J. L. HENDERSHOT.

PIPE LIFTING AND SEPARATING APPARATUS.

APPLICATION FILED SEPT. 2, 1908.

927,854.

Patented July 13, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

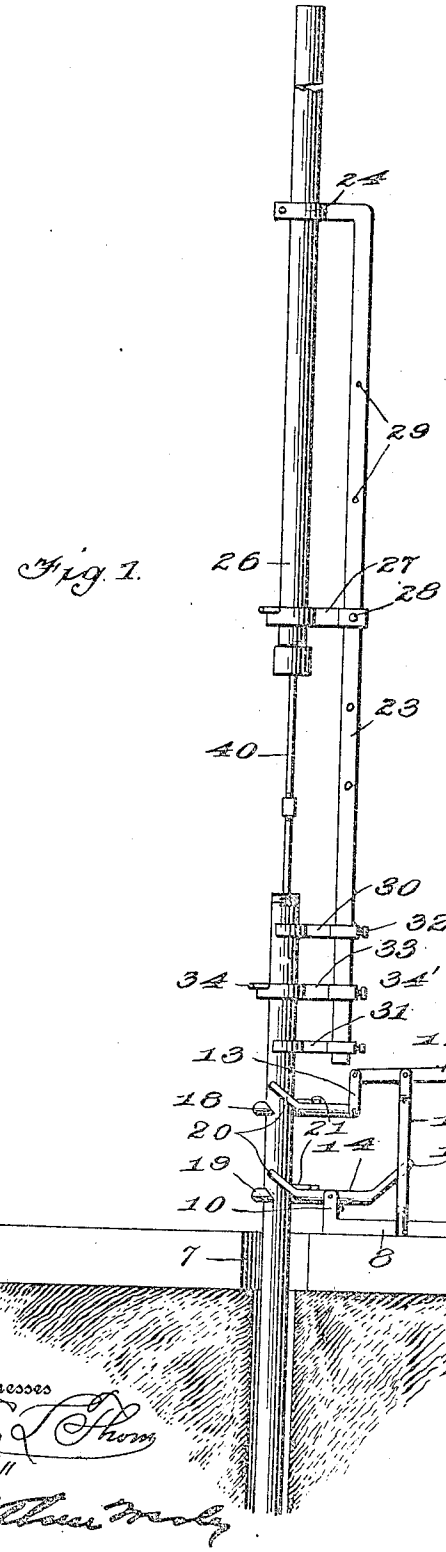
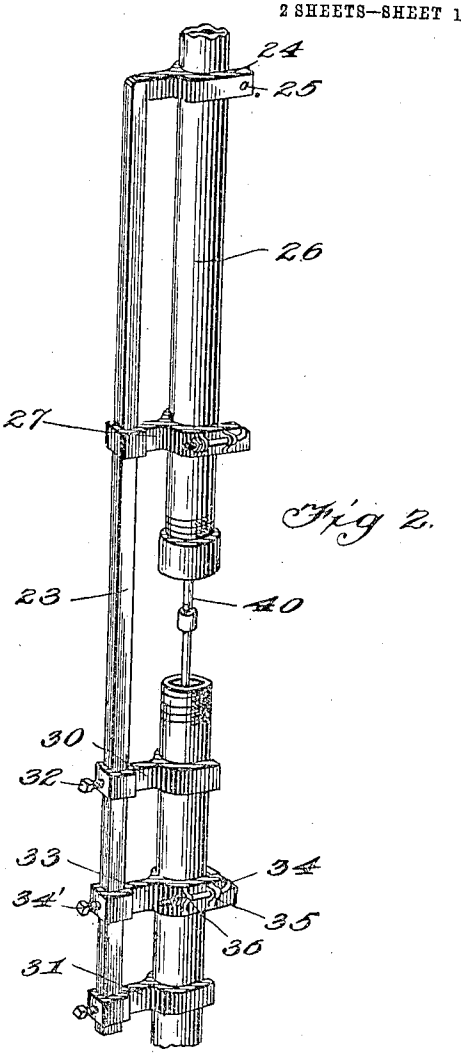


Fig. 2.



Witnesses

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Fig. 3.

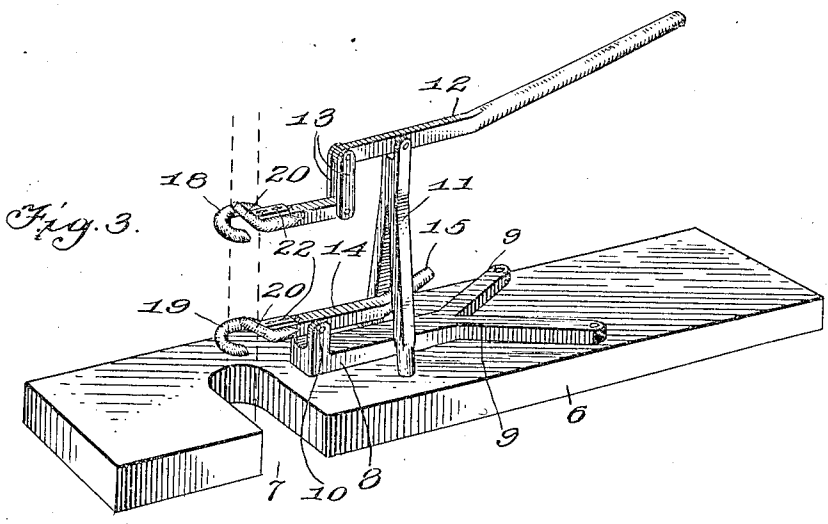
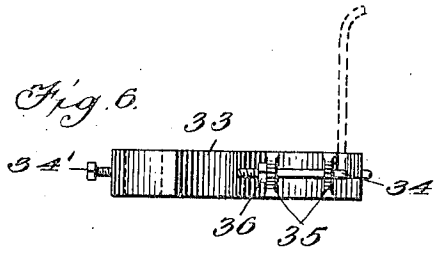


Fig. 6.



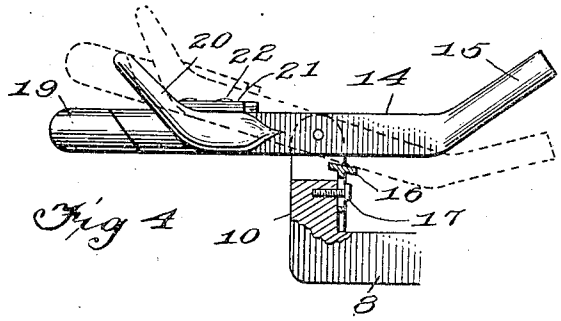
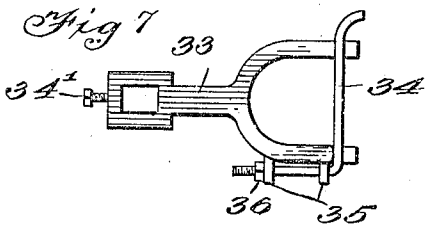


Fig 4

Fig 7



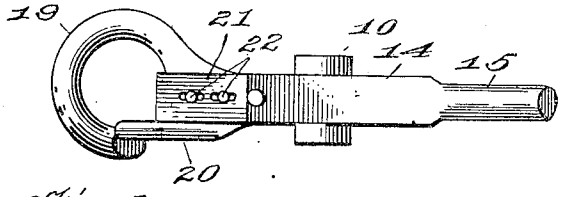


Fig 5

Fig. 8.

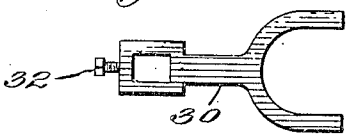


Fig. 9.



Witnesses

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UNITED STATES PATENT OFFICE.

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PIPE LIFTING AND SEPARATING APPARATUS.

No. 927,854. Specification of Letters Patent. Patented July 13, 1909.

Application filed September 2, 1908. Serial No. 451,380.

To all whom it may concern:

Be it known that I, JOHN L. HENDERSHOT, citizen of the United States, residing at Jerusalem, in the county of Monroe and State of Ohio, have invented certain new and useful Improvements in Pipe Lifting and Separating Apparatus, of which the following is a specification.

This invention relates to pump-jacks and apparatus for separating sucker rods and pipe sections used in connection with tubular or drilled wells, and has for its object to provide an improved apparatus as will more fully appear hereinafter.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a side elevation of the complete apparatus; Fig. 2 is a detail in perspective of the pipe holding devices; Fig. 3 is a detail in perspective of the pipe lifting jack; Figs. 4 and 5 are details in side view and plan of a part of the jack; Figs. 6, 7 and 8 are details of pipe guides forming part of the pipe holding devices. Fig. 9 is a side view of a hand lifter.

Referring specifically to the drawings, 6 indicates a base conveniently made of wood and provided with a recess 7 to receive the pump or well tube. Upon this base is mounted a stand consisting of a bottom part 8 with diverging branches 9 at the rear and a head with upstanding ears 10 at the front. A forked upright 11 projects upwardly from the bottom part of the stand and supports the hand lever 12 which operates the upper hook to which it is connected by links 13. The lower hook has a shank 14 pivoted between the ears 10 and projecting rearwardly between the branches of the upright 11, the rear end 15 being bent up and rounded, so that it can be operated by foot, or if necessary for greater leverage by a pipe section placed thereon. An adjustable stop 16 is attached to the inner side of the head at the front end of the base of the stand, and the shank of the lower hook stops against the same to limit its upward movement as the pipe is listed through the hook, thus preventing binding at the lower hook. A set screw 17 fixes the stop at adjustment. The upper hook is indicated at 18 and the lower hook at 19. Each of these hooks is open on one side, and each is provided with a finger 20 bent up beside the opening, the object and effect being to confine the pipe within the hook so that it cannot escape under ordinary conditions, but when the hook is tilted up sufficiently the pipe may be removed. Fixed to the shank of each hook is a blade 21 having at the front end an edge which will bite into the pipe, and this blade is adjustable by slots and set screws indicated at 22, so that it may be properly positioned for different sizes of pipes. The lower hook is heavier at the front end so that it acts automatically to catch as soon as the pipe ceases to rise. The stop 17 gives the hook only enough play upwardly to allow it to release and take hold of the pipe, and prevents the hook from tilting up when the pipe is being pulled up through the same.

The means used in connection with the jack for supporting the well tube or pipe while connecting or disconnecting the sucker rod comprise a square rod 23 provided at different places with guides and clamps to be described. The upper end of the rod is offset and forked as indicated at 24 the fork being provided with a pin 25 extending across between the branches and serving as a guide and holder for the well tube section 26. A pipe clamp 27 is movable up and down on the rod 23 and can be fixed at different places by a catch 28 engaging in one of a series of holes 29 in the upright rod 23.

Near the lower end the rod 23 is provided with pipe guides 30 and 31, which are shown more particularly in Fig. 8, each having forked branches to embrace the tube and set screw 32 to fix the same at adjustment on the rod. Between these guides is a clamp 33, shown more particularly in Figs. 6 and 7. This clamp is fixed on the rod by a set screw 34′ and is provided at its outer end with branches to embrace the pipe and also with a catch consisting of a bent rod 34 one branch of which extends through ears 35 on the side of one of the branches of the clamp 33, so that the catch may be swung in or out to engage or release the pipe. The end of the rod 34 is threaded to receive a nut 36 whereby it may be adjusted to suit pipes of different sizes, and when the catch rod is swung in, it will when properly adjusted engage tightly against the pipe section and thus hold the same in position. The clamp 27, above referred to, is provided with a similar device for holding the upper pipe section.

In the use of the apparatus for holding the pipe up while the sucker rod is coupled or un-

coupled, the pipe is first pulled out of the well by means of the jack until a coupling is reached, which is then partly unscrewed. The rod separator is then placed against the pipe, with the pipe between the branches of the several guides and clamps. The catch rod 34 of the lower clamp is then turned in and pulled down which clamps the pipe fast at the bottom. The pin 25 is then put in place at the top, and the remainder of the coupling is unscrewed. The catch of the clamp 27 is then pulled down to clamp the upper pipe section. Then the clamp 27 is slid up on the rod 23, carrying with it the pipe section, until the sucker rod coupling is exposed, said rod being indicated at 40, and after the sucker rod is disconnected the clamp 27 is released and the rod separating device is taken down. The next pipe section is then lifted by means of the jack and the operation is continued until the piping is all out or until the desired point is reached.

An important feature of the jack is the blades for catching pipe which prevent all slip and release and take hold very quickly.

The hand lifter shown in Fig. 9 may be used to lift a pipe directly by hand, removing the standard 11 and lever 12 if desired.

I claim:

1. A pipe separating device comprising an upright rod, upper and lower clamps thereon, adapted to hold different pipe sections, the upper clamp being slidable up and down on the rod, and upper and lower guides on the rod.

2. A pipe separating device comprising an upright rod having a forked guide at the top with a removable retaining pin, upper and lower pipe clamps on the rod, and guides on the rod above and below the lower clamp.

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

JOHN L. HENDERSHOT.

Witnesses:

D. E. MOORE,

LORA MOORE.