(No Model.)

J. R. ADAMS & D. ROBERTSON.

Detachable Lip for Augers.

No. 236,401. Patented Jan. 11, 1881.

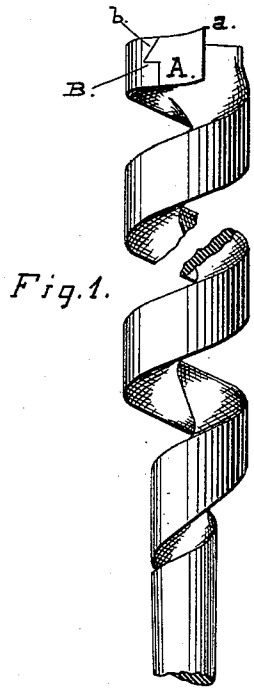


Fig. 1.

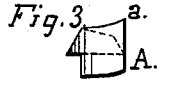


Fig. 3.

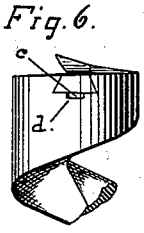


Fig. 6.

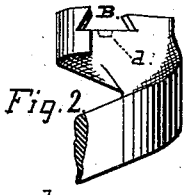


Fig. 2.

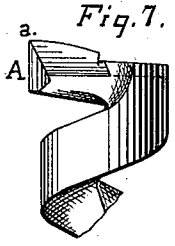


Fig. 7.

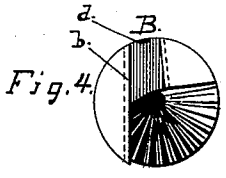


Fig. 4.

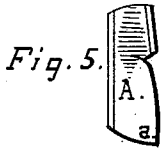


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN R. ADAMS AND DANIEL ROBERTSON, OF OAKLAND, CALIFORNIA.

DETACHABLE LIP FOR AUGERS.

SPECIFICATION forming part of Letters Patent No. 236,401, dated January 11, 1881.

Application filed November 5, 1880. (No model.)

To all whom it may concern:

Be it known that we, JOHN R. ADAMS and DANIEL ROBERTSON, both of the city of Oakland, in the county of Alameda and State of California, have made and invented a new and useful Improvement in Detachable Lips for Augers; and we do hereby declare that the following is a full, clear, and exact description of our said invention and the manner in which we apply the same, reference being had to the accompanying drawings.

This invention has relation to certain new and useful improvements in that class of augers or other similar boring-tools provided with a separable cutting-point attached to the end of the tool in such manner that when worn out or broken it can be removed and replaced by a new point, the object thereof being to add to the durability of the tool by rendering the stock or body serviceable for a much longer time.

The invention consists in the peculiar manner of attaching the cutting-point to the end of the auger or other tool, as illustrated in the drawings, and hereinafter described.

In the accompanying drawings, Figure 1 is a view of an auger with our improved detachable lip applied to it. Figs. 2 and 3 are front views of these parts separated. Figs. 4 and 5 are top views of Figs. 2 and 3 respectively. Fig. 6 is a detail view from the rear end of the cutting-lip. Fig. 7 is a front view of the end of the auger and cutting-lip.

In applying our invention to an auger we make the point or cutting-edge on a separate piece, A, and this piece we insert and fix in place on the end of the shank, so that the cutting-edge *a* shall form the proper continuation of the first spiral and have the requisite upward and forward curve. The remaining part of the removable piece A, on which is formed the cutting-lip *a*, has its sides beveled or made of a wedge shape, in order to fasten it in place upon the end of the tool. For this purpose we make a slot or groove diametrically across the end of the tool, of a form corresponding to the end of the part A, and in this slot B we insert and fasten the removable piece A. One side of this slot B extends entirely across the end of the auger, so that the back of the part *a* is received and fits against this side *b* as a solid shoulder. The cutting point or lip is thus held firmly and securely to the end of the auger, and is capable of performing its work as well as a solid cutting-lip, or one formed on the end of the spiral.

As the means of retaining this removable point in place when inserted in the slot B, we upset the end of the piece A by forcing down a lip, *c*, from the metal, and turning this lip down into a small cavity or depression, *d*, provided on the outer edge of the first spiral, so that this edge or face shall be preserved smooth and flush with the rest of the shank. This separable point A will have also the center gimlet or screw point fixed upon it, when such is required for the tool, and when either the cutting-lip *a* or this screw-point becomes damaged the piece A can be withdrawn from the tool and a new point inserted. By this means the shank or body of the tool is retained for use and rendered of service for a long time.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

An auger or other similar boring-tool having the dovetail slot B diametrically across the end thereof and the cavity or depression *d*, in combination with the dovetail piece A, with point or cutting-edge *a* and lip *c*, the piece A being secured within the slot B by forcing down the lip into the depression, so that the outer edge or face shall be preserved smooth and flush with the rest of the shank, substantially as and for the purpose set forth.

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Witnesses:
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