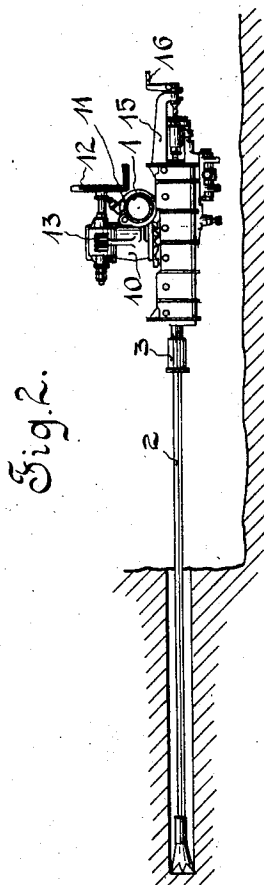
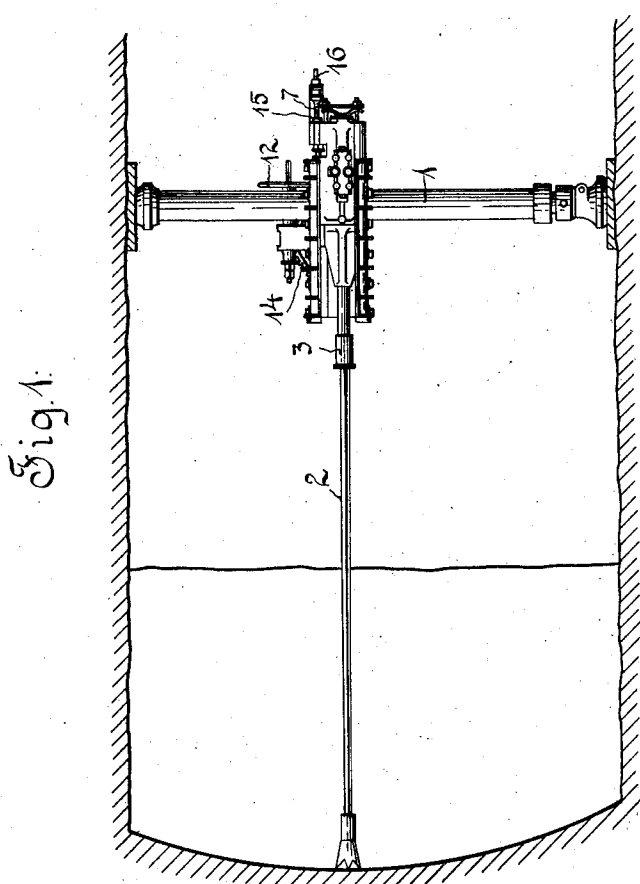
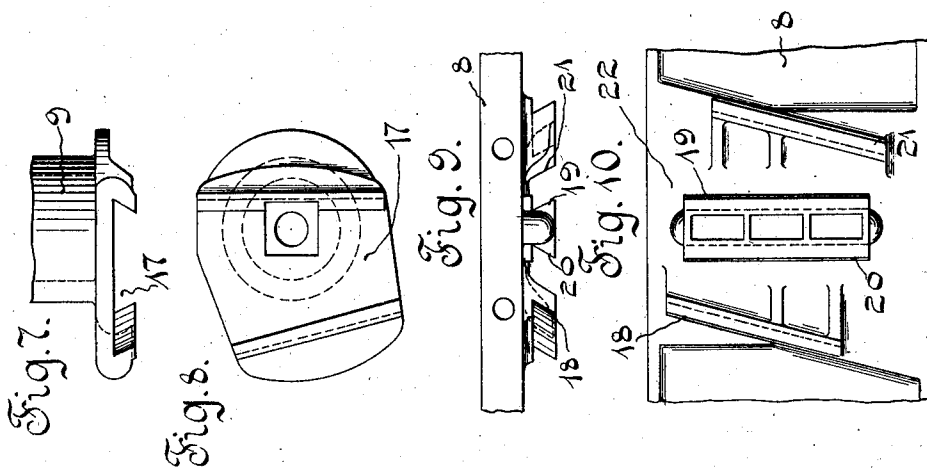


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 DRILL MOUNTING.
 APPLICATION FILED MAY 8, 1908.

997,509.

Patented July 11, 1911.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

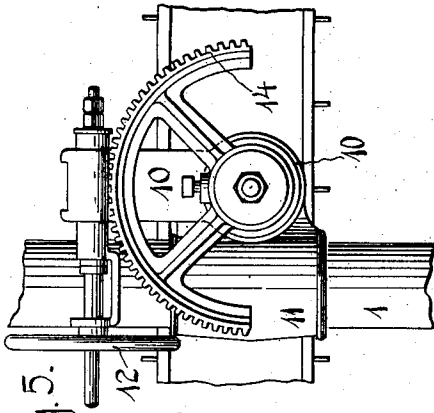


Fig. 5.

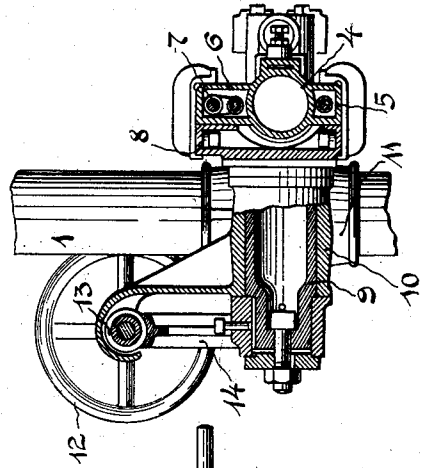


Fig. 6.

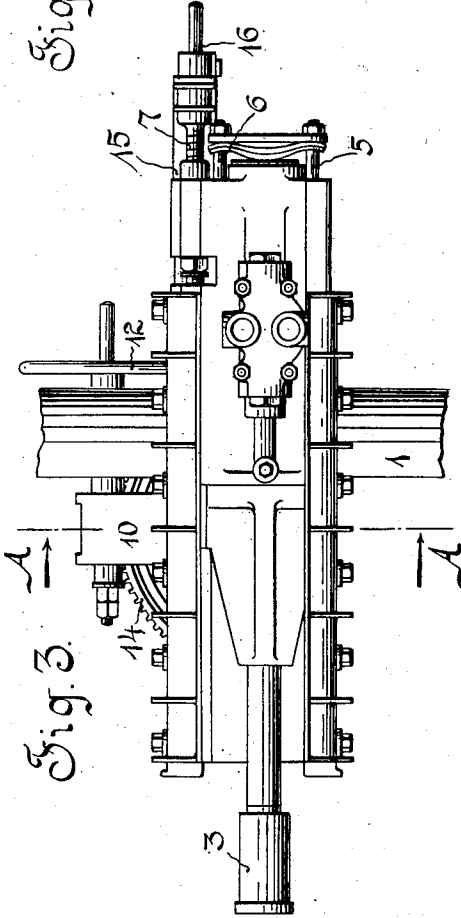


Fig. 3.

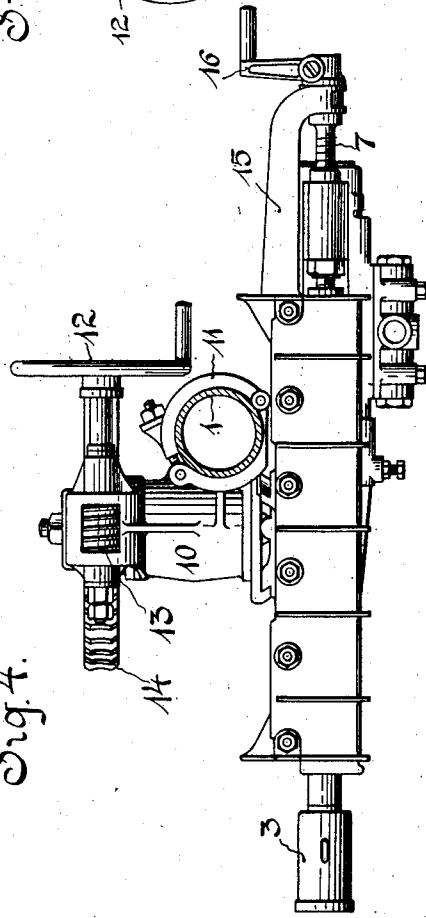


Fig. 4.

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UNITED STATES PATENT OFFICE.

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DRILL-MOUNTING.

997,509.

Specification of Letters Patent.

Patented July 11, 1911.

Application filed May 8, 1908. Serial No. 431,605.

To all whom it may concern:

Be it known that I, WILLIAM PRELLWITZ, a citizen of the United States, and resident of Easton, in the county of Northampton and State of Pennsylvania, have invented a new and useful Improvement in Drill-Mountings, of which the following is a specification.

My invention relates to a drill mounting and more particularly to means for mounting a drill on a column, with a view of bringing the plane in which the drill reciprocates, as well as the trunnion on which the drill shell rocks, into as close proximity as may be to the supporting column.

My invention also contemplates novel means for removably attaching the shell to its support.

My invention further contemplates means for reversing the position of the shell on its support without moving the trunnion.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view in side elevation of a drill mounted upon a column as in operation, Fig. 2 is a transverse section through the column showing the drill and its mounting in top plan, Fig. 3 is an enlarged view in side elevation showing the drill shell and parts in immediate proximity thereto, Fig. 4 is a top plan view of the same, the column being shown in section, Fig. 5 is a reverse view in side elevation of the same, Fig. 6 is a section in the plane of the line A—A of Fig. 3, Fig. 7 is a view in detail plan view of the trunnion, Fig. 8 is a view of the same in face elevation, Fig. 9 is a plan view of a portion of the shell at the point where it is provided with a double dove-tailed wedge for engaging the dove-tailed recess in the trunnion, and Fig. 10 is a view of the same in elevation looking at the back of the shell.

The supporting column is denoted by 1; the drill by 2; the drill chuck by 3; the drill cylinder (see Fig. 6) by 4; the guides for directing the cylinder in its reciprocating movement by 5 and 6; the feed screw by 7; the shell in which the drill cylinder reciprocates, by 8; the rocking trunnion for supporting the shell 8 and drill cylinder, by 9; the bearing for the trunnion 9, by 10; and the clamp for clamping the trunnion bearing and parts supported thereby to the column 1, by 11. The hand wheel for rocking

the trunnion and parts carried thereby is denoted by 12 and is provided with a worm 13 as usual, which engages a worm wheel or sector 14 secured on the trunnion 9. The shell 8 is provided at the end opposite the drill with a bracket arm 15 for supporting the outer end of the feed screw 7, the latter being provided with a crank 16 for operating the screw and hence the cylinder 4 to feed the drill to its work. The feed screw 7 and the guides 5 and 6 are located within vertical planes extended from the sides of the cylinder and, in the present instance, they are located in a vertical plane passing through the longitudinal axis of the cylinder, which plane is parallel with the axis of the supporting column, thereby rendering it feasible to locate the back of the shell in close proximity to the supporting column and the cylinder in close proximity to the back of the shell.

The bearing 10 which receives the trunnion 9 is located tangent to the column 1 and the end of the trunnion 9 which receives the shell is located in a plane tangent to the column 1 at a quadrant's distance from the point where the bearing 10 is tangent to the column 1, so that when the shell is attached to the trunnion in working position, its back will be in close proximity to the surface of the column 1, as close as is permissible while allowing the shell a rocking movement with its supporting trunnion 9.

In order to readily attach the shell 8 to its trunnion to operate the drill in either of two diametrically opposite directions without disturbing the trunnion support on the column 1 or from either of two opposite sides of the column without reversing the trunnion support, there is provided a dove-tailed recess on one of the parts, in the present instance on the end of the trunnion, and a double dove-tailed wedge on the other of the parts, in the present instance on the back of the shell 8. The dove-tailed recess on the end of the trunnion is denoted by 17 and receives therein either of the two dove-tailed wedges on the back of the shell 8, one of said dove-tailed wedges having its opposite edges denoted by 18, 19, with its narrower end directed upward, as shown in Fig. 10, and the other of said dove-tailed wedges having its opposite edges denoted by 20, 21, with its narrower end directed downwardly as shown in Fig. 10.

It will be noted that a central raised portion 22 on the back of the shell 8 and extending transversely with relation to the back of the shell has its opposite edges 18, 21, parallel and undercut, one of these edges 18 cooperating with the slanting undercut 19 to form one of the wedges and its other edge, 21, cooperating with the undercut slanting edge 20 to form the other or reverse wedge. The wedges so formed on the back of the shell are intended to be alike in size and shape so that the shell 8 may be dropped into secure engagement with the end of the trunnion with either of its edges uppermost as may be desired. This arrangement admits of reversing the shell end for end without disturbing the trunnion support on the column and it also admits of swinging the trunnion support around to the opposite side of the column and using the drill in a plane parallel with its former position without otherwise disturbing the trunnion support on the column.

By locating the back of the shell and hence the drill cylinder in the closest possible proximity to the supporting column, the spring, lost motion or vibration resulting from the impulses of the drill is reduced to

a minimum while the reversing of the drill shell serves to enlarge the scope of operation of the drill without the time and labor required to change the support on the column or the column itself.

What I claim is:—

1. A drill shell and a support for the shell, the shell and support being provided the one with a tapered, dovetailed recess and the other with reversed wedges adapted to fit the recess whereby the shell may be removably attached to the support in reversed positions.

2. A drill shell and a trunnion for supporting the shell, the shell and trunnion being provided the one with a tapered, dovetailed recess and the other with reversed wedges adapted to fit the recess whereby the shell may be attached to the trunnion in reversed positions.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this fifth day of May, 1908.

WILLIAM PRELLWITZ.

Witnesses:

WARD RAYMOND,
CHAS. T. MILLER.