

No. 768,476.

PATENTED AUG. 23, 1904.

G. L. MILLER.  
WHIFFLETREE COUPLING.  
APPLICATION FILED JAN. 27, 1904.

NO MODEL.

FIG. 1.

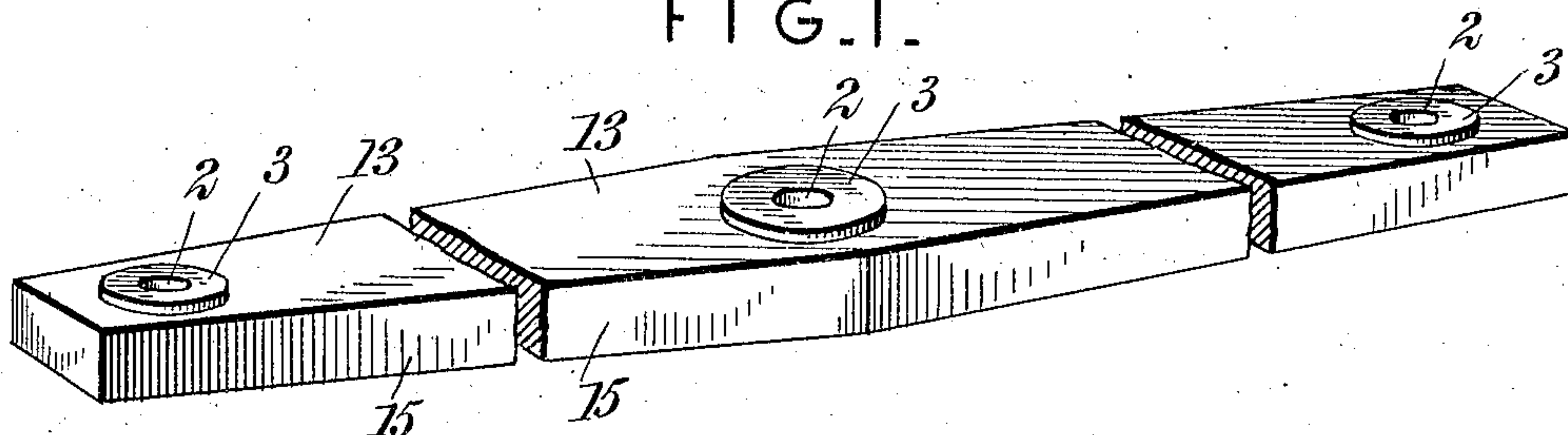


FIG. 2.

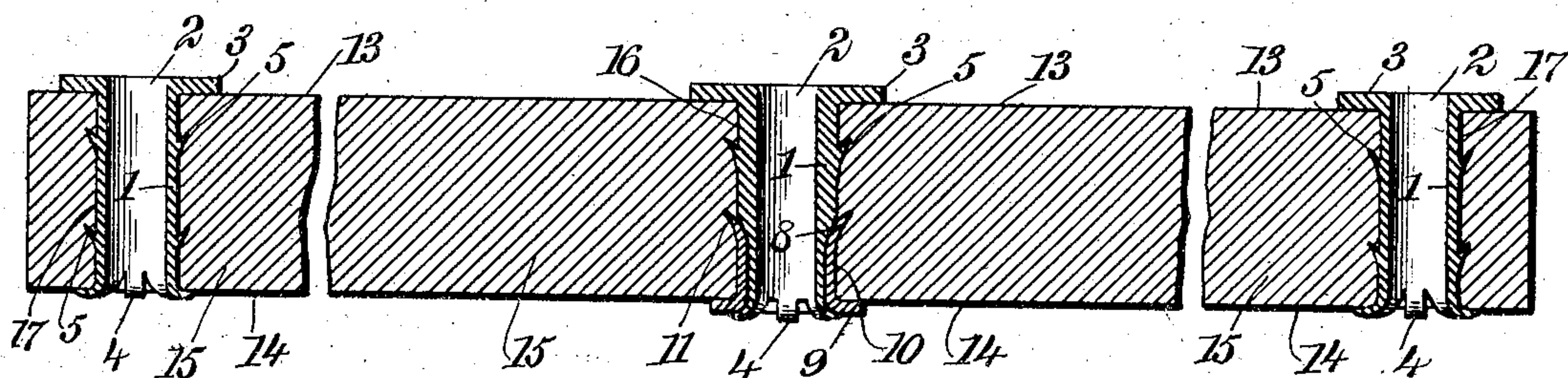


FIG. 3.

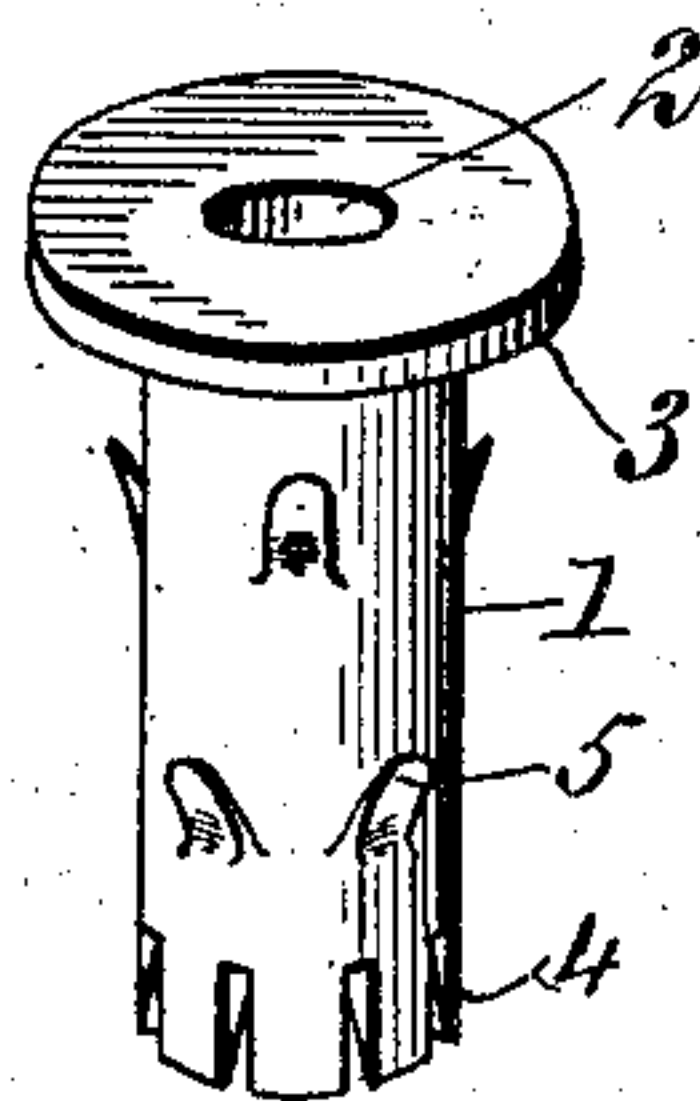


FIG. 4.

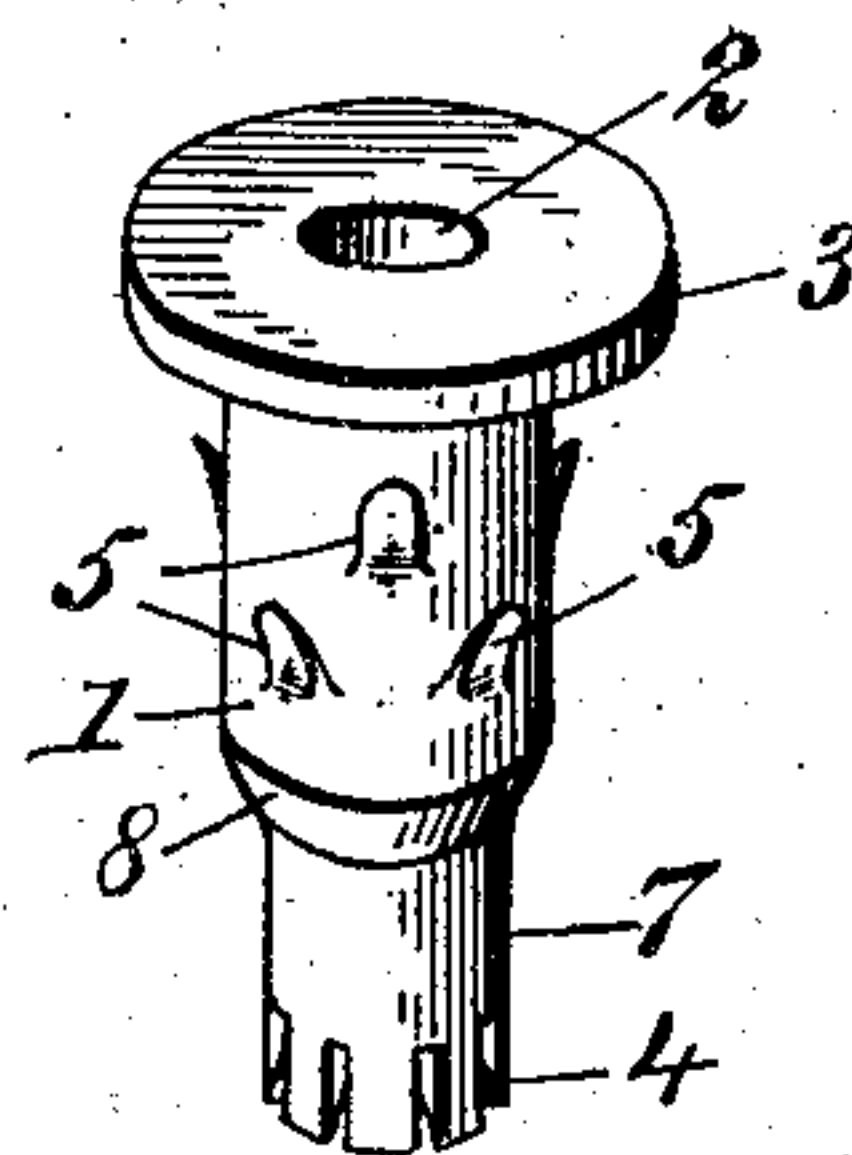
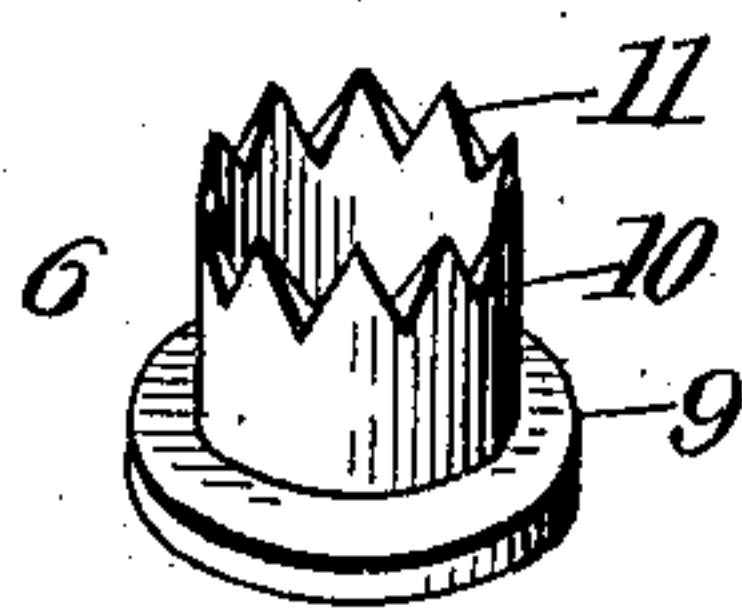


FIG. 5.



WITNESSES:

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INVENTOR  
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# UNITED STATES PATENT OFFICE.

GEORGE LOUIS MILLER, OF SOCIALVILLE, OHIO.

## WHIFFLETREE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 768,476, dated August 23, 1904.

Application filed January 27, 1904. Serial No. 190,801. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE LOUIS MILLER, a citizen of the United States, and a resident of Socialville, in the county of Warren and State of Ohio, have invented a new and Improved Whiffletree-Coupling, of which the following is a full, clear, and exact description.

My invention relates to coupling devices, and is especially useful in couplings for connecting the whiffletree, doubletree, or coupling-pole of a carriage or wagon with the cross-bar. It can be applied to the center of bolsters or axles to receive the coupling-pin or king-bolt or wherever the bore in a wood or soft structure requires a protecting-lining. As a clamping device it may be used to fasten separate parts together and will constitute a strong brace member for the structure.

The principal objects of my invention are to more effectually prevent the coupling from undue wear, whereby rattling, squeaking, or tipping of the whiffletree is prevented, and to form top and bottom bearing-plates for the whiffletree or other draft member in order to prevent the wear of the wood in the places where the coupling-pin or king-bolt engages therewith. It may also be applied to old doubletrees, coupling-poles, bolsters, &c., that have become useless by reason of the great wear caused by the coupling-bolts, making them practically as strong as new ones. My coupling can be applied without the use of nails, screws, or other securing means and without requiring the services of a mechanic or skilled workman. It is extremely simple in construction and can be manufactured at a very low cost.

My invention will be better understood by reference to the following description and accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, while its scope will be pointed out in the appended claims.

Figure 1 is a perspective view showing my invention applied to a whiffletree or doubletree. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a perspective view of one form of my device, and Figs. 4 and 5 are per-

spective views of the parts constituting another form of my invention.

Referring first to Fig. 3, 1 indicates the tubular body portion of my coupling, having an internal bore 2, which is adapted to receive the coupling-pin, king-bolt, or other retaining device. On one end of the tubular body is an annular flange 3, which is adapted to bear against the top or bottom of the whiffletree or other draft member and forms a bearing-plate for the head of the coupling-pin or a bearing-surface between the whiffletree and the cross-bar to which it is attached. One end of the coupling is serrated or provided with tongues or teeth 4; which may be bent outwardly into engagement with the face of the draft member, forming a retaining-flange for the coupling. In case the coupling is inverted in order that the flange 3 may serve as a bearing-plate for the lower side of the whiffletree the serrated flange will then constitute a bearing-surface for the head of the coupling-pin. In order to more securely hold the coupling in the bore of the draft member, I provide the intermediate portion of the coupling with projecting points or spurs 5 to engage the inner wall of said bore. The manner of applying this form of coupling to a draft member is clearly indicated at the end sections of Fig. 2. A suitable bore 17 having been made through the whiffletree or doubletree 15, the coupling is driven or forced therethrough until the flange 3 engages the face 13 of said member. The coupling is then secured by upsetting or bending the serrations 4 outwardly until they engage the face 14 of the draft member. During the operation of driving the coupling through the bore the spurs 5 have been embedded in the wall of the bore, and thereby constitute an additional securing means and prevent the turning or loosening of the coupling within the bore.

In Figs. 4 and 5 I show another form of my invention, in which I employ an auxiliary member 6 to cooperate with the serrated end of my coupling. This requires a slight modification of the tubular body portion. In this form I provide the body portion 1 with a reduced end portion 7, terminating in the serra-



tions 4, the intermediate shoulder 8 being made tapering for a purpose which will be described. The auxiliary member 6 consists of a ring or annulus 9, having a tubular extension 10 adapted to slide over the reduced end portion 7 of the coupling and terminating in serrations or teeth 11. The manner of applying this form of my coupling to a draft member may be better understood by reference to Fig. 2, which shows the coupling applied to the central portion of a doubletree. The main portion of the coupling is driven through the bore of a whiffletree or doubletree 15 in the manner described in connection with the coupling shown in Fig. 3. The auxiliary member 6 is now placed over the reduced end portion 7, with the tubular extension 10 pointing inwardly, and driven into the bar until the ring or annulus 9 engages the face 14 of the whiffletree or doubletree 15. During this operation the teeth or serrations 11 engage the tapering shoulder 8, being forced outwardly thereby, and are embedded in the wall of a bore 16, thus constituting additional securing means to cooperate with the spurs 5 to hold the coupling fast in the bore. The serrations or teeth 4 are now bent or forced outwardly until they engage the outer face of the ring or annulus 9. The auxiliary member 6 serves not only as an additional securing means, but also cooperates with the serrations 4 to form a stronger bearing-flange for the head or the retaining-bolt and prevents the possibility of mutilating the face of the draft member when the serrations 4 are bent outwardly.

From the foregoing description it will be seen that I have provided a coupling member to cooperate with the coupling-pin or king-bolt of a draft member, which greatly enhances the wearing qualities of the coupling and prolongs the life of the whiffletree or other draft member. Moreover, the bore of the coupling may be made to fit more or less snugly about the coupling-pin, which will prevent any tipping or canting of the whiffletree, while the bolt-head resting upon the top of the flange prevents dust and mud from entering the coupling. For this reason the usual injury to the coupling pin or bolt by grit and rust is avoided, and the bearing may be kept well oiled to obviate the usual squeaking and greatly lessen the friction of these parts.

It will be obvious that my invention has many other applications than those above specified and will be found useful whenever two faces of the same or separate members are to be securely fastened together or where a metal lining is desired to protect the walls of a bore in wood or other soft structure from the wear or abrasion of a rod or bolt.

While I have set forth and illustrated a particular device to accomplish the purposes of my invention, I do not wish to be restricted thereby, but aim to cover all modifications

thereof which may be regarded as equivalents of the structure described.

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

1. A coupling member for a whiffletree or other draft-coupling, comprising a tubular body upset or flanged at one end and serrated at the other end, and having one or more spurs projecting therefrom.

2. A coupling member for a whiffletree or other draft-coupling, comprising a tubular body flanged at one end and serrated at the other end and having one or more spurs projecting therefrom, and an annulus fitting over said serrated end.

3. A coupling device comprising cooperating members each provided with a tubular body flanged at one end and serrated at the other end, and having the bore of one member adapted to slide over the serrated end of the other member.

4. A coupling device comprising cooperating members each provided with a tubular body flanged at one end and serrated at the other end, and having the bore of one member adapted to slide upon the other member, the serrations of said members providing respectively, means for uniting said members and means for securing an external device thereto.

5. A coupling device comprising cooperating members each provided with a tubular body flanged at one end and serrated at the other end, and having the bore of one member adapted to slide upon the other member, the serrations of said members providing respectively, means for uniting said members and means for securing an external device thereto, and means upon one of said members for flaring or upsetting the serrations upon the other.

6. In a coupling for whiffletrees or other draft members, a coupling device comprising a cylindrical body having a smooth bore for the reception of a coupling-pin, an exterior surface provided with projecting spurs, an annular flange projecting from one end of said cylindrical body, and a plurality of serrations or teeth projecting from the other end thereof.

7. In a coupling for whiffletrees or other draft members, a coupling device comprising a tubular body having a reduced end portion terminating in serrations or teeth, a flange or annular projection extending from the other end thereof, spurs projecting from the exterior of said body, and an annulus or ring adapted to surround said reduced end portion.

8. In a coupling for whiffletrees or other draft members, a coupling device comprising a tubular body having a reduced end portion terminating in serrations or teeth, a flange or annular projection extending from the other end thereof, spurs projecting from the exterior of said body, and an annulus or ring hav-



ing a tubular extension and adapted to surround said reduced end portion.

9. In a coupling for whiffletrees or other draft members, a coupling device comprising a tubular body having a reduced end portion terminating in serrations or teeth, a flange or annular projection extending from the other end thereof, spurs projecting from the exterior of said body, and an annulus or ring having a tubular extension provided with a serrated edge and adapted to surround said reduced end portion.

10. In a coupling for whiffletrees or other draft members, a coupling device comprising a tubular body having a reduced end portion providing an intermediate shoulder or ledge and terminating in serrations or teeth, a flange or annular projection extending radially from the other end thereof, spurs projecting from the exterior of said tubular body, and a ring or annulus provided with a tubular extension adapted to surround said reduced end portion.

11. In a coupling for whiffletrees or other draft members, a coupling device comprising a tubular body having a reduced end portion terminating in serrations or teeth, a flange or annular projection extending from the other end thereof, spurs projecting from the exterior of said body, and an annulus or ring having a serrated or toothed edge and adapted to surround said reduced end portion.

12. In a coupling for whiffletrees or other draft members, a coupling device comprising a tubular body having a reduced end portion providing an intermediate shoulder or ledge and terminating in serrations or teeth, a flange or annular projection extending radially from the other end thereof, and a ring or annulus provided with a tubular extension adapted to surround said reduced end portion.

13. In a coupling for whiffletrees or draft members, a coupling device comprising a tubular body having a reduced end portion pro-

viding an intermediate tapering shoulder or ledge and terminating in teeth or serrations, an annular flange extending from the other end thereof, spurs projecting from the exterior of said body, and a ring or annulus provided with a tubular extension having a serrated toothed edge adapted to engage said tapering shoulder and surrounding said reduced end portion.

14. In a coupling for whiffletrees or other draft devices, the combination with a whiffletree having a bore for a coupling-pin, of a coupling device comprising a tubular member extending through said bore and provided at one end with an annular flange constituting a bearing-plate for the head of the coupling-pin and at the other end with serrations or teeth curved or bent outwardly, an annulus surrounding said serrated end and securely held between the whiffletree and the curved ends of said serrations, and spurs protruding from said tubular member into the wall of said bore.

15. In a coupling for whiffletrees or other devices, the combination with a whiffletree having a bore for a coupling-pin or retaining-bolt, of a coupling device comprising a tubular member extending through said bore and carrying an integral annular flange at one end and a loose ring or annulus at the other end, said flange and annulus engaging the whiffletree upon opposite sides thereof, serrations or teeth extending from said tubular member and curved or bent outwardly into engagement with the outer face of said annulus, and spurs protruding from said tubular body into the wall of said bore.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE LOUIS MILLER.

Witnesses:

J. LEE THOMPSON,  
WM. DONSON.