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H. HELLMAN & L. C. BAYLES.

MEANS FOR MOUNTING ROCK DRILLING MACHINES OR ENGINES.

APPLICATION FILED JUNE 12, 1906.

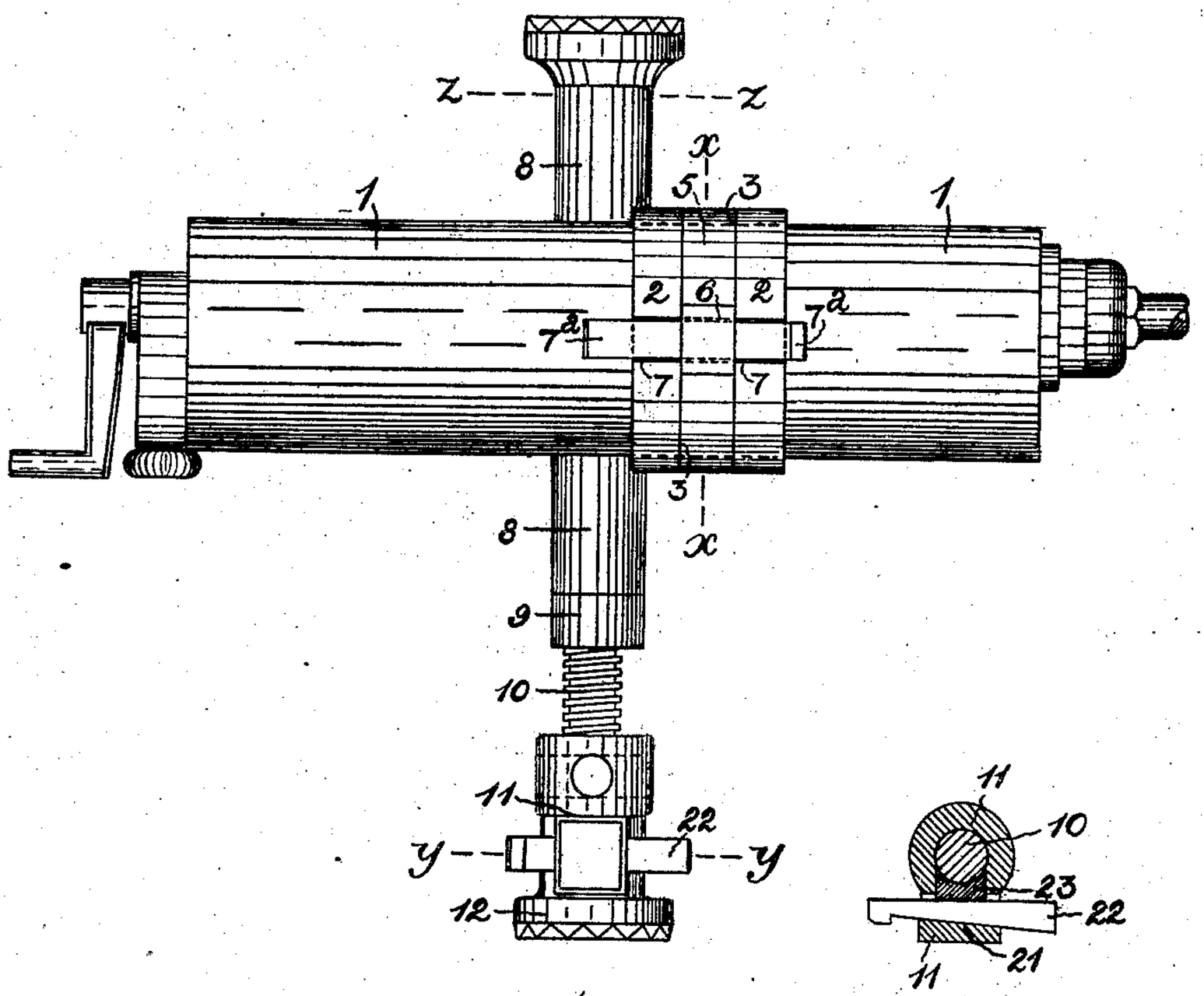

Fig. 1.

Fig. 3.

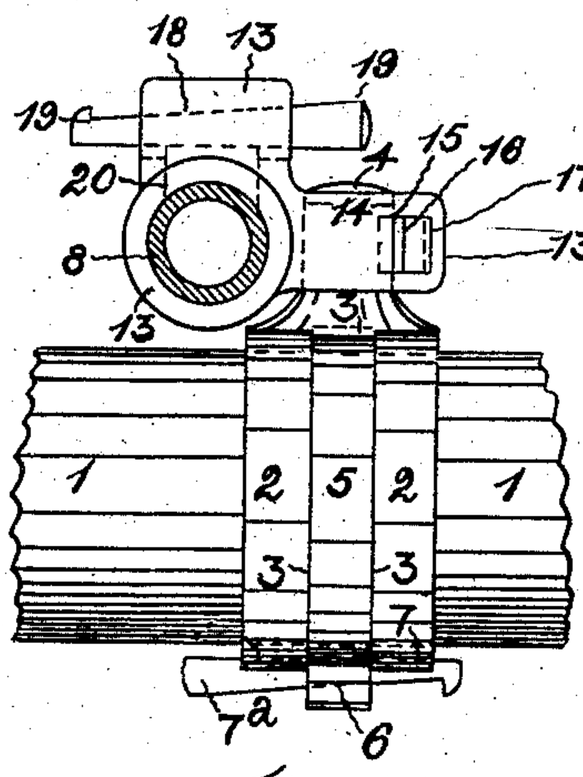

Fig. 4.

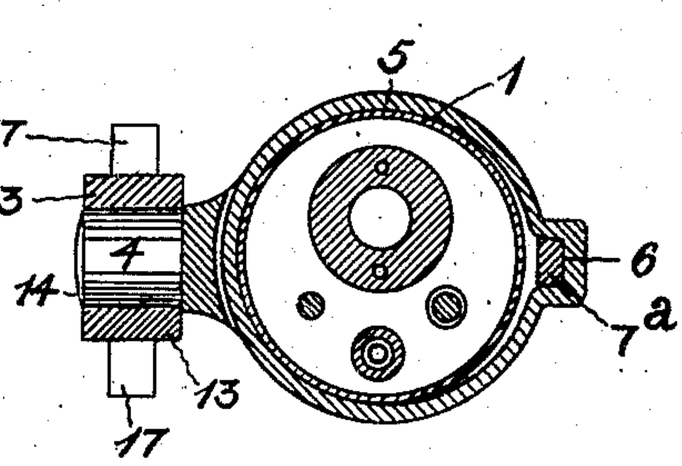

Fig. 2.

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UNITED STATES PATENT OFFICE.

HENRY HELLMAN AND LEWIS CONDICT BAYLES, OF JOHANNESBURG, TRANSVAAL.

MEANS FOR MOUNTING ROCK-DRILLING MACHINES OR ENGINES.

No. 850,885. Specification of Letters Patent. Patented April 16, 1907.

Original application filed January 11, 1905, Serial No. 240,661. Divided and this application filed June 12, 1906. Serial No. 321,327.

To all whom it may concern:

Be it known that we, HENRY HELLMAN and LEWIS CONDICT BAYLES, citizens of the United States of America, and residents of Johannesburg, Transvaal, have invented certain new and useful Improvements in Means for Mounting Rock-Drilling Machines or Engines, of which the following is a specification.

This invention relates to rock-drills or rock-drilling machines or engines employed in mining and quarrying work for the formation of holes to receive blasting charges.

It has especial reference to means for mounting or erecting such machines or engines in the desired position for operation; and the objects of the improvements are to provide means whereby the column, column-clamp, and base-block are all adjustably connected or secured together by means of keys or other equivalent contrivances and to obviate the use of screws or similar devices. By this means the mounting and dismounting of the machine or engine may be performed with greater facility than at present. It also reduces the initial cost by simplifying the construction of these parts and renders said parts less liable to be broken by their operators when in use.

The invention constituting the subject-matter of this application is a division of an application filed by us on the 11th day of January, 1905, and bearing Serial No. 240,661.

In order that our invention may be more easily described and more readily comprehended, we append drawings illustrating a practical embodiment of the same.

The drawings are marked with reference-numerals corresponding to the following description thereof.

Figure 1 represents an elevation of a rock-drilling machine or engine, showing it mounted on a column. Fig. 2 is a transverse section of Fig. 1 on line *x x*. Fig. 3 is a section taken through the column-base on line *y y*, Fig. 1; and Fig. 4 is a sectional plan taken through the column on line *z z*, Fig. 1.

The rock-drill or rock-drilling machine or engine is represented at 1, and as it embodies no feature of this invention the parts need not be further described.

In the particular arrangement illustrated the outer cylindrical casing of the machine 1 is encircled and carried by a sleeve 2, formed at the center with a transverse slot 3, which forms said sleeve into two parts connected by means of a cylindrical or other suitably-shaped projection 4. Into the slot 3, formed between the halves of the sleeve 2 and encircling the casing of the machine or engine 1, is fitted a ring 5, which is constructed with a recess 6 on the inside. In the exterior of the halves of the sleeve 2 are formed grooves 7, which are in line. In the grooves 7 and projecting through the recess 6 in the ring 5 is a wedge or tapered key 7[a], by the driving in of which the casing of the machine or engine 1 is secured between the halves of the sleeve 2 and the ring 5. Any other suitable means may be provided for slidably or otherwise preferably adjustably supporting the machine or engine 1.

The column is represented at 8, the column-nut at 9, the jack-screw at 10, the base at 11, and the base-block at 12.

On the column 8 is adjustably mounted the column-clamp 13, (see Figs. 2 and 4,) which has attached to it the sleeve 2. The cylindrical projection 4 on the sleeve 2 fits into a hole 14, formed to receive it in the column-clamp 13. A keyway 15 is formed through the column-clamp 13 intersecting on one side the hole 14 or passing down one side of the projection 4 when the latter is in position in the hole 14. In the keyway 15 is arranged a gib 16, which engages or fits against the cylindrical projection 4. In the keyway 15 at the back of the gib 16 is placed the key 17, which when driven in one direction forces said gib 16 inward, so that it grips the cylindrical projection 4, thereby fixing the sleeve 2 to the column-clamp 13. The column-clamp 13 is fixed to the column 8 in a similar manner. In Fig. 4, 18 represents the keyway through the column-clamp, 19 the key, and 20 the gib. The lower end of the jack-screw 10 is also secured in the base 11 in like manner. As shown in Figs. 1 and 3, 21 is the keyway, 22 the key, and 23 the gib.

By this construction these several parts are adjustably connected or secured together by means of the keys, so that all that it is necessary to do to adjust the machine vertically on the column 8 or to dismantle it is to drive the several keys in the requisite direction to disengage the gibs, which con-

struction allows these several operations to be performed much more quickly than at present.

The term "key" we use in the broad sense as including a piece tapered in one or more directions or its equivalent, which will operate when inserted between the parts to secure the same together in the manner hereinbefore described.

What we claim as our invention, and desire to protect by Letters Patent, is—

1. In means for mounting a rock-drilling machine or engine, in combination, an engine-clamping means comprising a pair of sleeves surrounding the machine or engine, a third sleeve disposed between those already named and also surrounding the machine or engine, a key engaging all three sleeves and adapted to pull the last-named sleeve in a direction opposite to the pull upon those first named, and a column-engaging projection secured to said engine-clamping means.

2. In means for mounting a rock-drilling machine or engine, in combination, an engine-clamping means comprising a pair of rings surrounding the machine or engine, a third ring independent of and disposed between those already named and also surrounding the machine or engine, a key engaging all three rings and adapted to pull the middle ring in a direction opposite to the pull upon those first named, and a column-engaging projection securing the first-named rings together.

3. In means for mounting a rock-drilling machine or engine, in combination, an engine-clamping means comprising a pair of rings surrounding a machine or engine, and each provided with a groove in its outer rim, a third ring independent of and disposed between those already named and also surrounding the machine or engine, a key slidably engaging the grooves in the rings first named and engaging the inner wall of the intermediate ring, and a column-engaging projection secured to said engine-clamping means.

4. In means for mounting a rock-drilling machine or engine, in combination a column, a column-clamp, means for adjustably supporting the machine or engine, said means comprising a sleeve surrounding the drill-case and formed with a slot and a ring located in said slot and surrounding the drill-case, the ring being constructed with an internal recess a key located in said recess operating between the ring and sleeve for adjustably clamping the sleeve to the drill-case, said sleeve being constructed with a cylindrical projection and the column-clamp with a hole to receive said projection, the column-clamp being constructed with a key and gib way and a key and gib arranged therein, the latter engaging the projection on the sleeve and the key serving to force the gib into engagement therewith for securing the supporting-sleeve to the column-clamp.

5. In means for mounting a rock-drilling machine or engine, in combination, a sleeve surrounding the machine or engine, a ring and key securing said sleeve to the drill-case, the sleeve being formed with a projection, a column, a column-clamp, the latter constructed with a hole to receive the projection on the sleeve and with a key and gib way, a key and gib arranged therein, the column-clamp being constructed with another key and gib way and a key and gib arranged therein for adjustably securing the clamp to the column.

In witness whereof we have hereunto set our hands in the presence of two subscribing witnesses.

HENRY HELLMAN.
LEWIS CONDICT BAYLES.

Witnesses:
CHAS. OVENDALE,
R. OVENDALE.