

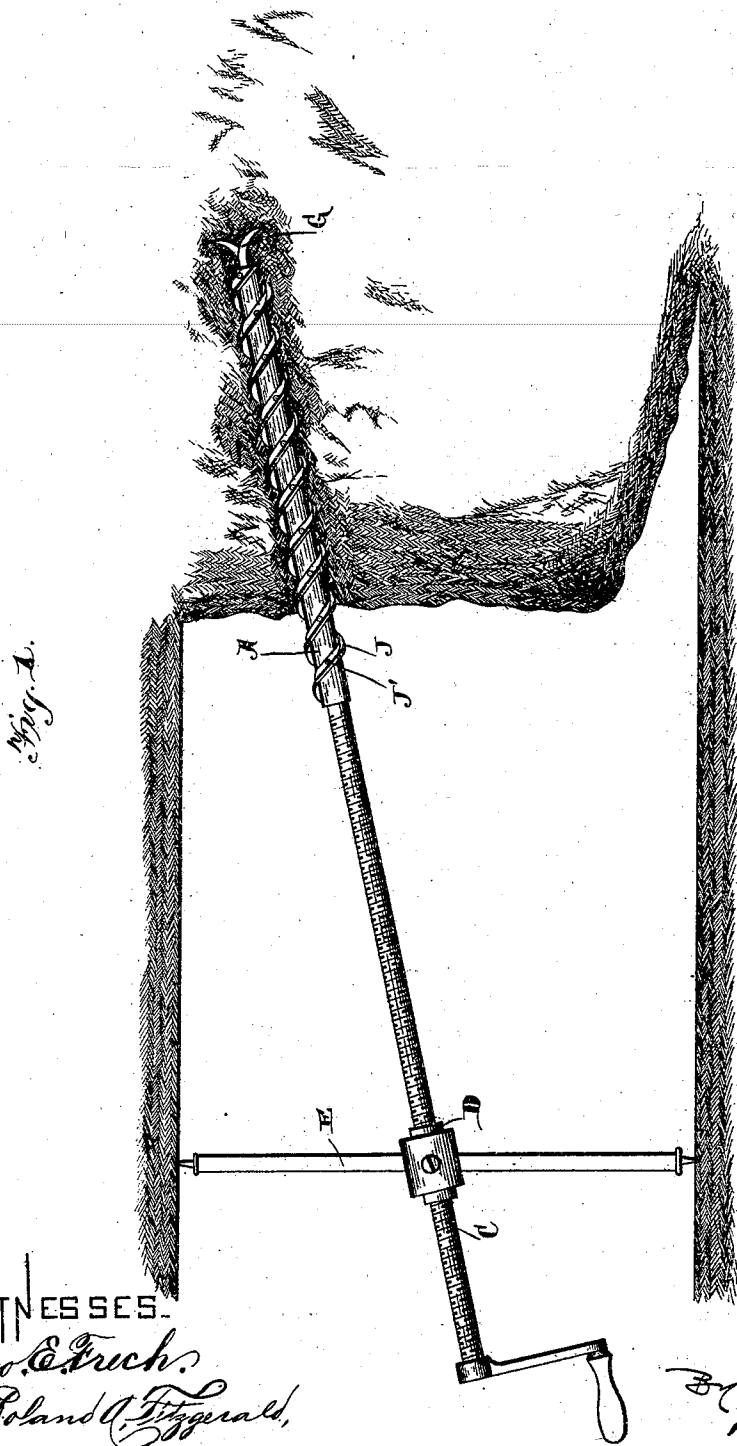
(No Model.)

2 Sheets—Sheet 1.

O. P. SWANSON.
AUGER.

No. 503,882.

Patented Aug. 22, 1893.



WITNESSES.
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

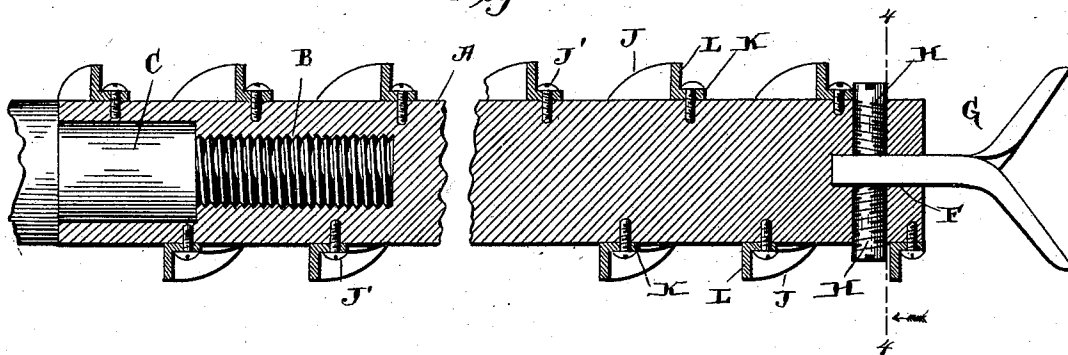


Fig. 3.

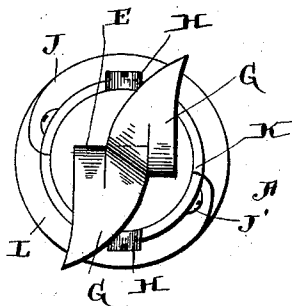


Fig. 4.

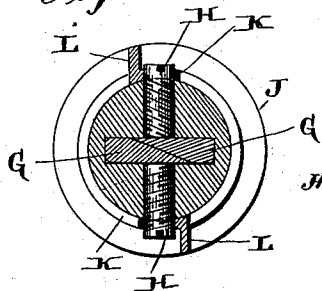
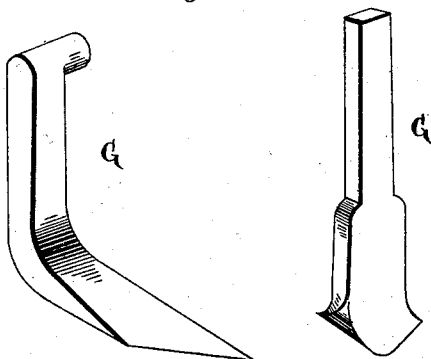


Fig. 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

OLOF PETE SWANSON, OF JOBS, OHIO.

AUGER.

SPECIFICATION forming part of Letters Patent No. 503,882, dated August 22, 1893.

Application filed May 22, 1893. Serial No. 475,095. (No model.)

To all whom it may concern:

Be it known that I, OLOF PETE SWANSON, of Jobs, in the county of Hocking and State of Ohio, have invented certain new and useful
5 Improvements in Augers; 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
10 to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in augers, and it consists in the novel manner of securing the bits in position, as will be more
15 fully described hereinafter and more especially designated in the claim.

The object of my invention is to provide an improved auger which is especially adapted for drilling coal in mines for blasting purposes.

20 Referring to the accompanying drawings: Figure 1, is a side elevation of my improved auger in position for operation. Fig. 2, is a detached enlarged view of the same shown partly in section. Fig. 3, is an end view. Fig.
25 4, is a cross sectional view on the line 4—4, of Fig. 2. Fig. 5 is a detached view of modified forms of the bit.

A designates the auger which is formed with the screw threaded socket B upon its outer
30 end, in which is secured the end of screw shaft C which latter works in a screw threaded head D, adjustable vertically upon the support E, as shown in Fig. 1. This screw shaft is provided with a crank and is for the purpose of
35 forcing the auger ahead into the coal being operated upon.

In the inner end of the auger stem A is formed a socket F, and adapted to fit therein are the removable bits G, which are formed

as shown with reduced overlapping adjacent 40 edges.

H are clamping screws extending inward from the outer side of the stem, which engage the bits while in position in the socket and hold them firmly in place. The bits are pre- 45 ferably of the form shown in Figs. 2 and 3, but may be of the construction illustrated in Fig. 5. By means of this arrangement it is apparent that the bits may be removed for sharpening or when it is desired to replace them by 50 other bits with but very little trouble.

I provide the stem A with the conveyers J, which are wound about the stem as shown, and secured thereto by screws J'. The conveyers consist of a flat piece of metal K, turned 55 upward or flanged as at L. These conveyers are adapted to extend the whole length of the drill and thus remove the borings from the cavities being opened.

In operation the support E is placed in the 60 desired position with the head D so adjusted thereon as to run the auger into the coal and thus form a cavity at the desired point, as illustrated in Fig. 1.

Having thus described my invention, what 65 I claim, and desire to secure by Letters Patent, is—

An improved auger comprising a stem having a socket in its outer end, bits having beveled edges which overlap when in the socket, 70 and a means for holding the same therein, substantially as shown and described.

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

OLOF PETE SWANSON.

Witnesses:

FRED DANSON,
CHAS. MARCH.