

J. KATULKA.
MINE DRILL.
APPLICATION FILED FEB. 12, 1920.

1,361,734.

Patented Dec. 7, 1920.
2 SHEETS—SHEET 1.

Fig. 1.

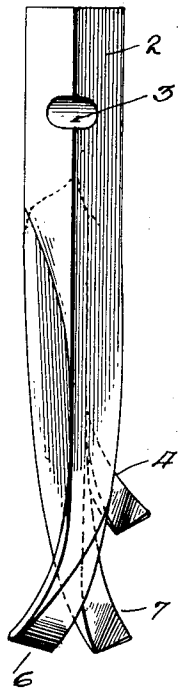


Fig. 2.

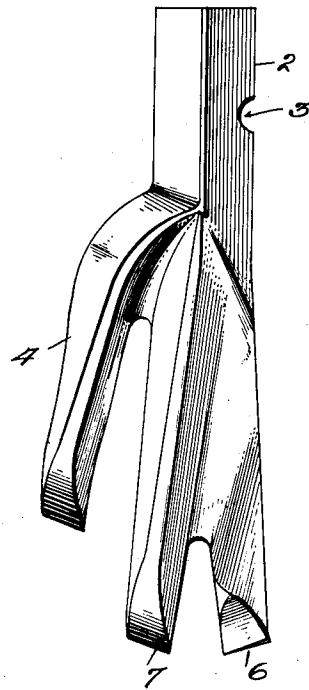
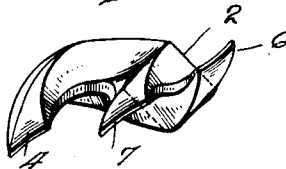


Fig. 3.



Inventor
John Katulka

By *Marion Fenwick Lawrence*,
Attorneys

J. KATULKA.
MINE DRILL.
APPLICATION FILED FEB. 12, 1920

1,361,734.

Patented Dec. 7, 1920.
2 SHEETS—SHEET 2.

Fig. 4.

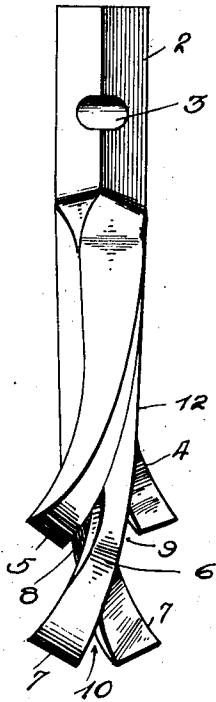


Fig. 5.

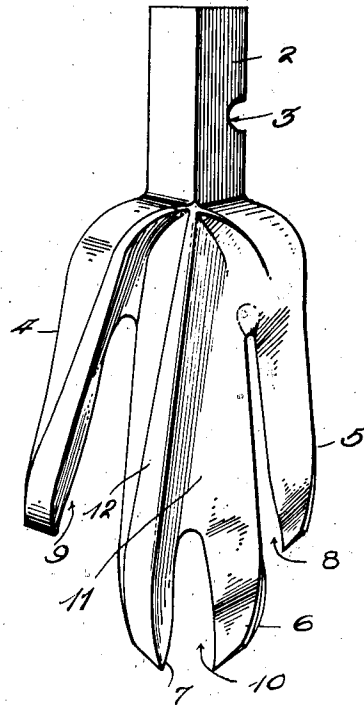
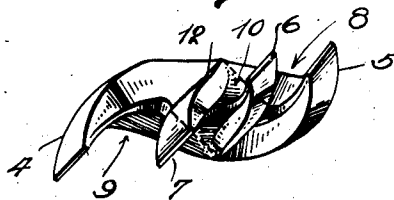


Fig. 6.



Inventor
John Katulka

By Mason Fawcett Lawrence,
Attorneys

UNITED STATES PATENT OFFICE.

JOHN KATULKA, OF NANTICOKE, PENNSYLVANIA.

MINE-DRILL.

1,361,734.

Specification of Letters Patent.

Patented Dec. 7, 1920.

Application filed February 12, 1920. Serial No. 358,118.

To all whom it may concern:

Be it known that I, JOHN KATULKA, citizen of the United States, residing at Nanticoke, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Mine-Drills; 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 improvements in coal drills or augers and has for its objects to provide a drill which will be more durable and effective in operating than the devices heretofore commonly employed.

With this and other objects in view the invention consists in the construction, the combination, the detail, and arrangement of parts as hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a side elevation of a three cutter bit embodying my invention.

Fig. 2 is a view at right angles to Fig. 1.

Fig. 3 is a bottom view of Fig. 2.

Fig. 4 is a modified form with four cutters in a position similar to Fig. 1.

Fig. 5 is the same modified form in the same position as Fig. 2.

Fig. 6 is the same modified form in the same position as Fig. 3.

In the embodiment of my invention I provide a bit having a polygonal shank 2 provided with a recess 3 for retaining the said bit in a stock, the said bit extending into prongs or cutters 4, 5, 6 and 7. These prongs are all integrally formed with the said shank, there being a recess 8 between prong 5 and prong 6 and a wider recess 9 between prongs 4 and 7. There is also a short recess 10 between prong 6 and prong 7.

Prongs 6 and 7 extends substantially in longitudinal alinement with the said shank 2 and are webbed between each other at 11. the said web tapering from the said shank where it is substantially the thickness of the said shank down to the recess 10, and there is provided a rib 12, so that the two prongs 6 and 7 are each substantially triangular in cross section with one side of said triangle everlapping a like side of said triangle on the other said prongs. In the boring of coal there is much stress upon the prongs 6 and 7 and frequent difficulty has been had owing to the breakage of the central bits. By this improved structure the breakage is reduced to a minimum and the bit improved in efficiency.

What I claim is:

1. A bit comprising a single piece of metal of polygon shape to form a shank, bits extending therefrom, said bits being of substantially triangular cross section with their cutting edges in the plane with one side of the triangle, the opposed back angle being a continuation of an edge of the polygonal shank.

2. A bit comprising a single piece of metal of polygon shape at one end to form a shank, opposed edges of said polygon extending to form the backs of a pair of bits, and an integrally formed auxiliary cutter.

3. A plurality of integrally formed bits of triangular cross section extending in one direction into a polygon shank and in the other direction into cutters, the cutting edges of said cutters substantially parallel with the sides of said shank and the edges of said polygonal shank extending to back said cutters and give rigidity thereto.

In testimony whereof I affix my signature.

JOHN KATULKA.