

(No Model.)

S. W. MARTIN.
PUMP PISTON GUIDE.

No. 433,990.

Patented Aug. 12, 1890.

Fig. 1.

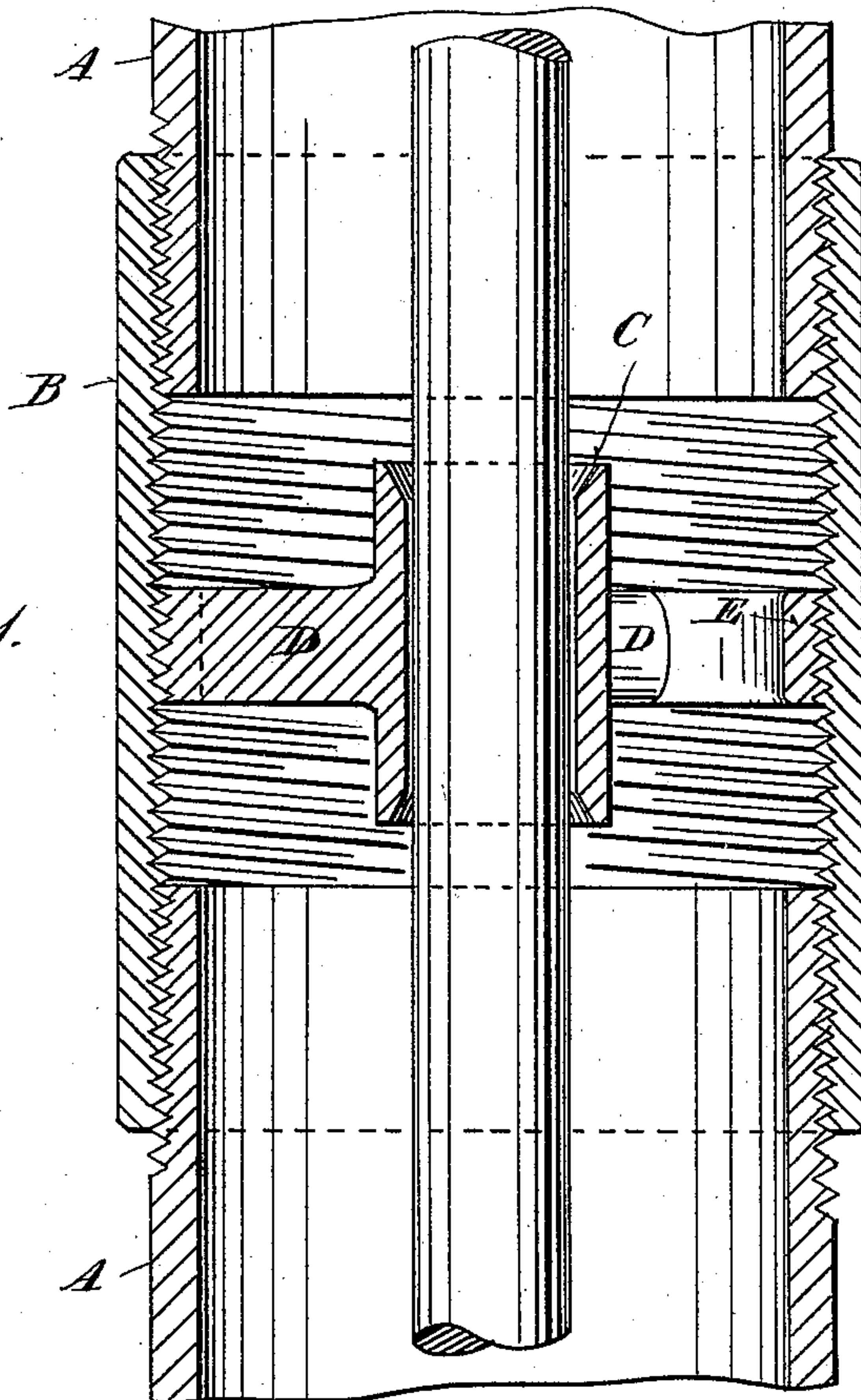
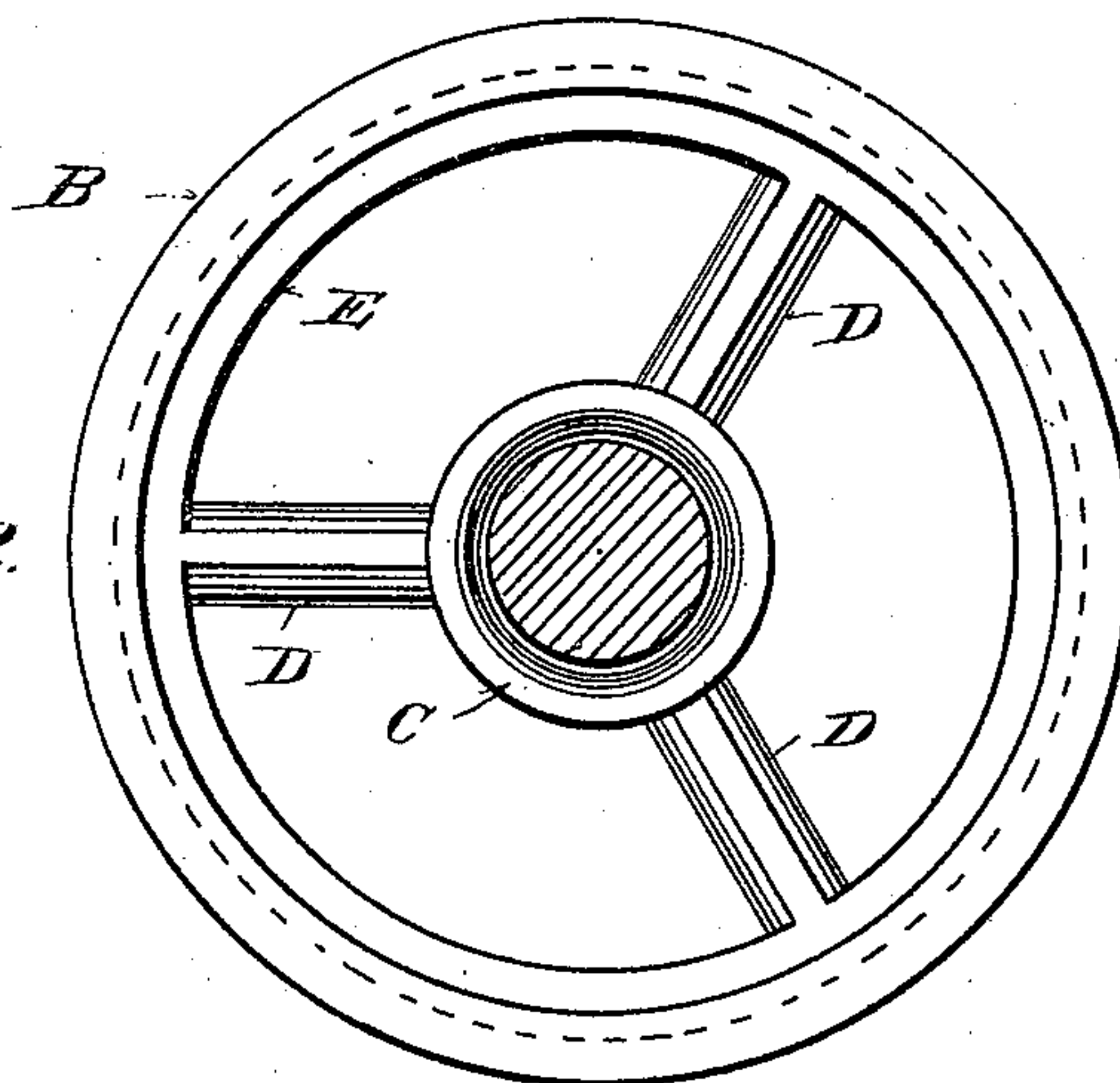


Fig. 2.



WITNESSES

H. M. Plaisted
Charles Hull,

INVENTOR

Samuel W. Martin,
By J. A. Paulmier,
his Attorney.

UNITED STATES PATENT OFFICE.

SAMUEL W. MARTIN, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE MAST, FOOS & COMPANY, OF SAME PLACE.

PUMP-PISTON GUIDE.

SPECIFICATION forming part of Letters Patent No. 433,990, dated August 12, 1890.

Application filed April 28, 1890. Serial No. 349,811. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL W. MARTIN, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Pump-Piston Guides, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in guides for pump-piston rods.

The object of the invention is to provide a guide for pump-piston rods of such a character that it may be screwed into and out of pipe-couplings used to connect the sections of a water-pipe of a deep-well pump. Many of these pipes are from fifty to one hundred and twenty-five feet long, as in the case of bored wells, where the cylinder is placed at a great depth and the water forced up through the pipe and out of a suitable discharge. In such cases the piston-rod is necessarily very long, as it has to reach from the operating-handle at the platform down into the cylinder. This great length occasions a tendency in the rod to bend or buckle on the downstroke, and also admits of a more or less lateral swaying and vibration of the rod even on the upstroke. It is the design of my invention to supply a cheap and easily-applied guide, which may be located along the rod at suitable distances and held by the pipe-coupling.

In the accompanying drawings, forming a part of this specification, and on which like reference-letters indicate corresponding parts, Figure 1 represents an enlarged sectional view of the adjacent ends of two sections of a water-pipe, a coupling, and my improved guide therein; Fig. 2, a plan view of the guide and coupling.

45 The letter A represents the several sections of a pump water-delivery pipe or pipe which constitutes the casing of the piston-rod, whether the water passes through such pipe or not. The sections are coupled by coup-

lings B, consisting of short stout iron tubes interiorly screw-threaded from end to end and receiving a pipe-section at either end. The guide consists of a sleeve C, having arms or spiders D, and an annular rim E, exteriorly screw-threaded and adapted to be screwed into and out of the couplings B. By making the guides in this manner they may be screwed into the ordinary coupling, and as many of them may be used as the particular case may require. They may be placed in every coupling, or in every alternate coupling, or in couplings at the desired intervals. It will be seen that by this device the rod is prevented from vibrating, swaying, or buckling, and is thereby rendered easier to operate. The labor expended upon the handle is also more effective in operating the plungers or pistons, because the rod being held from undue vibration and swaying applies the motion transmitted to it in a more direct and positive manner to the plunger or piston.

The device has been put into practical use and is now upon the market in considerable quantities and its utility fully tested.

By being detachable the guide does not interfere with the ordinary methods of manufacture in producing the couplings, while at the same time it itself is more cheaply made separate from the parts which support it.

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

The combination, with a pipe-coupling having an interior screw-thread, of a piston-rod guide consisting of a central sleeve, radial arms, and a rim having an exterior screw-thread adapted to be screwed into and out of said coupling.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL W. MARTIN.

Witnesses:

H. M. PLAISTED,
WARREN HULL.