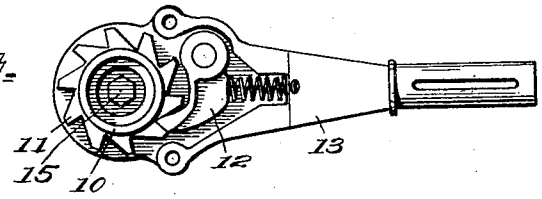
April 18, 1933. L. J. FELLAY 1,904,655

MINING DRILL MOUNTING

Filed Sept. 14, 1931

Fig. 3.



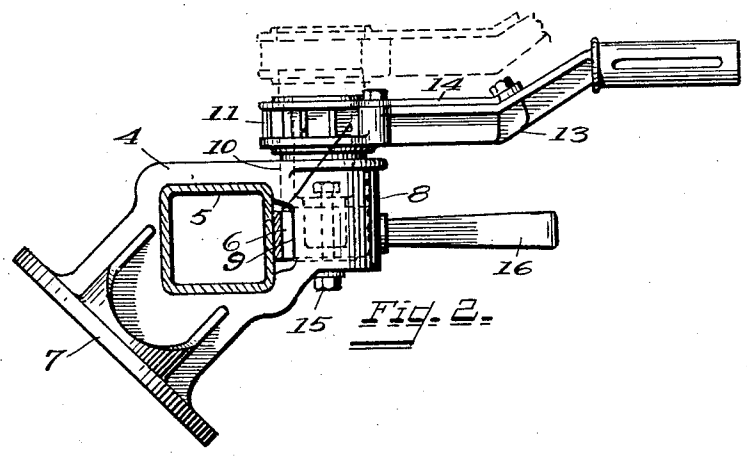
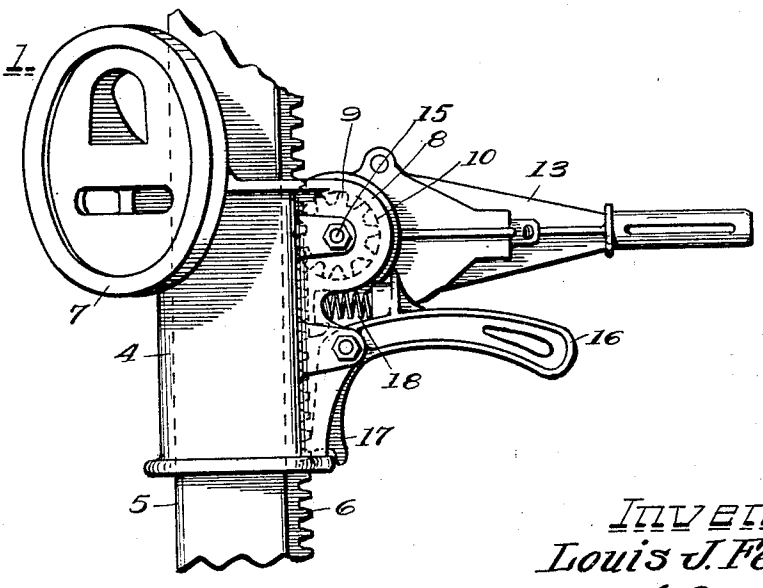


Fig. 2.

Fig. 1.



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UNITED STATES PATENT OFFICE

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MINING DRILL MOUNTING

Application filed September 14, 1931. Serial No. 562,631.

My invention relates to mining drill mountings particularly adapted for use with electric mining drills such as shown in the pending application of E. J. Dooley, Serial No. 281,049 filed May 28, 1928, though it is not limited to the structure there disclosed.

One object of my invention is the provision of a mounting which is carried by a post and whereby the drilling mechanism may be conveniently raised or lowered on the post and held in any adjusted position for the drilling operation.

Another object of my invention is the provision of a ratchet mechanism for operating the raising means for the mounting to the end that the mounting may be raised by a back and forth movement of the handle for the ratchet regardless of what position the handle may be in.

Another object of my invention is the provision of means for disengaging the raising means to the end that the mounting may be either raised or lowered rapidly if desired.

Other objects of my invention will appear and be described in the specification.

The novelty of my invention will be hereinafter more fully set forth and specifically pointed out in the claims.

In the accompanying drawing:

Fig. 1 is a side view of a mounting embodying my invention and showing a portion of a post.

Fig. 2 is a top plan view of Fig. 1.

Fig. 3 is a side view of the ratchet mechanism, the cover plate therefor being removed.

The same numerals of reference are used to indicate identical parts in all the Figs.

As illustrating one form of device embodying my invention, though without limiting myself to the details of construction or arrangement of parts shown and to be herein described, but availing myself of all changes and modifications which may be made within the scope of the appended claims, I have shown a device comprising a slide 4 adapted to move up and down on a post 5, the latter carrying a rack 6. The upper and lower ends of the post 5 are provided with any suitable means for mounting them in position such as shown in my co-pending application Serial No. 562,632 filed Sept. 14, 1931.

A turn table 7 is carried by the slide 4 and the drilling mechanism is provided with suitable means for engagement therewith.

At one side of the upper portion of the slide 4 a housing 8 is formed and a pinion 9, carried by a sleeve 10 is mounted free to turn and free to slide in the housing 8. The outer end of the sleeve 10 carries a ratchet 11 which is engaged by a pawl 12 carried by the handle 13, the latter being provided with a cover plate 14, the handle 13 being formed so that it engages the sleeve 10 at one side of the ratchet while the cover plate 14 engages the sleeve at the other side of the ratchet so that the handle 13 may be used not only to turn the sleeve 10 and pinion 9 but also to slide them within the housing 8. A movement limit bolt 15 is carried by the end of the housing 8 and permits the sleeve 10 and pinion 9 to move endwise in the housing 8 so that the pinion may be either engaged with the rack 6 or disengaged therefrom, the full line position of the handle 13 in Fig. 2 showing the parts when the pinion is engaged with the rack while the dotted line position of this handle shows the position of the parts when the pinion is disengaged.

Mounted on the slide 4 below the housing 8 is a lever 16 which carries a dog 17 to engage the teeth of the rack 6, the dog being normally held in engaged position by compression spring 18.

Assuming the post 5 is properly mounted for a drilling operation and suitable drilling mechanism is mounted on the turn table 7, when it is desired to raise the drilling mechanism on the post, the handle 13 is either used as a crank to turn the pinion 9 or if, due to the interference of the floor, ceiling, or walls

of a mine, it is inconvenient to use the handle 13 is a crank, this handle is merely moved back and forth thus operating the ratchet and pawl engagement and moving the slide upward. The dog 17, as the slide moves upward will successively engage the teeth of the rack 6 to hold the slide against running down on the post.

When it is desired to lower the slide on the post, this may be accomplished by merely pulling upward on the lever 16 which will disengage the dog 17 and permit the slide to run down, the handle 13 back running and acting somewhat as a governor during the descent of the slide, or the handle 13 may be moved to dotted position of Fig. 2, disengaging the pinion, and it as well as the lever 16 may be grasped by the operator and used to retard the descending movement, in which case when it is desired to stop the downward movement, the operator may bring the slide to a stop by the handle 13 and then release the lever 16 to permit the dog 17 to engage the rack, after which the handle 13 may be again moved to the full line position of Fig. 2 thus engaging the pinion with the rack for a subsequent operation.

Another method of permitting the descent of the slide is to use the handle 13 as a crank to retard the downward movement and by holding the lever 16 in elevated position, move the dog 17 out of engagement with the rack and hold it out until the slide has been lowered to the desired position.

If it is desired to raise the slide quickly, the pinion may be disengaged from the rack and by means of the lever 16 the slide may be rapidly raised to the desired position and the lever 16 released which will cause the immediate engagement of the dog 17 with the rack to hold the slide in the elevated position.

It will be seen from the above that I have produced a mining drill mounting of a very simple construction, consisting of but few parts and these parts all of a simple and rugged construction, and one which is capable of handling even a very heavy drilling mechanism with ease, either in raising or lowering it.

Having thus fully described my invention, I claim:

1. In a mining drill mounting the combination of a post, a rack carried thereby, a slide provided with means for mounting drilling mechanism thereon and arranged for adjustable movement lengthwise of the post, a pinion carried by the slide and movable into and out of engagement with the rack, means for rotating the pinion, and releasable holding means carried by the slide and co-operating with the rack whereby to secure the slide in its adjustable position on the post.

2. In a mining drill mounting the combination of a post, a rack carried thereby, a slide provided with means for mounting drilling mechanism thereon and arranged for adjustable movement lengthwise of the post, a pinion carried by the slide and movable into and out of engagement with the rack, ratchet and pawl mechanism for rotating the pinion, and releasable holding means carried by the slide and co-operating with the rack whereby to secure the slide in its adjustable position on the post.

LOUIS J. FELLAY.