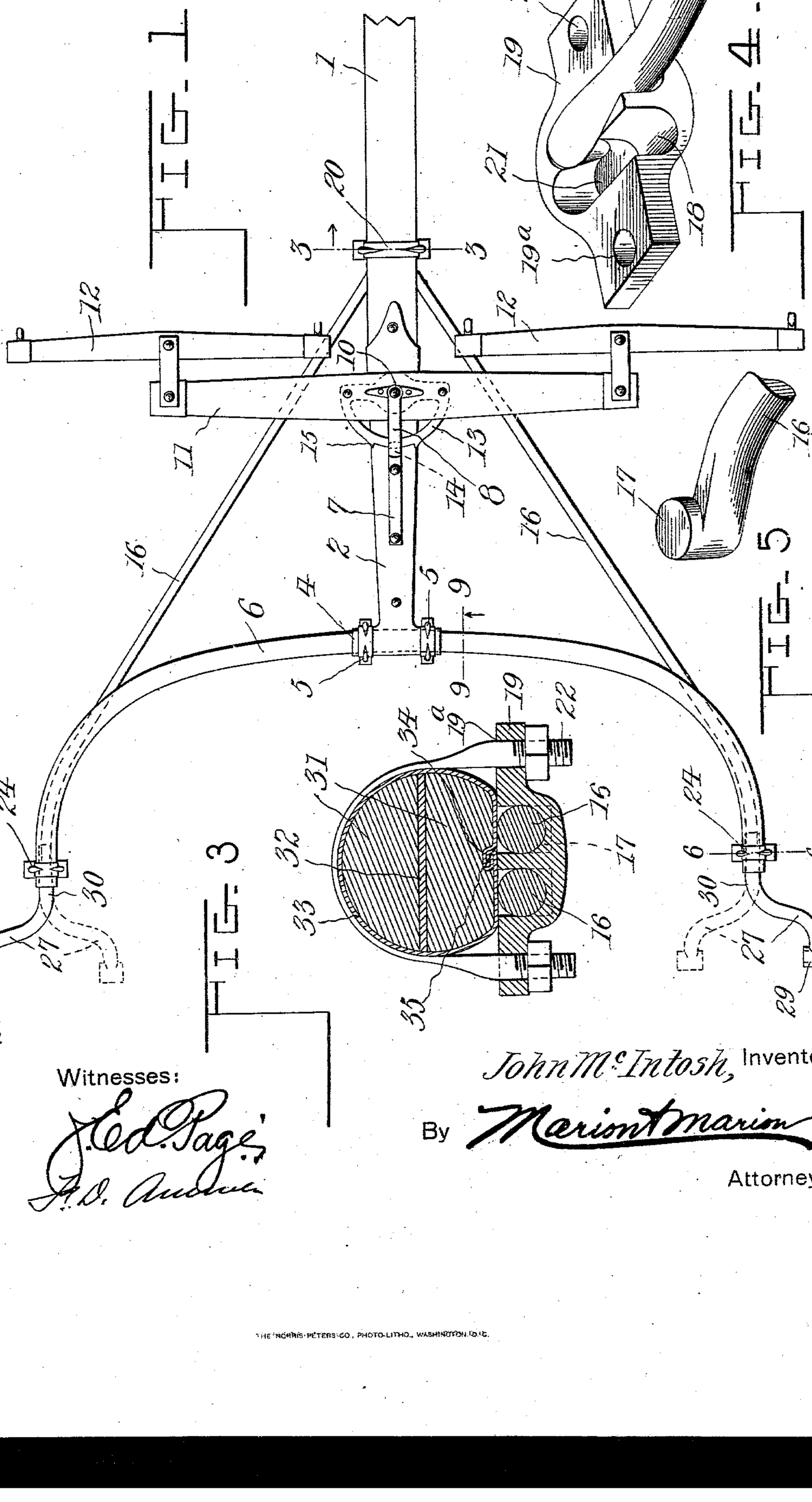
No. 753,423. PATENTED MAR. 1, 1904.

J. McINTOSH.

CARRIAGE POLE.

APPLICATION FILED OCT. 9, 1903.

NO MODEL. 2 SHEETS—SHEET 1.



Witnesses:

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NO MODEL. 2 SHEETS—SHEET 2.

FIG. 2.

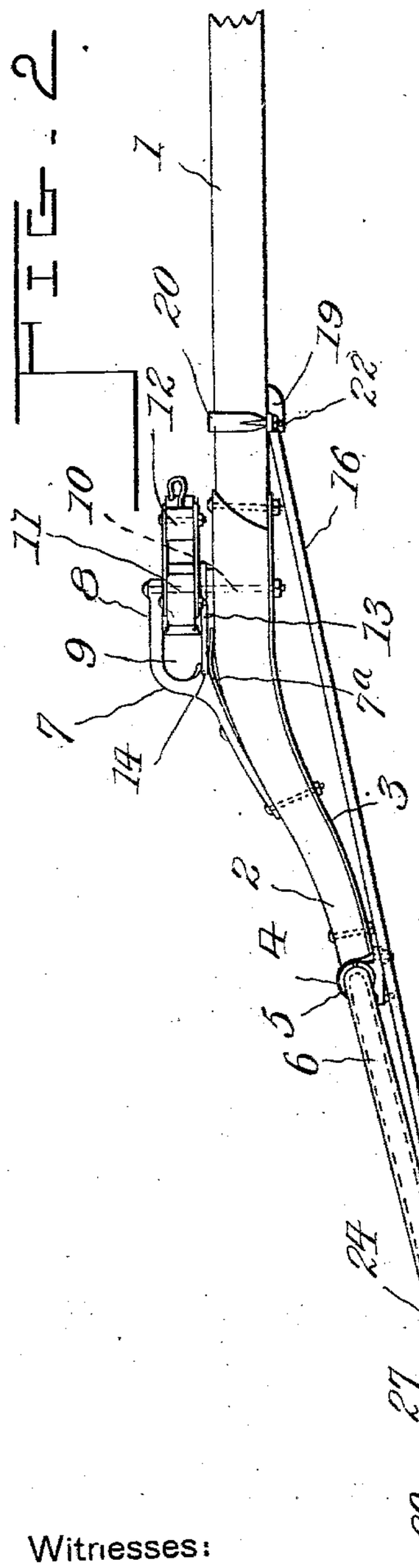


FIG. 4.

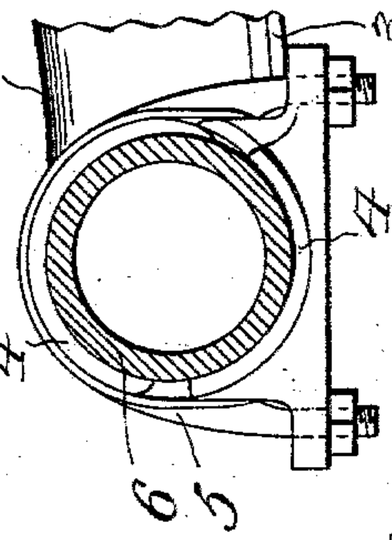


FIG. 7.

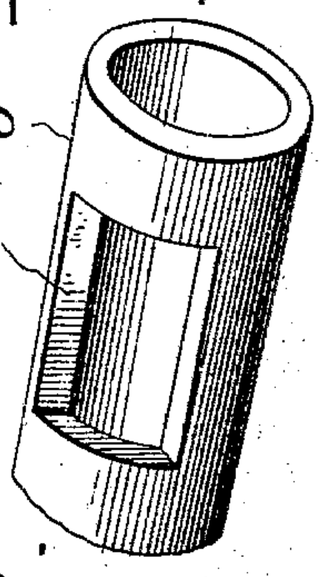


FIG. 8

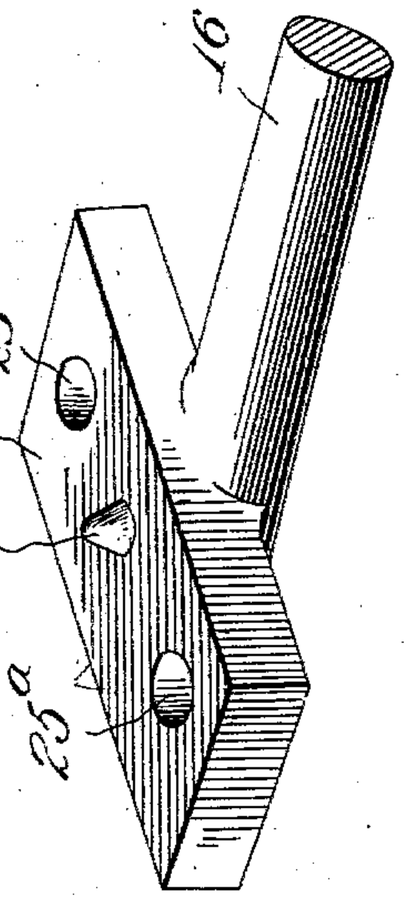
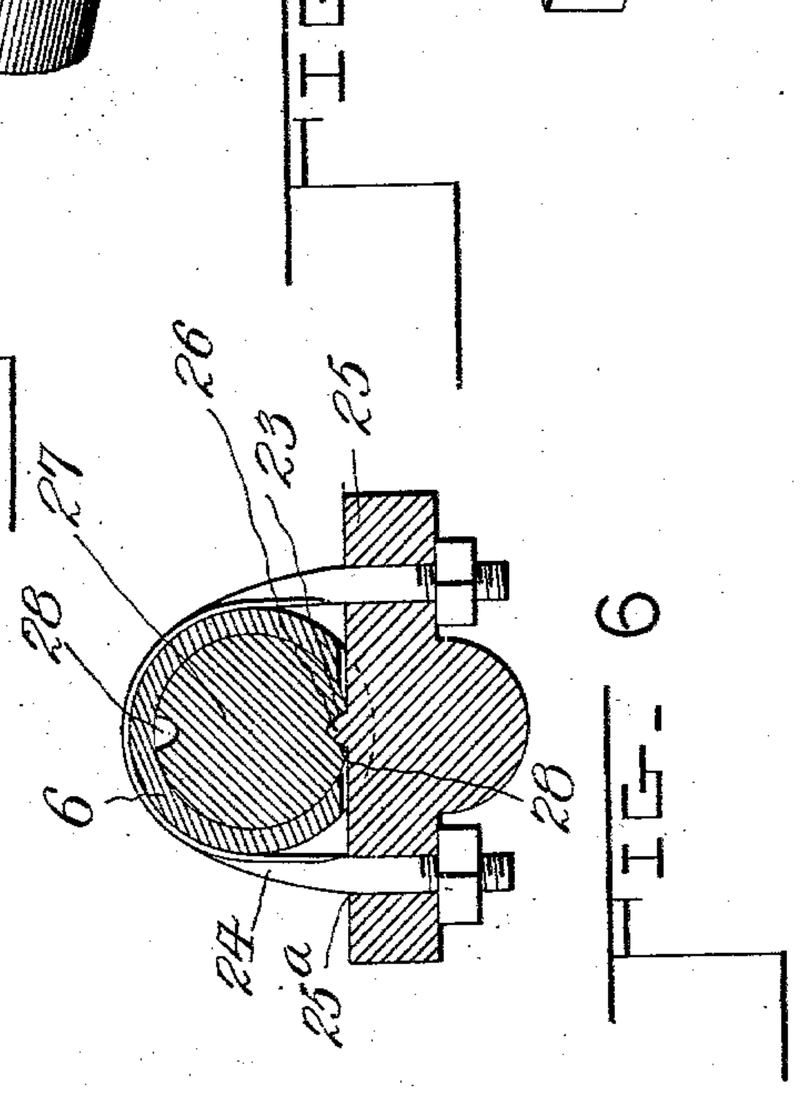


FIG. 6



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No. 753,423. Patented March 1, 1904.

UNITED STATES PATENT OFFICE.

JOHN McINTOSH, OF ALEXANDRIA, CANADA.

CARRIAGE-POLE.

SPECIFICATION forming part of Letters Patent No. 753,423, dated March 1, 1904.

Application filed October 9, 1903. Serial No. 176,342. (No model.)

To all whom it may concern:

Be it known that I, JOHN MCINTOSH, a subject of the King of Great Britain, residing at Alexandria, county of Glengarry, in the Province of Ontario, Canada, 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 of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to carriage-poles; and the object of the invention is to produce a pole of improved construction adapted to be used in connection with vehicles of all kinds, including sleighs. While simplicity of construction has been the principal aim, the object has been to provide an improved arrangement for supporting the pole, which arrangement permits of desirable adjustability with respect to the height of the pole.

The invention concerns itself also with the peculiar construction of the pole proper, tongue, or shaft and contemplates improvements in connection with the evener or doubletree attached to the tongue or pole.

The means for attaching the pole to the body of the vehicle is also a feature of the invention, and at this part an arrangement is made whereby the pole may be adapted for attachment to vehicles of narrower width, such as sleighs.

In its general construction the invention comprises a pole of improved form, which is adjustably secured at its rear to a cross-arm, and braces connect this cross-arm with the pole forwardly, the same being adjustable, whereby the relative position of the pole with respect to the cross-arm may be changed within certain limits. This cross-arm is preferably constructed of gas-pipe or a similar tubular member, and its ends curve rearwardly and are open to receive offset thill-irons, which are clamped in position in an improved manner by means of the clips which are used for attaching the aforesaid braces to the cross-arm. At the pole the braces are attached by means of a socket-plate, which constitutes a part of a clip and receives the extremities of the braces in an improved manner, which will appear more fully hereinafter. The braces are provided with specially-formed ends in order to facilitate their attachment at the socket and to the cross-arm near the thills.

The invention consists in the construction and combination of parts to be more fully described hereinafter and definitely set forth in the claims.

In the drawings, which fully illustrate my invention, Figure 1 is a plan of the rear portion of the pole and its attachments, the forward portion of the pole being represented as broken away. Fig. 2 is a side elevation of the parts represented in Fig. 1. Fig. 3 is a cross-section supposed to be taken on the line 3 3 of Fig. 1, which line passes through a socket at which the braces are attached. Fig. 4 is a perspective view representing the inner side of the socket-plate referred to above. This view represents the extremity of one of the braces in conjunction with the socket. Fig. 5 is a perspective of the extremity of one of the braces. Fig. 6 is a section through the cross-arm, supposed to have been taken on the line 6 6 of Fig. 1. Fig. 7 is a perspective representing an extremity of the cross-arm, this view representing the part as thrown into a more or less inverted and unnatural position. Fig. 8 is a perspective representing the rear extremity of one of the braces. Fig. 9 is a cross-section supposed to have been taken on the line 9 9 of Fig. 1.

Throughout the drawings and specification the same numerals of reference denote like parts.

Referring more particularly to the parts, 1 represents the body of the pole, which preferably bends downwardly at its rear, as indicated, at which part the irons 2 and 3 are attached, the former of which substantially incloses the rear portion of the pole, as indicated. The extremities of these irons 2 and 3 are formed into coöperating jaws 4, which extend laterally, as shown, and these jaws carry over them clips 5 of common form, by means of which the jaws may clamp a tubular cross-arm 6, which cross-arm is preferably substantially of the form shown and consists, preferably, of gas-pipe or similar material bent to the required shape.

Upon the upper side of the iron 2 there is attached a bracket 7, which terminates forwardly in an upper extension 8 in such manner as to form a deep throat 9. Through the extremity of the extension 8 a bolt 10 passes, the same being for the purpose of attaching an evener, whiffletree, or doubletree 11, to the extremities of which the swingletrees 12 attach in any suitable manner. To the under side of the doubletree 11 there is attached a segment 13 of substantially semicircular form, as shown, the periphery whereof lies adjacent to a recess or opening 14 in the lower portion of the throat 9, and on opposite sides of this point the said segment is provided with radially-projecting shoulders or stops 15. It should be understood that this construction is adopted in order to limit the possible movement of the doubletree, and this result is effected by reason of the stops 15, which will come into contact with the sides of the bracket when the doubletree has swung around sufficiently, as will be readily understood. A leaf-spring 7ª, attached under the bracket 7, thrusts against the under side of this segment, so as to offer a suitable frictional resistance to its movement, holding it against the upper side 14ª of the recess 14. This is for the purpose of preventing rattling.

Diagonal braces 16 connect the pole at a point forwardly of the doubletree with the extremities of the cross-arms. The forward extremities of these braces are slightly bent downwardly, as shown most clearly in Fig. 5, and provided with upwardly-projecting rounded nibs or heads 17, and these extremities are received, respectively, by pockets 18, formed in a socket-plate 19, which socket-plate constitutes the cap of a clip 20, attached to the pole. The forward portions of these pockets 18 are formed with deep recesses 21, which receive the aforesaid nibs or heads 17, as indicated, so as to prevent any possibility of the braces being pulled rearwardly from the socket-clip, as will be readily understood. The body of the clip 20 is of the usual form, having threaded legs 22 passing through openings 19ª in the socket-plate and coöperating with nuts, as shown.

The extremities of the cross-arm are mutilated, so as to form openings or notches 23 on their under sides, and at these notches clips 24 are attached, the caps of which consist of heads 25 with openings 25ª, which heads are flat and elongated, as shown, and formed at the rear extremities of the braces 16, as indicated. It should be stated at this point that the rear portion of the braces are curved, as indicated, so that they conform substantially to the general outline of the cross-arm near their point of attachment thereto. The inner faces of the heads 25 are provided, respectively, with substantially centrally-disposed projections or teeth 26, which are for the purpose of securing the thill-irons 27 in the manner most clearly shown in Fig. 6. It should be stated that the openings or notches 23 pass through into the bore of the cross-arm in such a manner as to enable the said teeth 26 to be received by correspondingly-formed recesses 28, formed in the sides of the thill-irons, as shown. The thill-irons are preferably of substantially the form shown, being offset and formed with bored heads 29 to receive the thill-bolts. The shanks 30 of these thill-irons are comparatively short and are received in the substantially straight extensions of the rear portions of the cross-arm. In conjunction with each shank there are two recesses 28, oppositely disposed, as shown, which enable the thills to be thrown around into reversed positions, as indicated in the dotted lines, this latter arrangement being adopted where it is desired to attach the thills to a sleigh or similar vehicle having a narrow body. From this arrangement it should readily appear that the clips 24 not only afford means for attaching the braces, but also securely attach the thill-irons 27. In this connection it should be noted that the arrangement is such that the inner faces of the heads 25 bear against the lateral surface of the shanks, as indicated, and while the teeth 26 facilitate the application and pressure at this point they are intended primarily to prevent the rotation or withdrawal of the shanks 30, as will be readily understood.

When it is desired to adjust the height of the pole with reference to the cross-arm, it should be understood that the clips 5 and the socket-clip 20 will be loosened, and when the pole has been brought to its proper position they will be tightened again, it being understood that the clip 20 may readily slide in either direction along the pole.

The body of the pole is preferably composed of sections 31, of wood, which sections are disposed about a centrally-arranged tongue or elongated plate 32, this entire structure being enveloped in an outer casing or shell 33 of substantially tubular form, as shown, suitably tapered and flattened upon its under side. The tongue 32 and the casing 33 are preferably formed of steel or similar material, and the seam 34, which must be made in the side of the casing 33, is preferably of the form indicated, comprising interlocking plies 35, the said seam being located on the under side of the pole, which is its flat portion referred to above. This tongue 32 extends continuously from end to end of the pole.

While I have shown in the accompanying drawings the preferred form of my invention, it will be understood that I do not limit myself to the precise form shown, for many of the details may be changed in form or position without affecting the operativeness or utility of my invention, and I therefore reserve the right to make all such modifications as are included within the scope of the follow-

ing claims or of mechanical equivalents to the structures set forth.

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

1. In combination, a pole having a clamp at the rear thereof, a cross-arm received by said clamp and which may rotate therein, whereby the angular position of said cross-arm may be adjusted, braces attached to said cross-arm toward the extremities thereof, means for attaching said braces to said pole, said last means being adjustable longitudinally upon said pole.

2. In combination, a cross-arm, a pole, clamps rigidly attached to said pole and adapted to receive said cross-arm, said cross-arm being of substantially circular section at the point received by said clamp, diagonal braces attached to said cross-arm near the extremities thereof, a clip carried by said pole, and interlocking means between the forward extremities of said braces and said clip, said clip being adjustable longitudinally upon said pole.

3. In combination, a cross-arm of substantially tubular form, a pole, a pair of jaws attached to the rear of said pole, said jaws constituting a clamp to receive said cross-arm, clips passing around said jaws and adapted to constrain the same, diagonal braces attached to said cross-arm near the extremities thereof, another clip comprising a socket and attached to said pole, the forward extremities of said braces being received by said socket and interlocking therewith.

4. In combination, a cross-arm of substantially tubular form, a pole, a clamp formed at the rear thereof and adapted to receive said cross-arm, a clip attached to said pole, said clip having a cap-plate with pockets formed on the face thereof adjacent to said pole, said pockets having recesses therein, braces attached to said cross-arm and having enlarged heads received by said pockets, said heads being adapted to project into said recesses to prevent longitudinal movement of said clip upon said pole.

5. In combination, a cross-arm, thill-irons making a telescoping connection therewith, one of said members having an opening at said connection, and a clip attached in said opening and clamping said members therethrough.

6. In combination, a cross-arm presenting sockets substantially at the extremities thereof, thill-irons carried in said sockets, said sockets having openings in the sides thereof, and clamps located at said openings and adapted to press said thill-irons through said openings.

7. In combination, a cross-arm comprising a member having tubular sockets projecting rearwardly at the extremities thereof, thill-irons having shanks carried in said tubular sockets, said tubular sockets being mutilated to form openings through the wall thereof, clamps attached at said openings and securing said shanks, a pole attached to said cross-arm, and braces connecting said pole with said clamps.

8. In combination, a cross-arm comprising sockets, thill-irons having shanks received by said sockets, said sockets being mutilated to form openings through the walls thereof, clips attached at said openings, said clips having caps received by said openings, and interlocking means between said caps and said shanks.

9. In combination, a cross-arm having tubular extremities projecting rearwardly therefrom, offset thill-irons having shanks received by said tubular extremities, means for clamping said shanks to said tubular extremities, said clamping means comprising a tooth and an interlocking recess.

10. In combination, a cross-arm consisting substantially of a tubular member having rearwardly-projecting extremities, thill-irons having shanks mounted in said extremities, said extremities being mutilated to form openings in the wall thereof, clips attached at said openings and adapted to clamp said shanks to said cross-arm, braces, the extremities whereof constitute caps for said clips, a pole attached to said cross-arm, and means for attaching said braces to said pole.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN McINTOSH.

Witnesses:

ROSABELLE SMITH,

ALEX. L. SMITH.