J. F. DANIEL.

BIT STOCK FOR BRACES.

APPLICATION FILED DEC. 15, 1908.

915,562. Patented Mar. 16, 1909.

Fig. 1.

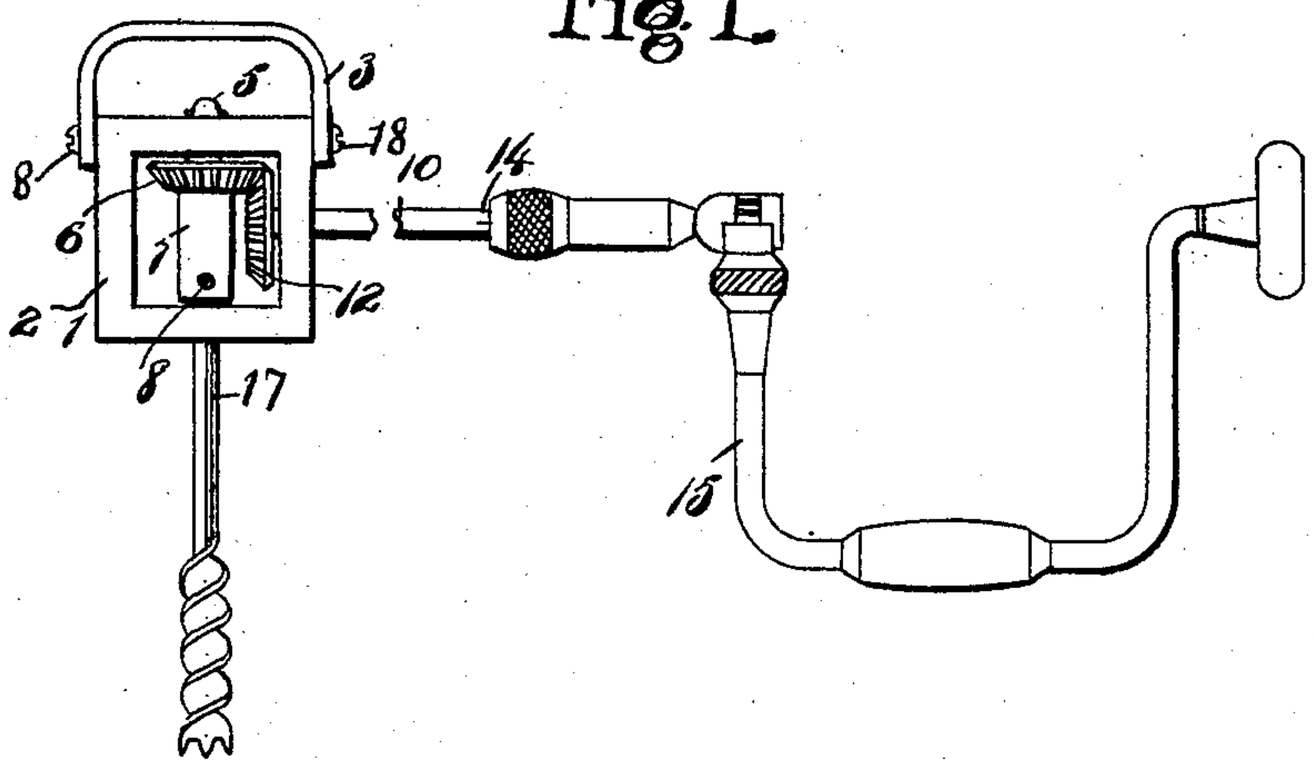
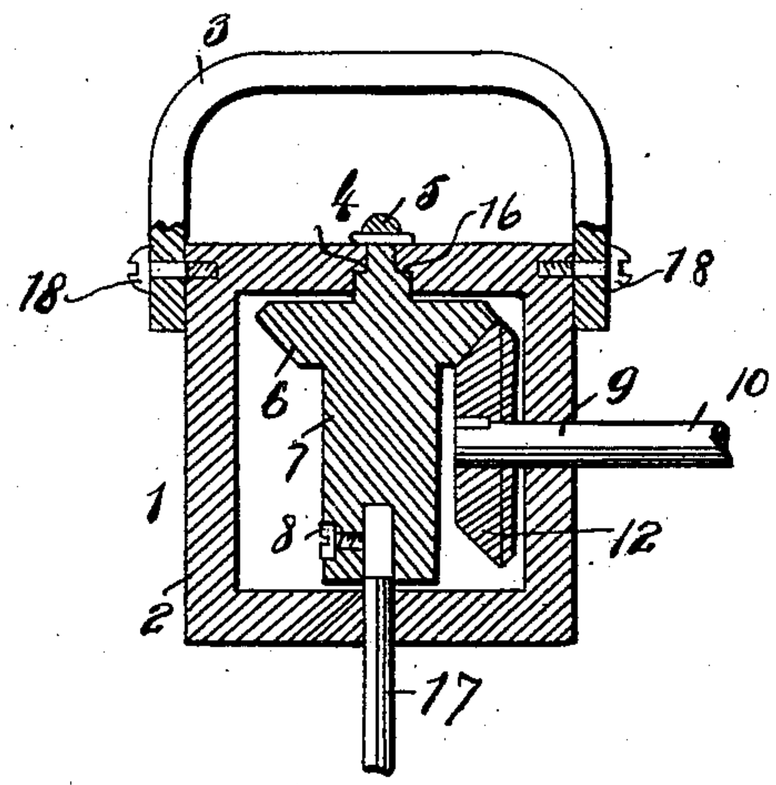


Fig. 2.



Witnesses
B. J. Lorkowski.
J. W. Stith,

Inventor,
J. F. Daniel.
By A. L. Jackson,
Attorney

UNITED STATES PATENT OFFICE.

JOHN F. DANIEL, OF FORT WORTH, TEXAS.

BIT-STOCK FOR BRACES.

No. 915,562. Specification of Letters Patent. Patented March 16, 1909.

Application filed December 15, 1908. Serial No. 467,639.

To all whom it may concern:

Be it known that I, JOHN F. DANIEL, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Bit-Stocks for Braces, of which the following is a specification.

This invention relates to improvements in bit stocks for braces.

The object is to provide a bit stock by means of which holes may be bored in corners or close places where the use of a brace in the ordinary manner is prevented. The stock is particularly adapted for railway car work for boring holes in car sills and the improvement makes it possible to place the brace down between sills to bore holes. Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claim.

Reference is had to the accompanying drawings which form a part of this application and specification.

Figure 1 is a side view of a brace, illustrating the invention. Fig. 2 is a vertical sectional view through the stock taken on the line of the operating shaft.

Similar characters of reference are used to indicate the same parts throughout the several views.

This invention is provided with a stock 1 which consists of an open rectangular frame 2 provided with a bail-shaped hand grip 3 which is pivotally connected to the frame 2 so that the hand grip can be turned on either side of the stock. In the upper member of the frame 2, is formed a centrally disposed bearing opening 4 in which is revolubly mounted a short stub shaft 5 which projects from one end of a chuck 7. A beveled gear pinion 6 is formed integral with the chuck 7. The shaft 5 has an annular bearing shoulder 16 which engages an annular shoulder in the frame 2. This bearing shoulder prevents friction of the wheel 6 against the frame 2. The reduced end of the shaft 5 projects through the frame 2 and through the projecting end is arranged a cotter pin by means of which the shaft 5 is revolubly held in the bearing opening 4. The lower end of the chuck 7 has a recess for receiving the ends of bits, as bit 17. The bits are held in the chuck by a set screw 8. The frame 2 has an aperture or hole for the bits, forming a bearing opening for the bits, the bit serving as one of the journals of the chuck 7.

In one side of the frame 2 is formed a centrally disposed bearing opening 9 in which is revolubly mounted an operating shaft 10, on the inner end of which is mounted a bevel gear wheel 12 for driving the gear wheel 6. The operating shaft 10 may be of any suitable length and is provided on its outer end with a reduced square portion 14, with which a brace 15 is adapted to engage for driving the shaft 10. The shaft 10 drives the wheel 12 which drives the wheel 6 which drives the chuck and the bit 17.

It will be noticed that the hand grip 3 by reason of the pivot bolts 18 can be turned on either side of the stock or frame 2. This construction accomplishes two purposes. It shortens the distance between the point of the bit and opposite side of the frame so that the stock can be placed between car sills and other close places for boring holes. The hand grip 3 is turned so that the stock may be held in place for boring when so placed between car sills.

The construction of my bit-stock is different from the construction shown in the patent to J. W. Thackara, No. 417,116, in that there are fewer pieces and the frame is much simplified and has a chuck in which any size bit shank may be clamped; and is different from the devices shown in the patent to L. Ruegg, No. 868,812, in that my bit chuck and its gear wheel are in one piece of metal and positioned within a frame which has a passage for bit-shanks into the chuck, and which passage constitutes one of the bearings for the bit chuck when the bit shank is inserted in the chuck; and is different from such structures as that disclosed in the patent to D. E. Trumbull, No. 755,058, in that my construction has the bit chuck positioned within a frame and has a double bearing for the bit chuck.

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

A bit stock having a rectangular frame provided with a shouldered bearing opening therein, a bit chuck mounted within said frame and having a shouldered stub shaft journaled in said bearing opening, the opposite side of said frame having an opening for the passage of bit shanks therethrough into

said chuck and constituting a second bearing for said chuck when operating a bit, the bit shank constituting a second journal for the bit chuck, a beveled gear wheel integral with said chuck, a driving shaft journaled in said frame, a beveled gear positioned within said frame and carried by said driving shaft and meshing with said first named gear wheel, and a bail pivoted to said frame and adapted to swing on either side of said frame.

In testimony whereof, I set my hand in the presence of two witnesses, this 12th day of December, 1908.

JOHN F. DANIEL.

Witnesses:
A. L. JACKSON,
J. W. STITT.