No. 686,062. Patented Nov. 5, 1901.

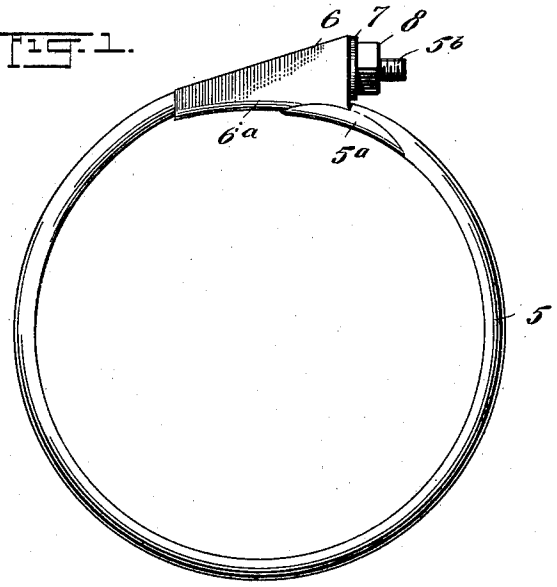
J. HATTELY.

BAND AND SHOE FOR TANKS.

(Application filed Apr. 4, 1901.)

(No Model.)

FIG. 1.



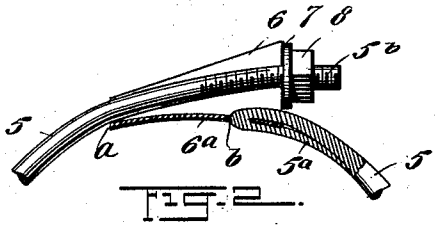


FIG. 2.

FIG. 3.

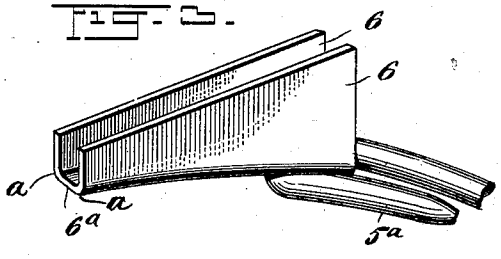
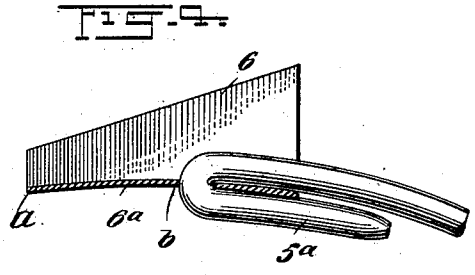


FIG. 4.



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UNITED STATES PATENT OFFICE.

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BAND AND SHOE FOR TANKS.

SPECIFICATION forming part of Letters Patent No. 686,062, dated November 5, 1901.

Application filed April 4, 1901. Serial No. 54,267. (No model.)

To all whom it may concern:

Be it known that I, JAMES HATTELY, a citizen of the United States, and a resident of Seattle, in the county of King and State of Washington, have invented a new and useful Improvement in Bands and Shoes for Tanks, of which the following is a full, clear, and exact description.

This invention relates to contractible bands or hoops employed for holding the staves of a tank assembled and closely joined, and has for its object to strengthen such a band where one end of the band engages with the abutment-shoe therefor, so as to render the band very strong and durable at a point which is weak in bands of ordinary construction.

The invention consists of the peculiar novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of a band and shoe connected in the improved manner. Fig. 2 is a sectional side view of the features of improvement for connecting the band and the abutment-shoe. Fig. 3 is an enlarged perspective view of the shoe and a side view of an end portion of the band engaged with the shoe by a loose hook connection ready for consolidation therewith by welding and drop-forging the same, and Fig. 4 is a sectional side view of the shoe and the hooked end of a band ready for welding and drop-forging to complete the fixed attachment of the shoe upon one end of the band.

The shoe, which is to be secured firmly on one end of the band 5, is formed of plate metal cut into shape and then bent at two points *a*, so as to provide two parallel and spaced flanges 6, that are oppositely positioned and may taper edgewise in the direction of the end which is outermost when the shoe is affixed upon the band. The backbone member 6^a of the shoe is perforated, as at *b*, a suitable distance from the end thereof which is to be connected with an end of the band 5. An end portion 5^a of the band 5 is formed into an open hook, which is inserted through the perforation *b* from the side of the backbone member 6^a which is between the flanges 6 and then bent farther, so as to dispose the hook-limb 5^a below the body portion of the band and close to it, as shown in Figs. 3 and 4. To complete the attachment of the hook member 5^a upon the shoe, a welding heat and proper flux is applied to the band end and shoe and then afterward the joined parts are rendered integral at the point of hooked connection by any preferred means, such as swaging in the ordinary manner or by drop-forging on a suitable machine, as may be preferred, the connection then appearing as shown in Fig. 2. The opposite end 5^b of the band 5 is screw-threaded and provided with a washer 7 and a nut 8.

In service the bands, constructed as shown and described, are each given complete form by introducing the threaded end of the band between the side flanges of the shoe, so that said end will be held in the shoe. The washer 7 seats against the wide ends of the flanges 6 and affords a base for the nut 8, which by adjustment will contract the band upon the assembled staves of a tank.

The peculiar means of connecting the end of the band with the shoe so as to render said connection practically integral is very advantageous, as it greatly strengthens the junction of the shoe and the band, prevents breakage, and adds to the durability of the bands for a tank or other vessel formed of staves held assembled and clamped by the improved bands.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a shoe having two sides and a spacing or backbone member that holds said sides parallel, the backbone member having a perforation near one end thereof, of a band in open hoop form having one threaded end, a washer and nut on said end, and a hook at the opposite end, which hook is engaged within the perforation of the backbone and subsequently consolidated with the backbone by welding and compression.

2. The combination with a shoe that is substantially V-shaped in cross-section, comprising two sides and an integral backbone or

spacing member, said backbone having a perforation near one end, of an open band or hoop, one end of which is bent into hook form and then engaged with the backbone of the shoe by passing the hook member through the perforation, the shoe and hook being rendered integral by welding heat and consolidation, the opposite end of the band having a screw-thread thereon and occupying space between the sides of the shoe, and a washer and nut engaging the threaded end portion of the band that projects beyond the shoe, said washer bearing upon the spaced ends of the shoe.

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

JAMES HATTELY.

Witnesses:
D. C. CONOVER,
J. M. POTTER.