

No. 871,618.

PATENTED NOV. 19, 1907.

G. A. ORR.  
DRILL CHUCK.

APPLICATION FILED MAR. 12, 1907.

Fig. 1.

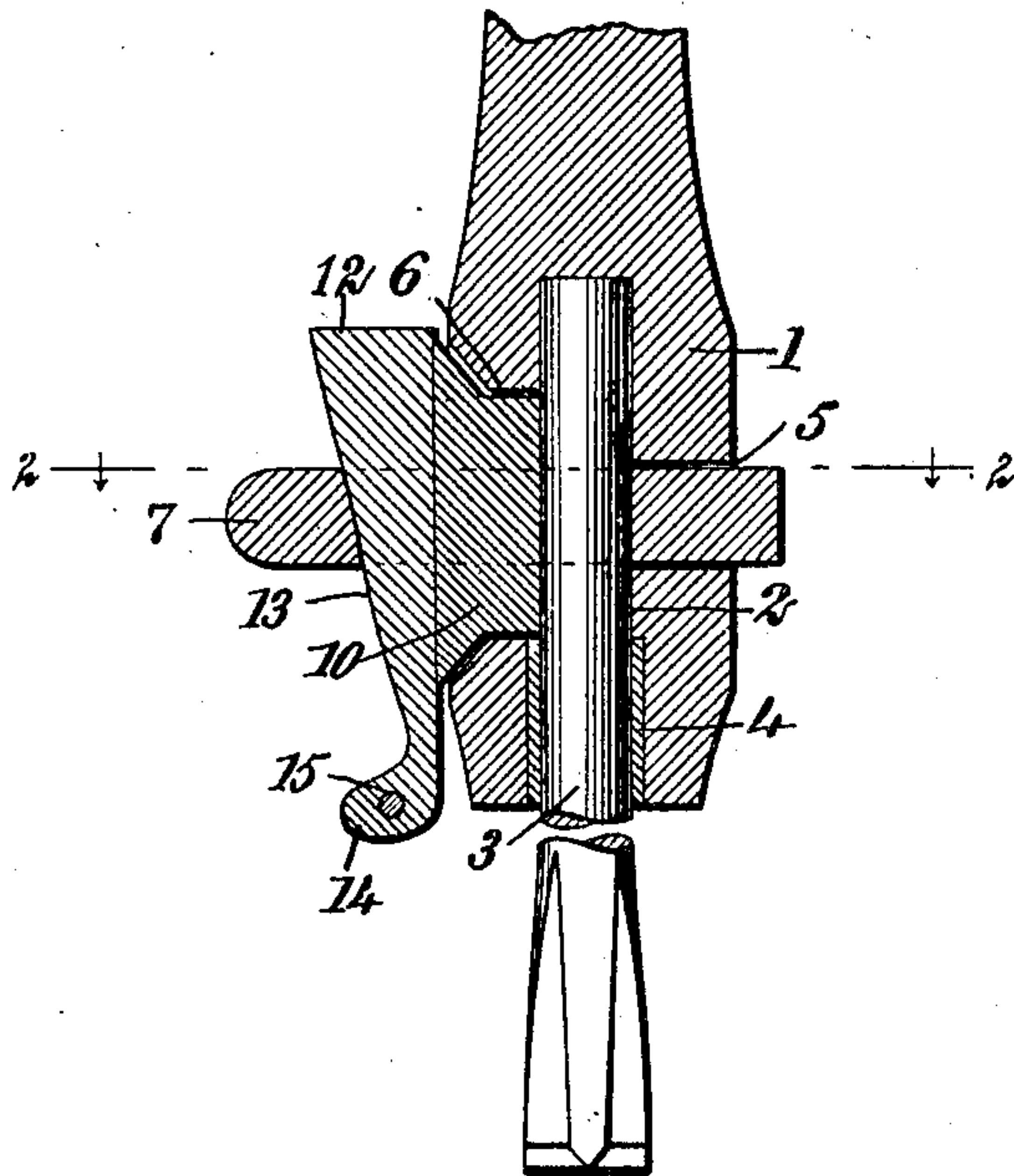
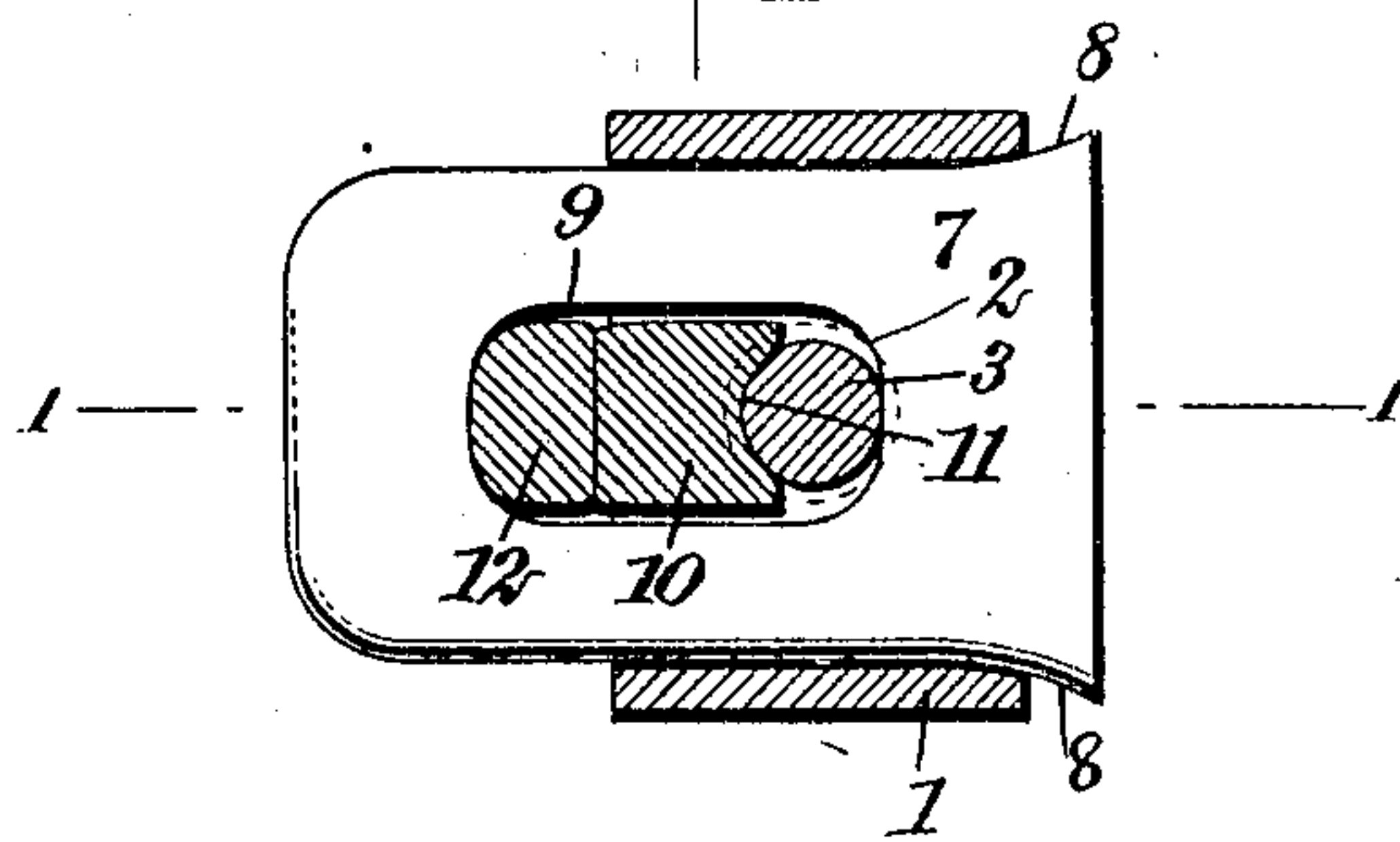


Fig. 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

GAYLORD A. ORR, OF CRIPPLE CREEK, COLORADO.

## DRILL-CHUCK.

No. 871,618.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed March 12, 1907. Serial No. 361,907.

*To all whom it may concern:*

Be it known that I, GAYLORD A. ORR, a citizen of the United States, and a resident of Cripple Creek, in the county of Teller and State of Colorado, have invented a new and Improved Drill-Chuck, of which the following is a full, clear, and exact description.

This invention relates to drill chucks, and especially to the drill chucks employed in miners' drills.

The object of the invention is to produce a chuck of simple construction which will be of few parts but which can be quickly applied and will operate to hold the bit securely.

The invention constitutes an improvement on the chuck patented to me October 3, 1905, Number 801,042.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both figures.

Figure 1 is a vertical central section on the line 1—1 of Fig. 2, through the chuck, a portion of the bit being shown partly broken away; and Fig. 2 is a cross section on the line 2—2 of Fig. 1.

Referring more particularly to the parts, 1 represents the drill head which is formed centrally with a vertical bore 2, in which there is received the shank of a drill or bit 3. The lower portion of this bore 2 is provided with a bushing 4 as indicated. At a suitable point above this bushing the head is formed with a transverse slot 5, and the forward portion of this slot is elongated vertically to form an enlarged recess 6, as shown in Fig. 1. In the slot there is placed a link 7, consisting of a substantially flat plate of substantially rectangular form. This link is inserted in the opening from the right, as shown in Fig. 2, and is enlarged at its right end to form tapered shoulders 8 which are adapted to abut the ends of the slot 5 so as to limit the inward movement of the link. At a suitable point the link 7 is provided with a longitudinally disposed eye 9.

In the recess 6 there is received a block 10 the inner face 11 whereof is of concave form so as to grip the side of the drill, as indicated in Fig. 2. The outer face of this block is

substantially flat and aligns with the outer face of the head. When in position, the block lies in the eye 9. The link 7 is so long that its left end projects beyond the left side of the drill head so that a space is formed at the end of the eye in which a wedge 12 may be inserted. This wedge has its small end disposed downwardly, as indicated in Fig. 1, and its outer inclined face 13 is adapted to press the left end of the eye in the link. The lower end of the wedge is enlarged to form a head 14 in which there is placed a split pin 15 which prevents the wedge from being completely withdrawn when the drill is to be replaced by another. When the parts are assembled, it should be understood that the shank of the drill passes up into the bore 2 to the eye, as indicated, so that the end of the eye grips the right side of the drill, while the block 10 grips the left side. The shoulders 8 prevent the link from being drawn through the slot, and prevent the link from having a lateral movement when the drill is in operation. In this connection it should be understood that the link 7 will jam in the head at the same time that the drill is secured by the pressure of the block when the wedge 12 is driven home. The shoulders 8 are inclined as shown, so that a wedging action is brought about, which results in making a tight fit between the link and the head.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a drill chuck, in combination, a head having a bore extending longitudinally therein and having a transverse slot, said slot having a recess formed on one side thereof, a link disposed in said slot and presenting an eye through which the drill shank may be passed upwardly, a block received in said recess and in said eye, and a wedge received in the said eye beyond said block and adapted to wedge said block against said shank, said link having shoulders formed at one end thereof adapted to seat in the ends of said slot to limit the inward movement of said link.

2. In a drill chuck, in combination, a head having a bore formed therein and a transverse slot, said slot having a recess formed therein, a link received in said slot and having an eye through which a drill shank may pass upwardly in said bore, a block received



in said recess, and a wedge seating in the  
end of said slot beyond said block, adapted  
to wedge said block against said drill shank  
and the end of said eye against said drill  
5 shank, said link having an enlarged end on  
the side of said bore opposite said block and  
adapted to jam in the end of said slot.

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

GAYLORD A. ORR.

Witnesses:

GEO. M. SHEPHERD,  
THORNTON BROWN.