No. 819,259. PATENTED MAY 1, 1906.

J. E. WHITE.

CLAMP.

APPLICATION FILED AUG. 29, 1905.

Fig. 1.

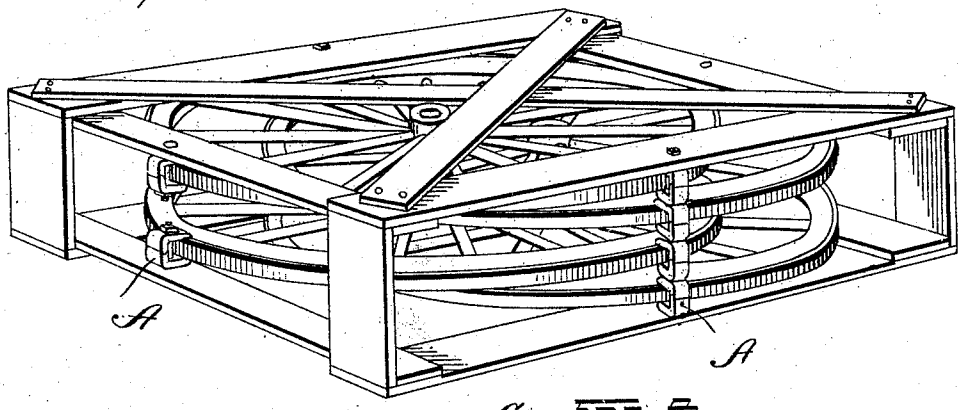


Fig. 2.

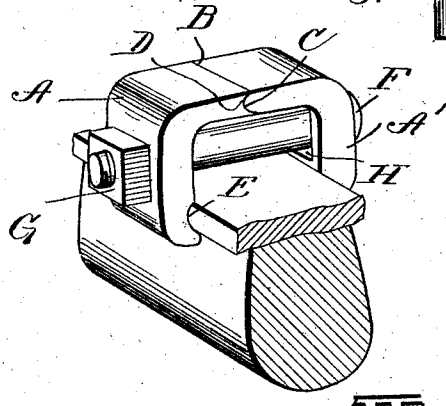


Fig. 3.

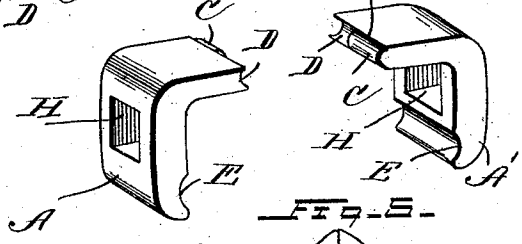


Fig. 4.

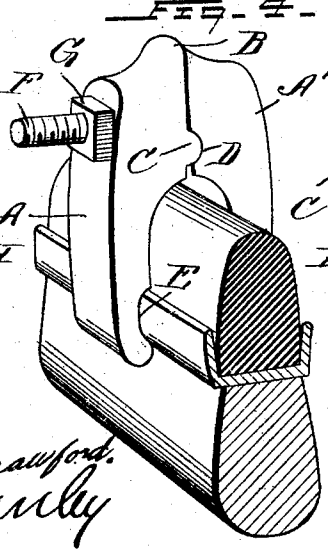


Fig. 5.

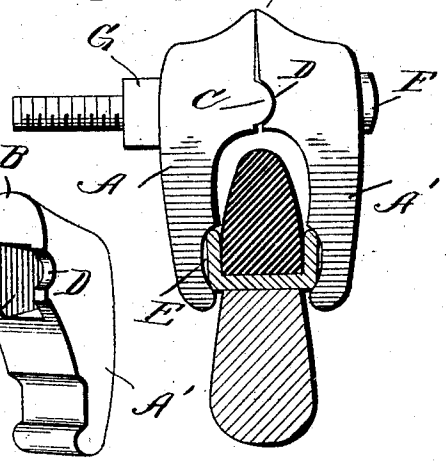


Fig. 6.

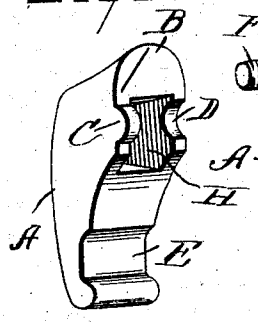
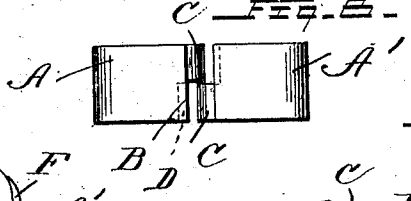


Fig. 7.

Fig. B.



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JOHN E. WHITE, OF MOLINE, ILLINOIS.

CLAMP.

No. 819,259. Specification of Letters Patent. Patented May 1, 1906.

Application filed August 29, 1905. Serial No. 276,295.

To all whom it may concern:

Be it known that I, JOHN E. WHITE, a citizen of the United States, and a resident of Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Clamps, of which the following is a specification.

My invention relates to that class of clamps used in crating the wheels of wagons and buggies when preparing them for shipment; and its object is to provide a simple reliable means for securing the wheels in place during shipment and a means of grasping the tires of said wheels in such a manner as to fully protect them from any injury to their finish or disarrangement of their parts while in transit.

My invention will be first fully described in connection with the accompanying drawings and then particularly referred to and pointed out in the claims.

Referring to the drawings, in which like parts are indicated by similar reference-letters wherever they occur throughout the various views, Figure 1 is a perspective view of the top of a crate of buggy-wheels secured in position by my improved clamp. Fig. 2 is a view of said clamp, showing its attachment to the rim of a buggy-wheel. Fig. 3 is a detail view showing the parts of my improved clamp. Fig. 4 is a view of a modified form of my improved clamp adapted for use on vehicles having a convex tire of rubber or other material. Fig. 5 is an end view of the same modification, showing the clamping members assembled as levers of the third class and fulcrumed at B. Figs. 6 and 7 are detail views of the members of the modified form of my clamp, showing them as twins and defining the position of the male and female lugs from another position than the view shown in Fig. 3.

My improved clamp in one of its forms consists of two castings A, which are **L**-shaped in section and in **U**-shaped form when assembled, the line of division being at the bottom of the clamp B when said clamp is regarded as having the form of the letter **U**, the parts permitting a certain amount of rocking or oscillation at their line of contact and at the engagement of the male and female lugs. (Shown at C and D.) The rocking movement is accomplished by the manner of engagement of the said members A and A′, which is accomplished by forming the surfaces in contact in two alternate male and female lugs C and D, referred to above, both members being twins and interlocking. Both clamping members grip the rim of the tire, for the reception of which rim a groove E is provided in each member, and both members are firmly secured in position by the bolt F and the nut G, passing through square apertures H in the said clamp members. By means of the interlocking lugs freedom of lateral motion is permitted to the clamp members, which so engage as to obviate the possibility of shear on the part of either element when it is secured in its position. As the jaws of the clamp are twins, but one form of casting is necessary, as any two of said castings engage in the manner shown and described.

In the modified form of my clamp, as shown in Figs. 4 to 7, inclusive, the principle of the operation is the same. The clamp is divided and, as in the former case, consists of two **L**-shaped members which constitute a **U**-shaped clamp when assembled. The engagement of the movable **L**-shaped jaws A and A′ is accomplished by extending the edges of the engaging members outwardly along the plane of engagement, by means of which this form of clamp terminates in an oval tip with its vertex at B, which tip is semicircular in cross-section, between which outer tip and the oppositely-disposed jaws of the clamp are located the male and female lugs C and D, which in this form prevent shearing strain due to any possible lateral turning of the jaws or the tip at B, which then forms the fulcrum. The square aperture H for receiving the bolt in this case passes directly through the engaging lugs, rendering their engaging surfaces less in linear extent than in the form of my invention first above described. In this modified form a larger vertical space is allowed between the lugs and the surface of the tire to provide for the reception of a rubber or other oval-shaped tire. As before, the clamp grasps securely the rim of the metallic tire only, thus leaving any elastic tire that may be used free from impression or indentation.

By the use of my improved clamp a highly-finished wheel may be crated and shipped without injury to the finish or danger of slipping from the crate, wholly obviating the employment of bandages or twine or other unsatisfactory means of fastening now in use.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is as follows:

1. A clamp for vehicle-wheels to protect the rims from injury in crating comprising

several pairs of two like jaws, each pair having a convex lug and an alined recess extending across their opposed faces, the lug on one fitting the recess of the other and tending to prevent lateral or shearing motion, while permitting rocking motion, and a single bolt passing through said pairs and a nut to clamp all of said jaws.

2. A clamp for vehicle-wheels to protect the rims from injury in crating, comprising two like jaws each having a convex lug and an alined recess extending across their opposed faces, the lug of one fitting the recess of the other and tending to prevent lateral or shearing motion, while permitting rocking motion, and a single bolt passing through both and a nut to clamp said jaws.

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

JOHN E. WHITE.

Witnesses:
J. A. HANLEY,
GEO. CRAWFORD.