T. F. LITAKER.

DRILL.

APPLICATION FILED APR. 12, 1912.

1,046,615. Patented Dec. 10, 1912.

Fig. 1.

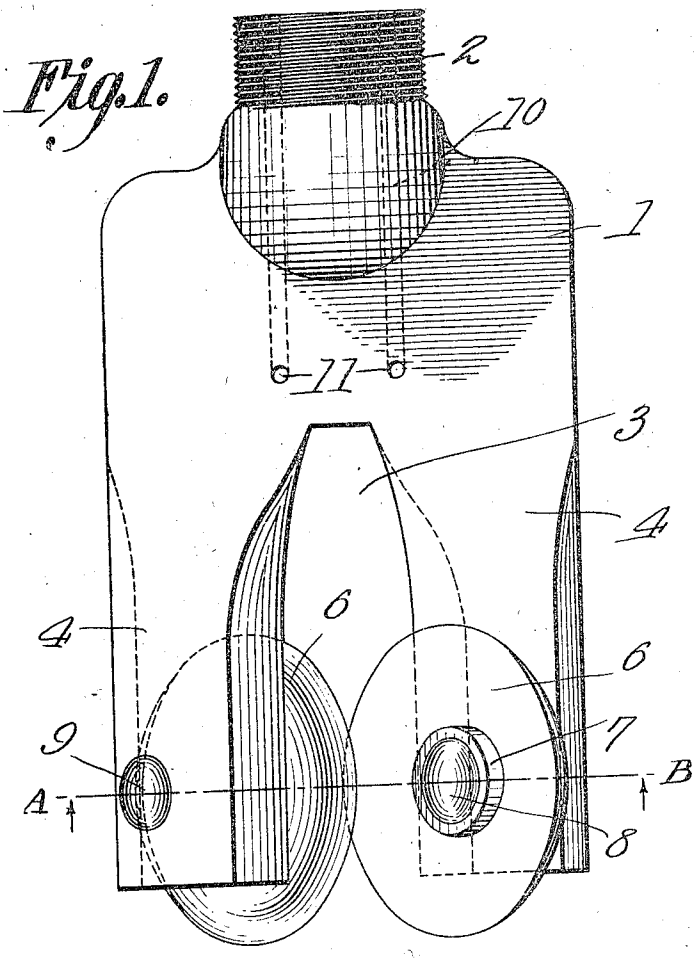
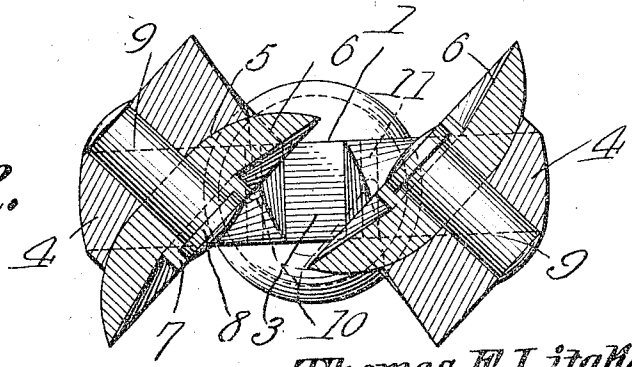


Fig. 2.



Witnesses

E. H. Wilson

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UNITED STATES PATENT OFFICE.

THOMAS FRANK LITAKER, OF FELLOWS, CALIFORNIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO ROTARY DISC BIT CO., INCORPORATED, OF FELLOWS, CALIFORNIA.

DRILL.

1,046,615. Specification of Letters Patent. Patented Dec. 10, 1912.

Application filed April 12, 1912. Serial No. 690,256.

To all whom it may concern:

Be it known that I, THOMAS F. LITAKER, a citizen of the United States, residing at Fellows, in the county of Kern and State of California, have invented a new and useful Drill, of which the following is a specification.

This invention relates to drills for use in working stone, the principal object of the invention being to provide a drill of this character the cutting portions of which are made up of disks designed to rotate, the axes of the disks being perpendicular to the longitudinal axis of the head to which they are connected.

A further object is to provide a cutting disk so disposed as to work to the best possible advantage without causing choking of the bore, means being employed whereby water can be supplied readily to the surfaces being acted on by the disks.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is an elevation of the drill. Fig. 2 is a section on line A—B Fig. 1.

Referring to the figures by characters of reference 1 designates the drill head provided, at one end, with a screw threaded stem 2 adapted to engage to a drill rod or tube or to any other means whereby the head can be rotated. A slot 3 extends longitudinally into the other end portion of the head so as thus to form spaced legs 4. Said legs are twisted so as to occupy parallel planes extending diagonally relative to the faces of the head 1. The inner faces of the legs are formed with concavities 5 designed to receive the convexed faces of concavo-convex cutting disks 6, each of these disks being formed at the center of its concaved face with a boss 7 adapted to receive the head 8 of a bearing pin 9. The bearing pins extend entirely through the legs 4 and are secured therein in any suitable manner, as by upsetting the outer ends of the pins or by screwing the pins into place. The disks project beyond the sides and the lower ends of the legs and thus are located where they will properly engage the surfaces to be acted on. Water passages 10 are formed longitudinally within the stem 2 and head 1 and have outlets 11 opening through opposed side faces of the head and close to the legs 4.

It will be seen that when the head 1 is rotated by any suitable means provided for that purpose, the disks 6, which are preferably formed of very hard steel, will cut into the surfaces to be acted on, the disks gradually rotating during this cutting action so as thus to bring all portions of the peripheries thereof ultimately into active position. Obviously the disks can be easily sharpened by removing pins 9. The dust and chips produced by the action of the disks on the surfaces will be free to work upwardly between the disks and the legs 4 and past the broad sides of the head 1. Water can be admitted between the disks through the passages 10 and the outlets 11.

What is claimed is:—

1. A drill including a head having spaced legs, and concavo-convex disks carried by and extending between the legs.

2. A drill including a head having spaced legs, and concavo-convex disks carried by and extending between the legs, said disks being oppositely disposed.

3. A drill including a head having spaced legs, and concavo-convex disks carried by and extending between the legs, said disks being oppositely disposed, and having their working edges disposed in parallel planes.

4. A drill including a head having spaced legs, and concavo-convex disks carried by and extending between the legs, and revoluble about axes perpendicular to the longitudinal axes of the legs.

5. A drill including a head having spaced legs, and concavo-convex disks carried by and extending between the legs, there being water passages through the head and discharging from the sides thereof.

6. A drill including a head having a

threaded stem at one end, spaced legs extending from the other end, there being a water passage within the stem and head and discharging from one face of the head, and a cutting disk carried by each leg and extending beyond the sides and bottom thereof, said disks being located between the legs.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

THOMAS FRANK LITAKER.

Witnesses:

W. J. HOLLAND,

GEO. MOLIDOR.