D. W. DAVIS.

DRAFT ATTACHMENT.

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Fig. 1.

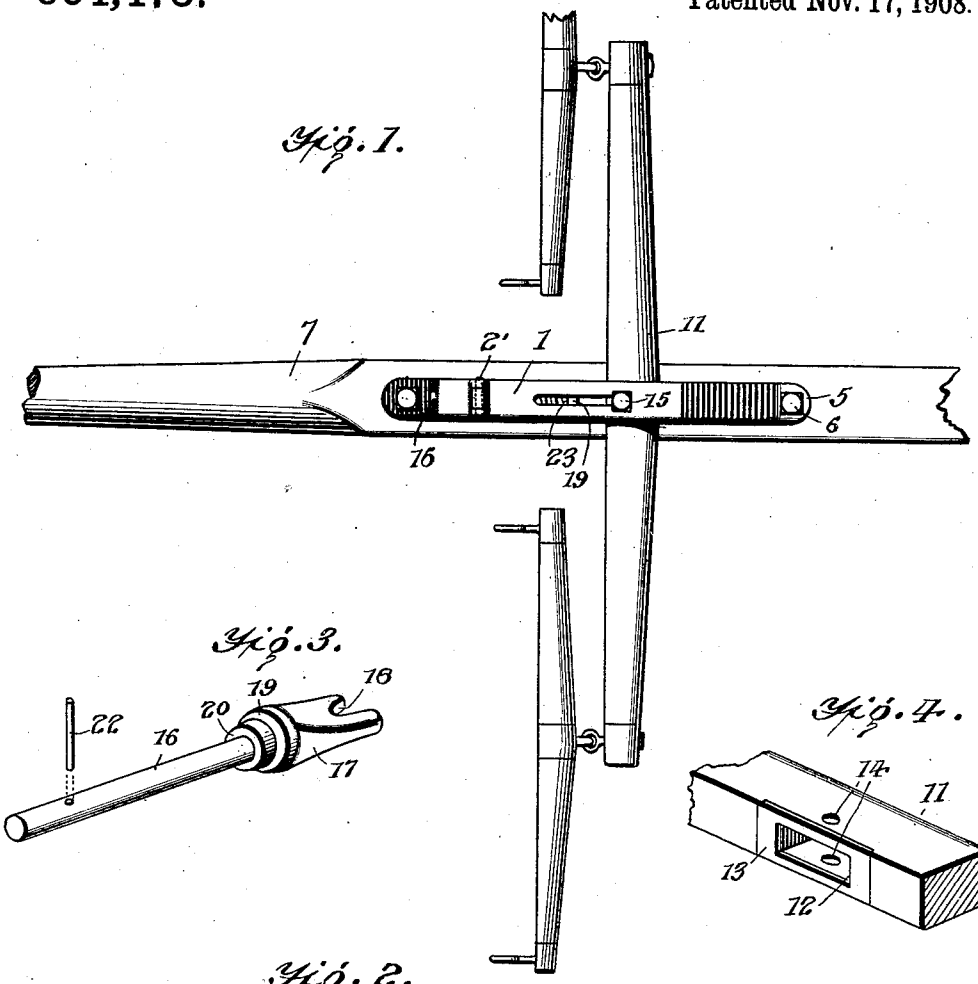
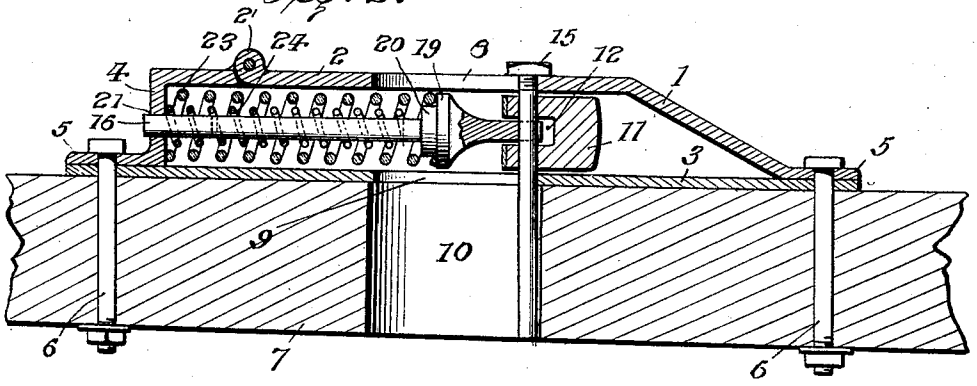


Fig. 3.

Fig. 4.

Fig. 2.



WITNESSES

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DRAFT ATTACHMENT.

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To all whom it may concern:

Be it known that I, DUDLEY W. DAVIS, a citizen of the United States, residing at Dresden, in the county of Muskingum and State of Ohio, have invented certain new and useful Improvements in Draft Attachments, of which the following is a specification.

The invention relates in general to draft attachments and specifically to an apparatus adapted for connection with any wagon tongue of ordinary construction with but slight modification thereof.

The main object of the invention is the production of a draft attachment such as described which shall be adapted to relieve and lessen the direct strain exerted upon a team of horses incident to both starting and continued pull with the usual arrangement between the harness of the team and the whiffletree.

Another object is to provide a draft attachment of few parts of simple construction and positive and efficient action and which shall be adapted for ready connection with and disengagement from a wagon tongue.

The invention will now be described in connection with the accompanying drawings forming a part of the specification and then more particularly pointed out in the claims.

In the drawings, Figure 1 is a broken top plan illustrating the apparatus attached to a wagon tongue. Fig. 2 is a broken longitudinal section, partly in elevation, of the apparatus in operative position on a wagon tongue. Fig. 3 is a perspective of a yoke shaft and retaining pin. Fig. 4 is a broken perspective, partly in section, of a portion of the whiffletree showing the recess for the reception of the yoke shaft.

Referring now to the drawings, wherein like reference numerals refer to like parts throughout the several views, 1 denotes a housing formed of upper and lower members 2 and 3, preferably formed of plate metal of approximately the form illustrated, the former comprising two sections hinged at 2′ and the latter of a single piece of material. The upper member is provided with a front wall 4 and at either end with horizontally-disposed extensions or flanges 5, resting normally contiguous the ends of lower member 3, said members being securely fastened together when in use and the housing as a whole rigidly secured to a wagon tongue through the medium of threaded bolts 6 passing through suitably alined openings formed to receive them in the flanges 5, ends of the lower member of the housing and the wagon tongue 7, said bolts being provided with the usual jam nuts. The upper and lower members 2 and 3 of the housing and the wagon tongue 7 are provided with alined longitudinal slots 8, 9, and 10 respectively, for a purpose to be hereinafter described.

11 denotes the whiffletree positioned intermediate the members 2 and 3 in approximately the usual relative position to the wagon tongue and centrally formed with a recess 12 extending in a rearward direction from its front face, the latter being provided with protecting plate 13. The upper and lower walls of said opening are formed with alined apertures 14 adapted to receive headed bolt 15, designed, when in operative position, to pass through slot 8, apertures 14, slot 9, and extend the depth of slot 10 and retain the whiffletree in proper relative position, slots 8, 9, and 10 being of sufficient length to permit desired movement of said bolt longitudinally of the wagon tongue incident to the pull of the team on the whiffletree.

16 denotes a yoke shaft, horizontally disposed, when in normal situation, between members 2 and 3 of the housing and adapted for movement longitudinally thereof incidental to the movement of the whiffletree. Said shaft is provided with a yoke head 17, said head being formed on one end with yoke 18 adapted to seat within recess 12 in the whiffletree and engage bolt 15, while the other end of said shaft yoke head is formed with a pair of annular shoulders 19 and 20 of different diameters. The opposite end of the shaft is adapted to seat for longitudinal movement in opening 21 in the front wall 4 of member 2 of the housing. A locking pin 22 is adapted for removable connection with the shaft 16 and is designed to hold the shaft yoke head from engagement with bolt 15 when desired, for a purpose to be later explained.

23 denotes a coil spring disposed around shaft 16 and adapted to be put under tension in the forward movement of the whiffletree, the terminals of said spring abutting respectively the front wall 4 of member 2 of the housing and shoulder 19, while within spring 23 is coil spring 24 disposed around shaft 16, the forward terminal of said spring

abutting wall 4 of the housing and the rear terminal being normally spaced from the yoke head, the diameter of said spring being such as to adapt it to abut and be put under tension by a sufficiently forward movement of the shoulder 20, the relative lengths of the two springs being such that spring 23, in the forward movement of the whiffletree, and incidentally shaft 16 and its yoke head, will be put under tension before spring 24, which will thus act as a supplemental resistance to the forward movement of the whiffletree.

The operation of the apparatus is as follows: The members of the housing being assembled in proper relation, its forward end is secured to the top of the wagon tongue through the agency of forward bolt 6, the rear section of member 2 of the housing thrown forward on hinge 2′, shaft 16 forced a short distance forward against tension of spring 23, the whiffletree properly positioned on member 3 of the housing, the rear section of member 2 of the housing turned back in operative position, bolt 15 seated in alined slots 8, 9, and 10 and apertures 14, shaft 16 permitted to move rearwardly the slight distance necessary for yoke head 18 to engage bolt 15, and rear bolt 6 seated, said bolt, in coöperation with its jam nut and forward bolt 6 rigidly securing the apparatus in operative position on the tongue of the wagon. It will be obvious that pull exerted on the whiffletree will cause the forward movement thereof with bolt 15 riding in and being guided by slots 8, 9, and 10, shaft 16 also moving forward under engagement of bolt 15 with yoke 18 of said shaft while the shoulders 19 and 20 will, as the whiffletree and shaft 16 move forward under the continued pull, successively put under tension springs 23 and 24 which thus afford a yielding resistance to the forward movement of the whiffletree and cause a gradual starting of the vehicle, thus relieving the sudden, sharp strain on the team incident to a dead start, the yielding resistance continuing as long as pull is exerted on the whiffletree and lessening the strain on the pulling team.

Should it be desired to remove the whiffletree from between the housing members, pin 22 can be inserted in the opening in shaft 16 designed for its reception when said opening has been forced beyond wall 4 of member 2 of the housing, said pin of course then abutting said wall under tension of the springs 23 and 24 and holding the shaft yoke from engagement with bolt 15, which can then be removed and the whiffletree slipped from its place between the housing members.

From the above it will be obvious that I have provided a draft attachment of simple and effective construction, the spring elements of which tend to keep in proper engagement the yoke and coacting bolt, while performing their primary function of relieving strain, while the recess in the whiffletree tends to further reduce the liability of accidental disengagement of said yoke from its normal contact with the whiffletree pivot without in any way restricting the movement of said whiffletree.

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

1. In a draft attachment, a housing comprising an upper and lower member, means for connecting the housing to a wagon tongue, a whiffletree pivotally supported and adapted for movement longitudinally of and between said members, a shaft supported between said members and engaging the whiffletree pivot, means for holding said shaft from said engagement, said means passing solely through said shaft and bearing against the forward face of said upper member, means disposed around said shaft for resisting the forward movement of the whiffletree, and means adapted to supplement said resisting means.

2. In a draft attachment, a housing, means for connecting the housing to a wagon tongue, a whiffletree supported and adapted for movement longitudinally of and within the housing, a shaft supported in the housing and engaging the pivot of the whiffletree, means for holding said shaft from said engagement, said means passing solely through said shaft and bearing against the forward face of the housing, and a plurality of springs concentrically disposed around said shaft for resisting the forward movement of the whiffletree.

3. In a draft attachment, a housing comprising an upper hinged member and a lower member formed with alined longitudinal slots, means for connecting the housing to a wagon tongue, a whiffletree pivotally supported and adapted for movement longitudinally of and between said members, the pivot of the whiffletree engaging and sliding in said slots in the movement of the whiffletree, a shaft supported between said members and engaging the whiffletree pivot, a bolt adapted to hold said shaft from said engagement, said shaft being formed with a plurality of shoulders, a spring disposed around said shaft and bearing on one of said shoulders, and a second spring disposed around said shaft within the first spring and terminally positioned to be engaged by another of said shoulders in the movement of the whiffletree.

4. In a draft attachment, a housing comprising an upper and lower member formed with alined longitudinal slots, means for connecting the housing to a wagon tongue, a whiffletree pivotally supported and adapted for movement longitudinally of and between said members, the pivot of the whiffletree engaging and sliding in said slots in the move-

ment of the whiffletree, a shaft supported between said members, said shaft being formed with a yoke end to loosely engage the whiffletree pivot and with a plurality of shoulders, a spring disposed around said shaft and bearing on one of said shoulders, and a second spring disposed around said shaft within the first spring and terminally positioned to be engaged by another of said shoulders in the movement of the whiffletree.

5. In a draft attachment, a housing comprising an upper and lower member formed with alined longitudinal slots, means for connecting the housing to a wagon tongue, a whiffletree pivotally supported and adapted for movement longitudinally of and between said members, said whiffletree being formed with a recess, the pivot of the whiffletree passing through the recess and engaging and sliding in said slots in the movement of the whiffletree, a shaft supported between said members, said shaft being formed with a yoke end to loosely engage the whiffletree pivot and with a plurality of shoulders, a spring disposed around said shaft and bearing on one of said shoulders, and a second spring disposed around said shaft within the first spring and terminally positioned to be engaged by another of said shoulders in the movement of the whiffletree.

6. In a draft attachment, a housing comprising an upper and lower member formed with alined longitudinal slots, means for connecting the housing to a wagon tongue, a whiffletree pivotally supported and adapted for movement longitudinally of and between said members, said whiffletree being formed with a recess, the pivot of the whiffletree passing through the recess and engaging and sliding in said slots in the movement of the whiffletree, a shaft supported between said members, said shaft being formed with a yoke end to seat in said recess and loosely engage the whiffletree pivot and with a plurality of shoulders, a spring disposed around said shaft and bearing on one of said shoulders, and a second spring disposed around said shaft within the first spring and terminally positioned to be engaged by another of said shoulders in the movement of the whiffletree.

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

DUDLEY W. DAVIS.

Witnesses:
ARTHUR C. LINDSAY,
NELLIE H. MCCANN.