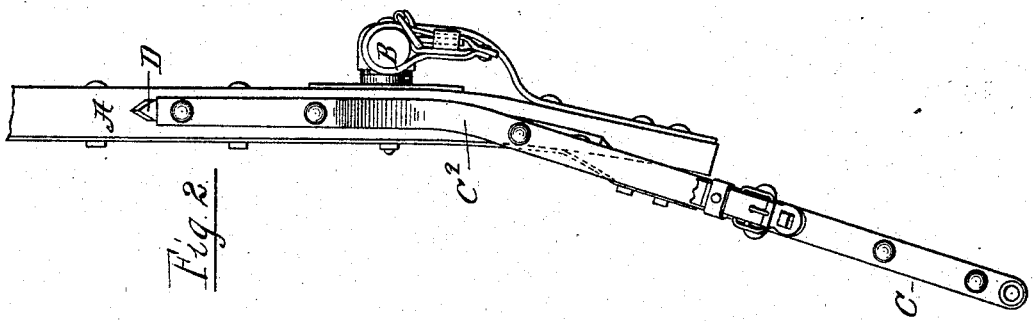

Fig. 2.

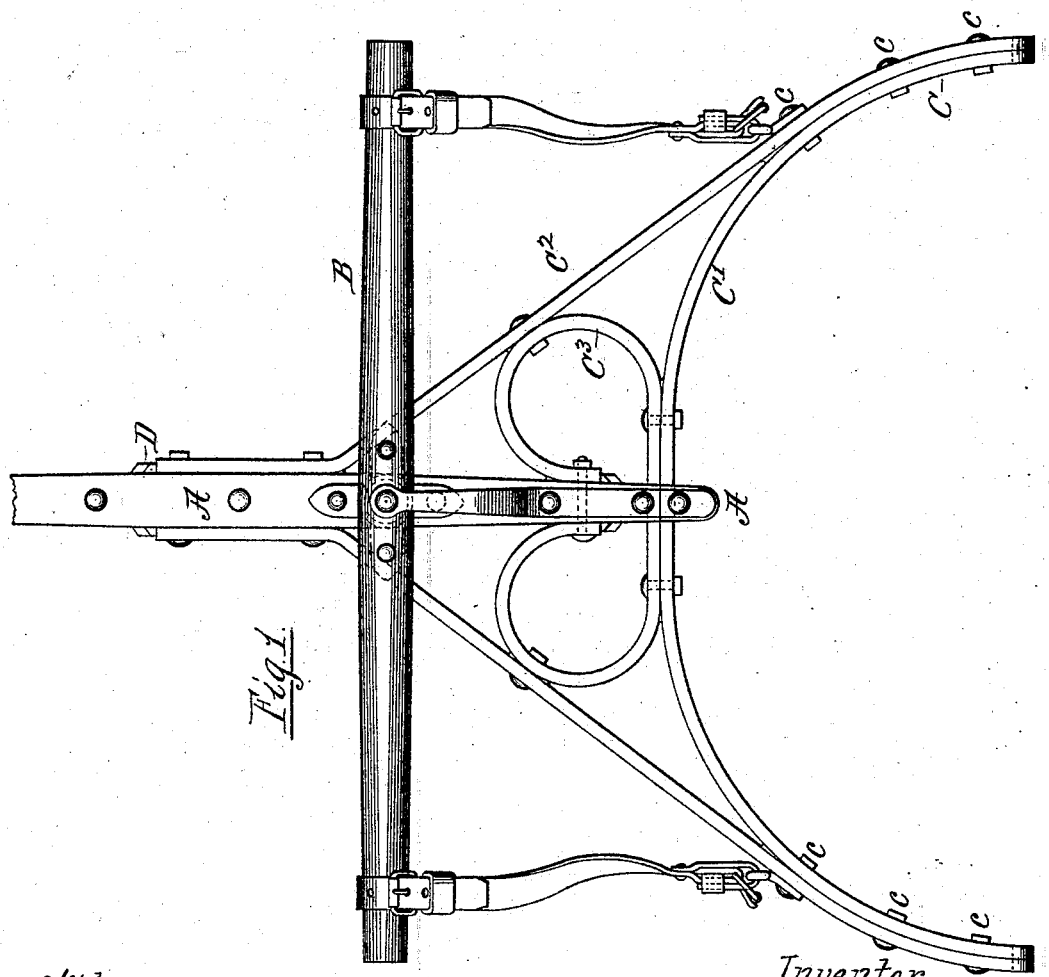

Fig. 1.

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his Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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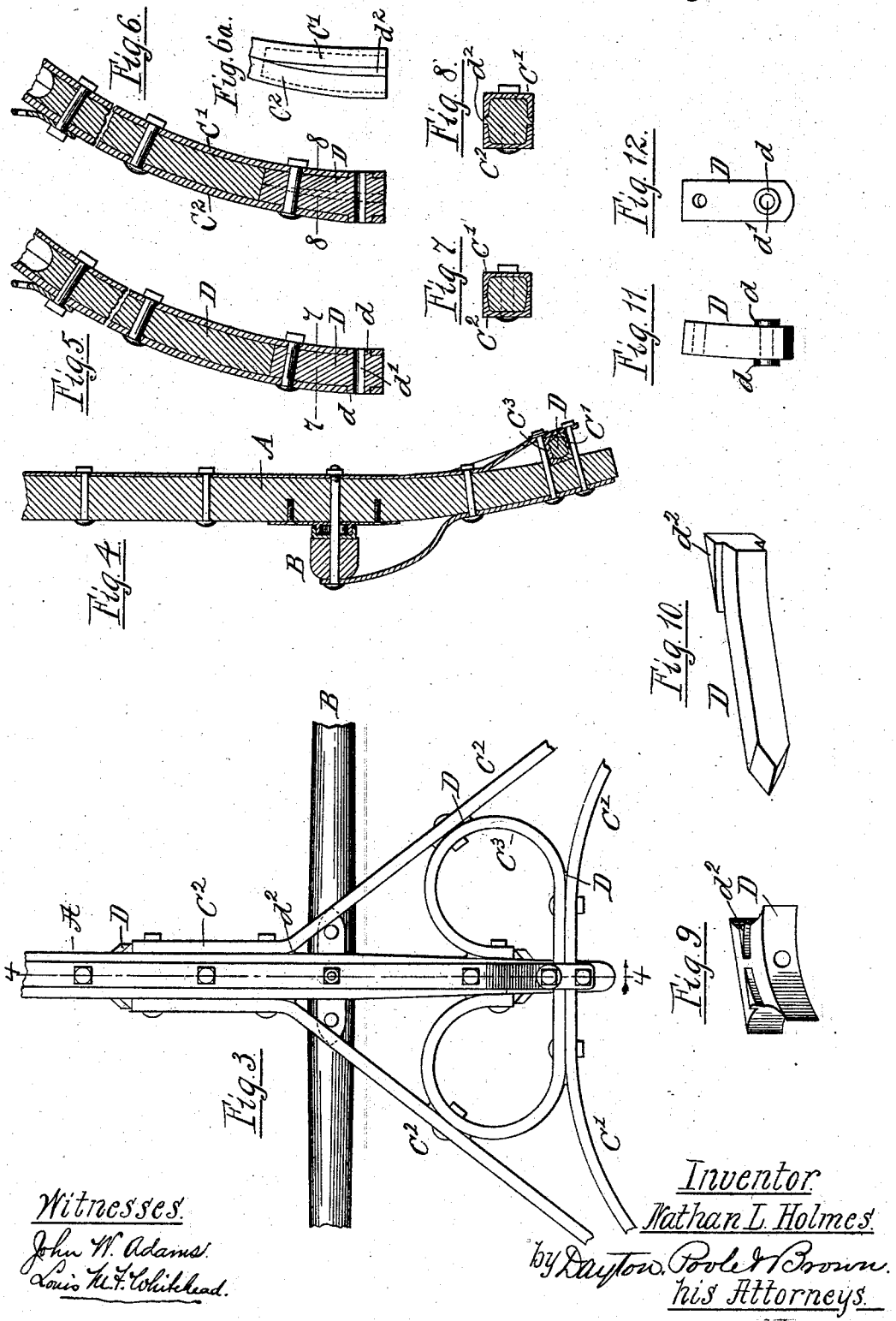

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

NATHAN L. HOLMES, OF RACINE, WISCONSIN, ASSIGNOR TO THE ACME ADJUSTABLE POLE COMPANY, OF SAME PLACE.

CARRIAGE-POLE.

SPECIFICATION forming part of Letters Patent No. 524,826, dated August 21, 1894.

Application filed January 8, 1894. Serial No. 496,107. (No model.)

To all whom it may concern:

Be it known that I, NATHAN L. HOLMES, of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Carriage-Poles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has for its object to provide a construction in carriage poles which shall be at once strong, neat and cheap. In an embodiment of my invention the arms and braces of the carriage pole are of channel-iron, and the invention consists in the arrangement of the channel-iron members channel to channel with the edges of their flanges in contact with each other or with the tongue or proximate, at those points where they are united, and the combination with said members, so arranged, of filling blocks occupying the channels when the members are connected.

In the accompanying drawings, Figure 1 is a top view of a carriage pole constructed in accordance with my invention. Fig. 2 is a side view. Fig. 3 is an under side view. Fig. 4 is a central, longitudinal section of the pole. Fig. 5 is a horizontal, longitudinal section of the extremity of one of the arms. Fig. 6 is a view corresponding with Fig. 5 but illustrating the end of the arm. Fig. 6ª is a top view of the arm constructed as in Fig. 6. Fig. 7 is a transverse section in the line 7—7 of Fig. 5. Fig. 8 is a transverse section in the line 8—8 of Fig. 6. Fig. 9 is a detached, perspective view of a filling block intended to be interposed between two channel-iron portions of the structure where they come in contact with each other. Fig. 10 illustrates in perspective a detached filling block of form suited to be interposed between a channel-iron member and the tongue. Fig. 11 is a top view of a preferred form of filling block employed between the channel-iron members at the extremities of the arms where they connect with the shackles. Fig. 12 is a side view of the block shown in Fig. 11.

A represents the pole, which is of wood, with the usual top and bottom ironing and carrying the usual whiffletree B. C C are the arms for giving braced connection of the pole with the carriage. These arms C are constituted each of two pieces of channel-iron, as illustrated in transverse section in Fig. 7 and in top or bottom view in Figs. 1 and 3, one piece, C′, being carried in a curved direction across the rear end of the tongue, and the others, C^2, being extended forwardly into junction with the pole A, in the neighborhood of the whiffletree, the better to form a rigidly braced structure.

The members C′ C^2 are arranged with their channels toward each other and preferably with the edges of their flanges in contact, as indicated in Fig. 7, and, for a suitable distance forwardly from their extremities they are bolted together by through bolts *c c*.

For the purpose of holding the two members more immovably in place and without possibility of vertical slip of one member upon the other, the coincident channels, forming longitudinal openings in the arm where its members are joined, are occupied by blocks D through which the bolts also pass. These blocks may be of wood or metal and may have any desired extent or length. If of wood they should be hard and should be made originally large enough to require slight compression when the bolts *c* are screwed up. They may also be in part of wood and in part of metal, if desired, in which case the parts at the extremities of the arms will be preferably of metal and will, moreover, be desirably provided with short bosses *d d* projecting through the lateral walls of the members C′ C^2 and containing the through passage *d′* for the shackle bolt, as plainly shown in Figs. 5, 11 and 12. By this latter feature of construction said shackle bolt passage is made continuous and the bosses *d* tend to bring the joined members into exact relative position preparatory to bolting them, and serve also to retain them in such relative position should the clamping bolts *c* be loosened.

In the use of channel-iron so light as may be used with ample strength, the aggregate width of the two pieces entering into the

several arms is somewhat less than the usual width provided between the ears of the shackles, and to give the extremities of the arms the desired width, said two parts may be, as illustrated in Figs. 6, 6ª and 7, somewhat more widely separated at their extremities by making the terminal block D of tapering form, in which case said block should be provided with a tapering fin d^2 upon its upper surface (and desirably also upon its lower surface) so as to fill the space which would otherwise be caused between the flanges and to give a flush and smooth surface.

At the point where the members C^2 join at their front ends with the pole, wooden blocks D may be placed in the channels of said members to bear against the side surfaces of the pole and thus to fill the outer ends and give greater firmness. An ornamental effect is produced by extending these blocks beyond the ends of the channel-iron members C^2 and beveling or otherwise finishing their extremities, as indicated in Figs. 1, 2 and 3. These filling blocks may also, if desired, be extended beyond the point at which the braces diverge from the pole and there provided with tapered fins D^2, as for example, shown in the detached Fig. 10, and as may be supposed to be shown in Figs. 1 and 3.

C^3 is a third piece of channel-iron, curved at both its ends in the same direction with the channel outward, so as to bear in its central transverse portion against the forwardly directed flanges of the member C', at the middle of the latter, and also with its flange edges against the inwardly directed flange edges of the members C^2 where it connects with them by a bolt. This piece C^3 may also be desirably extended at its extremities inwardly and rearwardly so as to bring the edges of its flanges against the sides of the tongue, to which also it will be bolted, as shown in Figs. 1 and 3. Filling blocks of wood or metal will desirably be employed between this brace C^3 and the parts with which it comes in contact, filling the channel thereof, as where it contacts with or proximates the pole, and filling the channel in both this and the contiguous channeled member where two such members are brought together. These blocks may be prolonged beyond the point of divergence of the channel member or members and will in such prolonged portion be preferably provided with the properly tapered fins d^2 rising to the outer surface of the flanges and giving a neat, flush finish.

The extension of the filling blocks beyond the points of divergence of a channeled member with the pole or with another channeled member has the advantage of preventing the hairs of horses' tails from catching in the crotches of the pole and being drawn out, while the addition of the fins improves the neatness of the finish. If these considerations are, however, to be disregarded and only the strength which these filling blocks give be required, they may be without such fins or such extension without departure from the general invention.

Under the term "channel-iron" herein employed it will be understood that steel or any other suitable metal may be employed, the term having special reference to the sectional form of the metal familiarly known as channel-iron. It is to be understood that the exact form of the channel-iron portion of the structure shown is not material and that variations in details may be made without departure from the invention.

I claim as my invention—

1. A carriage pole having each of its arms composed of two channel-iron members arranged channel to channel and bolted together at their extremities, one of said members being carried inward and connected with the pole proper at or near its end and the other diverging therefrom forwardly and connected with the side of the pole, combined with filling blocks inserted in the channels of the members where they connect with each other or with the pole.

2. In combination with the members C' C^2 severally connecting with the pole at different points in its length and brought together at their rear extremities to form the arms C, and arranged channel to channel, filling blocks D at the extremities of the arms provided with bosses d containing the through openings for the shackle bolts.

3. In combination with the channel-iron members and the pole, interposed filling blocks D occupying the laterally closed channel spaces and prolonged beyond the points of divergence of the said members.

4. In combination with a pole and channel-iron arms composed each of the members C' and C^2 joined at their rear extremities and diverging into connection with the pole at different points in its length, filling blocks occupying the laterally closed channels of the irons, said blocks being prolonged beyond the points of divergence of the members and provided with fins rising flush with the outer surfaces of the flanges of said irons.

5. In combination with a pole and the arms composed of the members C' C^2 of channel-iron arranged channel to channel and connected with each other and with the pole, substantially as described, of the channel-iron member C^3 having a central transverse portion joined with the transverse portion of the member C', channel to channel, and deflected into connection with the members C^2, channel to channel.

6. The combination with a pole and arms composed of the channel-iron members C' C^2, connected and divergent, as shown, of the channel-iron member C^3 having a transverse portion connected with the transverse portion of the member C', channel to channel, and deflected forwardly into connection with the arms C^2, channel to channel, and rearwardly into connection with the pole with the channels thereof toward the pole, and in-

terposed filling blocks, substantially as described.

7. In combination with the channel-iron arms C, terminal filling blocks provided with tapering fins d^2 rising flush with the outer surfaces of the channel-irons, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

NATHAN L. HOLMES.

Witnesses:
C. CLARENCE POOLE,
TAYLOR E. BROWN.