

(No Model.)

J. M. McCANDLISH.

DRILL JAR.

No. 338,857.

Patented Mar. 30, 1886.

Fig. 1.

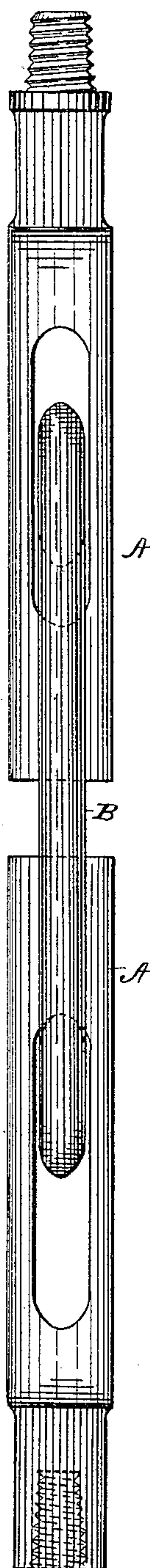
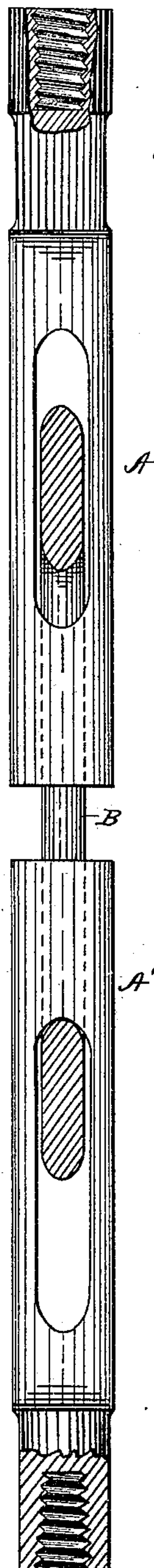


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES M. McCANDLISH, OF BRADFORD, PENNSYLVANIA.

DRILL-JAR.

SPECIFICATION forming part of Letters Patent No. 338,857, dated March 30, 1886.

Application filed October 13, 1885. Serial No. 179,810. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. McCANDLISH, a citizen of the United States, residing at Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Drill-Jars; 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 appertains to make and use the same.

This invention relates to the construction of drill-jars used in drilling oil and other deep-bored wells; and it consists in certain improvements therein, as will be hereinafter fully described, and pointed out in the claims.

Heretofore drill-jars have been made in two parts linked together or interlocked.

My improvement consists in making the jars of three parts linked together; or, in other words, in place of having two heads linked together, I have two heads connected by an intermediate link. The objects of this construction are, first, to distribute the jar or concussion which occurs when the tools are lifted up in the operation of drilling through more parts and thus lessen the liability of breakage; and, second, to lessen the liability of the jars becoming stuck fast in the well.

My device is shown in the accompanying drawings, as follows: Figure 1 is a side elevation of the same, and Fig. 2 is a like view, with the middle link in section vertically.

A is the upper head. A' is the lower head; and B is the intermediate link.

The construction can be easily understood from the drawings, as it does not differ materially from the manner of constructing jars now practiced, except that the middle link, B, is added.

The form of the parts may be varied to suit—as, for example, the rims or sides of the intermediate link may be flattened or widened out and made to embrace the sides of the heads, more or less, if desired.

It will be understood by a mechanic that the shock or concussion which takes place as the tools are raised up will in my device be distributed through the three parts, and conse-

quently there will be less liability to break than when only two parts are used; and, also, that if, by a particle of rock becoming detached from the sides of the well, the head A' should become stuck fast, or even the parts A' and B should be so stuck fast, the part A can reciprocate and very likely jar the tools loose, while when a jar consists of only two parts and they become fastened they cease to work and cannot be jarred loose.

I have found by actual use that the jars wear most rapidly on the lower link and the lower end of the middle link. This shows that in the operation of drilling the links move at that point, and that in case of a clogging of the drill or the lower link the upper link will be free to move. It also enables me to reverse the jars after they have become worn, thus adding greatly to the life of the jars.

In Fig. 2 I show both ends of the jars provided with a box or female screw. This is done to enable the jars to be reversed, as the auger-stem below and the sinker-bar above the jars will both be made with a pin; but where this construction is not made the jar can be reversed by using a coupler with two boxes or two pins on it, as the case may be.

I am aware that drill-jars have been made wherein the two heads were connected by a rope loop, as in the patent to Wheeler, January 20, 1885, No. 311,157. I do not desire to be understood as claiming any such construction.

What I claim as new is—

1. In a drill-jar, the combination, with the heads A and A', of the intermediate link, B, substantially as and for the purposes mentioned.

2. As an article of manufacture, a drill-jar consisting of three parts, A, A', and B, linked together, substantially as shown.

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

JAMES M. McCANDLISH.

Witnesses:

LESLIE E. OSBORNE,
L. M. FLEMING.