(No Model.)

H. W. FORD & R. M. FERGUSON.

HOOP COUPLING.

No. 477,174. Patented June 14, 1892.

Fig. 1.

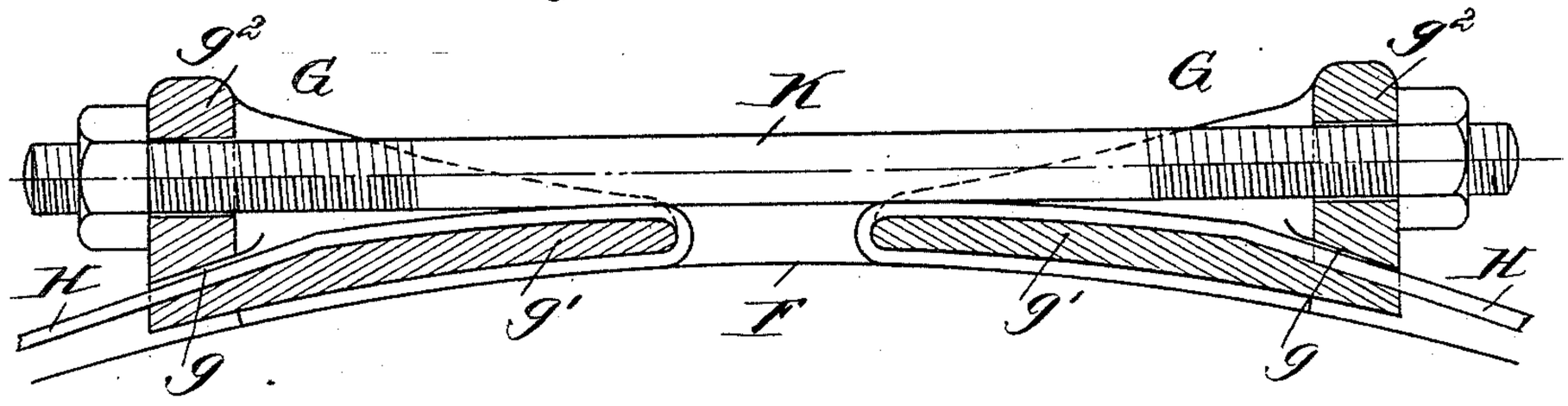
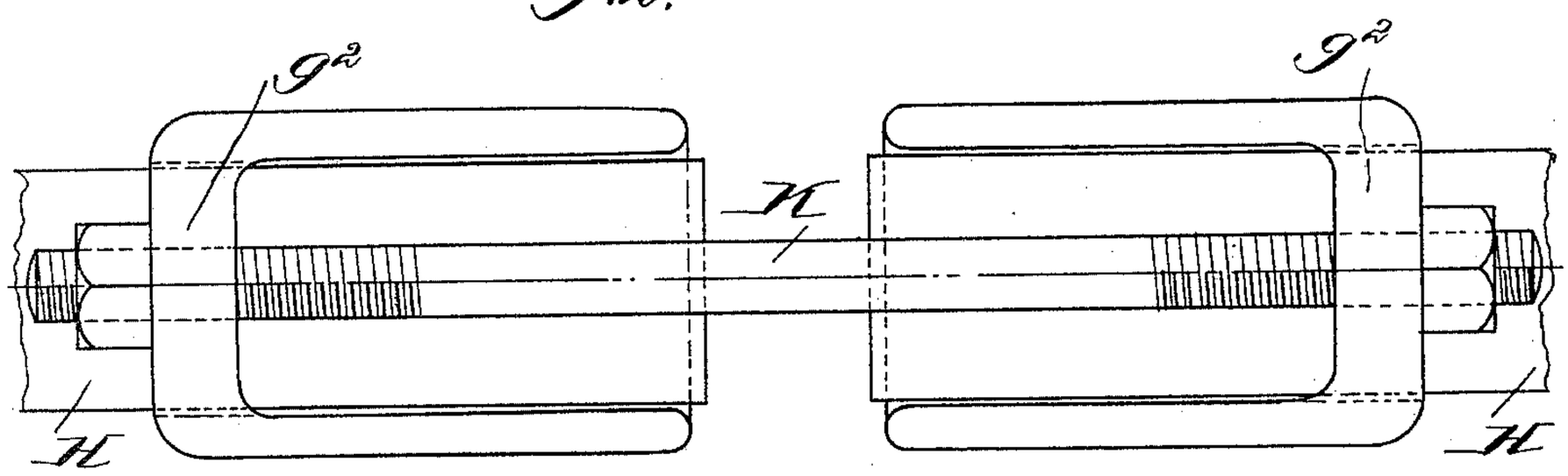


Fig. 2.



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UNITED STATES PATENT OFFICE.

HENRY W. FORD AND RICHARD M. FERGUSON, OF BELOIT, WISCONSIN, ASSIGNORS TO THE ECLIPSE WIND ENGINE COMPANY, OF SAME PLACE.

HOOP-COUPLING.

SPECIFICATION forming part of Letters Patent No. 477,174, dated June 14, 1892.

Application filed August 24, 1891. Serial No. 403,501. (No model.)

To all whom it may concern:

Be it known that we, HENRY W. FORD and RICHARD M. FERGUSON, both of Beloit, in the county of Rock and State of Wisconsin, have jointly invented certain new and useful Improvements in Hoop-Couplings, of which the following is a specification.

In the accompanying drawings, in which like letters indicate like parts, Figure 1 is a horizontal section of the coupling and straining-rod in position, and Fig. 2 is a front view of the same.

Our invention relates to that class of devices which serve as the connection for the ends of a metal hoop upon water-tanks and similar structures having convex external surfaces and properly belongs to that class of couplings wherein the ends of the hoop are attached to couplings (sometimes called "lugs") and the necessary strain secured by a straining-rod connecting the said couplings.

The objects are to furnish a very cheap and durable coupling and also simplify the manner of making such connections.

In the drawings, F represents the convex surface of a tank, upon which rest the couplings G G, attached to the ends of the hoop H and connected together by the straining-rod K. One of the couplings, and preferably each, contains the opening g, through which the hoop is passed, the transverse part g', over which the hoop is passed, around which the hoop is bent, and between which and the surface of the tank the return-bend of the hoop is clamped; also, the transverse part g^2, through which the straining-rod is passed. The end of the hoop H, diverging from the tank in order to pass through the opening g and over the transverse part g', is then bent around and back beneath said transverse part g', as shown.

The mode of operation is as follows: The several parts having been connected together as above described, and illustrated in the drawings, upon screwing up the straining-rod K the parts g^2 g^2 are pulled toward each other, and as the strain on the hoop tends to prevent the parts g' g' moving around the tank there is a tendency to rock the blocks G G on said parts g' g', and thus act to firmly clamp the hoop H between the transverse part g' and the surface of the tank, thereby, in connection with the bend of the hoop around the part g', securely locking the hoop in place and preventing its drawing out of or from the coupling. The hoop being thus secured at both ends to the couplings, the latter are forced toward each other by action of the straining-rod, thus tightening the hoop to any extent desired. This construction dispenses with the use of rivets and brings the strain equally upon the entire width of the hoop, so that it is not liable to rupture at the point where it is fastened to the couplings. No cutting or riveting being necessary, the parts can be readily and conveniently put together and as readily taken apart.

As distinguished from another device invented by us for a similar purpose and forming the subject-matter of a separate application, filed August 22, 1890, Serial No. 403,494, now pending for Letters Patent, the device herein described and claimed possesses the following new feature and function, to wit: By introducing the hoop through the opening g and then bending it around the front end of the part g' and down between the body of the coupling and the convex surface of the tank the result is that the tightening of the straining-rod acts preliminarily to firmly clamp the extreme end of the hoop against the body of the tank, so as to confine such end from yielding under a further strain, after which the further tightening of the straining-rod draws directly upon the body of the hoop, and therefore to the best advantage. We deem it important that the part g' should extend forward toward the center between the blocks and that the end should be turned down under said part g' and between it and the body of the tank, for by this means the band is much more securely held, inasmuch as an immense pressure is thus brought to bear on the end of the band between the part g' and the body of the tank, and there is no possibility of the end of the band slipping out under any circumstances, whereas in the invention above referred to there is a possibility of the end slipping under some circumstances, which is not possible where the end of the band is held between the extension part g^2 and the tank and pressed down by said part g'.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. As a fastening and tightening device for tank-hoops, a coupling consisting of two metallic blocks connected by a straining-rod, one of said blocks being provided with an opening adapted to admit the body of the hoop, with a transverse projecting part to receive the end of the straining-rod, and with a transverse part extending from said projecting part toward the center between the blocks and around which the end of the hoop is bent so as to lie between said transverse part and the body of the tank and be firmly clamped to the tank by the action of the straining-rod, substantially as described.

2. In a device for fastening a tank-hoop, the coupling member G, consisting of a metallic block provided with the projecting lug g^2, constructed to receive and co-operate with the end of a straining-rod, the transverse part g', inclined upward toward the center of the rod and away from the projecting lug g^2, and the opening g under the lug g^2 to allow of the passage of the hoop under said lug and thence over and around under the part g', substantially as set forth.

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