

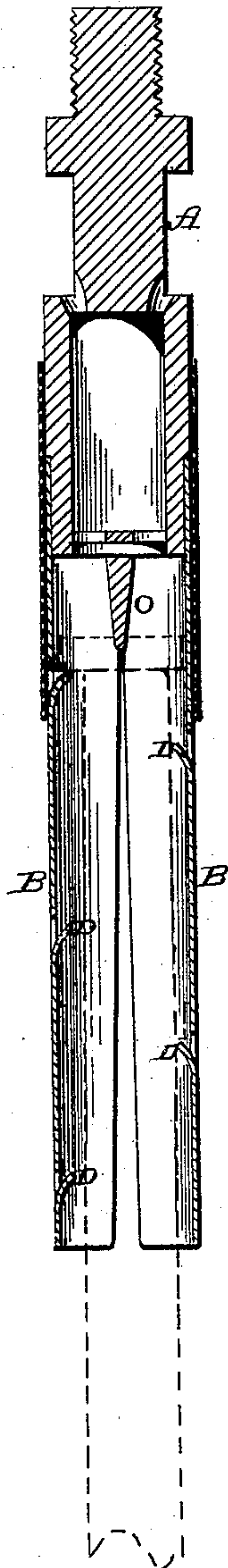
(No Model.)

J. GILL.

COMBINED SPEAR AND SOCKET FOR OIL WELLS.

No. 351,632.

Patented Oct. 26, 1886.



WITNESSES.

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COMBINED SPEAR AND SOCKET FOR OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 351,632, dated October 26, 1886.

Application filed February 23, 1886. Serial No. 192,795. (No model.)

To all whom it may concern:

Be it known that I, JOHN GILL, of Knapp's Creek, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Combined Spear and Socket for Oil-Wells; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in combined spear and socket for oil-wells; and it consists in a suitable head, to which are attached two semicircular elastic wings, each one of which is provided with a series of internal projecting springs upon its inner side, and which springs engage with the broken rods or other attachments and draw them to the surface, as will be more fully described hereinafter.

The object of my invention is to provide a combined spear and socket which, when lowered into the well, will pass down over the upper ends of broken rods or other devices which are down in the well, and, by causing the inwardly-projecting springs to bite into the surface of the rods, connect them to this spear or socket, and enable them to be drawn up to the surface with but very little trouble.

The accompanying drawing represents a vertical section of an implement embodying my invention.

A represents the head, which is made screw-threaded at its upper end, so as to connect with the rods or other devices by which it is to be lowered into the well. Connected to the lower end of this head in any suitable manner are the semicircular elastic sections B, which are made just large enough to pass freely down through the tubing of the well, and which readily spring apart at their lower ends, so as to pass down over the upper end of the broken rod or other device which is to be removed from the well. Secured to the inner side of each one of these sections B are a suitable number of springs, D, which are inclined inwardly at their upper ends and so shaped as to readily engage either with the broken rod or to catch under a collar upon the rod, and thus

connect the combined spear and socket to the rod or other device which is to be removed from the well. These springs being inclined inwardly, after they once engage with the surface of the rod or the collar thereon, the greater the weight of the rod or other device the more the springs will bite into its surface and hold it securely while being raised from the well.

Secured to the lower end of the head, and in between the upper ends of the elastic sections B, is the wedge O. When the device is driven down over the upper end of the rod, this wedge enters the end of the rod and holds it, so that the rods can be unscrewed below the device. Of course the rods that the device is forced down upon are screwed together very tightly, and in that case the device answers the same as a socket to unscrew the rods. As the lower ends of the two sections separate readily when they come in contact with the upper end of the broken rod or other device in the well, the socket slips on down over the rod as far as it is possible to move, the springs remaining in contact with the surface of the rod, so as to bite into it as soon as the upward movement of the socket is begun. The springs may either be struck up from the metal of the sections, or they may be formed of steel and secured to the inner sides of the sections, as desired.

By means of the construction above described a combined spear and socket is produced at a very slight cost, and one which will work equally as well with smooth rods or with rods or devices which have collars formed upon their upper ends.

Through the head A are made suitable openings, which extend down inside of the socket for the purpose of allowing the paraffine to pass through the socket.

I am aware that there is nothing new in a socket having a catch or sharp point upon its inner side to catch under a collar on the rod, and this I disclaim.

Having thus described my invention, I claim—

1. A combined spear and socket for use in oil-wells, composed of two semicircular sections, which are united together at their upper ends, and which are made expansible at their lower ends, and which are provided with springs or sharp points upon their inner sides,

and the wedge O, placed in the upper portion of the socket, substantially as shown and described.

2. A combined spear and socket, provided
5 with a wedge which is placed in between the upper ends of the two sections, substantially as set forth.

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

JOHN GILL.

Witnesses:

E. F. KRUSE,
A. S. PATTISON.