

UNITED STATES PATENT OFFICE.

JAMES REED, OF PADUCAH, KENTUCKY, ASSIGNOR OF TWO-THIRDS TO
JOSEPH A. LENDLER AND THOMAS E. LYDON, OF SAME PLACE.

WHIFFLETREE-CLIP.

SPECIFICATION forming part of Letters Patent No. 616,804, dated December 27, 1898.

Application filed April 5, 1898. Serial No. 676,567. (No model.)

To all whom it may concern:

Be it known that I, JAMES REED, a citizen of the United States, residing at Paducah, in the county of McCracken and State of Kentucky, have invented new and useful Improvements in Whiffletree-Clips, of which the following is a specification.

This invention relates to improvements in whiffletrees; and it has for its prime object to improve the clips and hooks on the ends thereof, so as to render them very effective and easy to operate.

A further object of the invention is to so construct the clip that it may be adapted for use on any and all whiffletrees, regardless of the size, and is not liable to work loose.

A still further object of the invention is to provide an improved hook to receive the trace-eye and to so operate in conjunction with the clip that it will always tend to remain in a locked or closed position while in use and will permit of a quick and ready detachment in releasing the trace.

Other objects and advantages will appear from the following description and claims when taken in conjunction with the annexed drawings, in which—

Figure 1 is a longitudinal sectional view of my improved clip applied to a whiffletree with parts in section and parts broken away. Fig. 2 is a sectional view taken in the plane and at the point indicated by the dotted line *xx* on Fig. 1 with a part of the hook broken away. Fig. 3 is a detail sectional view taken at the point and indicated by the dotted line *yy* on Fig. 1, the hook being removed. Fig. 4 is a perspective view of my improvements attached to a part of a whiffletree; and Fig. 5 is a view, partly in elevation and partly in section, of a modified construction of the clip and hook, showing the same attached to a part of a whiffletree.

Referring by letter to said drawings, A indicates the clip, and B a whiffletree, which latter may be of the form and material usually employed.

The clip A may be composed of any suitable metal and for the sake of cheapness may be cast in a single piece, although I do not wish to confine myself to casting it. This

clip (there being one employed on each end of the whiffletree) is provided at its outer end, which extends beyond the end of the whiffletree and is hollow, with a transverse slot *a*, and on each side of the slot within the clip are inwardly-directed bearing-lugs *b* for the cross-head of the hook. These bearing-lugs extend inwardly a sufficient distance and are tapered to form wedges, as shown. The forward set of lugs *b* are recessed, as shown at *c*, to form a seat for the cross bar or head *d* of the hook C, which is journaled thereon. The clip is also provided with longitudinal branches *e* and *f*, which are of a sufficient length and may be pierced transversely at a suitable point to receive screws *g* or other suitable fastening devices to assist in holding the clip on the whiffletree.

By the provision of the lugs *b*, which terminate in wedges, it will be seen that when the clip has been forced or driven on the end of the whiffletree said wedges will split the wood and displace the same, so as to force such displaced parts against the walls of the clip, which will aid very materially in holding the clip on the whiffletree and will prevent the same from becoming loose when shrinkage takes place or from other cause.

The hook C is provided at its inner end with the cross-head *d*, which may be so shaped as to snugly bear in the recesses *c* of the forward inner lugs *b*, and the slot *a* in the clip should be of a length and width sufficient to permit the cross-head to be inserted, and there should be sufficient space within the clip to permit the hook, with its cross-head therein, to be turned at least a quarter of a revolution, so that the said cross-head may be seated on the lugs. I do not wish to be understood as confining myself to having the lugs tapered so as to form wedges, as in some cases the feature of wedges might be omitted and the lugs serve only as journal-bearings and means for strengthening the clip at the slotted end. The hook C is provided at its outer or opposite end with a cross-head *h*, which may be much lighter than the cross-head *d* at its opposite end, and this outer cross-head is designed to be received by a keeper D, which may be secured to or formed on the outer side of the branch *f* of

the clip. The keeper which I have shown is composed of a forwardly-directed branch *i* and two lugs *j* at the outer end of the branch *i*, which lugs are directed laterally and are preferably beveled inwardly on their inner sides, as shown at *k*, so as to serve more effectively in holding the cross-head *h*, seated on the lugs of the keeper. It is obvious that the construction of the keeper might be varied to suit the dictation of the manufacturer, it being only necessary that the keeper should be so constructed as to prevent the cross-head from casual displacement.

In operation when the hooks have been placed in the clips and the clips secured on the whiffletree said hooks are allowed to swing freely in their bearings and are always in a position ready for application to the trace-eye. When the eye of the trace has been received by the hook, by simply turning the hook inwardly and placing its cross-head in the keeper as long as any tension remains on the trace the hook will be prevented from disconnection. In fact, the weight of the trace itself is sufficient to keep the hook properly locked.

Referring now more particularly to Fig. 5 of the drawings, in which I have illustrated a modification, *A'* indicates the clip, which may be secured on the whiffletree in any suitable manner. In this construction I omit the slotted end of the clip and also the internal lugs or bearings for the hook and provide the rear part of the clip with a rearwardly and inwardly directed hook *E*, which may be formed integral with the clip and secured thereto in any suitable manner, and I provide the hook *C'* with an eye or slot at its rear end, as shown at *F*, to receive the hook *E*, and this eye *F* is formed in an inwardly-directed branch *G* of the hook, the eye *F* being sufficiently long to permit a certain amount of play, so as to allow the cross-head *h'* to be placed into and removed from the keeper *D'*. In this modified construction the operation is substantially the same as that in the main construction, the eye of the trace being received in the hook *C'* when the cross-head *h'* is placed over the lugs of the keeper. To remove the trace, it is simply necessary to draw the cross-head *h'* out of the keeper and lift the trace-eye from the hook, the slot *F* affording sufficient play to permit the rear end of the hook *C* being drawn outwardly, so that said hook may swing in a hinged manner on the hook *E*.

Having thus described my invention, what I claim is—

1. A whiffletree-clip hollow at its outer end

and having a transverse slot in said outer end and bearings within the same, and also having a keeper on its forward outer side; in combination with a hook having a cross-head at each end, one of the cross-heads being arranged in the hollow end of the clip against the bearings thereof, and the other cross-head adapted to be received by the keeper, substantially as specified.

2. The slotted clip having the bearing-lugs on its inner side, said lugs being tapered and the forward ones provided with recesses; in combination with the hook having the cross-head on its inner end adapted to bear in the recesses of the bearing-lugs, and also having a cross-head at its opposite end, and the clip having the keeper on its forward side provided with the branches having their inner sides inclined inwardly, substantially as specified.

3. A whiffletree-clip having its outer end hollow and slotted and also having the internal lugs forming bearings and tapered to form wedges so as to serve the additional function of means for securing the clip on the end of a whiffletree; in combination with a hook having a cross-head at one end arranged in the hollow end of the clip against the bearings thereof, substantially as specified.

4. A whiffletree-clip having its outer end hollow and slotted and also having internal lugs disposed at opposite sides of the forward portion of the slot and forming bearings; in combination with a hook extending through the slot of the clip and having a cross-head at one end arranged in the hollow end of said clip against the bearings thereof, substantially as specified.

5. The combination with a clip adapted to be secured upon the end of a whiffletree and having a keeper on its forward side composed of a forwardly-extending arm and two lugs extending laterally outward from said arm; of a hook loosely and detachably connected at one end to the clip and having its other end seated between the lateral lugs of the arm on the clip and provided with a cross-head bearing against the inner sides or rear sides of said lugs, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES REED.

Witnesses:

WM. LYDON,

WM. HOFFMAN.