March 26, 1929. J. H. KECK 1,707,123

PIPE DRIVING AND PULLING MACHINE

Filed Oct. 26, 1927 2 Sheets-Sheet 1

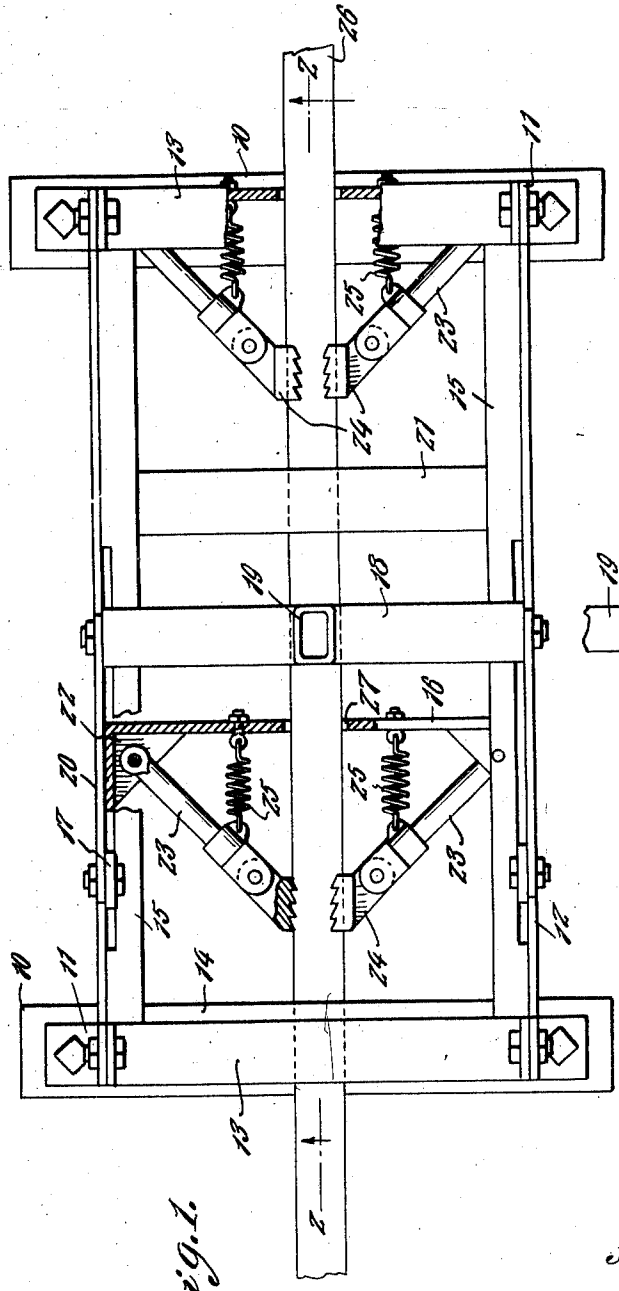


Fig. 1.

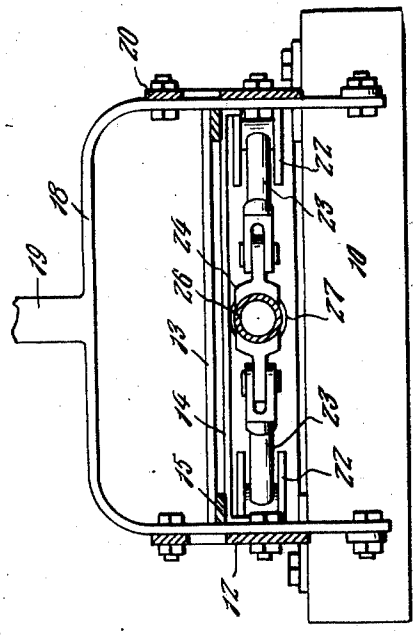


Fig. 3.

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PIPE DRIVING AND PULLING MACHINE

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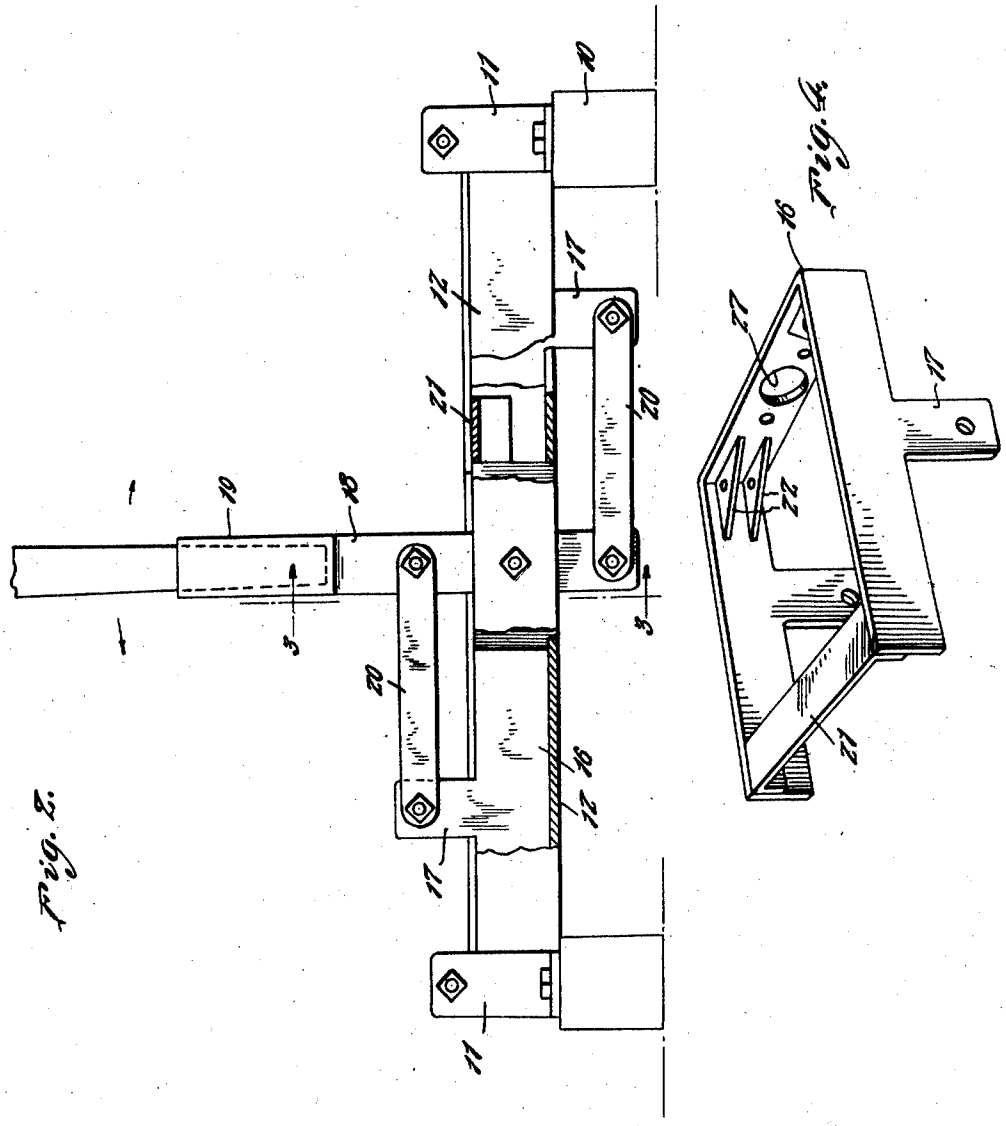


Fig. 2.

Fig. 3.

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Patented Mar. 26, 1929. 1,707,123

UNITED STATES PATENT OFFICE.

JOHN H. KECK, OF GILLETTE, WYOMING.

PIPE DRIVING AND PULLING MACHINE.

Application filed October 26, 1927. Serial No. 228,966.

This invention relates to a combined pipe driving and pulling machine which may be effectively operated at different degrees.

An object of the invention comprehends gripping members adapted for biting engagement with the pipe to hold the same against motion in one direction and for sliding the pipe in a reverse direction.

Another object of the invention comprehends a single handle member adapted to simultaneously operate the gripping members.

A further object of the invention comprehends carriage members for the gripping members.

More specifically stated the gripping members are provided with interchangeable jaw faces to accommodate pipes of different sizes.

With the above and other objects in view, the invention further consists of the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:

Figure 1 is a top plan view of the invention parts being shown in section.

Figure 2 is a longitudinal sectional view taken on line 2—2 of Figure 1 parts being shown in side elevation.

Figure 3 is a sectional view taken on line 3—3 of Figure 2.

Figure 4 is a perspective of one of the carriage members per se.

Referring to the drawings in detail, wherein like characters of reference denote corresponding parts, the reference characters 10 indicate base members, provided with standards 11. Side angle plates 12 and cross members 13 are adapted for connection with the standards 11 to provide a frame structure, the purpose of which will be presently apparent. Cross strips 14 carried by the side plates 12 adjacent the connection of the standards 11 therewith are adapted to interpose between their upper sides and the adjacent undersides of the cross strips 13, the ends of elongated guide plates 15.

Carriage members 16, composed of U-shaped frame structures are slidably mounted within the channel portions defined by the angle plates 12, cross members and guide strips. The carriages are reversely disposed and have parallel ears 17 projected therefrom adapted for connection with the yoke portion 18 of a handle member 19 through the instrumentality of pivoted links 20. Cross members 21 are employed to prevent flaring of the ends of the U-shaped frames. Plate members 22 disposed in spaced relation within the corners of the frames of the carriages have pivotally mounted therebetween the adjacent ends of arms 23 having interchangeable pivotally mounted jaw faces 24 upon the working ends thereof.

Retractile springs 25 are employed for normally holding the jaw faces of companion arms in juxtaposition. A pipe, such as indicated at 26, is inserted within the frame and passed through openings 27 in the ends of the carriage frames. The jaw faces 24 of the arms 23 are disposed in alignment with the registering openings 27 of the carriage frames to engage the pipe member.

The carriages are also interchangeable and the same may be arranged to push, hold and pull the pipe in different directions.

It is furthermore thought that the invention could be usefully employed in lifting jack construction.

The machine is designed to drive or pull a pipe or rod or similar article, either horizontally or perpendicularly with a double acting movement either by hand or power.

The main uses for the device would be the driving of pipe through dirt without excavating for pipe trenches, and for the pulling of pipe a distance without digging it out. Also the device may be employed for the lifting of pipe in a perpendicular position for driving

The invention is susceptible of various changes in its form, proportions and minor details of construction, and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having thus described the invention, what is claimed is:—

1. A pipe driving and pulling machine comprising a frame structure, carriage members reversely arranged within the frame and having ears projected therefrom, a handle member mounted upon the frame and having connection with the ears of the carriages, arms pivotally connected with the carriages and having jaw faces disposed in alignment with the longitudinal center of the frame to engage pipe members extended therein.

2. A pipe driving and pulling machine comprising a frame member defining channel race-ways, carriage members slidably mount-

ed within the race-ways of the frame and having registering openings, ears projected from the carriages, a handle member pivotally mounted upon the frame and having pivotal connection with said ears, arms pivotally mounted upon the carriages and disposed at inclinations toward work extended through the openings of the carriages, jaw faces pivotally mounted for interchangeable relation upon the ends of the arms, and springs having connection between the arms and carriages for holding the jaw faces against the work.

3. A pipe driving and pulling machine comprising a frame member having race-ways, carriages slidably mounted within the race-ways and having registering openings, a handle member pivotally mounted upon the frame, ears extended from the carriage members in different directions and having pivotal connection with the handle member at remote points thereon to facilitate relative movement of the carriage members incident to the operation of the handle member, spaced plates carried by the carriage members, arm members pivotally mounted between the plates, jaw faces pivotally mounted for interchangeable relation upon the outer ends of the arms for engagement with work extended within the frame, and springs establishing connection between the arms and carriages to hold and force the jaw faces against their work.

In testimony whereof I affix my signature.

JOHN H. KECK.