

C. T. CHAPMAN.
 DRILL BIT.
 APPLICATION FILED OCT. 21, 1916.

1,228,296.

Patented May 29, 1917.

Fig. 1.

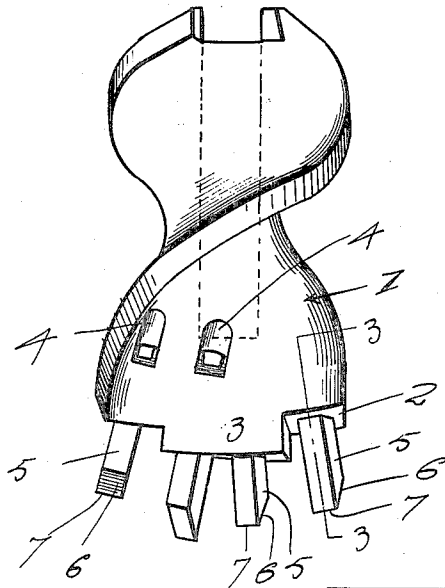


Fig. 2.

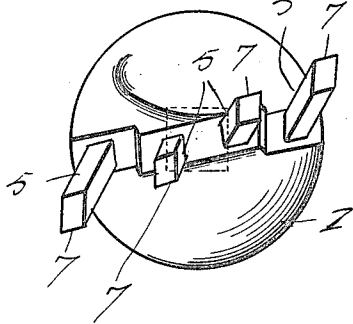
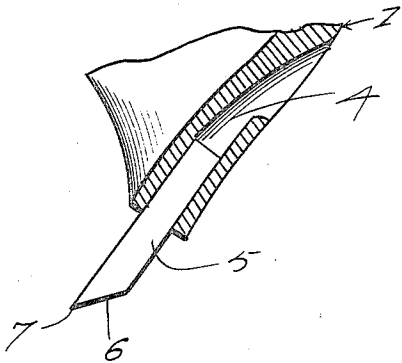


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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DRILL-BIT.

1,228,296.

Specification of Letters Patent.

Patented May 29, 1917.

Application filed October 21, 1916. Serial No. 126,926.

To all whom it may concern:

Be it known that I, CHARLES T. CHAPMAN, a male citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Drill-Bits; 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 a drill which is particularly designed for drilling blast holes in coal mines, and the primary object of the invention is to provide a drill which includes a spiral auger conveyer having a plurality of removable bits carried by the inserting end of the same, which bits are preferably constructed of tool steel, and are arranged in pairs, flaring outwardly from the center of the conveyer, and being angled oppositely to each other, for cutting or drilling a hole in the coal, much larger than the diameter of the drill.

With the foregoing and other objects in view, this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail, reference will be had to the accompanying drawing wherein like characters designate like and corresponding parts throughout the several views, and in which:

Figure 1 is a side elevation of the improved drill,

Fig. 2 is an end elevation of the drill, and

Fig. 3 is a section on the line 3—3 of Fig. 1.

Referring more particularly to the drawings, 1 designates the spiral auger conveyer of the drill, which has its inserting end flat as indicated at 2 and provided with a centrally disposed lug 3 which projects outwardly from the flat end at the center of the bit as clearly shown in Fig. 1 of the drawings. The flat end of the bit and the lug 3 are provided with openings 4 extending upwardly in the conveyer and angled, which openings 4 are provided for receiving bits 5.

The bits 5 are preferably constructed of tool steel, and they have their outer ends cut angularly as indicated at 6 for forming cutting edges 7. The bits 5 are arranged in pairs upon the opposite sides of the central axis of the conveyer structure 1 of the drill. The bits upon one side of the central axis are angled so as to extend oppositely to the bits upon the opposite sides of the axis and also so as to present their cutting edges to the surface of the coal or the like being drilled during the rotation of the drill. The bits 5 flare outwardly from the central axis of the conveyer 1 and they are driven into the opening 4 and held therein by frictional engagement with the walls of the openings.

In reducing the invention to practice, certain minor features of construction, combination and arrangement of parts may necessitate alterations to which the patentee is entitled provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:

1. In a drill structure, the combination, of an auger conveyer having one end cut flat, a lug positioned intermediate the edges on the flat end of said conveyer and extending outwardly therefrom, and a plurality of rectangular bits detachably carried by said auger conveyer.

2. In a drill structure, the combination, of an auger conveyer having one end cut flat, a lug positioned intermediate the edges on the flat end of said conveyer and extending outwardly therefrom, and a plurality of rectangular bits detachably carried by said auger conveyer, said bits flaring outwardly from the central axis of the conveyer, and the pairs of bits upon the opposite sides of the central axis being angled oppositely to the pair upon the opposite side of the axis of the conveyer for presenting cutting edges to the surface being drilled during the rotation of the drill.

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

CHARLES T. CHAPMAN.

Witnesses:

JOHN MELTON,
FRANK FIELD.