J. E. HILGERS.

PIPE FORCING JACK.

APPLICATION FILED APR. 26, 1911.

1,002,398.

Patented Sept. 5, 1911.

2 SHEETS—SHEET 1.

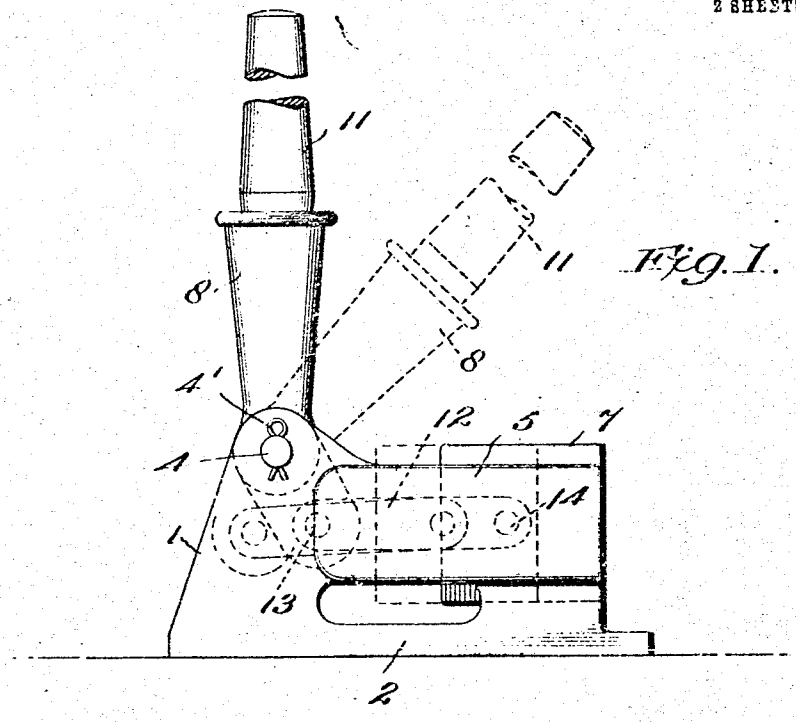

Fig. 1.

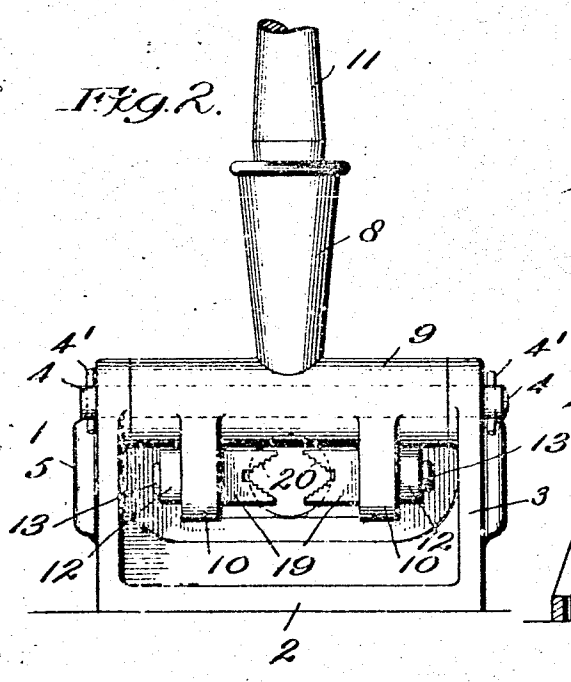

Fig. 2.

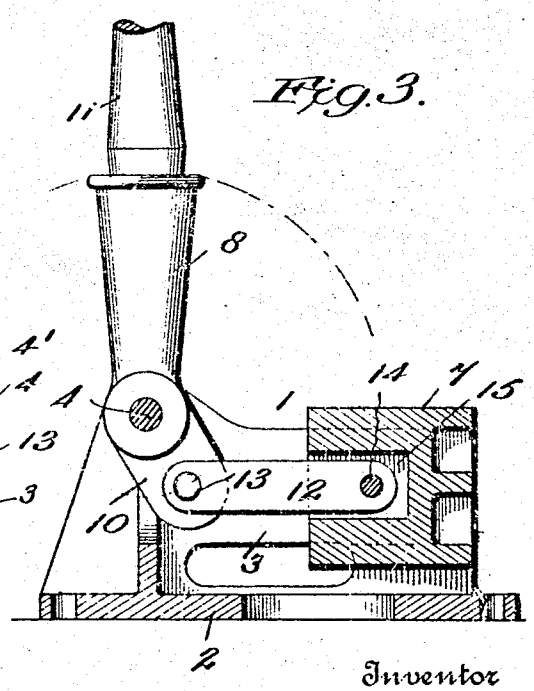

Fig. 3.

Witnesses

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1,002,398.

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2 SHEETS—SHEET 2.

Fig. 4.

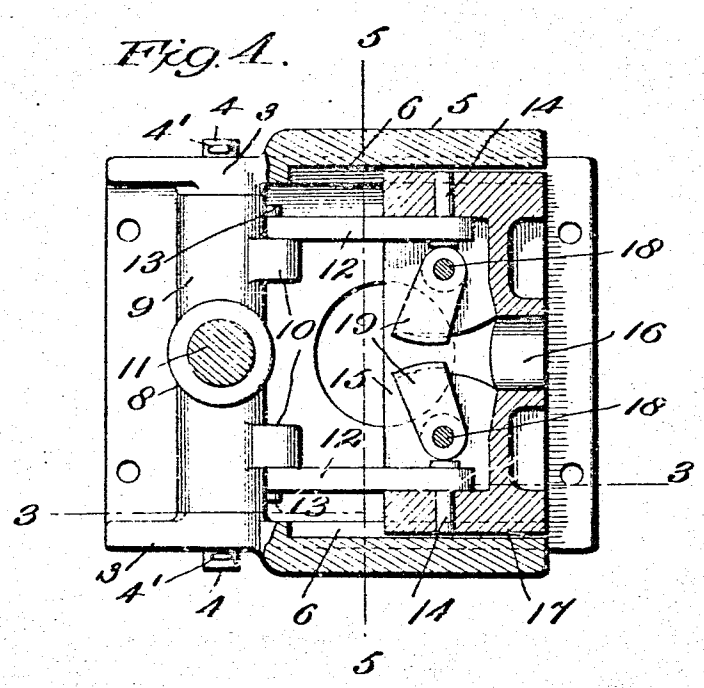


Fig. 5.

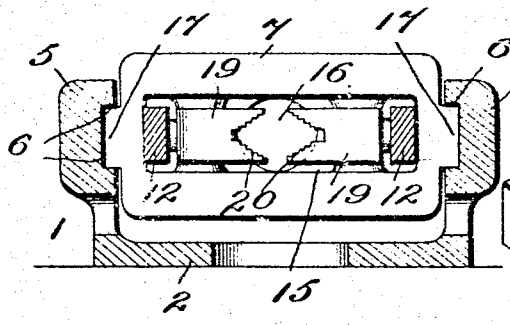


Fig. 6.

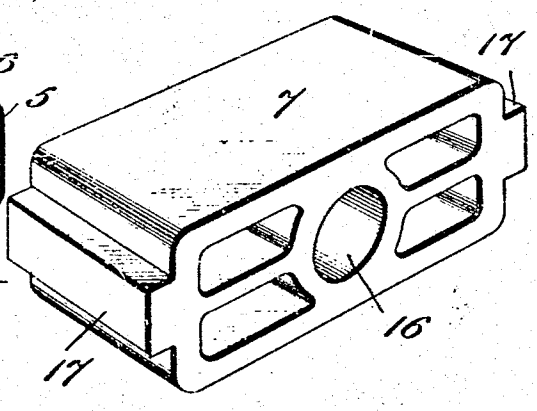
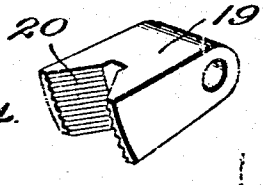


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN E. HILGERS, OF MIDDLETON, WISCONSIN.

PIPE-FORCING JACK.

1,002,393. Specification of Letters Patent. Patented Sept. 5, 1911.

Application filed April 20, 1911. Serial No. 622,278.

To all whom it may concern:

Be it known that I, JOHN E. HILGERS, citizen of the United States of America, residing at Middleton, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Pipe-Forcing Jacks, of which the following is a specification.

This invention relates to pipe jacks and especially to a device of this character that may be used in driving or forcing pipes or other like objects.

The object of this invention is to construct a simple, cheap and durable device of this character that will be easy to manipulate and one that will have a powerful maximum leverage.

With these and other objects in view the invention consists in the novel details of construction and combination of parts more fully hereinafter described and particularly pointed out in the claim.

Referring to the drawings forming a part of this specification in which like figures designate like parts in all the several views: Figure 1 is a side elevational view of my improved pipe jack; Fig. 2 is an end view, as shown looking from the right of Fig. 1: Fig. 3 is a longitudinal sectional view taken on the line 3—3 of Fig. 4. Fig. 4 is a horizontal sectional view of my device. Fig. 5 is a cross sectional view taken on the line 5—5 of Fig. 4. Fig. 6 is a detail perspective view of the dog holder and Fig. 7 is a detail perspective view of one of the dogs.

My invention comprises the frame 1 having the base 2 and sides 3 which are adapted to support on their upper forward ends the shaft 4 which shaft is held in said sides by the cotter pins 4'. These sides are also reinforced as indicated at 5 and are provided on their inner sides with the longitudinal grooves 6, in which is adapted to travel the dog holding frame 7. Mounted on the shaft 4 within the frame is the lever socket 8 having the sleeve 9 which is provided with the downward projecting lugs 10. 11 indicates a handle removably mounted within said socket 8, which is adapted through the connecting links 12 to operate the dog holding frame. These links are pivotally connected, at one end, as indicated at 13, to the lugs 10 and at their other ends they are pivotally connected by the studs 14 to the dog holding frame 7. This dog holding frame is preferably rectangular in shape and is provided with the hollow portion 15, a central opening 16 for the passage of a pipe, and lugs 17 on the sides thereof, which are adapted to travel within the longitudinal grooves 6. Pivotally mounted, as shown at 18, within the hollow portion 15, and diametrically opposite each other are two dogs 19 which are provided on their faces with the teeth 20. The faces of these dogs are in alinement with the pipe opening 16 and are adapted to firmly grip a pipe under a powerful leverage force when the device is in use.

When in use the device is placed in the desired position, the lever being in the position as shown by full lines in Fig. 1 and supposing a pipe be held between the dogs, the operator will then depress the handle as indicated in dotted lines, which will cause the dogs to engage the sides of the pipe, and force the lever forward until the end of the stroke has been reached: the lever is then returned and during this return movement the jaws release their hold on the pipe and are returned. This operation will be repeated at each stroke and it will be seen that on account of the lever being pivotally supported at right angles to the dog holding frame a powerful leverage can be obtained.

By slidably mounting the dog holding frame within the stationary frame, by reinforcing both frames thereof and by the construction and arrangement of parts, very heavy pipes and the like can be easily and conveniently driven or forced any desired amount.

The device is adapted to be used on pipes of various sizes, from a ¾" pipe to a pipe of 1¼".

What I claim as new and desire to protect by United States Letters Patent is:

A pipe jack comprising a stationary frame having reinforced sides provided with grooves: a rectangular dog holding frame having a central opening and movable in said grooves; a pair of oppositely

disposed dogs mounted in said movable frame and in alinement with said opening; a lever fulcrumed on said stationary frame; lugs mounted on said lever; and links pivotally mounted within said movable frame and connected to said lugs; substantially as described.

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

JOHN E. HILGERS.

Witnesses:
W. WIERSTORFF,
FRANK L. PINSTORFF.