No. 855,108. PATENTED MAY 28, 1907.

C. C. LOCKHART.

MINING AUGER.

APPLICATION FILED NOV. 25, 1904.

Fig. 2.

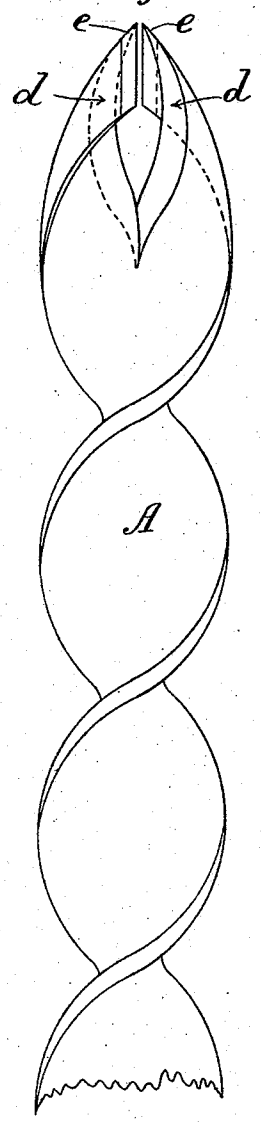
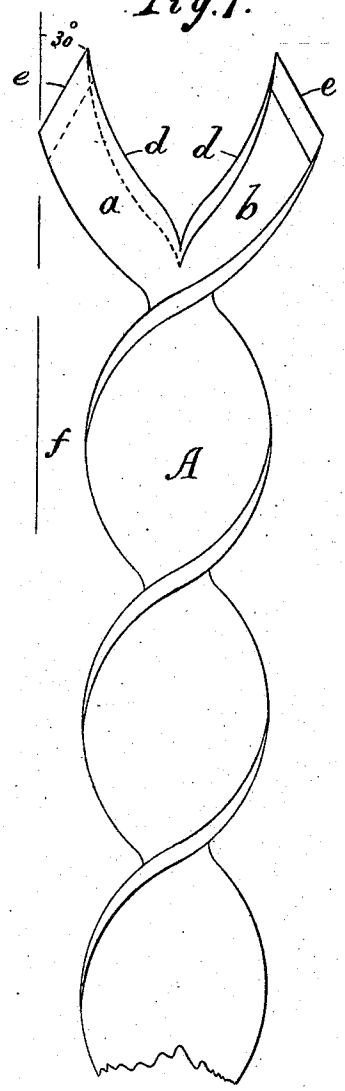


Fig. 1.



Witnesses

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MINING-AUGER.

No. 855,108. Specification of Letters Patent. Patented May 28, 1907.

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To all whom it may concern:

Be it known that I, CHARLES C. LOCKHART, a British subject, residing at Brookfield, in the county of Colchester, in the Province of Nova Scotia and Dominion of Canada, have invented new and useful Improvements in Mining-Augers, of which the following is a specification.

My invention relates to improvements in augers which are used in boring coal preparatory to blasting, and the object of my invention is to provide an auger which will penetrate the coal rapidly and freely with the minimum amount of labor, and without the aid of an extraneous propelling device. I attain this objeect by the formation of the cutters illustrated in the accompanying drawing, in which:

Figure 1 is a partial view of an auger embodying my invention and showing the cutters at their greatest width. Fig. 2 is a view of the same turned ninety degrees showing the cutting ends parallel to each other.

In the drawing A is the bit of the auger which is spiral in form.

a and *b* are the cutters which are made by flattening the extremity of the bit and cutting out a triangular shaped piece from the center forming two separate cutters as shown clearly in Fig. 1.

d. d. are the beveled cutting edges of said cutters which cut one in advance of the other when working. The cutters *a* and *b* are curved forward throughout their entire length each forming a spiral of the same pitch as the bit A, and terminating in the narrow angular cutting ends *e. e.* which form an angle of thirty degrees from a line parallel to the side of the bit A when viewing the cutters at their greatest width, and showing parallel to each other when turned ninety degrees.

The angular cutting ends *e. e.* are made thin and sharp so as to enter the coal readily; the forward curve of the cutters alone drawing the auger into the coal constantly as it revolves. As the spiral of the cutters are being formed they are gradually widened to their termination so as to give clearance to the bit when in operation, said clearance being shown at *f* in Fig. 1.

In operation as the auger revolves the cutting extremities *d. d.* and *e. e.* cut away the coal while the forward curve of the cutters *a* and *b* serves as an efficient drawing feed, to the auger without other aid.

Having illustrated and described my invention what I claim and desire to secure by Letters Patent is:

An auger embodying a spiral bit having one end bifurcated to provide substantially elongated diverging blades, each blade being curved in an arc of the same pitch as the bit with its inner and outer edges beveled throughout their length and arranged at an acute angle to each other whereby a sharp cutting point is formed on each blade, the outer cutting edges projecting laterally beyond the bit and the said cutting points being arranged within the line of the outer longitudinal edges of the spirals forming the bit.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

CHARLES C. LOCKHART.

Witnesses:

WM. M. FERGUSON,

HUGH MACKENZIE.