

# United States Patent

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[50] Field of Search..... 175/122,  
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[56] References Cited  
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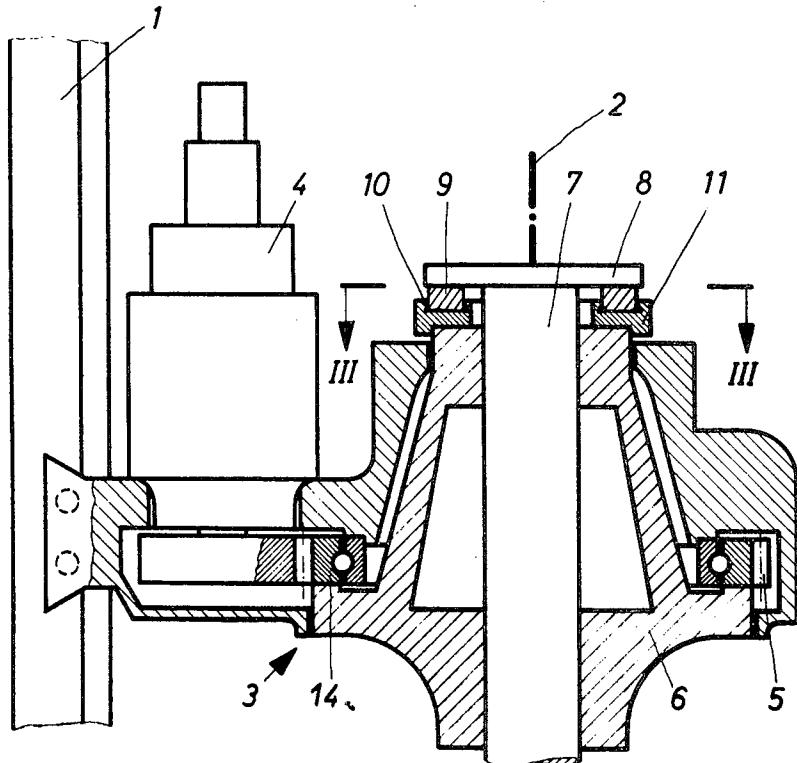
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Attorney—Nolte and Nolte

[54] DRILLING TABLES FOR SOIL DRILLING  
EQUIPMENT  
4 Claims, 3 Drawing Figs.

[52] U.S. Cl..... 173/165,  
64/23.5, 175/195  
[51] Int. Cl..... E21b 3/02

**ABSTRACT:** A drilling table for soil drilling equipment comprises a rotatable carrier device for a drill rod, and means for rotating the carrier device, damping means being provided at an upper surface of the carrier device and rotatable therewith for imparting rotary movement to the drill rod when carried by said damping means.



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Fig. 2

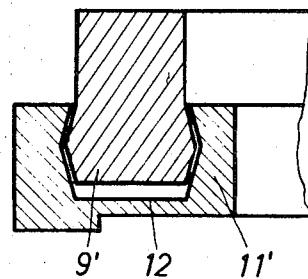


Fig. 3

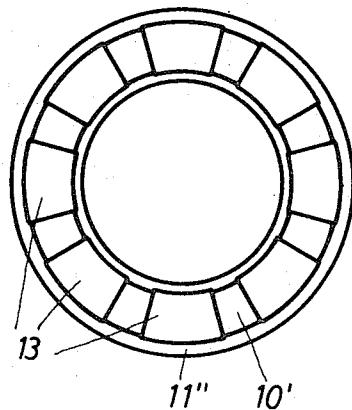
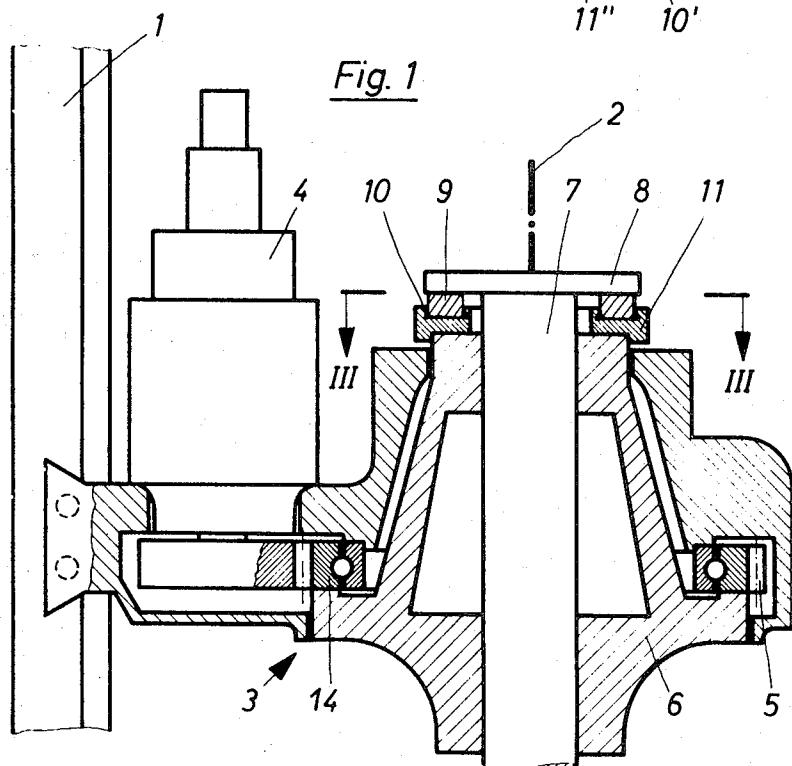


Fig. 1



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## DRILLING TABLES FOR SOIL DRILLING EQUIPMENT

## BACKGROUND OF THE INVENTION

The present invention relates to drilling tables for soil drilling equipments, and more specifically to such drilling tables in which the drive and necessary gears for a drill rod are accommodated.

When the drill in a drilling equipment of the type in which telescopic drill rod members extend under gravity required to be cleared of soil, the drill rod members are pulled up by means of a rope and, after clearing of the drill bit, are then again dropped into the bore hole by slackening the suspension rope. Consequently, the drill rod collar strikes violently onto the drilling table on the drill being reinserted in the bore hole.

It is an object of the invention to provide a drilling table wherein the drill rod collar is prevented from striking violently onto the drilling table.

## SUMMARY OF THE INVENTION

According to the present invention, there is provided a drilling table for soil drilling equipments, comprising damping means at an upper surface provided for bearing a flange at the upper end of a drill rod. The damping means may comprise a ring retained within a groove of dovetailed cross section in the surface. In an alternative embodiment, the damping means may comprise a ring loosely retained within a groove of double trapezium cross section in the surface. In yet a further embodiment, the damping means may comprise a plurality of segments each retained within a recess of dovetailed cross section within the surface.

## BRIEF DESCRIPTION OF THE DRAWINGS

To make the invention clearly understood reference will now be made to the accompanying drawings which are given by way of example and which:

FIG. 1 shows a view, partly in section, of a drilling table embodying the invention;

FIG. 2 shows a sectional view of a detail of an alternative embodiment; and

FIG. 3 shows a plan view of a detail of yet a further embodiment.

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## DESCRIPTION OF THE PREFERRED EMBODIMENTS

The embodiment of FIG. 1 comprises a drilling table 3 mounted to be vertically slidable on a guide post 1 of a soil drilling equipment. Hydrostatic gearing 4, not shown in greater detail, drives a drill rod 7 suspended by a rope 2 via a gear rim 5, which is born in a ball bearing 14, and via a carrier device comprising a carrier 6, and a damping ring 9 which is retained in a dovetaillike groove 10 in an intermediate ring 11.

10 A flange 8 is provided at the upper end of the drill rod 7 and prevents the drill rod 7 falling through the drill table. The flange 8 rests on the damping ring 9.

FIG. 2 illustrates an alternative embodiment, in which the damping ring 9' is of double trapezium shape and smaller in 15 cross section than a guide groove 12 in an intermediate ring 11'. The damping ring 9' is thus loosely retained in the guide groove 12 and may therefore wander. It is thereby avoided heat that, for example, unevenness at the flange 8 of the drill rod 7 always strikes the same spot on the damping ring and 20 thereby wears it out prematurely.

FIG. 3 shows yet a further embodiment in section along the line III-III of FIG. 1. In this embodiment, damping segments 13 are employed instead of a damping ring 9 or 9'. Expediently, the damping segments 13 are fastened as hereinbefore described with reference to FIG. 1 in a groove 10' of dovetailed cross section in the intermediate ring 11'.

I claim:

1. A drilling table for a soil drilling equipment, comprising a rotatable carrier device adapted to drive a drill rod having a collar at the upper end of the drill rod, said carrier device having an upper surface rotatable therewith, means for rotating said carrier device and said upper surface, and damping means being arranged at said upper surface to carry said drill rod collar when said drill rod is driven by said carrier device.

30 2. A drilling table as defined in claim 1, wherein said damping means comprise a damping ring retained within a groove of dovetailed cross section in said carrier device.

3. A drilling table as defined in claim 1, wherein said damping means comprise a damping ring loosely retained within a 40 groove of double trapezium cross section in said carrier device.

4. A drilling table as defined in claim 1, wherein said damping means comprise a plurality of segments each retained within a groove of dovetailed cross section within said carrier device.

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