H. D. Parker,

Shaft Coupling,

No. 52,793. Patented Feb. 20, 1866.

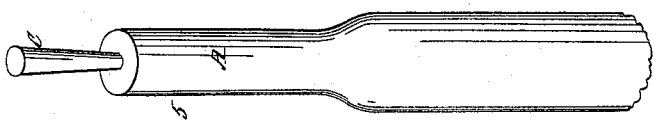

Fig. 5

Fig. 4

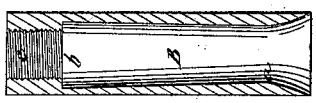

Fig. 3

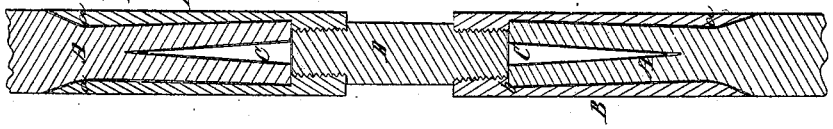

Fig. 2

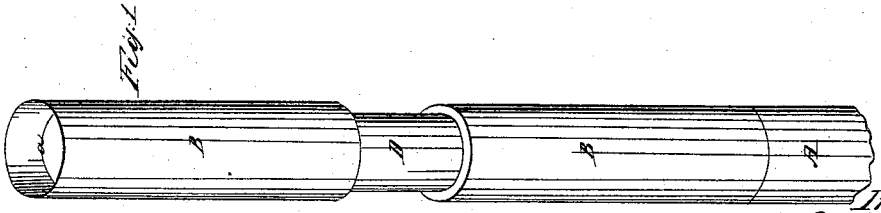

Fig. 1

Witnesses.
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UNITED STATES PATENT OFFICE.

H. D. PARKER, OF GENESEO, NEW YORK, ASSIGNOR TO C. L. BURTIS, THOS. A. BURROWS, AND ELI S. HART.

IMPROVED PIPE-COUPLING.

Specification forming part of Letters Patent No. **52,793**, dated February 20, 1866.

To all whom it may concern:

Be it known that I, HASKEL D. PARKER, of Geneseo, in the county of Livingston and State of New York, have invented a new and useful Improvement in Coupling the Sections of Piston-Rods for Oil-Pumps; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of my improved coupling, the lower socket having a wooden section of rod connected therewith, while the upper socket is open; Fig. 2, a central vertical section of the coupling with the sections of rod in place; Fig. 3, a section of one of the sockets; Fig. 4, an elevation of the connecting-bolt; Fig. 5, a perspective view of the end of one of the sections of rod, with the expanding-wedge partially driven in.

Like letters of reference indicate corresponding parts in all the figures.

In operating the pistons of oil-pumps several hundred feet below the surface it has been found necessary to employ wooden piston-rods, as iron ones are too heavy, owing to the great length. The usual couplings for the sections of these rods have been simple sockets receiving the contiguous ends, and having pins or bolts passing transversely through. The great difficulty is that, owing to the great strain in the upstroke, the sections easily pull out or get broken at the couplings, and it is very difficult to remove the broken rod.

My invention consists in coupling the contiguous ends of two sections of rod by a particular means, so that the strain in the upstroke will draw only upon the grain of the wood.

As represented in the drawings, A A are the contiguous ends of two sections of wooden piston-rods, popularly known as "sucker-rods." These ends are preferably cut down to a smaller diameter than the body of the rod, and are made to fit into sockets B B. The interiors of these sockets are made of smaller diameter at the outer extremity, *a*, than at the inner one, *b*, and therefore are of the inversely wedging shape shown. When the ends of the wooden sections are introduced into the sockets they are expanded therein by means of wedges C C (which may be conical or otherwise) being driven into their inner ends. In this condition it will be perceived that the ends of the rod cannot be withdrawn without sufficient strain to break the grain of the wood. Since the wedges are to be driven after the ends of the sections have been introduced into the sockets, it is desirable to leave the inner ends of said sockets open. In the drawings a female screw, *c*, is shown as formed in each socket, into which screws a double-threaded connecting-bolt, D. Any equivalent that will accomplish the same result may be employed, or, if practicable, the two sockets may be formed as a whole, or one may screw directly into the other.

The advantages of this coupling are obvious. The strength of the coupling is in proportion with that of the tension of the wood, for the strain comes directly lengthwise of the grain, and the latter must break before the coupling can give way. The wedges cannot escape, and the wood is kept constantly swelled by its contact with the oil that surrounds it in the elevating-tube, so that the coupling is always tight.

I am aware that it is common to secure a wooden pin or plug in a socket by a wedge driven in, but such simply I do not claim. My claim is limited to a particular combination of parts forming a coupling for two sections of rod.

What I claim as my invention, and desire to secure by Letters Patent, is—

Coupling the ends A A of two sections of rod by means of the wedging-sockets B B, connecting-bolt D, or equivalent, and wedges C C, operating substantially in the manner and for the purpose herein described.

H. D. PARKER.

Witnesses:

J. B. ADAMS,

J. M. ALLEN.