No. 877,892. PATENTED JAN. 28, 1908.

A. E. & J. W. JENNINGS.

DRILL.

APPLICATION FILED MAR. 20, 1907.

Fig. 1.

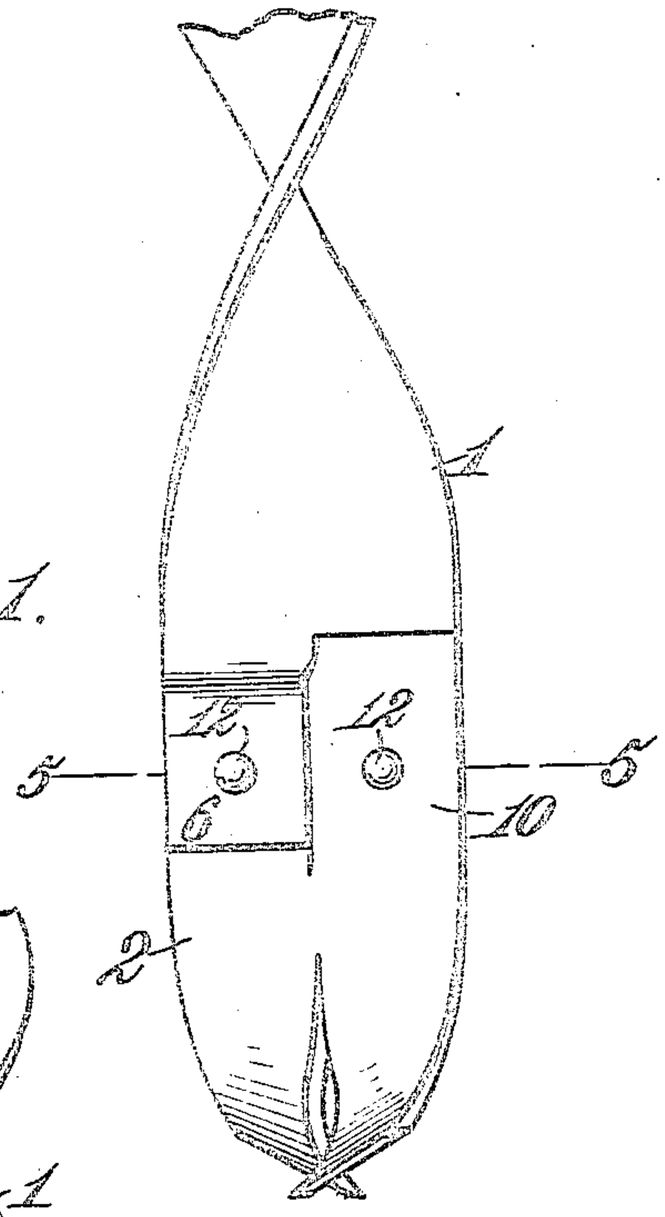


Fig. 2.

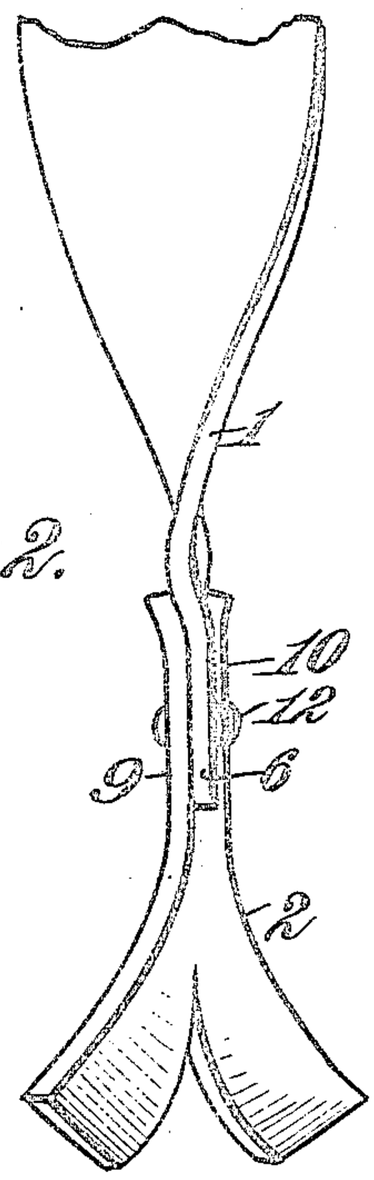


Fig. 6.

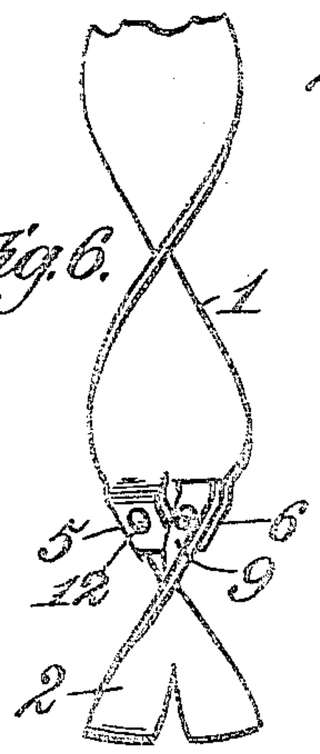


Fig. 4.

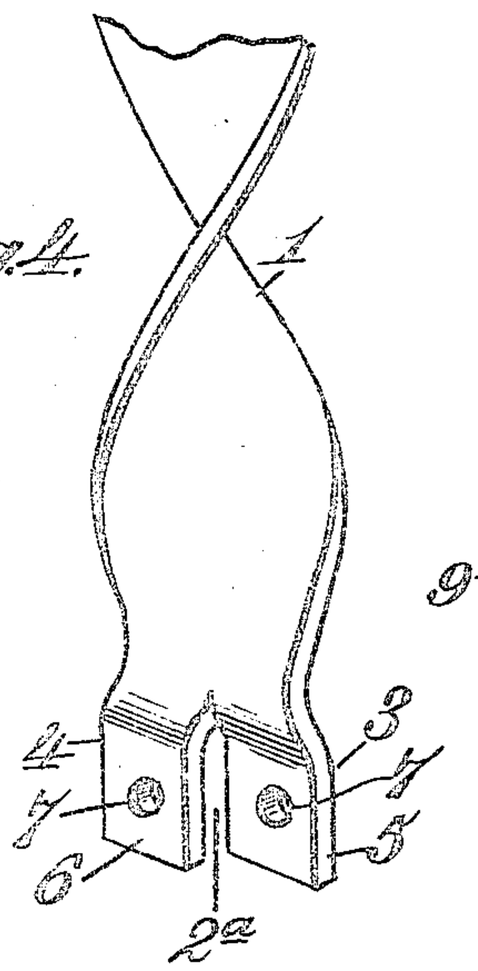


Fig. 3.

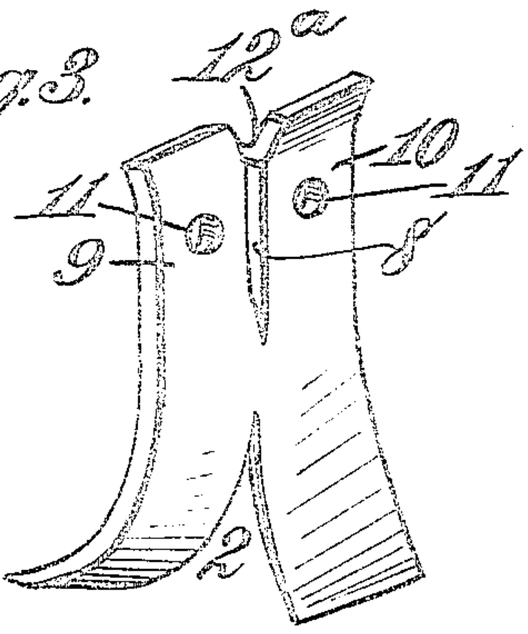
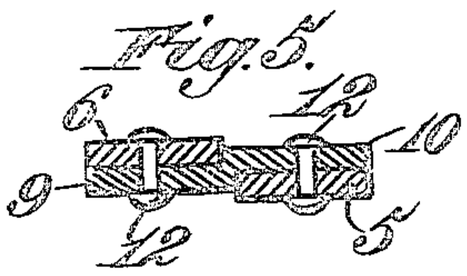


Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

AARON EDWIN JENNINGS AND JAMES WILLIAM JENNINGS, OF CENTRAL CITY, KENTUCKY, ASSIGNORS OF ONE-THIRD TO GREGORY JENNINGS, OF LIMA, OHIO.

DRILL.

No. 877,892. Specification of Letters Patent. Patented Jan. 28, 1908.

Application filed March 20, 1907. Serial No. 363,476.

To all whom it may concern:

Be it known that we, AARON E. JENNINGS and JAMES W. JENNINGS, citizens of the United States, residing at Central City, in the county of Muhlenberg and State of Kentucky, have invented new and useful Improvements in Drills, of which the following is a specification.

This invention relates to drills for mining purposes; and the object thereof is to construct a drill of such class in a manner as hereinafter set forth whereby bits of varying sizes can be detachably secured to the shank and when secured will be prevented from moving laterally or longitudinally with respect to the stem. By such arrangement provision is made for the employing of drills of different lengths for boring holes of different depth, and furthermore, provision is made whereby it is not necessary to discard the drill as an entirety if the bit should become broken, as would be the case if the shank and bit were formed of one element.

Further objects of the invention are to provide a drill for mining purposes which shall be simple in its construction, strong, durable, efficient in its use, embodying means whereby the bit can be rigidly secured to the shank in a convenient manner and readily separated therefrom when occasion so requires, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts hereinafter more specifically described and illustrated in the accompanying drawings wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings wherein like characters denote corresponding parts throughout the several views, and in which—

Figure 1 is a front view of a drill in accordance with this invention; Fig. 2 is an edge view; Fig. 3 is a perspective view of the bit; Fig. 4 is a like view of the shank, and, Fig. 5 is a section on line 5—5 (Fig. 1). Fig. 6 illustrates a modified form of drill showing the twist or spiral continued throughout.

The drill shown is of the screw or serpentine class and embodies a shank section 1 and a bit section 2, the latter being detachably connected with the former so that when the sections are secured together the bit section will not be capable of lateral or longitudinal movement with respect to the shank section. The shank section 1 at its lower end is split as at 2^a and offset as at 3—4 so that the tongues 5—6 formed by splitting the shank and offsetting it will extend in opposite directions with respect to each other. Each of the tongues 5—6 is provided with an opening 7. The upper portion of the bit section 2, approximately centrally thereof, is shouldered as at 8, so as to form the portions 9—10, the former being offset from the latter, or in other words the portions 9—10 are not positioned in the same plane. Each of the portions 9—10 is provided with an opening 11 and these openings 11 are adapted to register with the openings 7. The inclined portion 8 at its top is notched as at 12^a. The openings 7, 11 are provided to receive hold-fast devices indicated by the reference character 12, for securing the two sections together so as to prevent any longitudinal movement of the bit section with respect to the shank section, or vice versa.

When the sections are secured together the bit section is adapted to be inserted in the shank section and in such a manner that the offset portion 6 of the shank will overlap the portion 9 of the bit and the portion 10 of the bit will overlap the offset portion 5 of the shank. By such an arrangement after the hold-fast devices 13 are secured in position the bit section is prevented from any lateral movement with respect to the shank section or vice versa. The inter-engaging of the sections in a manner as stated, and the securing of the same together by the hold-fast devices 13 forms a rigid connection between the sections, and further, owing to the manner in which the sections are constructed, provision is made for the employing of sections of varying lengths and further, if one section becomes damaged it is not necessary to throw the entire drill away as the undamaged sections can be used.

Fig. 6 shows the drill with the twist or spiral continued throughout so as to dispense with the flattened portion as shown in Figs. 1 and 2.

What I claim is—

A drill for mining purposes comprising a

shank section and a bit section, said shank section having its lower portion formed with a pair of tongues offset with respect to each other, said bit section having its upper portion offset to form shoulders and further having a notch in the top edge thereof, said upper portion of said bit section adapted to be positioned between and overlapped by the tongues of the shank section, and said tongues bearing against the shoulders of the bit section and means for securing the shank section to the bit section.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

AARON EDWIN JENNINGS.
JAMES WILLIAM JENNINGS.

Witnesses:
J. F. ROBERTSON,
A. L. BLANDFORD.