

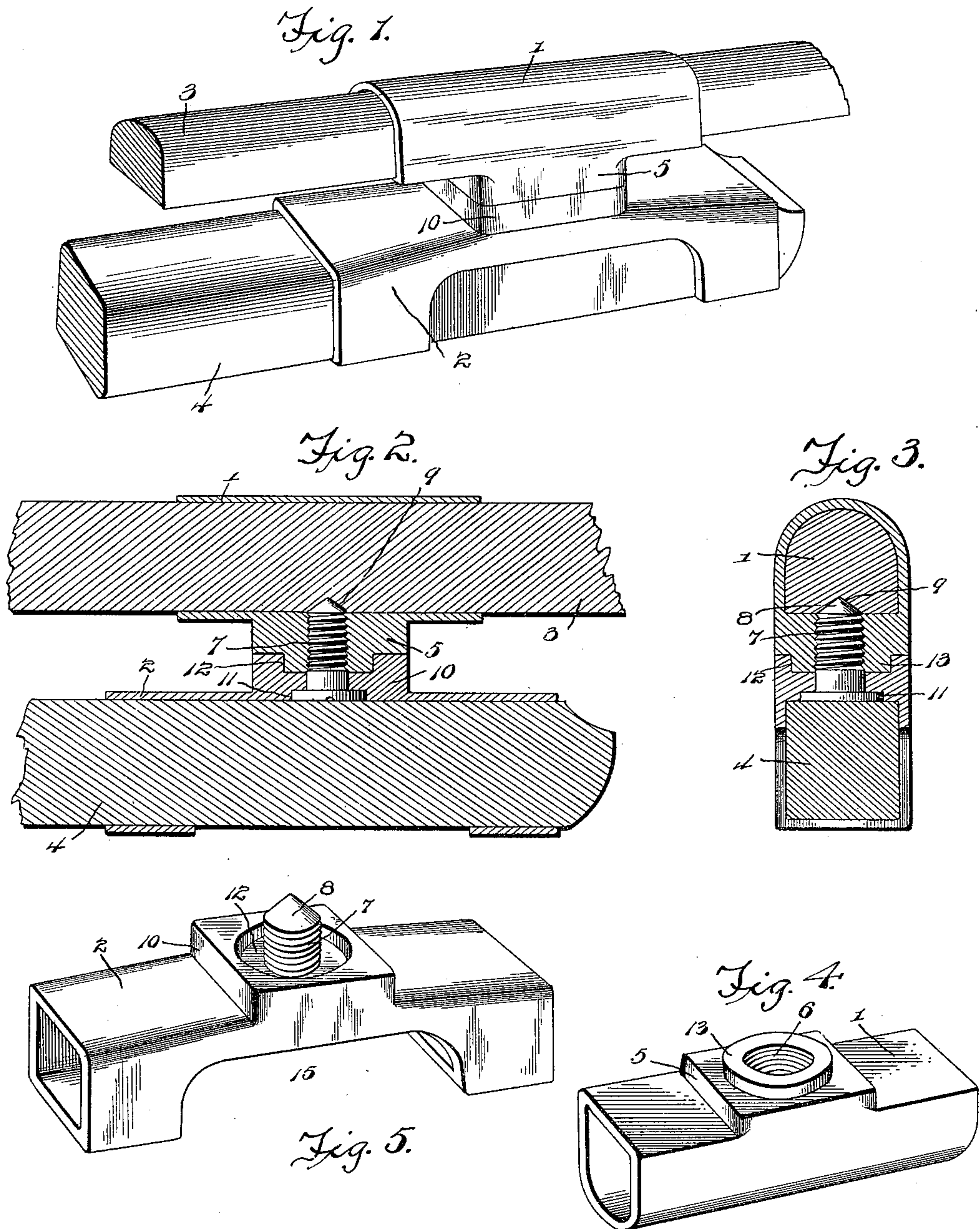
No. 631,565.

Patented Aug. 22, 1899.

C. H. FALKENSTEIN.  
WHIFFLETREE.

(Application filed Feb. 8, 1899.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

CHARLES H. FALKENSTEIN, OF WEST SUPERIOR, WISCONSIN, ASSIGNOR OF  
ONE-HALF TO GEORGE W. YOUNGBLOOD, OF SAME PLACE.

## WHIFFLETREE.

SPECIFICATION forming part of Letters Patent No. 631,565, dated August 22, 1899.

Application filed February 8, 1899. Serial No. 704,931. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. FALKENSTEIN, a citizen of the United States, residing at West Superior, in the county of Douglas and State of Wisconsin, have invented a new and useful Whiffletree, of which the following is a specification.

The invention relates to improvements in whiffletrees.

10 The object of the present invention is to improve the construction of whiffletrees, more especially the means for pivotally connecting them together or to the pole of a vehicle or the cross-bar of a pair of thills, and to increase the  
15 strength and durability of the whiffletrees and enable the same to be pivotally connected without perforating them for the reception of pivot-bolts.

20 The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is a perspective view of a device constructed in accordance with this invention and shown applied to a portion of a whiffletree at one end of a double-tree. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse section.  
30 Fig. 4 is a detail perspective view of the upper sleeve, illustrating the construction of the socket. Fig. 5 is a similar view of the lower sleeve.

35 Like numerals of reference designate corresponding parts in all the figures of the drawings.

40 1 and 2 designate upper and lower sleeves constructed of steel or other suitable material and designed to embrace, respectively, a singletree 3 and a doubletree 4; but instead of applying the coupling to two whiffletrees it may be employed for pivoting the double-tree to a pole or a singletree to the cross-bar of a pair of thills. The upper sleeve is pro-  
45 vided at its lower face with a depending integral offset or socket 5, which is interiorly threaded at 6 to receive a coupling-screw 7, and the latter, which has a tapered point 8, extends into the upper sleeve 1 and engages  
50 a concavity 9 of the lower face of the singletree, whereby the latter is secured within the

sleeve. The lower sleeve, which embraces the doubletree, is provided at its upper face with an integral offset or socket 10 and has an annular recess 11, formed in the walls thereof, 55 at the lower end of the same, to receive the head of the screw, which is inverted. The upper portion of the socket is provided with a recess 12, forming a female member and receiving a depending annular flange 13, which 60 constitutes the male member of the coupling. The bearing-faces of the socket of the lower sleeve are smooth, and the lower portion and head of the screw are also smooth and are adapted to turn in the bearing formed by the 65 socket of the lower sleeve. The upper face or end of the lower socket bears against the upper socket outside of the depending flange 13, and the head of the screw is flush with the lower face of the upper portion of the sleeve 70 2, being countersunk therein, as clearly shown in Figs. 2 and 3 of the accompanying drawings. The short coupling-screw firmly connects the upper and lower sleeves, and as it terminates short of the whiffletrees and does 75 not extend through the same they are not weakened by perforations and are enabled to wear much longer than those that are perforated for pivot-bolts. The sleeves also strengthen the whiffletrees and increase their 80 durability by embracing them at the point of connection. The lower sleeve is open at its lower portion between its ends at 15 to increase the lightness of the device, and one end of the bottom 2 is preferably perforated 85 to receive a small screw, which engages the doubletree and retains the lower sleeve thereon.

90 The invention has the following advantages: The device, which is simple and comparatively inexpensive in construction, is strong and durable and adapted to be applied to whiffletrees for connecting a singletree to a doubletree or a doubletree to a pole or a singletree to the cross-bar of a pair of thills. 95 The whiffletrees are not weakened by perforating them for the reception of pivot-bolts; but they are strengthened and supported by the sleeves which embrace them and increase their durability. The pointed end of the 100 screw which engages a concavity of the lower face of the singletree 3 locks the same against



longitudinal movement, and the head of the bolt, which is flush with the inner face of the lower sleeve, abuts against the doubletree 4.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

10 1. A device of the class described comprising upper and lower sleeves adapted to receive and encircle whiffletrees or bars and provided with interlocked intervening sockets adapted to rotate on each other, one of the sockets being threaded and a short screw engaging the  
15 threaded socket and provided with a head interlocked with the other socket, said screw terminating at the end of the sockets, whereby the parts are pivotally connected without  
20 perforating the whiffletrees, substantially as described.

2. A device of the class described comprising upper and lower transversely-continuous sleeves provided with intervening interlocked  
25 sockets, one of the sockets being threaded and the other socket being provided with a smooth annular recess, and a short coupling-screw engaging the threaded socket and having its head arranged in the said annular recess,  
30 whereby it is interlocked with the adjacent sleeve, said head being flush with the inner face of the same to enable such sleeve to be readily placed on and removed from a whiffletree, substantially as described.

35 3. A device of the class described comprising upper and lower transversely-continuous sleeves having intervening interlocked sock-

ets, one of the sockets being threaded and the sleeve having the other socket being provided at a point opposite the same with an opening, 40 a short coupling-screw engaging the threaded socket and having its head interlocked with the other sleeve and disposed opposite said opening, substantially as described.

4. A device of the class described comprising upper and lower transversely-continuous sleeves having interlocked sockets, one of the sockets being threaded, and the sleeve having the other socket being provided with an opening, and a short coupling-screw engaging 50 the threaded socket and having its head disposed opposite said opening, the other end of the screw being tapered and adapted to engage a whiffletree, substantially as and for the purpose described. 55

5. The combination with two imperforate bars, such as whiffletrees, of pivotally-connected sleeves extending continuously around their respective bars, and provided on their adjacent surfaces with meeting offsets, one of 60 which has a smooth opening and the other a threaded opening, and a connecting-screw having corresponding smooth and threaded portions for engagement therewith and arranged with its head bearing against one of 65 the bars, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES H. FALKENSTEIN.

Witnesses:

J. DE LAMOTTE,  
T. M. THORSON.