June 17, 1930. V. G. TELLIS 1,763,680

HINGE PLATE FOR RAILROAD SPREADER WINGS

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Fig. 1.

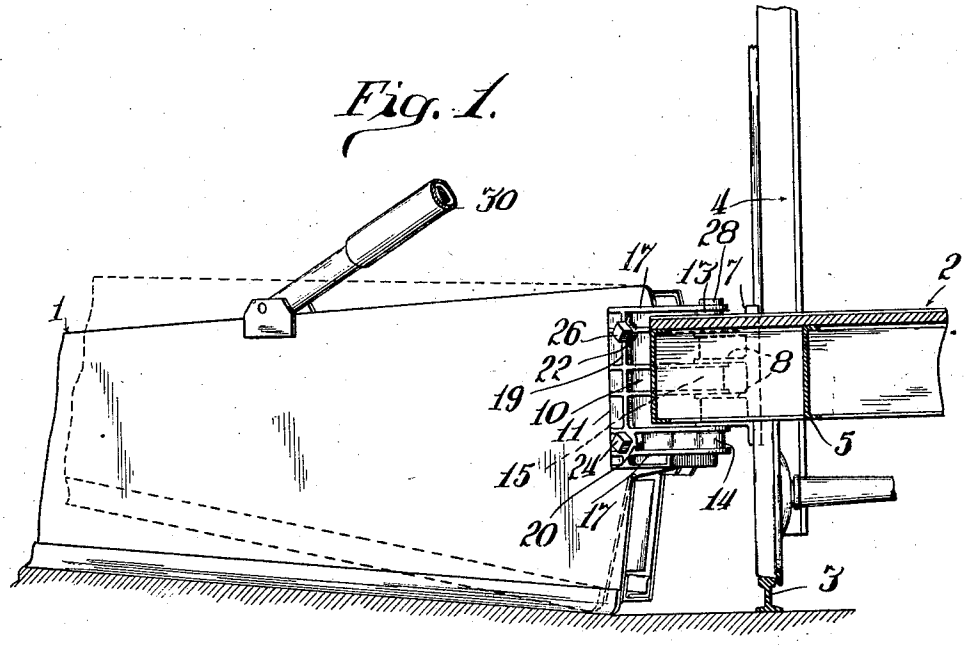
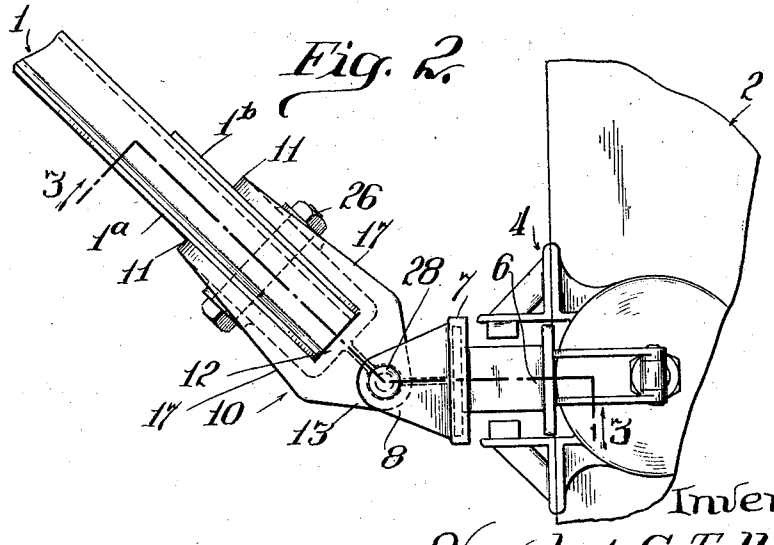


Fig. 2.



Inventor

Vsevolod G. Tellis

By Arthur W. Allen

Attorney

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Fig. 3.

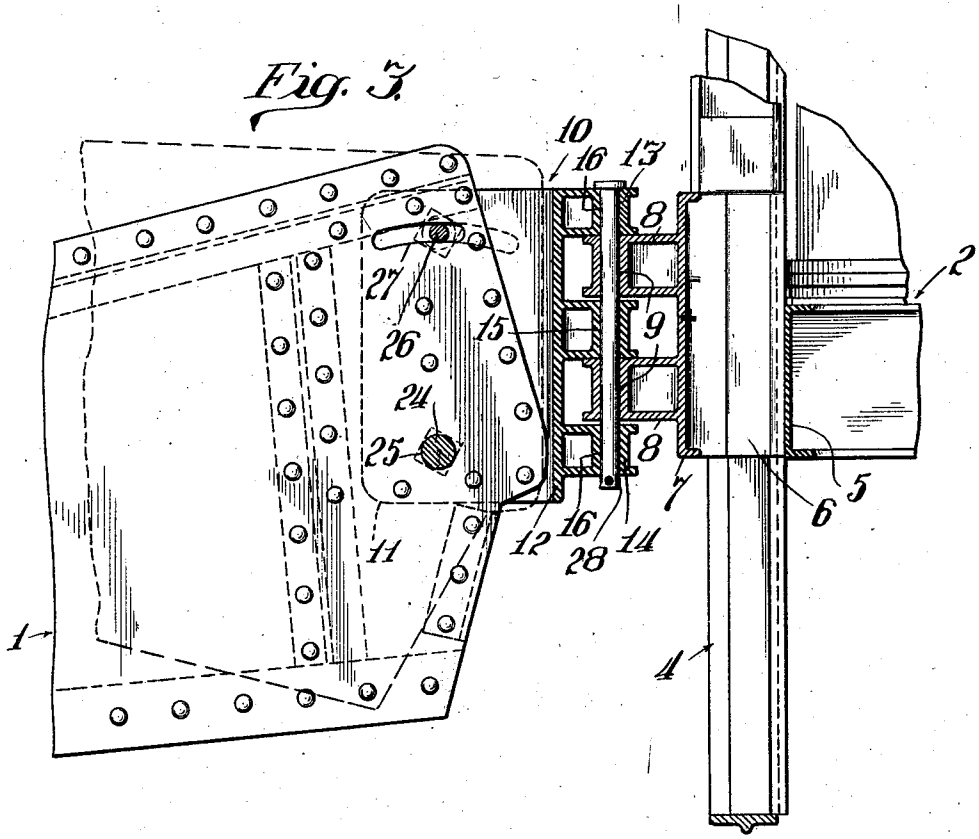
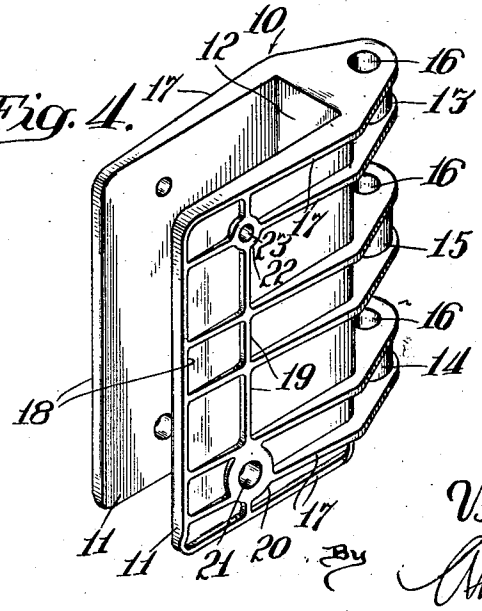


Fig. 4.



Inventor

Vsevolod G. Tellis

By Arthur M. Nelson

Attorney

Patented June 17, 1930 1,763,680

UNITED STATES PATENT OFFICE

VSEVOLOD G. TELLIS, OF EAST CHICAGO, INDIANA, ASSIGNOR TO O. F. JORDAN COMPANY, OF EAST CHICAGO, INDIANA, A CORPORATION OF INDIANA

HINGE PLATE FOR RAILROAD SPREADER WINGS

Application filed October 14, 1926. Serial No. 141,483.

This invention relates to improvements in hinge plates for railroad spreader wings and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The primary object of the invention is to provide an improved hinge block to operatively connect the main wing of railroad spreader wings to an associated hinge block slidably mounted in the side or wing post of the spreader.

A further object of the invention is to provide such a hinge plate that embraces both sides of the inner end of the wing and which is so formed as to be strong and rigid and to hold the wing in the desired plane against the twisting action imposed thereon encountered in the actual conditions of use.

These objects of the invention as well as others, together with the many advantages thereof, will more fully appear as I proceed with my specification.

In the drawings:

Fig. 1 is a view in front elevation of the inner end of the wing of a railroad spreader, with my improved hinge plate in position thereon and connected to the hinge block vertically slidable in the wing post of the spreader.

Fig. 2 is a top plan view on an enlarged scale of the parts shown in Fig. 1.

Fig. 3 is a longitudinal vertical section through the same, on a further enlarged scale as taken on line 3—3 of Fig. 2.

Fig. 4 is a perspective view of the improved hinge plate as it appears when removed from the associated wing and hinge block.

Referring now in detail to that embodiment of the invention illustrated in the accompanying drawings:—1 indicates as a whole the inner end of a main or spreader wing of a railroad spreader usually in the form of a car 2 adapted for travel along the rails 3 of a railroad track only one of which is shown as in Fig. 1. Rising from each side of the car is a wing post 4 suitably attached to and braced from the underframe 5 of the car. Vertically slidable in said post is a carriage 6 to the bottom end of which is secured a hinge block 7.

Said hinge block has a pair of laterally extending, vertically spaced bearing ears or sleeves 8 having vertically aligned openings 9—9 therein. 10 indicates as a whole my improved hinge plate best shown in perspective in Fig. 4. Said plate is preferably a casting and includes spaced parallel side walls 11—11 and an end wall 12 connecting the side walls 11—11 together along one end thereof. Extending laterally from the end wall 12 is a plurality of vertically spaced, top, bottom and intermediate bearing ears or sleeves 13, 14 and 15, respectively having vertically aligned openings 16 therein. The top and bottom ends of ear bearing sleeves 13, 14 and 15 respectively are defined by flanges 17—17 that extend toward the free margins of each side wall 11—11 on the outside thereof, tapering in depth as they approach said margins to merge into a flange 18 thereon. On the outside of each side wall and spaced from the flange 18 and parallel therewith is a rib 19 and this rib extends from the flange 17 at the top of the wing plate to the similar flange 17 at the bottom thereof and said rib intersects the intermediate flanges 17. In line with said rib 19 in each side wall 11 between the flanges 17 associated with the sleeve 14 thereof is a circular boss 20 with an opening 21 therein and in line with the same rib in the plane of the second flange 17 from the top is a smaller circular boss 22 having an opening 23 therein, said openings extending in planes at right angles to the openings 16 in the bearing sleeves 13, 14 and 15. The side walls 11—11 of the hinge plate which are smooth and flat on their inner faces, embrace the top portions of front and rear plates 1^a and 1^b respectively at the inner end of the spreader wing 1. A bolt like hinge pin 24 passes through the hinge plate openings 21—21 and through a registering hole 25 in the side wing and a second bolt like pin 26 passes through the hinge plate openings 22—22 and through an arcuate slot 27 in the inner end of the wing 1 and concentric with the hinge pin 24.

In assembling the hinge plate 10 upon a spreader, the intermediate bearing sleeve 15 is positioned between the bearing sleeves 8 of the hinge block 7 while the top and bottom sleeves 13 and 14 engage the top and bottom ends of said sleeves 8, the openings 9 and 16 of all of said sleeves registering with each other and through which is inserted a hinge pin 28. It is apparent that the wing 1 may be swung into the desired vertical angular position with respect to the hinge plate 10 about the hinge pin 24 as an axis and this movement is usually effected by a telescopic lifting brace 30 only a part of which is shown in Fig. 1. The wing and hinge plate may be swung together about the hinge pin 28 as an axis into the desired horizontal angular position with respect to the side of the spreader car 2.

A hinge plate made as described has many advantages. The wing is held against all twisting relative to the hinge plate and is therefore rigidly maintained in its extended position. Again such a hinge plate does not crack or fracture at the inner end edge of the wing and it permits the placing of the hinge pin 28 in the median plane of the wing. Such a hinge plate is strong and durable and may be readily cast, thus reducing the cost of manufacture thereof.

While in describing my invention, I have referred to many details of form as well as arrangement and construction of the parts thereof, I do not wish to be limited thereto except as may be pointed out in the appended claim.

I claim as my invention:—

In combination with a spreader wing having an arcuate slot in its inner end, a hinge block having vertically spaced bearings ears, a hinge plate open at its top and bottom ends and including spaced parallel side walls to receive said inner end of the spreader wing and an end wall connecting said side walls together, ears on said end wall engaged with the ears on said hinge block, a pin pivotally connecting said ears on said hinge block and hinge plate respectively, a second pin concentric with said slot and disposed at a right angle to said first pin and pivotally connecting said spreader wing to the bottom end of said side walls of the hinge plate and a third pin fixed in the top portion of said side plates and extending through said slots to limit the movement of said spreader wing about said second pin, the top portion of the wing extending above the top portion of the side walls of the hinge plate.

In testimony whereof, I have hereunto set my hand, this 8th day of October, 1926.

VSEVOLOD G. TELLIS.