

O. WELLS.  
Coupling for Joints of Wooden Pumps.  
No. 215,307. Patented May 13, 1879.

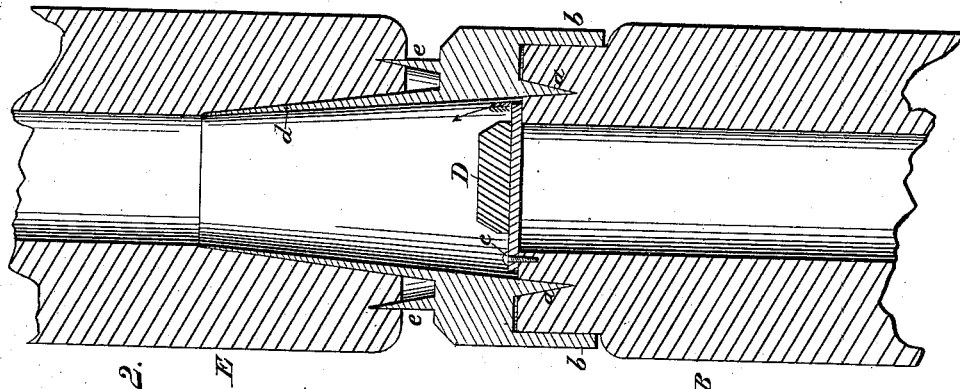


Fig. 2.

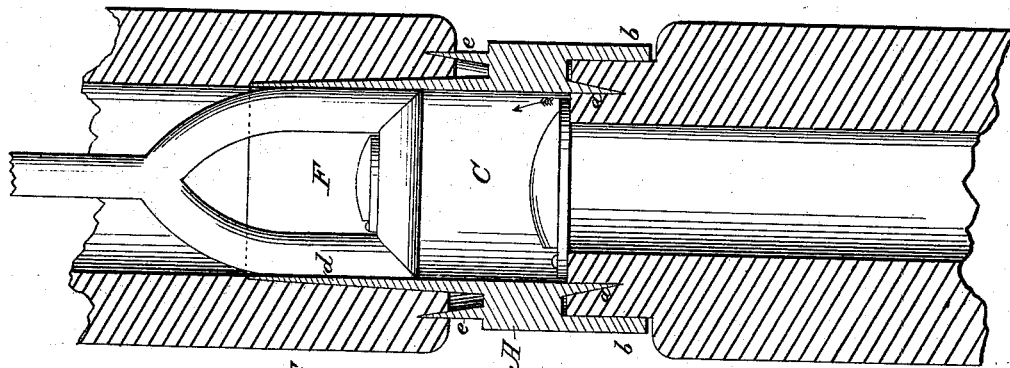


Fig. 3.

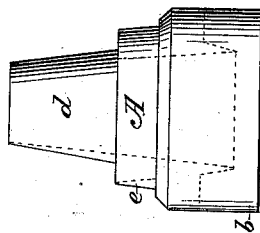


Fig. 1.

Attest:  
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# UNITED STATES PATENT OFFICE

OSBERN WELLS, OF NEWBERRY, SOUTH CAROLINA.

## IMPROVEMENT IN COUPLINGS FOR JOINTS OF WOODEN PUMPS.

Specification forming part of Letters Patent No. **215,307**, dated May 13, 1879; application filed November 2, 1878.

### *To all whom it may concern:*

Be it known that I, OSBERN WELLS, of Newberry, in the county of Newberry and State of South Carolina, have invented certain new and useful Improvements in Couplings for Joints of Wooden Pumps; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a cheap and perfect coupling for the joints of wooden pumps, and is an improvement upon my former patent, No. 205,709, for pipe-coupling.

Hitherto much difficulty has been experienced in making these joints in such a manner that the valves could be readily placed in position, especially when the bore of the separate joints of the pump were of the same diameter; but by using my improved coupling this difficulty is avoided, and the joints are made and the valves placed in position with equal facility, whether the bore of the separate pieces be the same or different from each other, as when a working-barrel is joined directly to the suction-pipe, with the valve upon the top of the latter, all as will be hereinafter fully described, and the points of novelty specifically designated in the claims.

In the drawings accompanying this specification, Figure 1 is a side view of the coupling. Fig. 2 is a longitudinal section through the coupling, and a part of two contiguous portions of the pump logs or pipes with the valve in place upon the top of the lower piece. Fig. 3 shows a modification of my improved coupling applied to a joint in which the lower piece is the suction-pipe and the upper the working-barrel, with the valve on top of the suction-pipe and the pump-bucket in the working-barrel.

A represents the coupling, formed with a downwardly-projecting band, *b*, which encircles the top of the lower or suction pipe, B, which, if large, is reduced till of the same diameter as the inside of the band, thus prevent-

ing all danger of splitting the pipe when the coupling is forced upon it. An inner wedge-shaped ring, *a*, projects downward within the band *b*, and, in making the joint, is driven into the end of the suction pipe or log B, thus compressing the wood between the ring and band in such a manner as to form a perfectly-tight and, as it were, packed joint.

The inner side of the ring *a*, being straight, does not force the wood inward, but leaves it intact to receive the valve D, which is secured to the top of the pipe or log B within the coupling by screws *c* or other suitable means.

Projecting upward from the body of the coupling is the extension *d*, which incloses the valve-chamber C, and, when the bore of the pipe or log E is the same as that of the part B, is made conical, so as to enter a conical enlargement in the lower end of the part E, thus forming a perfect valve-chamber, and at the same time reducing the internal chamber of the upper part of the coupling to that of the bore of the pipe B; but where the upper joint or part, E, is used as a working-barrel for pump-bucket F, therefore requiring a larger bore than the lower part, B, this extension *d* of the coupling is made of equal internal diameter from end to end, thus serving, if desired, for the principal portion of the working-barrel exposed to the friction of the bucket, and insuring great durability.

Encircling the extension *d* is a wedge-shaped ring, *e*, straight upon the outside, tapering upon the inside, serving, like the ring *a*, to compress the wood, not outwardly against a band, but inwardly against the extension *d*, making a perfectly-tight joint without incurring the slightest danger of splitting the pipe or log.

These couplings may be made of cast metal, and are of such form as to be readily molded in sand, thus enabling them to be manufactured at a very cheap rate. If iron be the metal of which they are made, it may be protected from oxidation, when desired, by coating with tin or zinc in the well-known methods of applying a coating of those metals to iron.

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

1. The pipe-coupling hereinbefore described,

consisting of a body provided with the band *b*, wedge-shaped ring *a*, extension *d*, and ring *e*, substantially as specified.

2. The pipe-coupling provided with the band *b* and wedge-shaped ring *a*, in combination with the pipe or log *B*, as and for the purpose set forth.

3. The pipe-coupling provided with the extension *d*, forming a valve-chamber, and the wedge-shaped ring *e*, encircling the extension,

in combination with the log or pipe *E*, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

OSBERN WELLS.

Witnesses:

JAMES PACKER,  
S. F. FANT.