July 17, 1928. 1,677,476

C. A. HAGADONE

CONVERTIBLE RUNNING GEAR FOR WAGONS

Filed Jan. 10, 1924 3 Sheets-Sheet 1

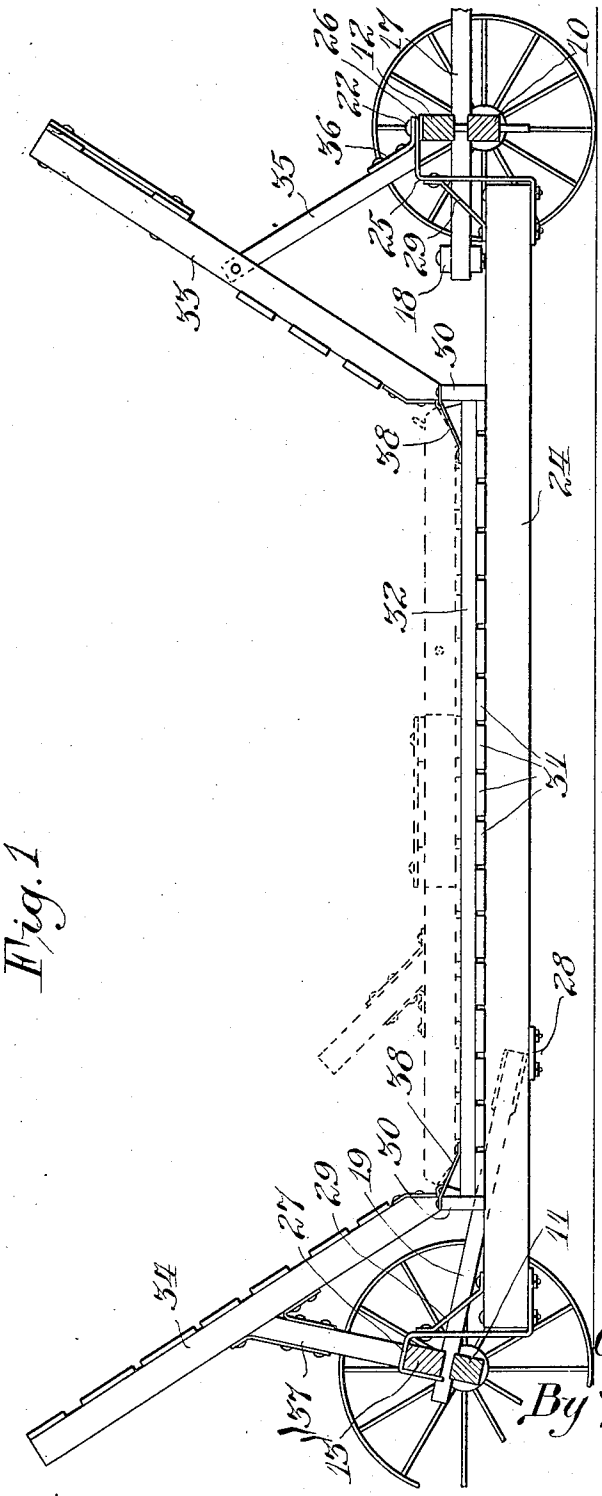


Fig. 1

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Filed Jan. 10, 1924 3 Sheets-Sheet 2

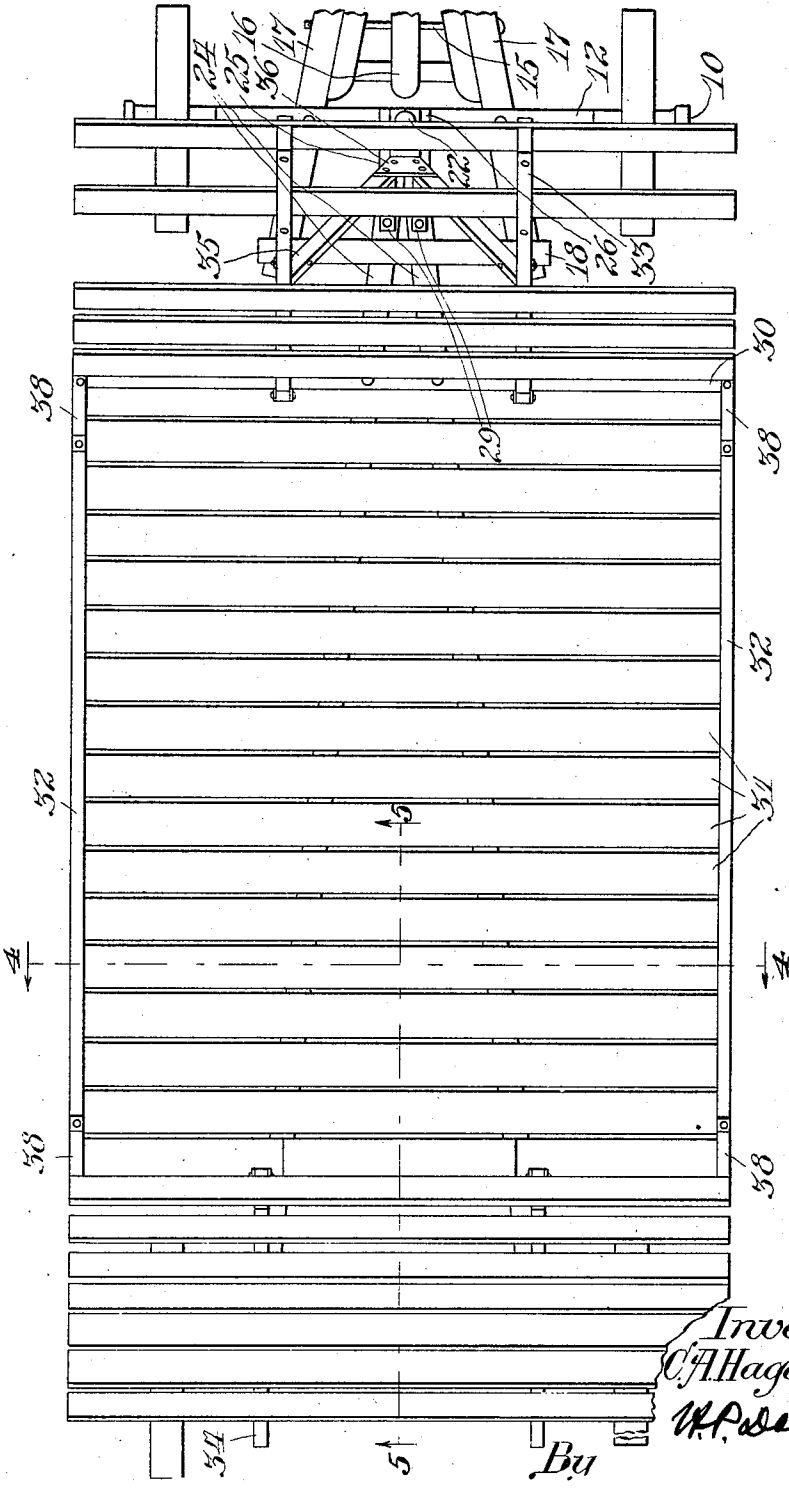


Fig. 2.

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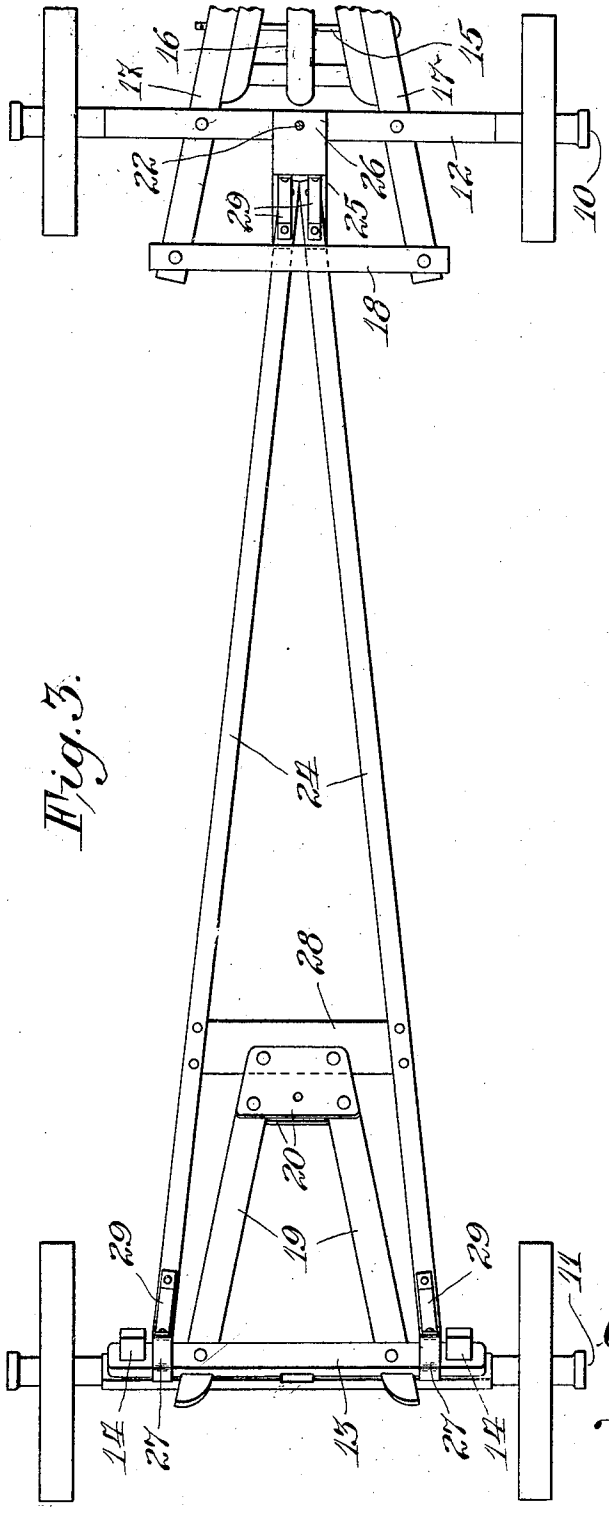


Fig. 3.

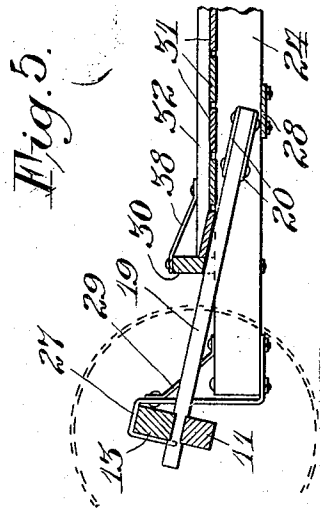


Fig. 5.

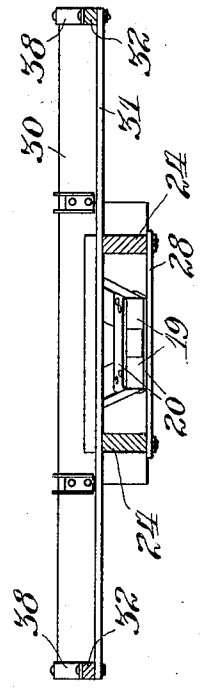


Fig. 4.

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UNITED STATES PATENT OFFICE.

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CONVERTIBLE RUNNING GEAR FOR WAGONS.

Application filed January 10, 1924. Serial No. 685,347.

The invention hereinafter described relates generally to wagons and particularly to a removable running gear attachment adapted to be substituted for a standard running gear.

It is an object of this invention interchangeably to adapt the running gear of a standard or conventional wagon to use with either a regular box body or an open rack body, such as used in farm work.

Another object is to provide an arrangement of simple construction, easily manufactured and practicably adapted to its purpose.

This is accomplished by providing an attachment comprising, briefly, a pair of frame members adapted to be detachably carried by the bolsters of a standard wagon running gear after the regular box body has been removed. These frame members may then function to support a wagon body of a different type, such, for instance, as a farm rack.

A detailed account of this transformation and the character of the attachment will be amply described hereinafter.

Reference is made to the accompanying sheets of drawings forming a part of this application and wherein the invention is illustrated, like numerals designating like parts throughout the several views.

Fig. 1 is a side elevation of the improved body attachment, in this instance, a farm rack carried by the bolsters of a standard running gear;

Fig. 2 is a plan view of the construction shown in Fig. 1;

Fig. 3 is a view similar to Fig. 2 and shows in plan the frame members which support the rack body, the body itself being removed for the sake of clearness of illustration;

Fig. 4 is a detail view along the line 4—4 of Fig. 2 and looking in the direction of the arrows; and

Fig. 5 likewise is a detail view taken along the line 5—5 of Fig. 2 looking in the direction of the arrows.

The standard wagon shown embodies front and rear wheeled trucks carried on front and rear axles 10 and 11, respectively. These axles support front and rear bolsters 12 and 13, respectively, the bolsters carrying the conventional bolster stakes or standards 14. Sandwiched or locked between the bolster members and the axles are front and rear hounds. The forward hound supports for vertical pivotal movement on a pivot pin 15 a tongue or draft pole 16, and comprises side members 17. The rearward ends of the hound members 17 are tied together by means of a pair of transverse pieces 18, these members being disposed above and below the hound members 17 to provide a space between them for a purpose which will presently appear. The rear hound similarly constitutes side members 19 locked between the bolster 13 and the axle 11 and tied together at its forward ends by means of upper and lower plates 20 also provided with a space between them. A conventional reach bar is slid forwardly between the rear bolster and axle through the space between the plates 20 on the rear hound and through the cross pieces 18 on the forward hound to the front bolster member where it may be pivotally held in position by the usual king bolt 22. A pin may be dropped through the plates 20 and the reach bar to securely hold the rear hound in position with respect to the reach bar. It will be understood, of course, that angling of the tongue 16 in turning the wagon will likewise angle the front truck because of the manner in which the front hound is locked between the bolster and axle. All this is conventional and forms no part of the present invention.

Specifically, the invention relates to an attachment for the above described conventional running gear. This attachment, as clearly shown in Fig. 3, comprises a pair of longitudinally extending, forwardly converging, sill or frame members 24, the forward ends of these frame members being fastened together by an angularly bent bracket 25 having a forwardly extending portion 26 adapted to be disposed centrally between the ends of the front bolster and there be detachably secured in position by means of the king bolt 22. The rear ends of the frame members are provided with similar brackets in the form of hook members 27, which are adapted to be hooked over the rear bolster adjacent its ends. It will be noted, by reference to Fig. 1, that these front and rear brackets for supporting the longitudinal frame members depend consid-

erably so that the frame members are carried in a plane below the plane of the bolster members supported on the axles of the front and rear trucks. To permit this underslung construction, it is necessary that the reach bar of the wagon running gear be removed. This may be readily accomplished by removing the king bolt 22 and the pin 23. Once this has been done, the frame members 24 may be easily brought into position as a unit by pushing the forward end of the frame unit under the cross pieces 18 of the forward hound and positioning the front bracket 25 with its apertured extension 26 to register with the king bolt on the front bolster. The rear ends of the frame unit, of course, merely hook over the rear bolster.

When the reach bar has been withdrawn from the standard running gear, the rear hound has lost its support and it will drop to the ground. This same difficulty would arise when the substitute unit comprising the frame members 24 is hung in position on the bolsters. To overcome this, a cross plate 28 is transversely disposed underneath the frame members 24 in such a position that the forward end of the rear hound comprising the plates 20 may rest on this transverse cross piece 28. For the purpose of strengthening the frame members 24 with respect to the front and rear brackets and in general to provide a more sturdy construction, suitable braces 29 may be provided.

The supplemental body supporting unit comprising the frame members 24 may carry almost any kind of wagon body and, in the present instance, it is shown supporting an open farm rack. This farm rack comprises transversely disposed sills 30 bolted to the longitudinal frame members 24. A plurality of boards or slats 31 is also bolted or nailed to the members 24 to provide a floor or bottom for the rack body. Suitable end strips or pieces 32 may be provided to securely hold the body in position and prevent distortion thereof. Hinged to the transverse sill members 30 are front and rear rack sections 33 and 34, respectively, also provided with boards or slats similar to the floor boards 31 and nailed to the studs comprising these front and rear sections. Pivoted to the studs of the front section is a pair of forwardly extending supporting members 35, which converge from the sides of the section to a point midway between the ends of the front bolster where they are secured in position by the apertured plate 36, which ties them together, and the king bolt 22. Rear section 34 has its studs provided with brace members 37, which are rigidly connected to the studs and rest upon the rear bolster member. The weight of the section and the load which the rack may be carrying is sufficient to maintain these brace members 37 in contact with the bolster, as shown.

When traveling without a load or when laying the attachment away for storage purposes, it is an advantage to have the body collapsible or foldable so that it will occupy a minimum amount of space. To this end, the front and rear sections have been hinged to the sill members 30, as has been mentioned. The hinges thus permit the sections to be folded inwardly across the bottom of the rack. The studs of these sections are differentially spaced; that is, the distance between the centers of the two studs on the front section will be less than the distance between the centers of the two studs on the rear section, so that, when the sections are in folded position, the studs will be juxtaposed rather than superposed. It will be observed also that on the front section some of the cross boards are fitted to the reverse side; that is, about half way up they are on the inner side of the studs and for the remainder of the distance they are on the opposite side of the studs. This permits a neat overlaping arrangement of the two sections in folded position.

The side pieces 32 of the rack floor or bottom may be securely fitted to the transverse sills 30 by means of suitable braces 38. It will also be noted, as shown in Fig. 7 in detail, that the rearmost floor board of the rack body, at least the center portion of it, is slightly inclined to provide a space for the insertion of the rear hound so that it may rest on the transverse plate 28 without obstruction from the floor of the rack body.

The manner of utilizing the attachment of the present invention with respect to a conventional wagon running gear disclosed will now be described. The regular box body will be removed by pulling out the bolster stakes or studs 14. The upper member of the front bolster, in which the front bolster stakes are fitted, is also removed as well as the reach bar. The reach bar may be slid or pulled out rearwardly after the king bolt 22 and the pin 23 have been removed. These removed members are then laid aside, as they are of no further use with the substitute rack attachment. The front and rear trucks are now independent units. To make them dependent units again, the unit frame comprising the members 24, upon which is mounted the folded rack above described, is then brought into position between these two truck units. The brackets 27 are hooked over the rear bolster and the front bracket is slid under the cross pieces 18 of the forward hound and into position so that the apertured plate 26 registers with the king bolt opening in the bolster. The forward rack section 33 is then unfolded so that its forwardly converging members, or supports, 35 and the apertured plate 36, which ties them together, will also register with the king bolt opening. The king bolt 22 is then

dropped through the plate 36, the extension 26 of the bracket 25, and through the bolster, thereby securely locking all these members in position without in the least interfering with the turning movement of the bolster and axle in response to angling movements of the draft tongue. The rear section 34 of the rack is then swung rearwardly and of its own weight will cause the supports 37 to contact the rear bolster and thus hold said section in position. Transformation from a box body wagon to an open farm rack wagon has thus been completed and the rack is ready for use in the field. Such an open rack body as that described, of course, has many uses, but is especially useful when operated along side a corn harvester where it may receive bundles of corn discharged therefrom.

From the above description it should be apparent that the invention provides a useful body attachment which may be interchangeably employed with the regular wagon body of a wagon having a standard running gear, thereby obviating the necessity of possessing two distinct types of wagons. The economy effected by this arrangement is appreciable.

Of course, it should be understood that only the preferred form of the invention has been illustrated and described and that various changes in form and construction and arrangement of parts may be made by those skilled in the art to which this invention appertains without departing from the spirit thereof as hereinafter claimed.

What is claimed is:

1. In an attachment for the running gear of a wagon having front and rear bolsters, a king bolt disposed centrally in the front bolster, a pair of converging frame members adapted to support a wagon body, hook members carried by the rear ends of the frame members adapted detachably to engage over the rear bolster adjacent its ends, and a bracket member carried by the front ends of said frame members, said king bolt loosely passing through the bracket member for fastening said frame members to the front bolster.

2. In an attachment for the running gear of a wagon having front and rear bolsters and front and rear hounds, a plurality of spaced body supporting sills connected to the bolsters, and a cross plate on said sills for supporting the rear hound thereon.

3. In an attachment for the running gear of a wagon having front and rear bolsters and front and rear hounds, a pair of longitudinally extending frame members adapted to be detachably carried by the bolsters and to support a wagon body, and a transverse member carried by said frame members adjacent the rear hound whereby said member may support the rear hound.

4. In a substitute attachment for the running gear of a wagon having front and rear bolsters, said attachment comprising a pair of longitudinally extending frame members spaced apart at their rear ends and converging together at their front ends, a hook fastened to the rear end of each frame member and adapted loosely to engage over the rear bolster adjacent each end thereof, and means at the converging front ends of said members for detachably and pivotally mounting said members on the front bolster substantially midway between its ends.

5. In a wagon, the combination of front and rear wheel supports including bolsters and hounds, longitudinal frame sills detachably hung on the bolsters, and a rest on the sills for supporting the front end of the rear hound.

6. In a wagon, the combination of front and rear wheel supports including bolsters and hounds, longitudinally extending, laterally spaced frame sills supported on the bolsters, and a cross plate secured to the bottom of said sills to provide a support for the front end of the rear hound.

In testimony whereof I affix my signature.

CLINTON A. HAGADONE.