

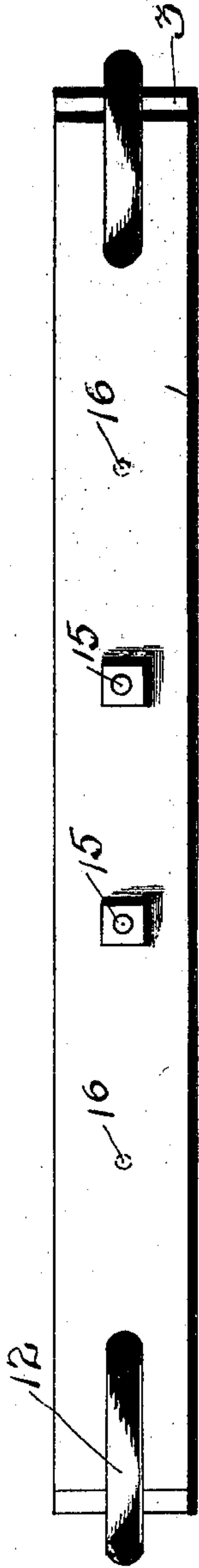
No. 691,897.

Patented Jan. 28, 1902.

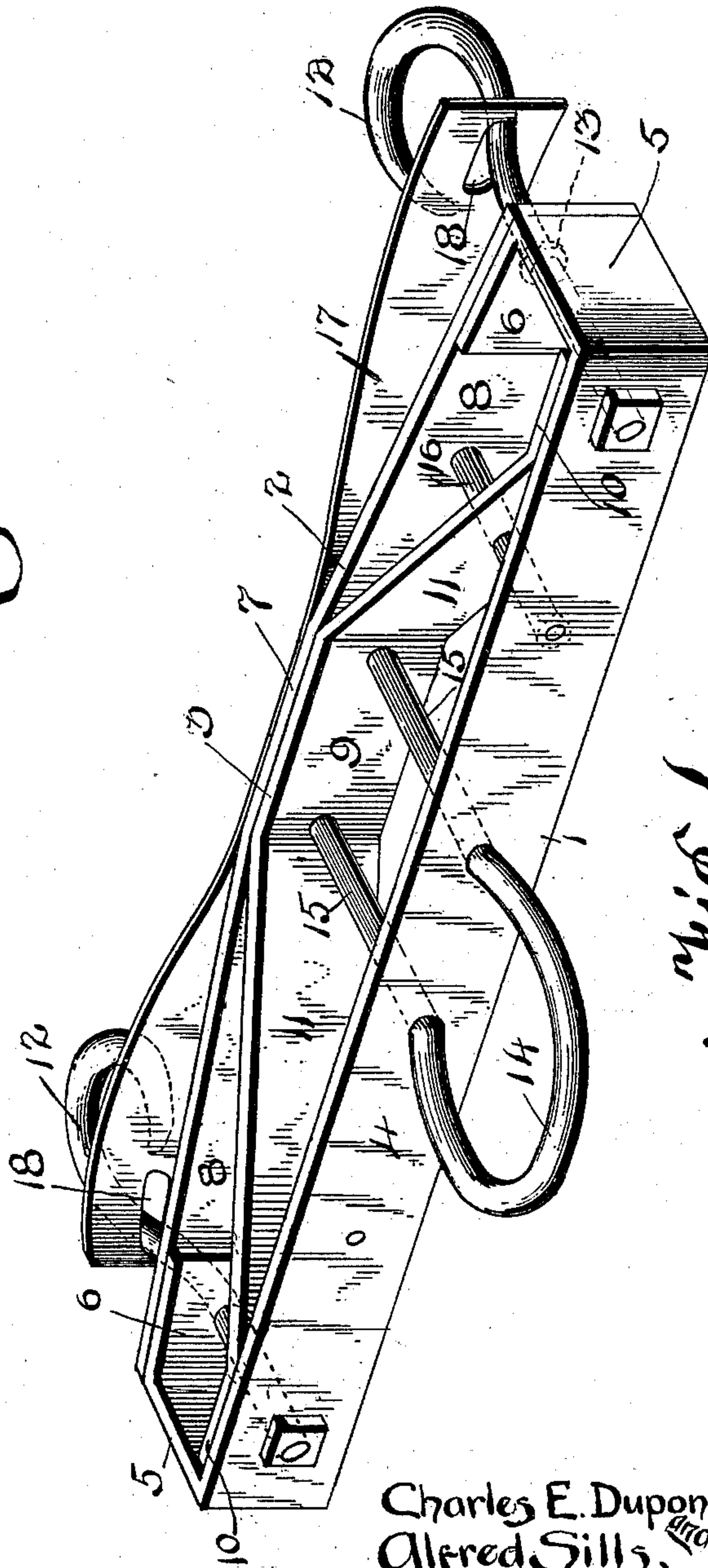
C. E. DUPONT & A. SILLS.  
WHIFFLETREE CONSTRUCTION.

(Application filed Mar. 15, 1901.)

(No Model.)



*Fig. 2.*



*Fig. 1.*

Witnesses:  
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# UNITED STATES PATENT OFFICE.

CHARLES E. DUPONT AND ALFRED SILLS, OF MANCHESTER, NEW HAMPSHIRE.

## WHIFFLETREE CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 691,897, dated January 28, 1902.

Application filed March 15, 1901. Serial No. 51,340. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES E. DUPONT and ALFRED SILLS, citizens of the United States, and residents of Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Whiffletree Constructions, of which the following is a specification.

Our invention relates to improvements in the construction of whiffletrees and analogous articles, and has for its object the providing of a construction which is built up and in its completed form being light and substantially inexpensive and yet possesses durability, the arrangement being such as to withstand the strains, &c., to which it is subjected in use.

A further object is the specific arrangement of the means for preventing accidental disengagement of the traces, &c., carried by the hooks of the tree.

Other objects will be clearly perceived as the invention is hereinafter described.

Our invention consists in the improved whiffletree construction hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings, in which similar numerals of reference indicate similar parts in both views, Figure 1 is a perspective view showing our improved construction. Fig. 2 is a face view of the same.

Before giving a detailed description of the invention we wish to call attention to the fact that the construction herein shown is adapted for whiffletrees, doubletrees, neck-yokes, &c., and we wish it understood that although described in connection with whiffletrees it may be used in other relations without departing from the spirit and scope of the invention as defined in the claims.

The whiffletree shown consists of a series of plates bent into shape and connected together. These plates are three in number, (designated, respectively, as 1, 2, and 3, the plate 1 being the rear one.) The plate 1 is of a length greater than the length of the whiffletree and has an intermediate straight or unbent portion of a length equal to the length of the whiffletree. The ends of the plate are first bent forwardly at substantial right an-

gles to the intermediate portion and then bent inwardly to a point almost parallel with said intermediate portion. We have designated the intermediate portions as 4, the right-angled portions (forming the ends of the tree) as 5, and the inwardly-bent portions as 6.

The plate 2 when bent into shape is of a length equal to the length of the portion 4 and forms the forward side of the construction, as shown. Said plate has a central flat portion 7, from which the ends extend at an angle, the rear faces fitting against the front faces of the portions 6, as shown in Fig. 1. As shown, the point of greatest distance between the plates 1 and 2 is centrally of the two plates, said plates when in position forming the outer walls of the construction.

The plate 3 is in the form of a brace and has its central portion 9 fitting the inner face of the portion 7, while the extreme end portions of said plate 3 fit the inner face of the portion 4 of the plate 1 at a point substantially close to the ends of said portion 4. The intermediate portions 11 of the plate 4 are arranged angularly to the portions 9 and 10.

The three plates are connected together by bolts or their equivalents, as follows: At the ends the hook 12 (or, if desired, an eye may be used) has its shank passing successively through holes made in the portions 8, 6, 10 and 4, said shank having, preferably, an enlargement 13 fitting against the face of the portion 8 and having its end portions arranged in suitable manner as to prevent the hook being withdrawn. This is accomplished by screw-threads, in connection with a nut, by swaging the end or by any other suitable means. Centrally the plates are connected by the eye 14, which extends rearwardly, in a direction opposite the hooks 12, said eye having its ends 15 passing successively through openings made in the portions 4, 9, and 7. As shown, the eye is preferably made of a diameter slightly greater than the distance between the openings made for the ends 15, the point where the ends 15 join the eye thereby forming a stop against the pulling of the eye into and through the openings for the ends 15. The ends 15 after passing through the portion 7 and through the spring 16, hereinafter described, are arranged simi-



larly to the ends of the shanks 13 to prevent a withdrawal of the eye. Intermediate the ends 15 and the shanks 13 are arranged posts or supports 16, having reduced end portions, which enter into openings formed in the portions 4 and 8, thereby forming braces against an inward movement of the plates 1 and 2, said posts passing through the portions 11, as shown. By this construction it will be seen that the plates are held against a separating movement at the ends and at the center, while they are braced against inward movement intermediate the center and ends. There is possible, however, a slight inward movement of the plates 1 and 2 under excessive strain due to the springing of the metal centrally and at the ends; but such movement is normally not present, owing to the presence of the posts 16 and the fact that each of the connections of the plates extends through each of them, tending to prevent an endwise-spreading movement excepting as a body, and this is possible only under excessive strain, the parts immediately righting themselves when the strain is removed.

17 designates a spring or, if desired, a series of springs which extend laterally from the center of the whiffletree, having suitable openings 18 (or, if desired, said openings may be recesses extending from the end of the spring or springs) for the passage of the shank of the hook 12, said openings being arranged so as not to permit the hooked ends of the hook from passing thereinto. As hereinbefore pointed out, said spring is mounted on the ends 15, thus securing the spring or springs to the whiffletree. Said spring is arranged to normally press against the hooked ends and serves to normally close the opening or passage-way leading into the hook, said springs yielding under pressure to permit of the insertion of the traces, &c. While we have shown the spring as of a width equal to the width of the plates 1, 2, and 3, yet it will be understood that said spring may be of less width, so long as it will when in position serve to close the passage-way leading into the hook 12.

Having thus described our invention, what we claim as new is—

1. A whiffletree comprising a series of plates secured against separation at the ends and center and against movement in the opposite direction at points intermediate the center and ends.

2. A whiffletree comprising a series of plates secured against a separating movement at the ends and center respectively by the trace-hooks and the attaching-eye, and secured against movement in the opposite direction at points intermediate the center and ends.

3. A whiffletree comprising a series of plates secured against a separating movement at the ends and center, said plates being of equal width and arranged in the same horizontal plane, said plates being secured against a movement in the opposite direction at points intermediate the center and ends.

4. A whiffletree comprising a series of plates secured against a separating movement at the ends and center respectively by the trace-hooks and the attaching-eye, and posts or supports, having reduced ends fitting within the front and rear plates, said posts serving to prevent a movement in the opposite direction.

5. A whiffletree comprising a plate having its end portions bent at right angles thereto and then bent inwardly; a second plate bent angularly and fitted to the forward face of said inwardly-bent portions of the first plate; a third plate located between said first and second plates and having contact with the ends of the first plate and the center of the second plate; trace-hooks passing through the ends of each of said plates; an attaching-eye passing through the centers of said plates, said hooks and eye preventing a separating movement of the plates; and posts or supports, having reduced ends, fitted in said first and second plates and passing through said third plate, said posts serving to prevent movement of said plates in the opposite direction.

6. A whiffletree comprising a series of plates secured against a separating movement at the ends and center respectively by the trace-hooks and the attaching-eye and secured against movement in the opposite direction intermediate the center and the ends; and a spring or springs, carried by the attaching-eye and extending across the hooked ends of the trace-hooks, whereby the passage-way leading into said hooks will be normally closed.

In witness whereof we have hereunto set our hands in the presence of two witnesses.

CHARLES E. DUPONT.  
ALFRED SILLS.

Witnesses:

AIME E. BOISVERT,  
EMILE LETENDRE.