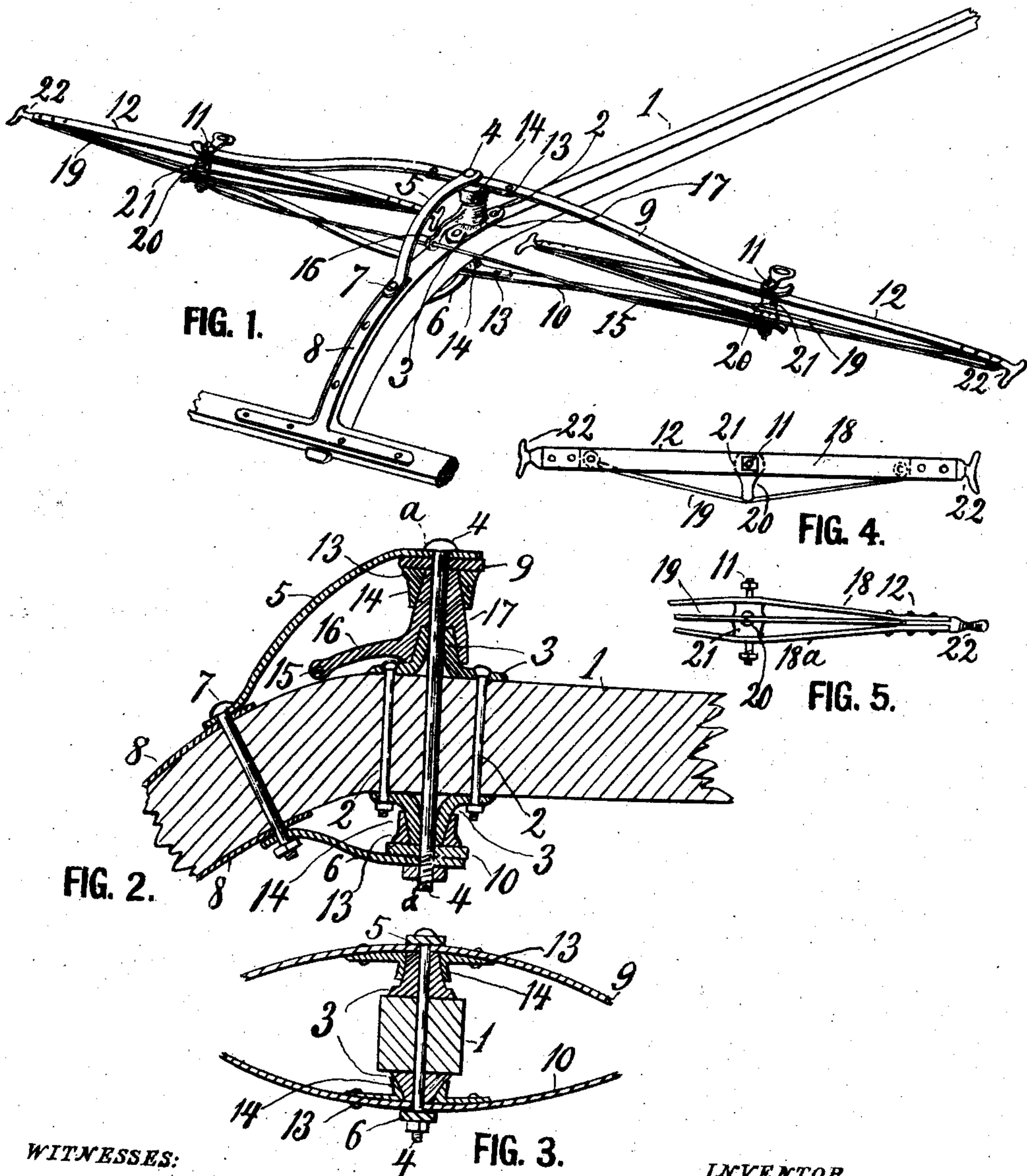


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PATENTED MAR. 31, 1908.

B. F. PINSON, JR.
TRUSS BRACED TREE,
APPLICATION FILED MAR. 21, 1907.



WITNESSES:

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UNITED STATES PATENT OFFICE.

BENJAMIN F. PINSON, JR., OF SKIATOOK, OKLAHOMA.

TRUSS-BRACED TREE.

No. 883,342.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed March 21, 1907. Serial No. 363,788.

To all whom it may concern:

Be it known that I, BENJAMIN F. PINSON, Jr., a citizen of the United States, residing at Skiatook, Oklahoma, have invented new and useful Truss-Braced Trees, of which the following is a specification.

This invention has relation to trees used in draft appliances and usually termed double-trees, and swingle-trees or whiffletrees.

The object is to provide such trees with strengthening truss rods and other improvements in connection therewith. This and other objects are attained by the novel construction and arrangement of parts illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of a draft pole or tongue with the improved trees applied thereto. Fig. 2 is a vertical section about centrally along the pole in Fig. 1. Fig. 3 is a transverse section of Fig. 1 on the line *a a* of Fig. 2, with a simplifying modification. Fig. 4 is a top view and Fig. 5 is a rear elevation of one of the whiffletrees in Fig. 1.

Referring to the drawing by reference numerals, 1 designates a draft pole or tongue of a vehicle adapted to be drawn by two horses, one hitched at each side of the pole.

To the upper and lower sides of the pole are secured by bolts 2 two conical hollow trunnions 3, through which passes a bolt 4, which is reinforced by an upper brace 5 and a lower brace 6, through the front ends of which the bolt is passed while the rear ends are secured by a bolt 7 to the pole and to its reinforcing metallic strips 8. Between the braces 5 and 6 and their adjacent trunnions are centrally fulcrumed on the bolt 4 the upper and lower arched metallic strips 9 and 10, of which the double tree is composed. Said strips having their ends secured together by bolts 11, on which the whiffletrees or swingle-trees 12 are pivoted between the ends of said strips.

The strips 9 and 10 are preferably made of steel, and are arched from each other so as to brace one another against a vertical strain. Each strip has riveted or otherwise secured at its middle a reinforcing plate 13, with a central bearing 14 fitting over the cones 3, as is best shown in Fig. 3, where the invention is illustrated in a simplified form without truss-bracing, but in Figs. 1 and 2, the double-tree is provided at its rear side with a truss-brace or rod 15, having its ends

secured on the bolts 11 and its middle portion held rearwardly and downwardly by a stud or arm 16 of a convexo-concave cone 17, interposed between the cone 3 and bearing 14, above the pole, and when thus placed the downward curvature of the arm 16 helps to bring the truss-rod vertically to the middle of the tree, and also to hold it below the inner ends of the swingle-trees without distorting the rod out of alinement to any considerable extent. But the cone 17 may also be placed below the pole, in which event the arm 16 may be straight.

The swingle trees 12 may be made of wood or of iron or steel, but in the preferable form shown they are made on the same principle as the double-tree, of two arched metal strips 18, 18^a, a truss brace or rod 19 secured to both ends of the tree and supported in a rearwardly bridging position by a stud 20, projecting from a block 21 secured between the middle portions of the strips, where it also serves to hold the strips spread; the outer ends of the strips are secured together and provided with whiffletree hooks 22 of any form preferred.

From the above description it will be understood that, as the swingle-trees are pivoted between the ends of the double strip double-tree, they lie substantially in the same horizontal plane with the tongue and thus pull in said plane without any tendency to force the tongue up or down, which is one of the advantages gained by the construction. Another advantage is that the upper strip of the double-tree guards the inner ends of the swingle trees from getting caught by the reins. Also that as the strips 8 extend to the very rear end of the tongue, the pulling strain or draft falls on the metallic parts and not on the wooden part of the tongue back of the bolt 4. The conic shape of the trunnions prevents rattling and provides greater wearing surface and makes the parts practically self-adjustable when they wear, except that possibly the small surface at the very end of each cone may have to be touched off with a file once in a great while, if the sides of the cone should wear faster than the end of it. The device as an entirety possesses strength, steadiness and durability without involving objectionable weight or unsightly appearances to the vehicle.

Having thus described my invention, what I claim is:—

1. A draft appliance comprising a tongue,

two hollow trunnions secured one to the under side of the tongue and the other opposite thereof to the upper side, a doubletree composed of an upper and a lower metal strip, each having at its middle a reinforcing piece with a bearing fitting one on each of the trunnions, the ends of the strips at each side of the tongue being converged together, bolts passed through the converging ends, swingletrees pivoted on said bolts, and a pivot bolt passed through the trunnions, the tongue and the strips.

2. A draft appliance comprising a tongue, two hollow trunnions secured one to the under side of the tongue and the other opposite thereof to the upper side, a doubletree composed of an upper and a lower metal strip, each having at its middle a reinforcing piece with a bearing fitting one on each of the trunnions, the ends of the strips at each side of the tongue being converged together, bolts passed through the converging ends, swingletrees pivoted on said bolts, and a pivot bolt passed through the trunnions, the tongue and the strips, and braces extending rear-

wardly from near the ends of the pivot bolt to the tongue.

3. A draft appliance comprising a tongue, two hollow trunnions secured one to the under side of the tongue and the other opposite thereof to the upper side, a doubletree composed of an upper and a lower metal strip, each having at its middle a reinforcing piece with a bearing fitting one on each of the trunnions, the ends of the strips at each side of the tongue being converged together, bolts passed through the converging ends, swingletrees pivoted on said bolts and a pivot bolt passed through the trunnions, the tongue and the strips, braces extending rearwardly from near the ends of the pivot bolt to the tongue, and metallic strips joined to said braces and extending to the rear end of the tongue.

In testimony whereof I affix my signature, in presence of two witnesses.

BENJAMIN F. PINSON, JR.

Witnesses:

T. F. McVAY,
J. F. OLLER.