JAMES H. BOYD.

Improvement in Spring Bit for Cleaning and Enlarging Wells.

No. 122,149. Patented Dec. 26, 1871.

Fig. 1.

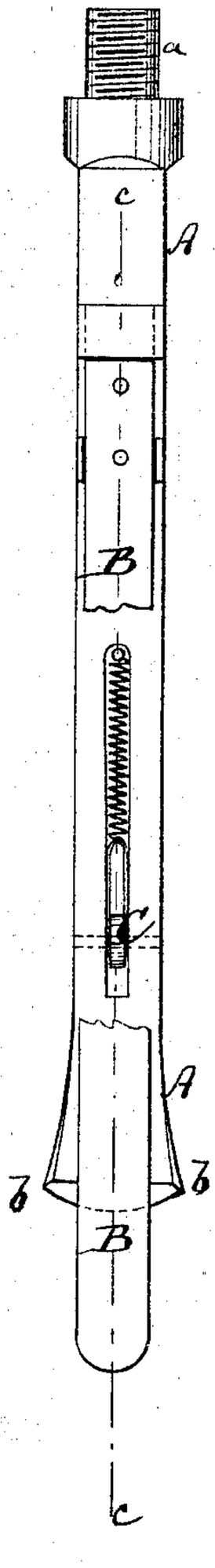


Fig. 2.

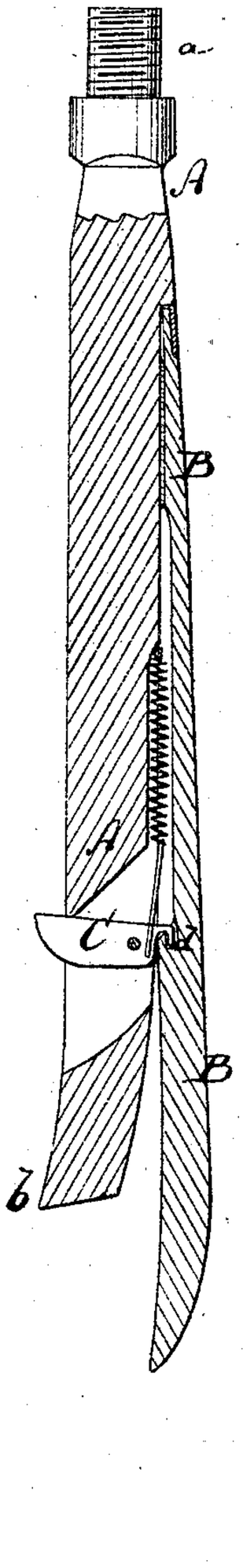


Fig. 3.

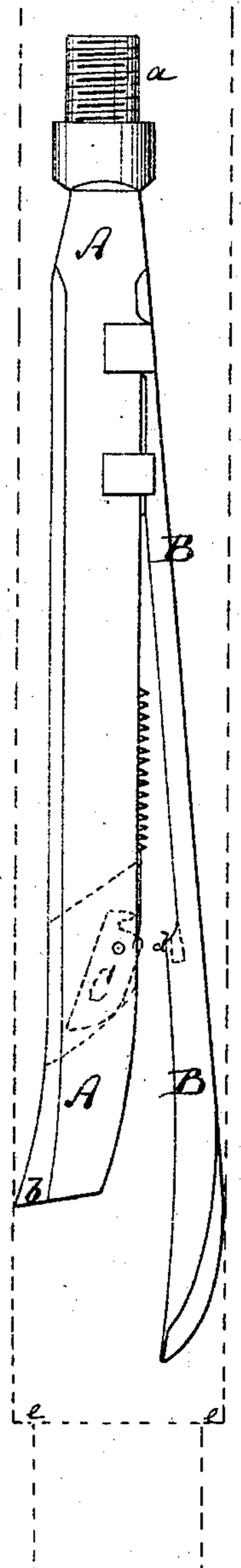
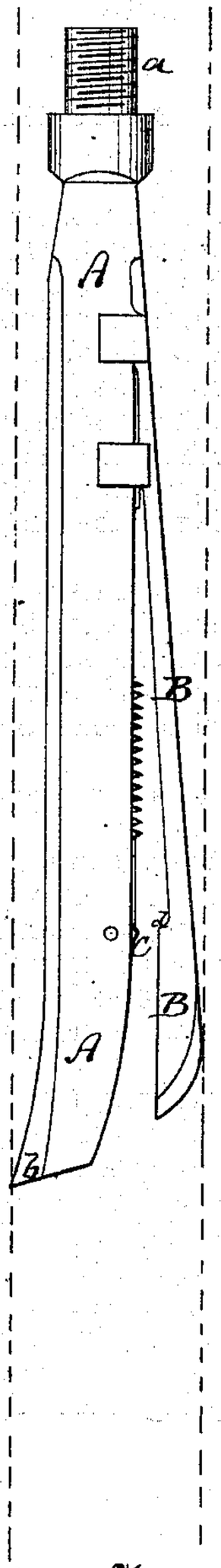


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES H. BOYD, OF WEST MONTEREY, PENNSYLVANIA.

IMPROVEMENT IN SPRING-BITS FOR CLEANING AND ENLARGING WELLS.

Specification forming part of Letters Patent No. 122,149, dated December 26, 1871.

To all whom it may concern:

Be it known that I, JAMES H. BOYD, of West Monterey, in the county of Clarion and State of Pennsylvania, have invented a new and Improved Spring-Bit for Cleaning and Enlarging Wells; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a face view, partly in section, of my improved well-bit. Fig. 2 is a section of the same taken on the plane of the line *c c*, Fig. 1. Figs. 3 and 4 are side views of the bit, showing it with a long and short spring-jaw, respectively.

Similar letters of reference indicate corresponding parts.

The object of this invention is to produce a convenient tool for cleaning out or enlarging oil-wells; and the invention consists in the application, to the shank of the bit, of a spring for crowding it against the well, and of a catch for holding the spring close to the bit during its application to the well.

A in the drawing represents the shank of my improved tool, made with a screw, *a*, at its upper end, whereby it can be connected with suitable mechanism, and provided also with an outwardly-projecting steel bit, *b*, at the lower end. To one face of the shank A is rigidly secured a spring, B, which, as in Figs. 1, 2, and 3, extends below the bit, or, as in Fig. 4, may be shorter than the same. In a mortise of the shank A is pivoted a spring-catch, C, which can, as in Fig. 2, be hooked over a lip, *d*, of the spring for holding it close to the shank, and which, when thus holding the spring, will project with its outer end from the back of the shank.

When the tool is to be applied to a well the spring is held close to the shank by the spring-catch C, so that the insertion of the tool will be facilitated. The projecting outer end of the catch at the same time holds the bit clear from the wall of the well, preventing it from scraping while being let down. As soon as the device is being worked, when in its proper place the catch will release the spring, causing the same to crowd the bit against the wall of the well, as in Figs. 3 and 4.

For enlarging a well, the bit is used with the long spring, Fig. 3. In this case the spring will enter the smaller part of the well and cause the bit to work in the larger part of the same upon the shoulder *e*.

For cleaning out wells the short spring is used, (see Fig. 4,) and crowds the bit against the wall of the well for properly scraping the same.

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

The tool, having shank A, provided with steel bit *b* at the lower end, with rigidly-secured spring B on one face having lip *d*, and extending below the bit, and with the pivoted spring-catch C with a hook thereon, all constructed and arranged as and for the purpose specified.

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