

(No Model.)

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

No. 477,173.

Patented June 14, 1892.

Fig. 1.

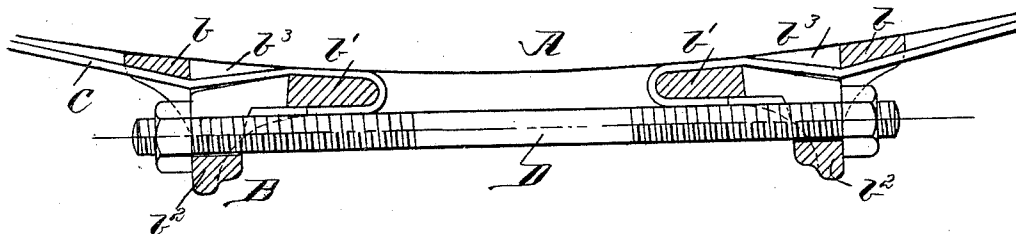


Fig. 2.

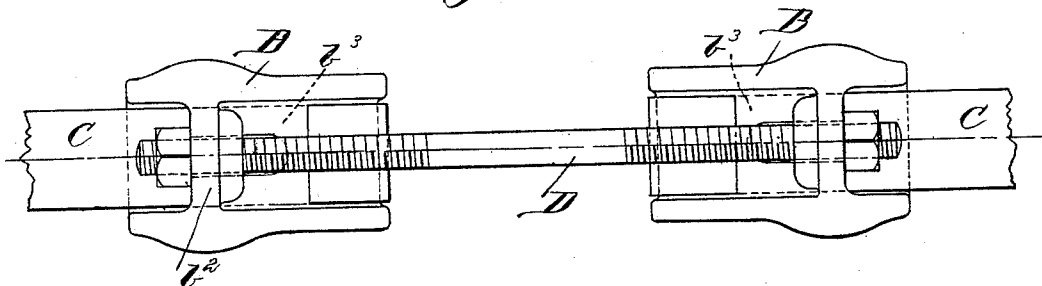
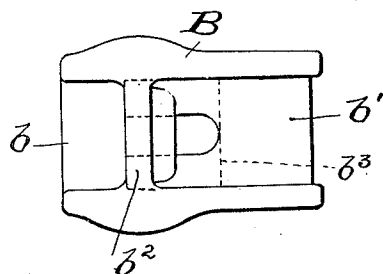


Fig. 3.



Witnesses
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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. 477,173, dated June 14, 1892.

Application filed August 22, 1891. Serial No. 403,494. (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 same. Fig. 3 is a plan of one of the couplings detached.

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 external convex 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.

To furnish a more economical and durable coupling than is now to be found and also to simplify the manner of making such connections are the objects of our invention.

In the drawings, A represents the outer convex surface of the plank or staves of a tank, upon which rest the couplings B B, attached to the ends of the hoop C and connected by the straining-rod D. One of the couplings, and preferably each, contains the transverse part *b*, which rests against the tank and forms a bridge, over which the hoop is bent, the transverse part *b'*, between which and the tank the hoop is passed and around which the hoop is bent, and also the transverse projection *b²*, through which the straining-rod is passed, a space or opening *b³* being thus formed through the coupling to accommodate the hoop, as shown. The parts *b*, *b'*, and *b²* are usually cast in one piece with the block, of which it forms a part, as shown in Fig. 3. The end of the hoop C, diverging from the tank in order to pass over the bridge *b*, is then bent inward toward the tank and passed between the latter and the transverse part *b'* and thence around and back over the outside of the part *b'*, as shown.

The mode of operation is as follows: The

several parts having been connected together as above described, and as illustrated in the drawings, upon screwing up the straining-rod the parts *b² b²* are pulled toward each other, and as the strain on the hoop tends to prevent the parts *b' b'* moving around the tank there is a tendency to rock the blocks B B on said parts *b' b'*, and thus act so as to clamp the hoop C firmly between the part *b'* and the surface of the tank, thereby, in connection with the bend of the hoop at *b* and around the part *b'*, securely locking the hoop in place and preventing its drawing from the coupling. The hoop being thus secured at both ends to the couplings, the latter are forced toward each other by the action of the straining-rod, thus drawing and 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 the latter is not liable to rupture at the points where it is fastened to the couplings. No riveting or cutting being necessary, the parts can be readily and conveniently put together and as readily taken apart. We deem it important that the part *b'* should extend forward toward the center between the blocks, for by this means a great pressure is exerted on the band and it is firmly held between said part *b'* and the body of the tank, whereas if said part *b²* did not extend toward the center of the coupling it would not hold the band, but would require that the loop of the band be riveted or otherwise secured to the bar.

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 metal blocks connected together by a straining-rod, one of said blocks being provided with a loosely-fitting socket for said straining-rod, and a transverse part extending away from said socket toward the center between the blocks and around which the end of the hoop is to be bent and which when the straining-rod is tightened up causes said metal block to press said transverse part toward the tank, and thus strongly clamp that portion of the hoop which extends between said transverse

part and the tank, substantially as and for the purpose set forth.

2. As a fastening and tightening device for tank-hoops, the combination of the straining-rod D with the couplings B B, each coupling
5 being constructed with the transverse part b' , around which the hoop is bent and beneath which it is clamped to the tank, and with the transverse part b , arranged to come between
10 the hoop and the tank and adapted to form an angle in the hoop when the latter is applied in connection with the couplings, substantially as herein set forth.

3. In a device for fastening a tank-hoop, the

coupling member B, consisting of a metallic
15 block or casting provided with the transverse parts $b b'$ to engage with the hoop, the projecting lug b^2 , constructed to receive the end of the straining-rod and co-operate therewith, and the opening b^3 between the parts b, b' , and
20 b^2 to admit and accommodate the end of the hoop, substantially as herein set forth.

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Witnesses:

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