M. LUTENBERGER.

JACK.

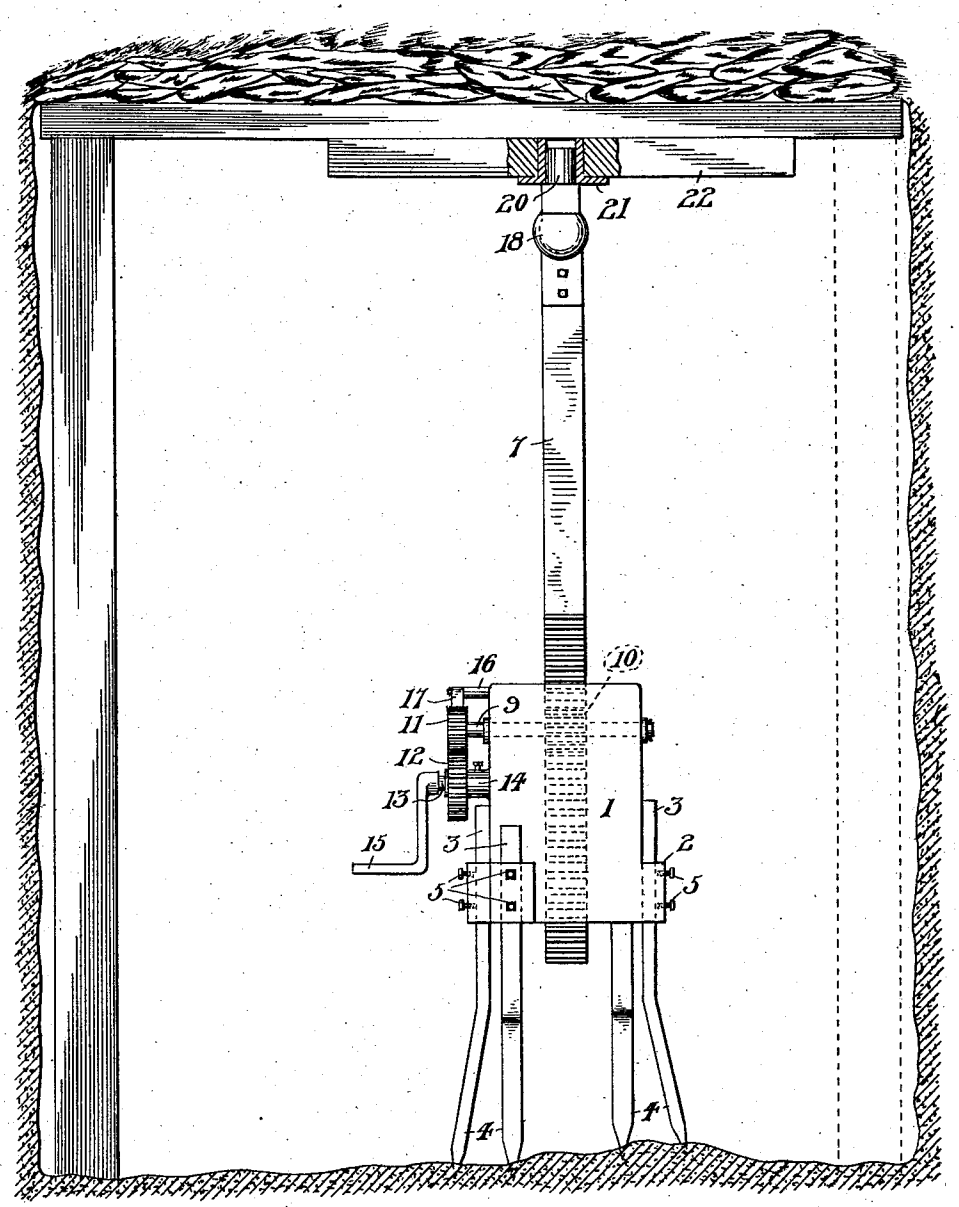
APPLICATION FILED APR. 5, 1911.

1,027,348.

Patented May 21, 1912.

2 SHEETS—SHEET 1.

FIG. 1



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2 SHEETS—SHEET 2.

FIG. 2

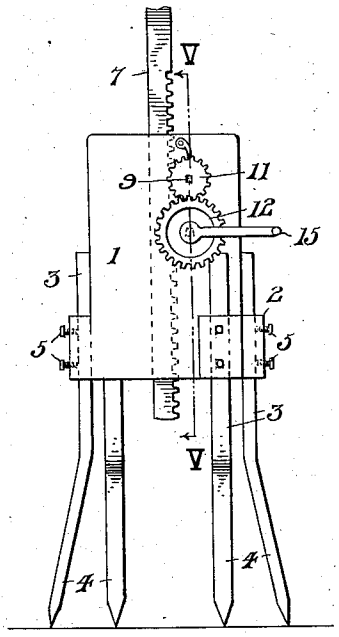


FIG. 3

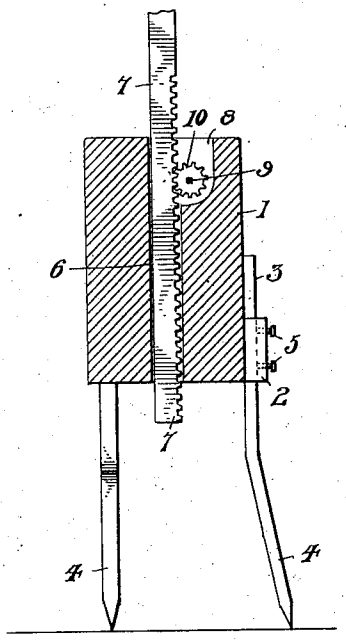


FIG. 4

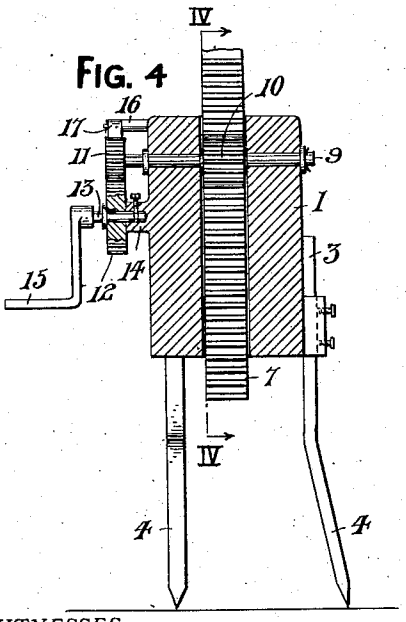
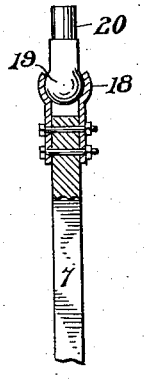


FIG. 5



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UNITED STATES PATENT OFFICE.

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1,027,348. Specification of Letters Patent. Patented May 21, 1912.

Application filed April 5, 1911. Serial No. 619,035.

To all whom it may concern:

Be it known that I, MIKE LUTENBERGER, a subject of the King of Hungary, residing at Blocton, in the county of Bibb and State of Alabama, have invented certain new and useful Improvements in Jacks, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to jacks and more particularly to that type of jack commonly styled "a collar jack" used in mines for jacking up or elevating broken roof timbers and sagging roofs.

The object of my invention is to provide a jack of the above type that is simple in construction, durable, adjustable, easy to operate, and highly efficient for the purposes for which it is intended.

I attain the above object by a portable jack that can be easily and quickly placed in position beneath a roof timber to elevate the same, whereby additional or any supporting timbers can be placed in position.

The invention will be hereinafter specifically described and then claimed, and reference will now be had to the drawings, wherein like numerals of reference designate corresponding parts throughout the several views, in which:—

Figure 1 is a front elevation of the jack. Fig. 2 is a side elevation of the jack. Fig. 3 is a vertical transverse sectional view of the same. Fig. 4 is a vertical cross sectional view taken on the line V—V of Fig. 2, this view showing a line IV—IV on which Fig. 3 is taken, and Fig. 5 is a vertical sectional view of a ball and socket of the jack.

A jack in accordance with this invention comprises a rectangular body 1 having the lower edges thereof provided with corner pieces 2 for the upper vertical ends 3 of legs 4 adapted to support the body 1 in an elevated position. The upper ends of the legs 4 are adjustably held in the corner pieces 2 by set screws 5. The body 1 is provided with a vertical opening 6 for a rack 7 and in the upper end of said body there is a recess 8 in communication with the upper end of the opening 6.

Journaled in the upper end of the body 1 transversely of the recess 8 is a shaft 9 provided with a pinion 10 meshing with the rack 7. The outer end of the shaft 9 is provided with a gear wheel 11 meshing with a large gear wheel 12 keyed or otherwise mounted upon a shaft 13 revolubly supported by a bearing 14, carried by the side of the body 1. The shaft 13 has a crank or handle 15 whereby it can be easily rotated. The same side of the body 1 is provided with an outwardly extending pin 16 supporting a gravity pawl 17 adapted to engage the gear wheel 11 and lock said wheel in an adjusted position. The upper end of the rack 7 is provided with a socket 18 for the ball end 19 of a pin 20 and this pin is adapted to extend into a bushing 21 provided therefor in a beam 22.

When a supporting timber in a mine is broken and a roof timber lowered, as shown in Fig. 1 of the drawings, the jack can be easily and quickly placed in position with the beam 22 engaging the roof timber. By then imparting a rotary movement to the pinion 10 the rack 7 can be elevated to raise the roof timber and allow another supporting timber to be placed in position, as shown in Fig. 2.

The jack in its entirety can be made of light and durable metal, and it is thought that the operation and utility of the same will be apparent without further description.

What I claim is:—

A jack comprising a vertically disposed rectangular block provided with a centrally arranged vertical opening extending entirely there-through, said block further having its top provided with a recess located at one side of and communicating with said opening, a vertically adjustable rack extending through said opening, supporting legs secured to the side of said block, a shaft journaled in the upper portion of said block at a point to extend through said recess and having one end projecting beyond one side of the block, a pinion carried by said shaft and positioned in said recess and meshing with said rack, a gear fixed to the extended end of said shaft, and a gravity pawl supported from one side of said block at the top thereof and capable of engaging said gear to secure the

shaft against back rotation, the laterally extending bearing projecting from that side of the block carrying the pawl, a laterally projecting stub shaft journaled in said bearing and provided on its outer end with a crank, and a relatively large gear on said stub shaft and meshing with the first mentioned gear.

In testimony whereof I affix my signature in the presence of two witnesses.

MIKE LUTENBERGER.

Witnesses:
E. D. LEE,
JAS. R. ANTON.