

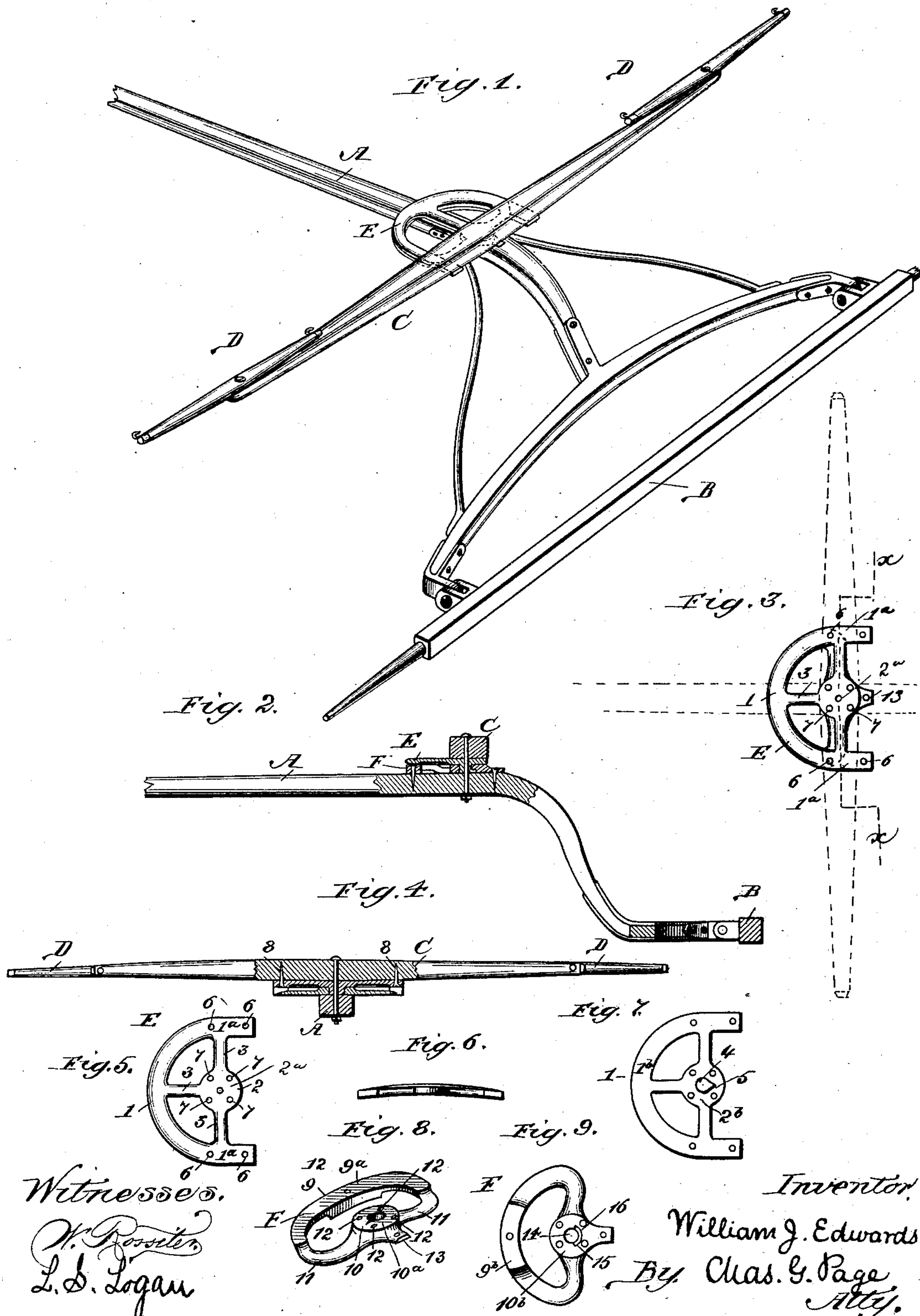
(No Model.)

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EVENER COUPLING FOR VEHICLE POLES.

No. 374,294.

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EVERNER-COUPLING FOR VEHICLE-POLES.

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To all whom it may concern:

Be it known that I, WILLIAM J. EDWARDS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Devices for Attaching Eveners to Vehicle Tongues or Poles, of which the following is a specification.

Heretofore various devices have been devised and patented for pivotally holding both whiffletrees or singletrees and doubletrees or eveners at their respective points of attachment. These devices may be separated into devices for attaching the singletrees to the ends of a doubletree or to the cross-bar of a pair of shafts and devices for attaching a doubletree or evener to the tongue or pole of the vehicle, it being obvious that the attaching device for a doubletree or evener which is subject to the pull of a couple of horses, one drawing upon each end of the doubletree or evener, necessitates certain considerations relative to its structure and use which do not enter into the needs of the attaching device or center for a whiffletree or singletree to which but one horse is hitched by a pair of traces.

My present invention relates to an improvement in devices of that class wherein the device or attachment is adapted and applied for attaching a doubletree or evener to the tongue or pole, and has for its object to provide a strong, durable, economical, and simple form and construction of two-part attachment involving, by reason of its form, construction, and arrangement, the following several features, namely: first, the provision of a broad or extended horizontal bearing-surface between the part to which the doubletree is secured and the part which is secured to the tongue or pole, with the greater portion of said bearing-surface in front of the vertical pivotal axis of the two-part attachment, thereby not only generally guarding against wobbling and rolling on the part of the evenner and rendering the attachment noiseless and anti-rattling, but in particular serving to prevent undue binding or cramping upon the pivot by reason of the usual tendency of the evenner to roll forward, it being observed that, especially in vehicles where the singletrees are pivotally supported upon the upper side

of the evenner by modern and commonly-adopted singletree centers, the draft upon the singletrees tends to roll the evenner forward, and that the broad bearing surfaces of the two-part attachment, disposed mainly in front of the evenner, in accordance with my improvement, serves to effectively resist such rolling forward of the evenner; second, the attainment of the several foregoing-mentioned ends, in conjunction with the provision of a large or extended seat adapted for receiving the evenner and supported upon an extended bearing-surface both in front of and at opposite sides of the pivot; third, the attainment of all of said foregoing ends, in conjunction with facilities providing a safe and efficient pivotal connection formed between the two parts of the device and adapted, while locking said parts together, to permit a limited oscillatory movement of one part independently of the other; and, finally, the production of a neat, desirable, and generally efficient attachment which can be easily made and applied, and which shall permit the doubletree or evenner to be readily detached from the pole when desired.

To the attainment of the foregoing and other useful ends my improvement consists in matters hereinafter described, and particularly pointed out in the claim.

With regard to certain devices which appear to have the closest approximation to my present improvement, the following brief statement of the state of the art as known to me may be here made: Two-part devices or attachments for attaching the doubletree to the pole of a vehicle have been formed of two plates pivotally connected together, the doubletree being secured to one of such plates and the remaining plate secured to the pole. In one of such instances the upper plate is made in the form of a segment and the lower plate made to correspond in width to the width of the pole, which arrangement provides a somewhat limited extent of horizontal bearing for the upper plate. In said construction the lower narrow plate interlocks with the rear portion of the upper segment-plate with a view of limiting the extent of oscillation on the part of the latter, the pivotal connection between the two plates being attained by a hollow boss rising from the lower plate and en-

tering a hole in the upper plate, which latter is mainly held down by a bolt passing through the doubletree, the said hollow boss, and the pole. In another instance one plate substantially equal in width to the doubletree has been arranged upon a plate substantially equal in width to the pole, the upper plate being provided with a boss or hub which turns in a socket in the lower plate and is limited in the extent of its oscillation by stops within such socket.

A great variety of forms of whiffletree or singletree centers or attachments have been devised for attaching the whiffletree or singletree either to the ends of a doubletree or to the cross-bar of the shafts, and among such varieties plates with interlocking hubs or pivots may be found, which said plates have been made square, circular, and oblong, and of other like shapes, all possessing peculiarities of detail, which, to the avoidance of prolixity of description, need not be here set forth, since in describing my invention I shall hereinafter clearly define the particular form and construction involved, and specifically claim my improvement, thereby separating and distinguishing the new from the old.

In the accompanying drawings, Figure 1 represents in perspective a portion of the tongue or pole of a two-horse vehicle attached to the front axle, with my improved evenner or doubletree attaching device applied to hold the evenner upon the pole. Fig. 2 represents a part longitudinal section through and a part elevation of Fig. 1, the section being on a plane coincident with the length of the pole. Fig. 3 represents a top plan view of my improved evenner-attaching device, with the evenner and a portion of the pole indicated in dotted lines. Fig. 4 represents a vertical section taken on the line *x x*, Fig. 3, whereby the end portions of the evenner are shown in elevation, portions of the singletrees being also visible in this figure. Fig. 5 is a top plan view of the upper segment-piece, to which the evenner is to be secured as in the preceding figures. Fig. 6 is a rear edge view, and Fig. 7 a bottom plan view, of the said segment-piece of Fig. 5. Fig. 8 is a perspective view of the lower segment-piece, that is to be secured upon the tongue or pole as in the first four figures. Fig. 9 is a bottom plan view of the said lower segment-piece.

In said drawings, A refers to the tongue or pole of a two-horse vehicle, the attachment of said tongue or pole to the front axle, B, being attained in any known or desirable way.

C indicates the evenner, to which the whiffletrees or singletrees D D are attached in any known or suitable manner, the points of such attachment being of course adjacent to the ends of the evenner, as usual, and generally with the singletrees supported upon the evenner, as herein shown.

My improved evenner-attaching device is constructed and applied as follows: The upper part of the device to which the evenner is se-

cured consists of a segment-piece, E, formed with a half-circular flattened rim portion, 1, a central disk-shaped portion, 2, and arms 3, radiating from the central disk-shaped portion and serving to unite the same with the rim portion. The central disk-shaped portion, 2, of the segment-piece E is provided on its under side with a centrally-arranged and substantially-formed cylindric pivot, 4, which has at a point contiguous to its lower end a lateral wedge-shaped stud or projection, 5, said pivot being rigid with and hence desirably formed integral with the central disk-shaped portion, 2, of the segment-piece. The end portions of the rim 1 of this upper segment are provided with bolt-holes 6 and have upper flattened surfaces, 1^a, which constitute portions of the seat to which the evenner C is applied, the remaining portion of the upper side of the rim being desirably rounded along its edges, so as to give a neat and finished appearance to such portion of the rim as will be exposed in front of the evenner. The central disk-shaped portion, 2, of the upper segment-piece is also provided with bolt-holes 7, and has its flat top side, 2^a, formed in the plane of the top portions, 1^a, of the rim, thereby completing the seat for the evenner, which will be laid across the segment-piece so as to rest upon the surface portions 1^a and 2^a thereof, in which position it is rigidly secured to the segment-piece by bolts 8, arranged to pass through the bolt-holes 6 and 7 of the said upper segment-piece. It will also be observed that in this position the evenner crosses and rests over the vertical pivot or pivotal axis of the attachment and bears upon two of the radial arms of the upper segment-piece, whereby the seating-surface bar of the evenner is considerably extended.

The under side 1^b of the upper segment-piece is made flat and flush with or in the plane of the under side 2^b of the central disk-shaped portion, 2, of said piece. These two lower bearing-surfaces, 1^b and 2^b, of the upper segment-piece bear upon the lower segment-piece, F, with a sliding contact. The lower segment-piece, F, is rigidly bolted upon the tongue or pole A, and is formed with a rim portion, 9, a central hub or disk-shaped portion, 10, and arms 11, which radiate from the central portion, 10, and serve to unite the same with the rim portion 9. The upper side, 9^a, of the rim portion of the lower segment-piece is made flat, as in Fig. 8, and is flush with or in the horizontal plane of the flat top surface, 10^a, of said piece, which said two surfaces provide broad or extended bearing-surfaces for the corresponding bearing-surfaces of the upper segment-piece.

The central hub portion and the rim portion of the lower segment-piece are provided with bolt-holes 12 for the bolts by which the lower segment-piece is secured upon the pole A, and as a means for further securing the lower segment-piece in place it is provided with a rearwardly-extending lug or lip, 13, having

a bolt-hole for a bolt to be used in bolting down this rear extension, 13, upon the pole.

The central hub portion, 10, of the lower segment-piece is provided with a centrally-disposed round socket or hole, 14, adapted to receive the pivot 4 of the upper segment-piece. This said hole or socket 14 of the lower segment-piece is formed with a lateral wedge-shaped recess, 15, which receives the lateral stud or projection 5 of the pivot 4 when the upper segment-piece is applied to the lower segment-piece. The lower portion of this notch 15 merges into a segmental-shaped recess, 16, formed in the under side of the lower segment-plate, F, and forming an enlargement of the hole or socket 14 at the lower end thereof. This recess 16 is adapted to receive the stud 15 of the pivot of the upper segment-piece after said stud has been let down to a suitable extent within the notch 15 and the upper segment-piece turned so as to bring the stud 15 within said recess 16. In this way the two segment-pieces will be pivotally locked together, it being observed that the notch 15, through which the locking-stud is permitted to enter the recess 16, is located on a line at least at an angle of forty-five degrees to the length of the pole when the lower segment-plate is in place thereon, whereby under all ordinary circumstances the lug or stud 16 will work between the top wall of the recess 16 and the top side of the pole which at such point forms the bottom side of such recess. The end walls of the recess 16 also form stops which serve to limit the extent of oscillation on the part of the upper segment-piece, and hence limit the extent of oscillation on the part of the evener independently of the pole.

The under side of the lower segment-plate has two bearing or seating surface portions which are designed to fit upon the tongue or pole, one of said surfaces, 10^b, being mainly the under side of the central hub portion, 10, and the other, 9^b, being the under side of the middle portion of the rim 9.

In the application of this evener-attaching device the evener crosses the rim of the upper piece near the ends thereof, the greater portion of the rim being to the front of the evener. The rim portions of the two segment-pieces afford, in addition to the hub or central portions, extended bearing-surfaces between the two segment-pieces, which said extended bearing-surfaces are in front of and to some distance beyond the evener and the axis about which it may oscillate.

It will be observed that the foregoing form of evener attachment involves between its two parts an extent of bearing-surface in rear of its pivot or vertical axis sufficient for every purpose without the employment of unnecessary material and cumbersome fixtures, and that in front of the said axis and to some extent at opposite sides thereof, but mainly in front, the broad or extended bearing-surface not only prevents the evener from tilting endwise, but effectively resists any tendency on the part of the evener to roll forward. If desired, I can also drill a hole through the evener, the pivot, and the pole and insert a bolt through the same, whereby still greater security will be attained.

I am aware that, broadly considered as a bearing, a couple of segmental-shaped plates pivoted together is not new, and that fifth-wheels for vehicles have heretofore been composed of two pivotally-connected segmental-shaped plates. I therefore desire to be understood as confining myself to the herein-described particular arrangement of the segmental-shaped pieces relatively to and in connection with the tongue or pole whereon the lower segment-piece is secured and the evener provided at its ends with singletrees and at its middle seated upon and extending across the rear end portion of the upper segment-piece with its line of crossing over the pivot, and with the bearing-surfaces of the two segment-pieces disposed in the manner set forth.

What I claim as my invention is—

The combination of an evener and the pole of a two-horse vehicle with the evener-attaching device consisting of the lower segment-piece, F, secured upon said pole and having a perforated hub, curved arms radiating therefrom and a segmental rim uniting them, and the upper segment-piece, E, attached to the under side of the evener and having a central disk-shaped and perforated portion, 2, arms radiating therefrom, and a segmental rim, said segmental rim extending in front of said evener and resting upon the pole, with a bolt passing through the evener-attaching device and through the evener and pole, substantially as and for the purpose described.

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