(No Model.)

S. E. BURKE.

WHIFFLETREE.

No. 472,853 Patented Apr. 12, 1892.

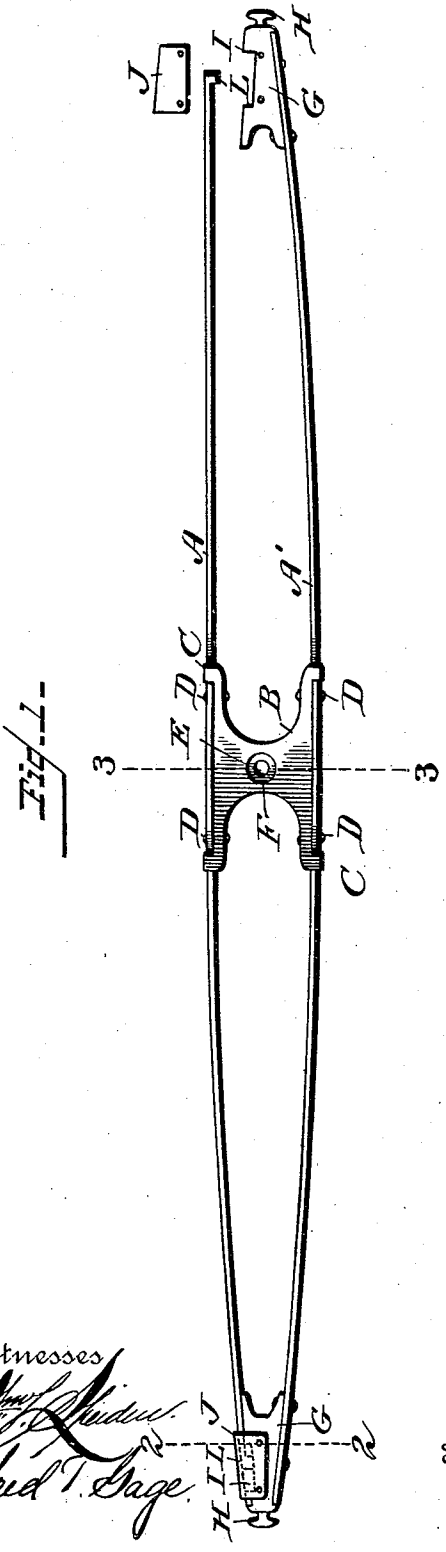

Fig. 1.

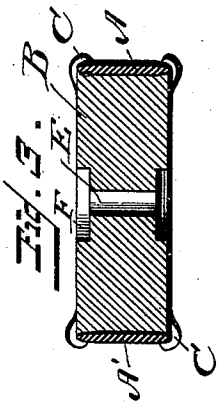

Fig. 3.

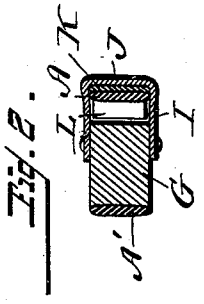

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

STEPHEN E. BURKE, OF EDON, OHIO.

WHIFFLETREE.

SPECIFICATION forming part of Letters Patent No. 472,853, dated April 12, 1892.

Application filed December 8, 1891. Serial No. 414,388. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN E. BURKE, a citizen of the United States, residing at Edon, in the county of Williams and State of Ohio, have invented certain new and useful Improvements in Whiffletrees; and I do declare the following to be 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to whiffletrees, and has for its object to construct a whiffletree so that the longitudinal members thereof will constitute two springs or elastic members, permitting a yielding of the tree to the draft until one of the members is brought against a stop, when the two members form a stiff truss possessing great firmness and stiffness, whereby is obtained initial elasticity that relieves the pull or strain on the horse, and afterward the necessary rigidity requisite to strength and firmness, and the formation of a truss whereby one member braces the other.

To the accomplishment of the foregoing and such other objects as may hereinafter appear, the invention consists in the construction and the combination of parts hereinafter particularly described, and then specified in the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a side elevation of the whiffletree with the fastening-clasp detached at one end. Fig. 2 is a cross-section on the line 2 2 of Fig. 1, and Fig. 3 is a cross-section on the line 3 3 of Fig. 1.

In the drawings, the letters A and A′ designate two longitudinal members of the whiffletree, composed each of spring metal and connected together intermediate of their ends—say at the middle—by a truss-block B, which is formed with ears or lips C, adapted to be turned down onto the two metal plates to hold them to the block and prevent lateral movement, while bolts D, passed through the plates and block, will hold the several parts securely together. The truss-block is also formed with the opening E for the passage of the coupling-bolt, while recesses or cups F, made in the block at each end of the opening, may receive the bushing or washer, of any suitable material, to prevent rattling of the bolt.

To the opposite end of one member, preferably the rear member A′, there are attached metal blocks G, the same being secured to the member by bolts or otherwise, which are formed at their ends with knobs H to receive the traces and on their faces next to the other member with recesses or ways I, the ends of which constitute shoulders or stops. These ways or recesses receive the ends of the opposite members A, which are preferably bent, so as to bear against the face or bottom of the way, although the invention is not limited to such construction; but that construction is preferred, as a firm rest or bearing is thus afforded for the end of the member A.

The two members are brought together at their ends and held together by a sheet-metal or other suitable clasp J, which will be secured by rivets or otherwise to the block G, which clasps shall permit the ends of the member A to move or play therein, the clasps only preventing the two ends from separating apart.

It is designed to have the ends of the members free, so that as tension is put on or taken from off the two members there shall be play to at least one of them, so that there will at first be freedom in the movement, and then a truss shall be formed by the two members, thereby imparting the requisite stiffness and strength to serve the purposes of the whiffletree. For instance, with the parts in their normal position, with no draft on the members, they will bear that relation to each other illustrated in the left of Fig. 1. Now when the draft is applied both members A and A′ will bend or yield in the direction of the pull, so that the requisite elasticity or yielding motion will be given at the beginning of the pull. This continues until the ends of the members A strike against the shoulders or stops formed by the outer ends of the recesses, when the freedom of movement that before existed is checked, and the two members are made to form a truss to each other, so that stiffness and firmness are at once obtained. It will thus be seen that the member A′ is at first allowed the greater movement, as the traces are attached thereto, and that when the ends of the member A and the stops of the block

G are brought together there is an endwise or longitudinal bearing of one member against the other, so that stiffness is imparted to the two and one made to brace the other.

I prefer to line the clasps J with leather K or other suitable material, so as to prevent rattling or grating of the parts by harsh frictional contact.

It should be mentioned that by bending the ends of the member A, hooks L are formed, as shown, which will prevent the possibility of the ends being forced from out of the clasps.

The whiffletree constructed as described is simple, strong, and durable, and possesses the advantages specified of having the greatest elasticity when the draft is first applied and the requisite stiffness after the draft or pull is well on.

The recesses I may be lined with leather, and the ends of the member A may be wrapped with rawhide, so as to prevent the rattling which usually ensues when two metallic bodies are allowed to play on each other; but such is not essential and therefore not illustrated. It is also preferred to make the members A A′ oval in cross-section.

Having described my invention and set forth its merits, what I claim is—

1. A whiffletree comprising two elastic longitudinal members opposite to each other with their ends free to move, means connecting said two members together between their ends, and stops connected to one member adjacent to its ends and arranged beyond the ends of the other member to have them and the ends of said other member brought together after both members have been moved in the same direction, whereby both members are first permitted freedom of movement and afterward the two are caused to brace each other and form a truss, substantially as and for the purposes described.

2. A whiffletree comprising the two longitudinal members connected together intermediate of their ends with their ends free, blocks secured to the ends of one member, and clasps holding the ends of the other member to said blocks, while permitting longitudinal movement of said ends and blocks relatively to each other, substantially as and for the purposes described.

3. In a whiffletree, the combination of the two elastic longitudinal members, the block between the two intermediate of their ends to hold them together at a central point, the blocks formed with ways and secured to opposite ends of one of said members, and clasps holding freely the ends of the other member to said end blocks in position to bear against said block, substantially as and for the purposes set forth.

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

STEPHEN E. BURKE.

Witnesses:
B. F. SHELINE.
ELI SHELINE.