

1,040,383.

Patented Oct. 8, 1912

Fig. 1.

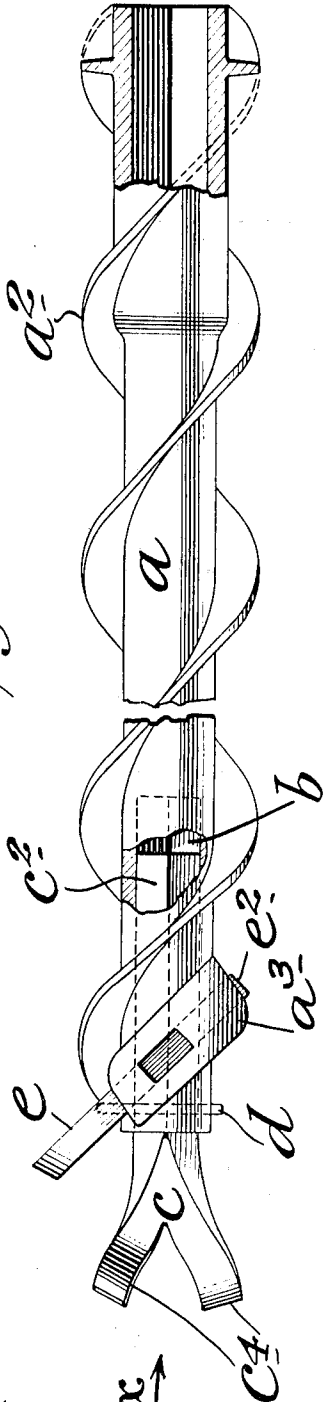


Fig. 4.

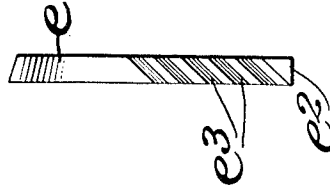


Fig. 3.

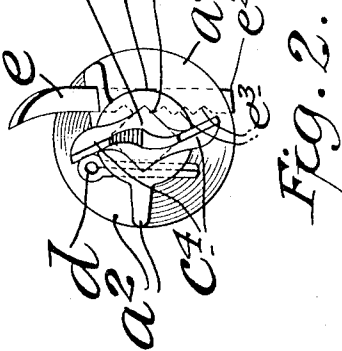
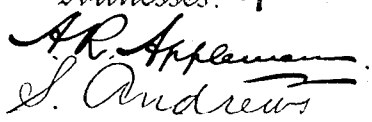


Fig. 2.

Witnesses: 
 A. R. Appelman
 S. Andrews

George A. Moss, Inventor,
 By his Attorneys 

UNITED STATES PATENT OFFICE.

GEORGE A. MOSS, OF PLYMOUTH, PENNSYLVANIA.

COAL-BORING BIT.

1,040,383.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed June 22, 1912. Serial No. 705,160.

To all whom it may concern:

Be it known that I, GEORGE A. MOSS, a citizen of the United States, and residing at Plymouth, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Coal-Boring Bits, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to boring bits of the class used in mining coal, or for placing a charge of powder for blasting purposes, and the object of the invention is to provide means for adjusting the cutters employed in the cutting end of the bit so as to facilitate the operation thereof and increase the length of time during which a cutter or set of cutters may be employed.

The invention is fully disclosed in the following specification of which the accompanying drawing forms a part, in which the separate parts of my invention are designated by suitable reference characters in each of the views, and in which;—

Figure 1 is a side view of an ordinary coal boring bit provided with my improvement, part of the construction being broken away;—Fig. 2 an end view looking in the direction of the arrow X;—Fig. 3 a side view of the axial cutter detached, and;—Fig. 4 a corresponding view of a side cutter detached.

In the drawing forming part of this specification, I have shown at *a* an ordinary coal boring bit having the usual spiral conveying flange or rib *a*² and in the smaller or cutting end of which is an axial recess *b* adapted to receive the shank *c*² of an axial cutter *c*, and the bore *b* and shank *c*² of the cutter *c* are angular in cross section and one corner of the shank *c*² is provided with transverse notches or recesses *c*³ whereby the cutter *c* may be secured in the end of the stock of the bit by means of a key pin or similar device *d* which is passed through the stock of the bit and through one of the recesses *c*³ and said recesses are equally spaced, and any desired number thereof may be employed, and with this construction the

said cutter *c* may be adjusted longitudinally of the bit or stock thereof, as the blades *c*⁴ of the cutter are worn away. The blades *c*⁴ are diverging blades and may be sharpened when necessary; and in practice, I also provide a side cutter *e* which is mounted in a spiral boss *a*³ formed in connection with the cutting end of the spiral conveying flange or rib *a*². The cutter *e* is provided with a shank *e*² having transverse and diagonal notches or recesses *e*³ in one side thereof and, in practice, the cutter *e* is first inserted into the housing or holder formed by the shoulder *a*³, as shown in Fig. 1, and said cutter is adjusted into the desired position after which the shank of the cutter *c* is inserted and one of the corners of the cutter *c* enters one of the notches or recesses *e*³ in the shank of the cutter *e* and the cutter *e* is locked against longitudinal movement by the shank of the cutter *c* and the cutter *c* is locked against longitudinal movement by the key pin *d*, and by means of this construction the cutter *e* may also be adjusted longitudinally as the cutting end thereof wears away.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is;—

A boring bit of the class described, said bit being provided at its cutting end with a longitudinally adjustable and axially arranged cutter, and adjacent thereto with a side cutter which is also adjustable longitudinally, the shank of the side cutter being provided with diagonal notches or recesses adapted to receive a corner of the shank of the axial cutter, and the shank of the axial cutter being provided with transverse recesses adapted to receive a key pin passed through the stock of the bit.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 13th day of June 1912.

GEORGE A. MOSS.

Witnesses:

I. LASSER,
EMMA HEDDEN.