Nov. 20, 1923. 1,475,146

J. W. SEPTER

PIPE LIFTING JACK

Filed April 25, 1921

Fig. 1.

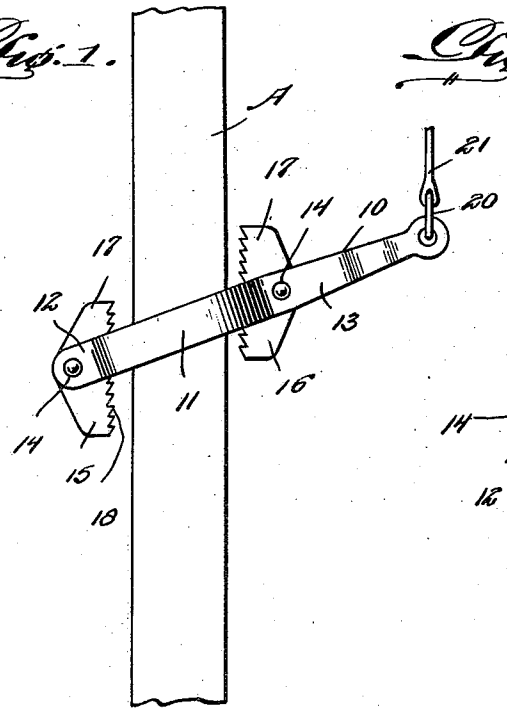


Fig. 2.

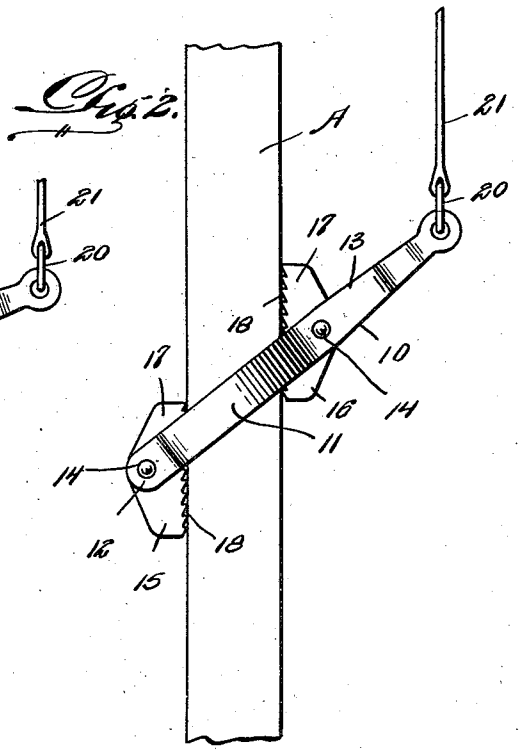


Fig. 4.

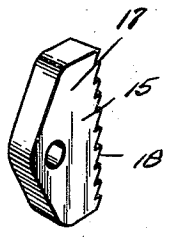


Fig. 3.

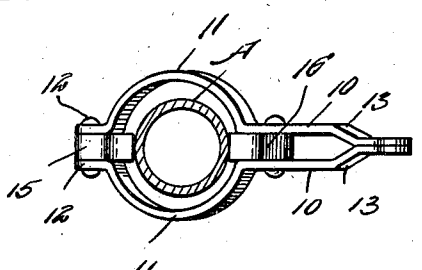
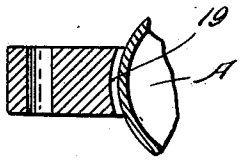


Fig. 5.



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WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES W. SEPTER, OF SUN CITY, KANSAS.

PIPE-LIFTING JACK.

Application filed April 25, 1921. Serial No. 464,171.

To all whom it may concern:

Be it known that I, JAMES W. SEPTER, a citizen of the United States, residing at Sun City, in the county of Barber and State of Kansas, have invented new and useful Improvements in Pipe-Lifting Jacks, of which the following is a specification.

This invention relates to lifting devices, particularly to jacks, and has for its object the provision of a novel jack device or automatic clamp designed primarily for pulling or lifting pipe sections out of a well, the device being so constructed that when allowed to drop down along a line it will pass over units thereon but being so constructed that when an upward pull is exerted thereon by a rope or other flexible member from which it is suspended, the device will automatically grip the pipe, the gripping action being all the more positive as the strain is placed upon the rope.

An important object is the provision of a device of this character which is adaptable for use upon pipes of different sizes, the device automatically accommodating itself to the pipe regardless of the diameter of the latter, of course within reasonable limits.

An additional object is the provision of a device of this character which will be simple and inexpensive in construction, highly efficient in use, positive in action, durable in service, and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed and illustrated in the accompanying drawings in which—

Figure 1 is a side elevation of my device associated with a pipe and in initial or released position,

Figure 2 is a similar view showing the device in gripping position,

Figure 3 is a cross sectional view through the pipe showing my device in plan,

Figure 4 is a perspective view of one of the clamping jaws, and

Figure 5 is a sectional view through a modified form of clamping jaws.

Referring more particularly to the drawings, the letter A designates a pipe section to be pulled. In carrying out my invention I provide a yoke formed of two similar members 10, each of which includes a semi-circular intermediate portion 11 and straight end portions 12 and 13. These members 10 are placed together in mating relation and are designed to be slipped over the pipe to be elevated. The end portions 13 are considerably longer than the end portions 12 whereby to constitute levers and having their extremities formed with holes 14.

Pivoted between the ends 12 is a jaw 15 and pivoted between the ends 13 is a similar jaw 16. These jaws may be formed as shown in Figure 4 which shows the jaws as formed from a preferably rectangular block 17 of elongated form having a toothed pipe engaging face 18. If preferred, the jaws might be straight as shown in Figure 5, in which figure they are shown as having curved pipe engaging faces 19. Regardless of which form of jaw is used, the operation is the same.

In the use of the device it is placed upon the pipe to be lifted and is of course connected as by a ring 20 with a rope or other flexible member 21 by means of which the device may be lowered into the well or other place whereby the pipe is located. When the device is allowed to drop along the pipe it will be seen that it will have no action and will, moreover, pass freely over units. When the device has been lowered to the desired point and the operator exerts a slight pull upwardly on the rope 21, the jaws will of course be brought into engagement with opposite sides of the pipe, as shown in Figure 2 and will efficiently grip the pipe. As the operator continues to pull upon the rope 21 it will be quite apparent that the pipe section will be lifted.

From the foregoing description and a study of the drawings it will be seen that I have thus provided a pipe lifting jack of extremely simple form and one which will therefore be inexpensive. It will be observed that the gripping action is entirely automatic and that the strength of the grip is directly in proportion to the degree of pull upon the hoisting rope.

While I have shown and described the preferred embodiment of my invention, it is of course to be understood that I reserve the right to make such changes in the form, construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A pipe jack comprising a yoke dispos-

able about a pipe and having one end prolonged to serve as a lever adapted for connection with a flexible hoisting element, and a pair of jaws pivoted within the yoke and engageable with opposite sides of a pipe to be pulled, said jaws having their confronting faces formed with inclined teeth.

2. A pipe jack comprising a pair of members each including a semi-circular intermediate portion and straight end portion, the members mating to form a yoke disposable in encircling relation to a pipe to be pulled, one end of the yoke being prolonged to define a lever handle, a flexible member connected with said prolonged end, and a pair of similar gripping jaws pivoted between the respective ends of said members and engageable with opposite sides of the pipe to be pulled.

3. A pipe jack comprising a pair of members each including a semi-circular intermediate portion and straight end portions, said members mating to form a yoke disposable in encircling relation to a pipe to be pulled, one end of the yoke being prolonged to define a lever handle, and a pair of similar gripping jaws pivoted between the respective straight end portions and engageable with opposite sides of the pipe to be pulled.

In testimony whereof I affix my signature.

JAMES W. SEPTER.