

No. 752,835.

PATENTED FEB. 23, 1904.

F. R. GOODE.
DRAFT EQUALIZER.
APPLICATION FILED JUNE 10, 1903.

NO MODEL.

Fig. 1.

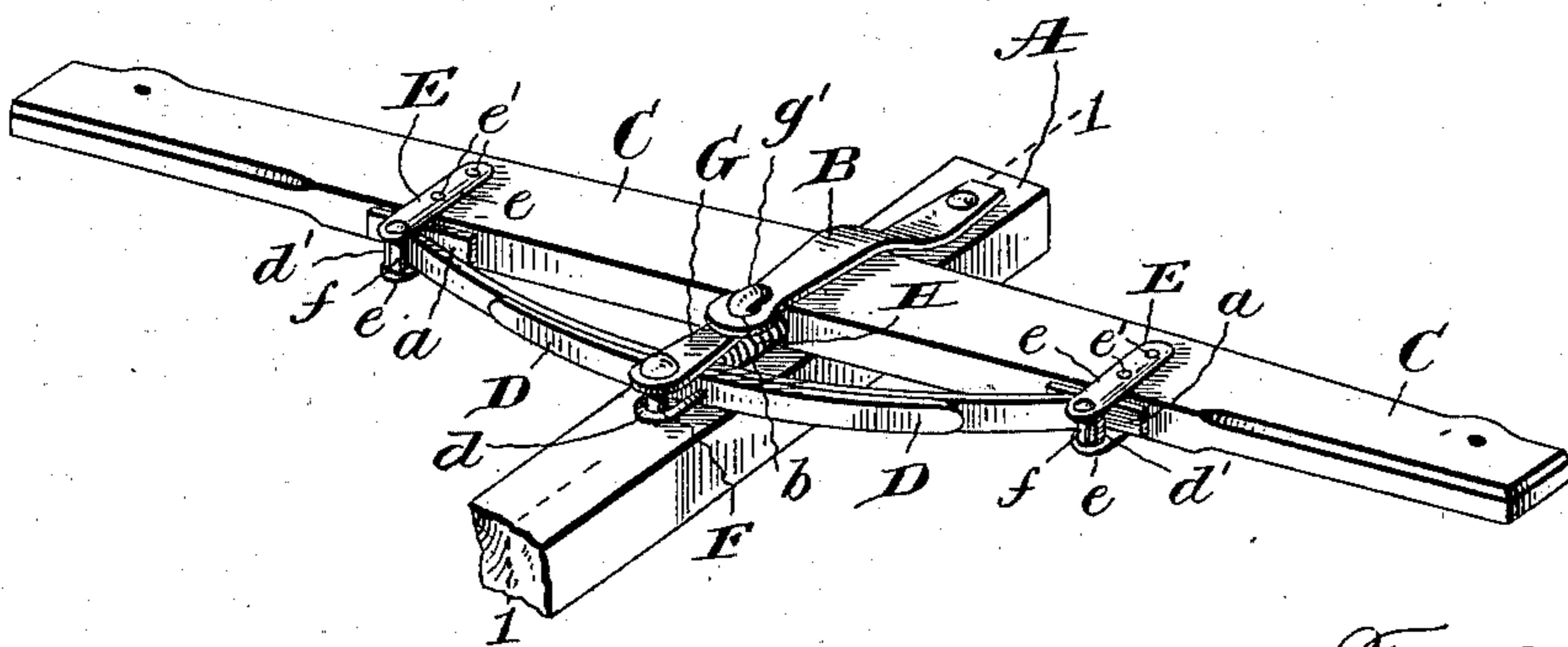


Fig. 5.

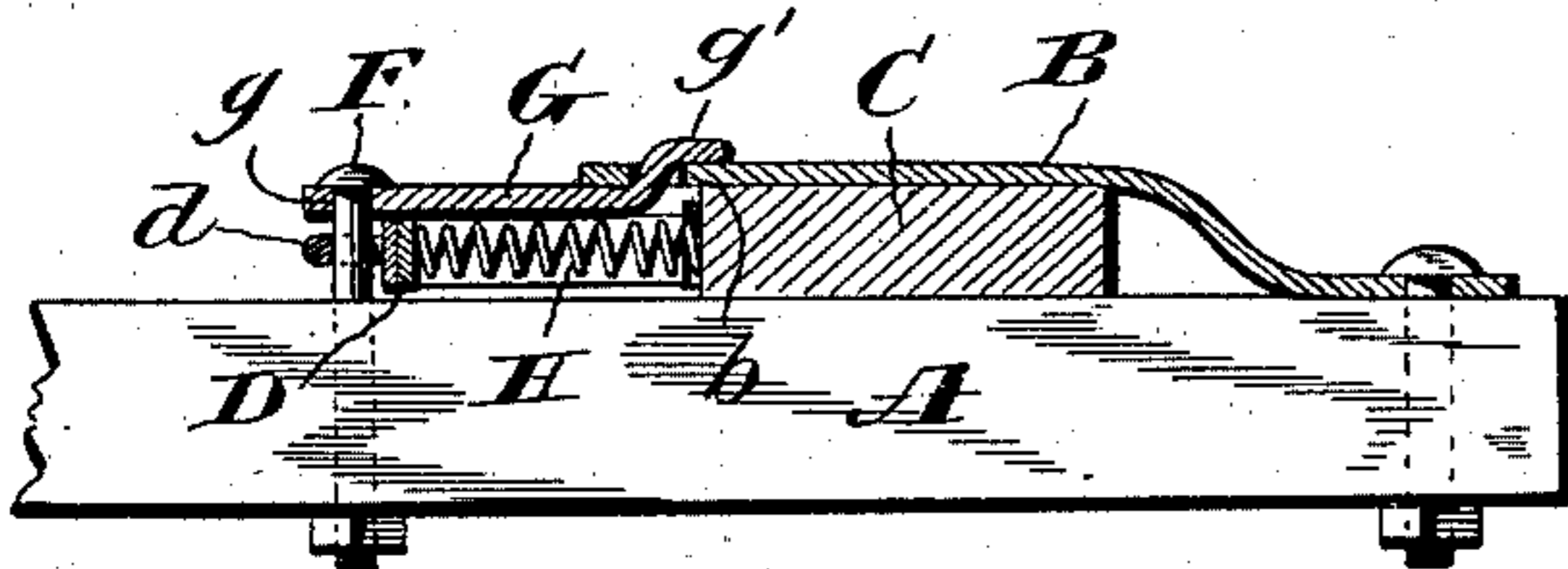


Fig. 2.

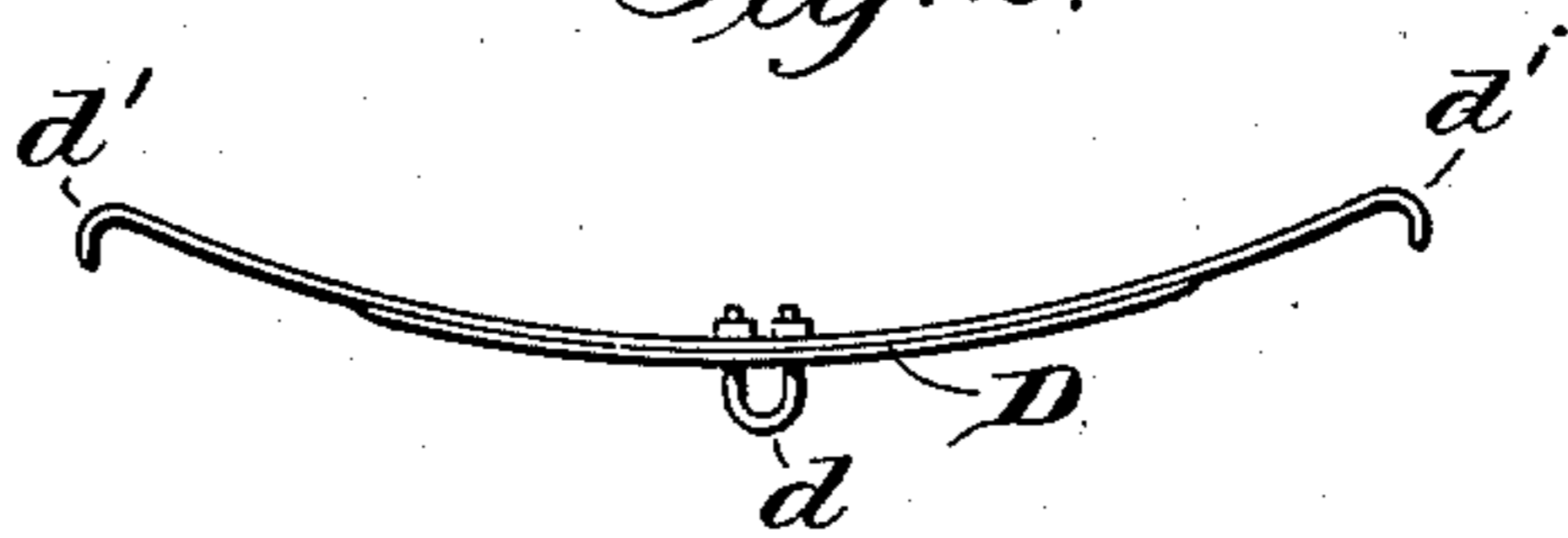
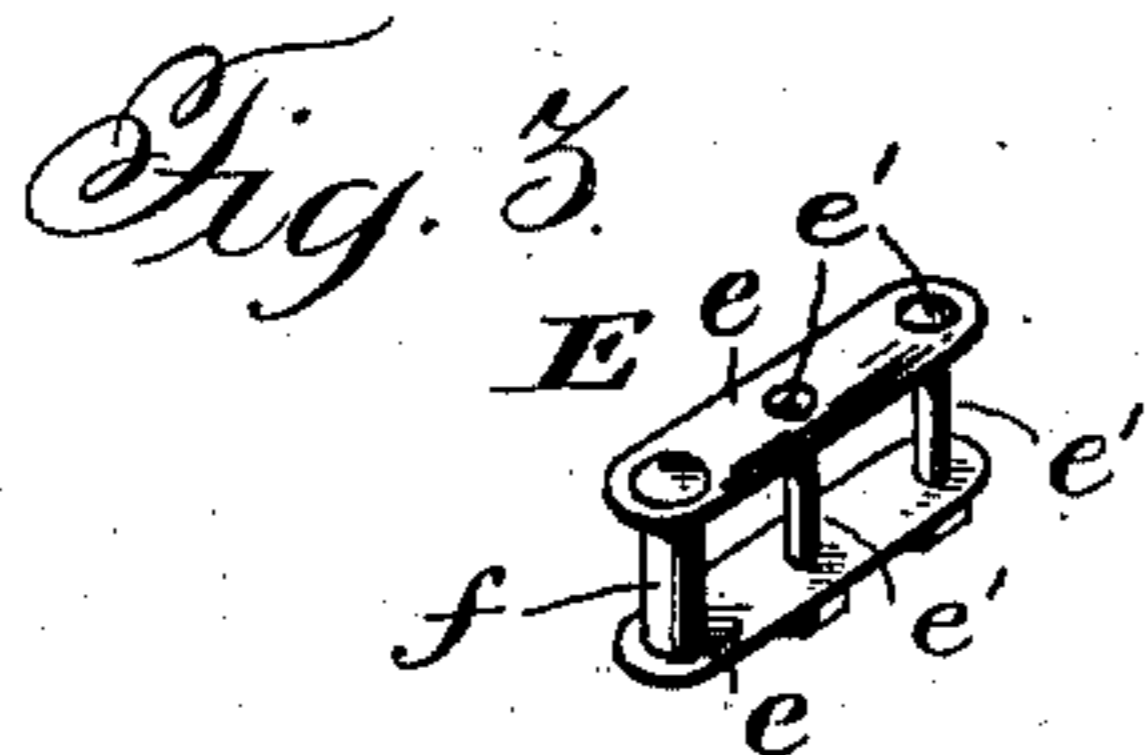
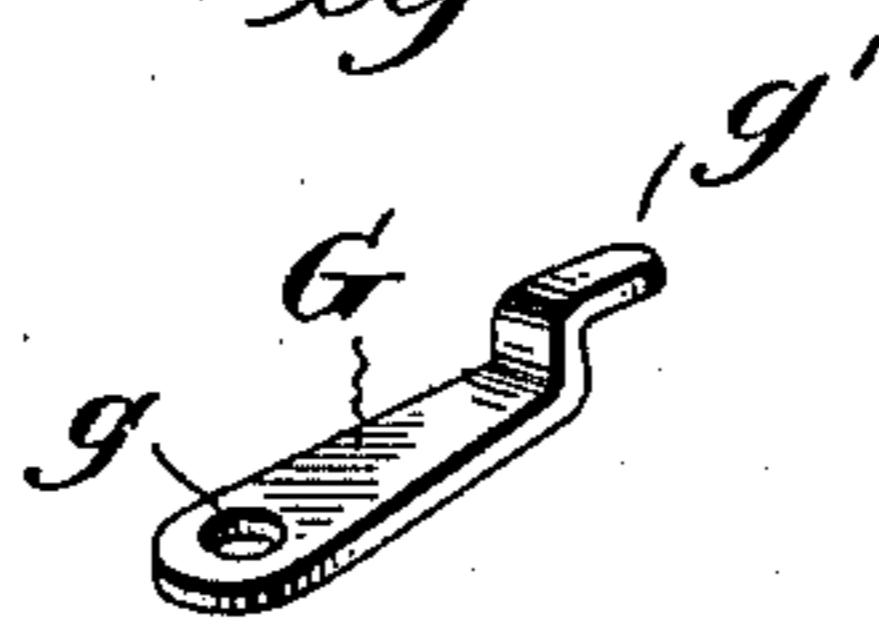


Fig. 4.



Witnesses:

Jas E Hutchinson.
Thos R Heath.

Inventor:

Frank R. Goode,

By *Macmillan*

Attorneys

UNITED STATES PATENT OFFICE.

FRANK R. GOODE, OF DECATUR, ILLINOIS, ASSIGNOR OF ONE-HALF TO
W. B. SPARKS, OF CLINTON, ILLINOIS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 752,835, dated February 23, 1904.

Application filed June 10, 1903. Serial No. 160,881. (No model.)

To all whom it may concern:

Be it known that I, FRANK R. GOODE, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improvement in spring-whiffletrees, and more particularly to an attachment which can be used in connection with the hammer-strap on the wagon-tongue now in use to convert an ordinary whiffletree into a spring-whiffletree.

In the drawings accompanying the specification, wherein a preferable embodiment of my invention is shown and in which like numerals of reference refer to similar parts in the several views, Figure 1 is a perspective view of my improved spring-whiffletree secured upon the tongue. Fig. 2 is a detail view of the spring. Fig. 3 is a detail view of one of the clips on the whiffletree. Fig. 4 is a detail view of the strap used to lengthen the hammer-strap; and Fig. 5 is a section on the line 1 1, Fig. 1.

Referring now more particularly to the drawings, A is a wagon-tongue of the ordinary construction having the usual hammer-strap B secured thereon.

C is a whiffletree arranged to slide between the hammer-strap and the tongue.

D is a bow-shaped spring arranged to be secured to the tongue in front of the whiffletree and against which the draft of the whiffletree is applied. The spring D has secured at a point intermediate its ends the U-shaped staple *d*, through which a bolt F passes to pivotally secure the spring to the tongue.

As the hammer-straps in use are too short to admit of use with my attachment, I have provided an extension therefor. This extension consists of a strap G, formed at its rear end with the aperture *g*, and at its forward end with the upwardly-extending hooked portion *g'*. In use the hooked portion *g'* is adapted to be inserted from beneath through the hole *b* in the end of the hammer-strap B, so that the flat top of the hooked portion will rest upon

the hammer-strap. The rear portion of the strap G is adapted to rest on the spring D with the hole small *g* in alinement with the U-shaped staple small *d*. The bolt F is then passed through the hole *g*, the staple, and the tongue A.

The ends of the bow-shaped spring D are held in engagement with the forward edge of the whiffletree by means of the clips E. These clips consist of two strips of metal *e e*, secured to the top and bottom of the whiffletree by the bolts *e' e'* and projecting over its forward edge. Journaled in the projecting ends of the clips E are friction-rollers *f*, between which and the whiffletree the ends of the spring are adapted to slide when a pull is exerted upon the whiffletree. Wear-plates *a* are secured to the front edge of the whiffletree immediately behind the friction-rollers *f*. The extremities of the spring D are provided with the turned-up portions or hooks *d'* to prevent the ends of said spring from slipping from behind the clips E. Secured to the forward edge of the whiffletree and immediately behind the staple *d* of the spring is a coiled spring F, which is adapted to come in contact with the rear edge of the spring and act as a buffer when any very strong or sudden pull is exerted upon the whiffletree.

When constructing my spring-whiffletree for the first time and not as an attachment for old wagon-tongues, I would dispense with the strap G and use instead a hammer-strap of sufficient length to hold the whiffletree and the spring.

I do not desire to limit myself to the precise form and construction shown in the drawings, as it is obvious that many minor changes might be made thereto without departing from the spirit of the invention.

What I claim is--

1. A device of the character described, comprising a tongue, a hammer-strap secured thereon, a whiffletree arranged to slide between said hammer-strap and tongue, a bow-spring having its central portion secured to the tongue and its end portions bearing against the whiffletree, and a coil-spring interposed between the spring and the adjacent side of the whiffletree.

2. A device of the character described, comprising a tongue, a hammer-strap secured thereon, a whiffletree arranged to slide between said hammer-strap and tongue, a bow-spring having its central portion secured to the tongue and its end portions bearing against the whiffletree, and a coil-spring secured to the side of the whiffletree adjacent the spring.

3. A device of the character described, comprising a tongue, a hammer-strap secured thereon, a whiffletree arranged to slide between said hammer-strap and tongue, a bow-spring having its central portion secured to the tongue and its end portions bearing against the whiffletree, and clips secured to the whiffletree and arranged to embrace the free ends of said spring, said clips being provided at their extremities with friction-rollers arranged to bear against the outside of the spring.

4. A device of the character described comprising a tongue, a hammer-strap secured at one end to the tongue and having an aperture in its free end, a bow-spring having its ends arranged to bear against the whiffletree and provided at its center with a U-shaped staple, and a bolt arranged to pass through the aperture in the hammer-strap, the staple on the spring and the tongue.

5. A device of the character described comprising a tongue, a hammer-strap secured at one end to the tongue and having an aperture in its free end, an extension-strap provided at one end with a hooked portion adapted to engage the aperture in the free end of the hammer-strap and at the other end with an aperture, a bow-spring having its ends arranged to bear against the whiffletree and provided at its center with a U-shaped staple, and a bolt arranged to pass through the aperture in the

extension-strap, the staple on the spring and the tongue.

6. A device of the character described comprising a tongue, a hammer-strap secured at one end to the tongue, an extension-strap secured to the free end of the hammer-strap, a bow-spring having its ends arranged to bear against the whiffletree, and a pivot-bolt arranged to pass through the free end of the extension-strap, the spring at a point intermediate its ends and the tongue.

7. A device of the character described comprising a tongue, a hammer-strap secured at one end to the tongue, an extension-strap secured to the free end of the hammer-strap, a bow-spring having ends arranged to bear against the whiffletree, a pivot-bolt arranged to pass through the free end of the extension-strap, the spring and the tongue, and a buffer secured to the side of the whiffletree adjacent the spring.

8. A device of the character described comprising a tongue, a hammer-strap secured at one end to the tongue, an extension-strap secured to the free end of the hammer-strap, a bow-spring having its ends arranged to bear against the whiffletree, clips secured to the whiffletree and arranged to embrace the free ends of said spring, friction-rollers journaled in the ends of said clips and arranged to bear against the outside of the spring, and a pivot-bolt arranged to pass through the free end of the extension-strap, the spring and the tongue.

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

FRANK R. GOODE.

Witnesses:

EUGENE LINXWEILER,
CHARLES R. BENNETT.