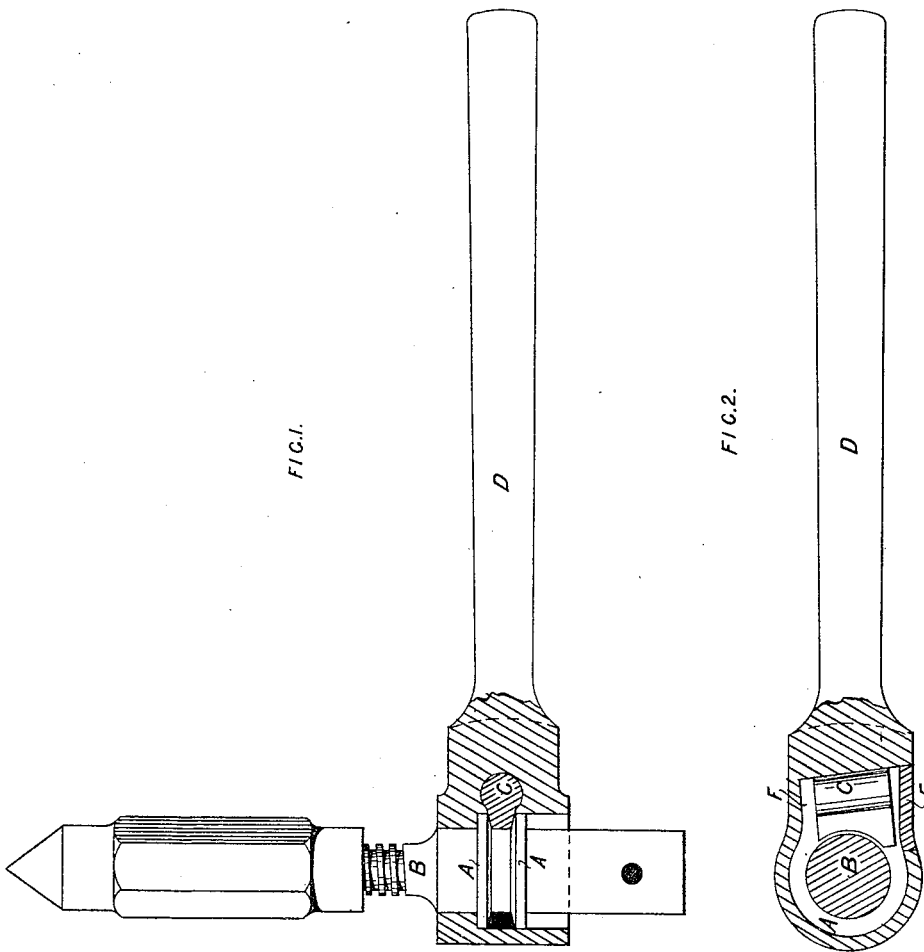


(No Model.)

R. S. SOLOMON.
FRICTION DRILLING BRACE.

No. 320,185.

Patented June 16, 1885.



Witnesses:-
A. P. Kalb
C. E. Allen

Inventor:
Richard Stuart Solomon
By J. M. Kalb,
Asso. Atty.

UNITED STATES PATENT OFFICE.

RICHARD STUART SOLOMON, OF CAPE TOWN, CAPE OF GOOD HOPE.

FRICITION DRILLING-BRACE.

SPECIFICATION forming part of Letters Patent No. 320,185, dated June 16, 1885.

Application filed April 8, 1885. (No model.) Patented in England November 18, 1884, No. 15,165.

To all whom it may concern:

Be it known that I, RICHARD STUART SOLOMON, a subject of the Queen of Great Britain, residing at Cape Town, in the Colony of Cape of Good Hope, have invented a new and useful Friction Drilling-Brace, (for which I have applied for a patent in Great Britain, No. 15,165, bearing date November 18, 1884,) of which the following is a specification.

My invention relates to an improved construction of drilling-braces, consisting in the substitution of a simple application of friction in lieu of the ordinary spring and ratchet; and among the objects of my improvements are to avoid the loss of time incurred when working in a limited space with the ordinary ratchet-brace, and to obtain a more durable brace, one less likely to get out of order, that can be repaired at less cost and with greater ease, and which, having bearings double the usual thickness and all the action well protected, is less liable to be injured by rust and dust than the ordinary brace. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation of a brace embodying my improvements, and Fig. 2 a sectional plan of same.

Similar letters refer to similar parts in each figure.

A A are beveled collars on the spindle B; C, the pawl; D, the stock; E, cover; F, chamber for pawl. It will be seen that the collars A A on the spindle B are turned on the same

angle, and the pawl C made to fit the same, the pawl being also placed at an angle to the spindle. Thus in moving the stock D forward the pawl C is gripped between the collars A A, thus working the spindle B. In moving the stock the reverse way the pressure is released, a fresh grip is then taken, and so on. The cover E may be made to fit tightly with a small lip or cut, or be otherwise conveniently arranged to be taken out when it is desired to oil the inside. The pawl may be made solid or hollow, and with or without a spring, the stock preferably of malleable cast-iron, the tongue of steel, and the spindle of wrought-iron, the whole of the spindle being turned up in a lathe. My improved brace may, however, be made of any suitable materials and in all sizes.

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

The combination, in a drilling-brace, of the collars A A, forming a tapered or V-shaped groove on the spindle B, with the pawl C, set at an angle to the spindle in the angular chamber or recess F in the stock D, the whole constructed, combined, and arranged to operate the brace by friction, substantially as described.

RICHARD STUART SOLOMON.

Witnesses:

GEORGE ARTHUR WALTER,
JAMES HARPUR.