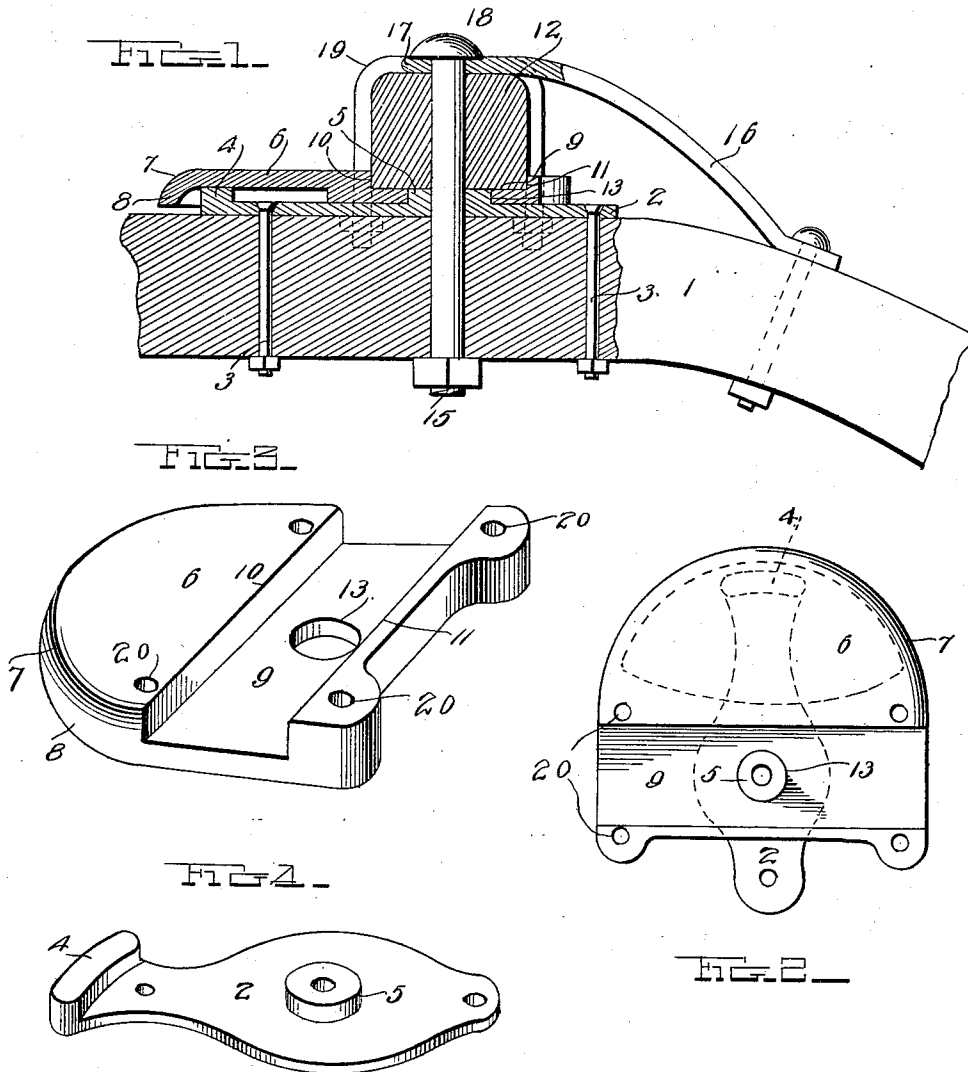


L. H. SOENS.
WHIFFLETREE BEARING.
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1,024,037.

Patented Apr. 23, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

LOUIS HENRY SOENS, OF MANCOS, COLORADO.

WHIFFLETREE-BEARING.

1,024,037.

Specification of Letters Patent.

Patented Apr. 23, 1912.

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To all whom it may concern:

Be it known that I, LOUIS H. SOENS, a citizen of the United States, residing at Mancos, in the county of Montezuma and State of Colorado, have invented certain new and useful Improvements in Whiffletree-Bearings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to carriages and wagons, and more especially to whiffletrees; and the object of the same is to produce an improved form of whiffletree bearing to be placed between the whiffletrees and tongue in the case of a two-horse vehicle or between the whiffletrees and a cross bar within the shafts in the case of a one-horse vehicle.

It is well known that considerable strain is thrown upon the whiffletree at the point where it is pivoted on either the tongue or the cross bar. As a result manufacturers and makers of vehicles have applied wear plates to the top of the tongue or cross bar and to the bottom of the whiffletree at this point and have pivoted the plates together, and a number of constructions have been adopted in an effort to secure a neat pivot and retain the greatest strength of all parts. The common expedient is to have some part of the upper plate engaged beneath some part of the lower to the rear of the pivotal point, from which it follows that the two plates must be inter-engaged when they are put into position and hence the parts which are swiveled upon each other cannot fit as closely as if this inter-engagement were not required.

My present invention avoids the difficulty and still uses a through-bolt for pivotally connecting the cross bar or tongue with the whiffletree and the two plates with each other, and it possesses details of advantage which will be understood from the construction set forth in the following specification and claim, and shown in the drawings wherein—

Figure 1 is a central longitudinal section through this improved bearing with all parts connected and in place; Fig. 2 is a plan view of the metal parts, showing their relative positions; Figs. 3 and 4 are perspective details respectively of the upper member and the lower member.

In the drawings the numeral 1 designates

in the present instance the tongue of a two-horse vehicle, although in some instances it may designate the cross bar of a pair of shafts, and 2 is the lower plate secured upon said tongue by means of bolts 3 passing through the latter. Said plate extends longitudinally of the tongue as illustrated and is therefore flat upon its lower face, while its upper face is also flat throughout except for a raised front end forming a lip 4, and a raised tubular boss 5 near the rear end of the plate.

The numeral 6 designates the upper plate which is made somewhat wider than the lower plate and is rounded at its front edge as shown in 7, and around this edge is provided with a depending flange 8 adapted to pass over and inclose the lip 4 which rests against the under face of this portion of the upper plate as seen. Somewhat farther to the rear the body of this plate is dropped so as to produce a transverse groove 9 bounded by front and rear parallel shoulders 10 and 11, and in this groove lies the whiffletree 12. At the center of the dropped portion is a hole 13 which surrounds the boss 5 and holds the two plates in relative lateral position, while the dropped portion of the top plate rests upon the bottom plate around said boss and holds the former upon the latter. The pivot bolt 15 extends vertically through the tongue 1, the center of the boss, the whiffletree 12, and the hammer strap 16 whose front end 17 engages said bolt 15 just beneath its head 18, the rear end of this strap being connected with the tongue in the usual manner. The whiffletree is held within the groove 9 of the top plate by means of two clips 19 whose arms pass through holes 20 in this plate at either side of its shoulders 10 and 11, and receive nuts below the top plate and at either side of the bottom plate in a manner which will be clear from the drawings.

Thus it will be seen that I have constructed a whiffletree bearing comprising two members whereof the lowermost lies upon and is bolted to the tongue (or in some instances to the cross bar within a pair of shafts) and has its front end extended into a lip; and the uppermost lies upon the lowermost and has its front edge turned down into a flange around said lip so as to prevent the entrance of dirt into the space between these plates as indicated in the sectional view, and which may well be filled

with packing to retain oil and cause the two plates to work easily one over the other. Lateral movements are prevented by the engagement of the edges of the hole 13 around the sides of the boss 5, and lateral movements of the whiffletree 12 within the groove 9 are prevented by the clips which, however, do not pierce the whiffletree and thus do not weaken it. Yet I am unable to use the pivot bolt 15 without unduly weakening the parts, and the hammer strap 16 and its connection with the upper end of the pivot bolt prevents the whiffletree from being turned over forward under the strain of the draft. This movement is also further prevented by the fact that the front end of the upper plate rests upon the lip at the front end of the lower plate at a point some little distance forward of the pivot bolt 15. If any of the parts need attention, they can be easily separated for inspection or repair. The sizes, proportions, and materials are not essential to the successful operation of this invention.

What is claimed as new is:—
In a whiffletree bearing, the combination

with the tongue, and the whiffletree; of a lower plate bolted on the tongue and having a tubular boss rising from its body and a lip from its front end, an upper plate whose front edge is rounded and provided with a depending shoulder passing over said lip and whose body has a transverse whiffletree groove in its upper face with a central hole surrounding said boss while its lower face rests upon the lower plate around the same, the pivot bolt passing through both plates and the tongue and whiffletree, the hammer strap engaging the upper end of this bolt and connected with the tongue, and clips passing over said whiffletree and with their arms taking through the upper plate forward and backward of its groove respectively and at either side of the lower plate, the whole for the purpose set forth.

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

LOUIS HENRY SOENS.

Witnesses:

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N. B. WILSON, Jr.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."