J. SHAW.

JOINTS FOR SUCKER-RODS.

No. 195,408. Patented Sept. 18, 1877.

Fig. 1

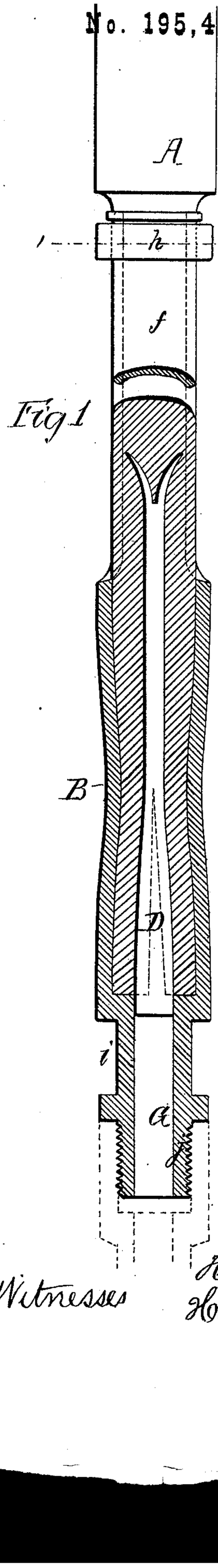

Fig. 2

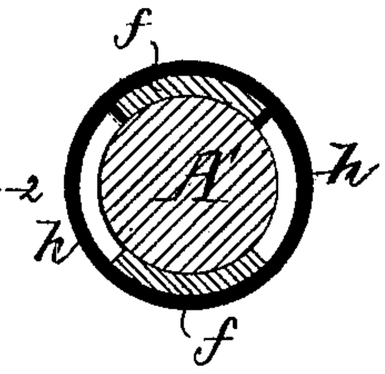

Fig. 3.

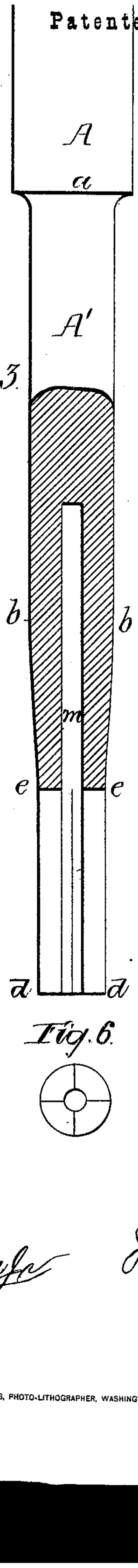

Fig. 4.

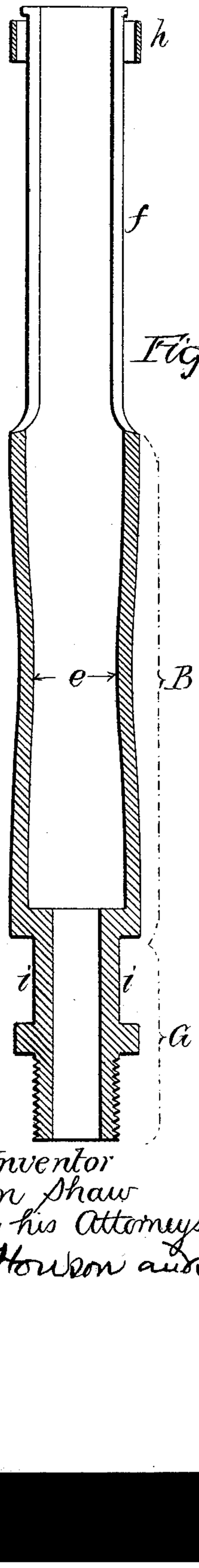

Fig. 5.

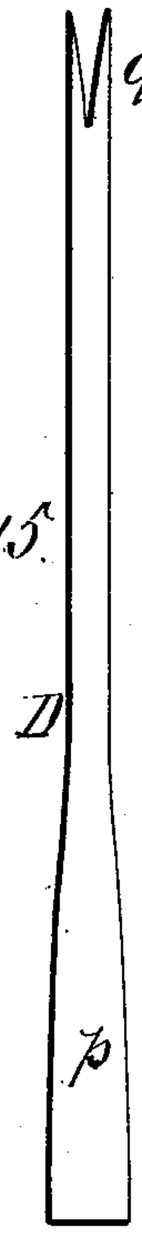

Fig. 6.

Witnesses

Henry Howson Jr

Harry Smith

Inventor

John Shaw

by his Attorneys

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UNITED STATES PATENT OFFICE.

JOHN SHAW, OF OIL CITY, PENNSYLVANIA.

IMPROVEMENT IN JOINTS FOR SUCKER-RODS.

Specification forming part of Letters Patent No. **195,408**, dated September 18, 1877; application filed August 20, 1877.

To all whom it may concern:

Be it known that I, JOHN SHAW, of Oil City, Venango county, Pennsylvania, have invented a new and useful Improvement in Joints for Sucker-Rods, of which the following is a specification:

My invention relates to the sucker-rods of deep-well pumps; and the object of my invention is to attach coupling-sockets to the several sections of the rod in a substantial and permanent manner.

In the acompanying drawing, Figure 1 is a vertical section of my improved coupling-socket for sucker-rods; Fig. 2, a transverse section on the line 1 2, and Figs. 3, 4, 5, and 6, views of the detached parts of the device.

A represents one end of one section of the wooden sucker-rod, and is reduced in size and made cylindrical from the shoulder *a* to about the point *b*, whence to about the point *e* it is made tapering, and from the latter point to the extreme end of the rod cylindrical. From the upper end of the socket B project two arms, *f f*, referred to hereinafter, and the lower end of the socket has a hollow projection, G, a portion, *i*, of which is made square, so as to be adapted to a wrench, the ends of the projection being threaded, so as to screw into the internally-threaded end of the socket of an adjoining section of the sucker-rod. A hole, *m*, is bored into the end of the rod A, and longitudinal slits are made in the rod from the extreme end to about the point *e*.

The rod A is introduced into the socket B, the tapering portion of the rod from *b* to *e* fitting snugly to the interior of the upper tapering portion of the socket, and the extreme end of the rod bearing on the bottom of the socket.

A pin, D, Fig. 5, forked at the end *q*, and made tapering at the opposite end, *p*, is introduced through the hollow projection G of the socket into the hole *m* in the end of the rod, and is driven tightly into the same, the result of which will be the outward forcing of the split end of the rod against the tapering interior of the lower portion of the socket by the tapering portion of the pin, the outward spreading of the prongs of the forked end of the pin, and the consequent retention of the latter, and the permanent attachment of the wooden rod to the socket.

In order to strengthen the rod, the arms *f f* of the socket are made to embrace the cylindrical portion A′ by a hoop, *h*, as best observed in Fig. 2.

It should be understood that the sucker-rods of deep-well pumps are made in sections or lengths coupled together, and that each end of each section is to have one of the sockets B, the socket at one end of each section having an externally-threaded projection, *j*, and the socket at the opposite end of the same section having an internally-threaded recess, so that the several sections of the rod may be readily screwed together and as readily uncoupled.

I claim as my invention—

The socket B, contracted at *e*, and having a hollow projection, G, the rod A, adapted to the socket and severed at the end, as specified, and the taper pin D, all being combined substantially as set forth.

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

JOHN SHAW.

Witnesses:
ROBERT DERBY,
J. F. WALTERS.