

R. N. Allen,
Shaft Coupling,
No 52,355,
Patented Jan. 30, 1866.

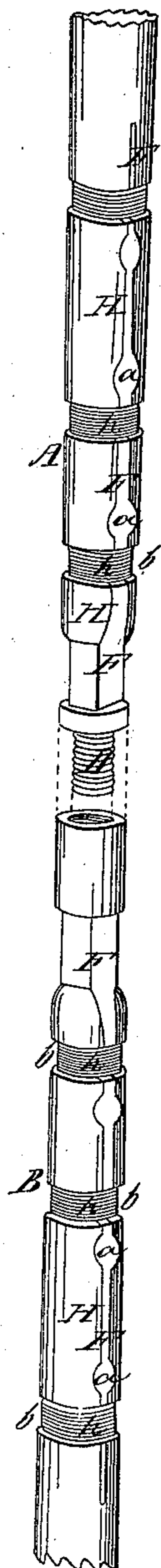


Fig. 1

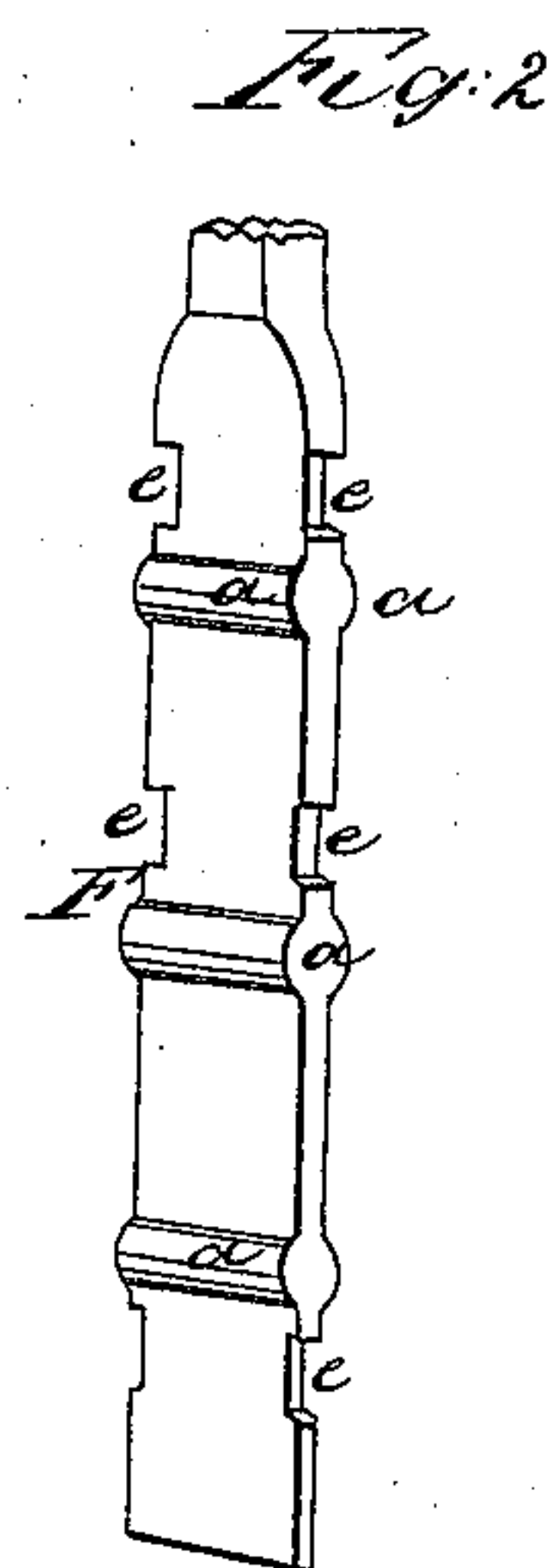


Fig. 2

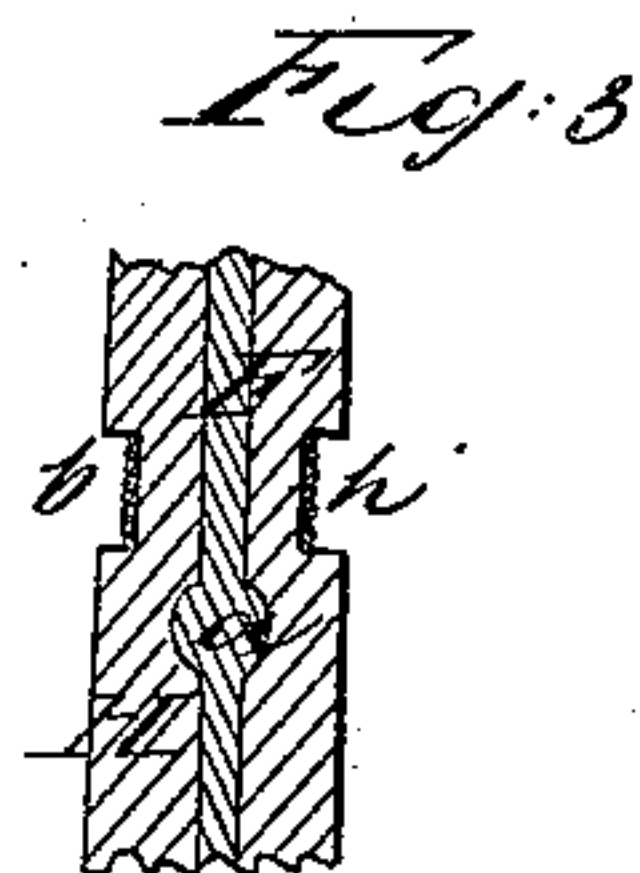


Fig. 3

Witnesses.
W. J. Burdage
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Inventor
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UNITED STATES PATENT OFFICE.

R. N. ALLEN, OF CLEVELAND, OHIO, ASSIGNOR TO W. R. MOULD, OF SAME PLACE.

IMPROVEMENT IN WOODEN PISTON-RODS FOR DEEP WELLS.

Specification forming part of Letters Patent No. 52,355, dated January 30, 1866.

To all whom it may concern:

Be it known that I, R. N. ALLEN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Sucker-Rods for Pumps; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a portion of the rod, showing the manner of connecting the coupling-plates to the sections of the rod. Fig. 2 is a perspective view of a part of one of the coupling-plates detached from the rod. Fig. 3 is a vertical section through a portion of the rod.

Like letters of reference refer to like parts in the several views.

My improvement relates to the manner of connecting the coupling to the sucker rods, as hereinafter described.

In Fig. 1, A and B represent sections of a sucker-rod in which the coupling-plates are secured, that are united or coupled together by the screw D, as indicated by the dotted lines. The coupling-plates F, inserted and secured in the ends of the sections of the rod, are equal in width one way to the rod, and across the other they taper toward the ends, as shown in Fig. 1. The plates are secured in the sections or wooden part H of the rod by means of bosses *a* formed on and projecting from the sides of the plates, as represented in Fig. 2, that extend into the wood, and the edges of the plates are shouldered out as at *e*, on which wire *h* is wrapped that passes around depressions *b* cut or shouldered out on the rod.

The solid wooden rod, in order to fit on the plate and be connected to it, is bored out so as to receive the bosses *a* of the coupling-plate, and from one bored opening to the

other the rod is slotted or scarfed out, according to the width of the plate, when the plate can be put in the rod from one side, the bosses fitting into the bored openings, and the places shouldered out at *e* on the edges of the plate correspond or fit into place with the depressions *b* shouldered or turned out on the rod, round which the copper wire *h* is wrapped, whereby the wooden part H of the rod is securely fastened to the plate, which connection is rendered very firm and strong, not only by the wire wound around the plate and rod, but also by means of the bossed projections *a* extending into the wood from the plate.

In the ordinary mode of attaching the coupling-plates to the rod, when the wood becomes soft by the water the fastenings are loosened, causing the pump to stop, and to repair it is accompanied with much difficulty and expense, which are obviated by having a rod constructed as herein described.

In the ordinary pump-rod, the wood being softened by the oil and water, the rivets become loose, work out, and drop down into the barrel or valves of the pump, producing a leakage of the rod or valves, either breaking the rod or injuring the valves so as to stop the working of the pump.

One or more bosses may be used, and they can be of an angular form; but I prefer them as herein described, being more easily and conveniently fitted to the rod.

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

The plates F, provided with one or more bosses, *a*, in combination with the section A or B of the rod, arranged and secured together substantially as and for the purpose set forth.

R. N. ALLEN.

Witnesses:

W. H. BURRIDGE,
A. W. McCLELLAND.