L. PATTERSON.

DEVICE FOR PREVENTING OIL-WELL TUBING FROM FALLING.

No. 193,278. Patented July 17, 1877.

Fig. 1.

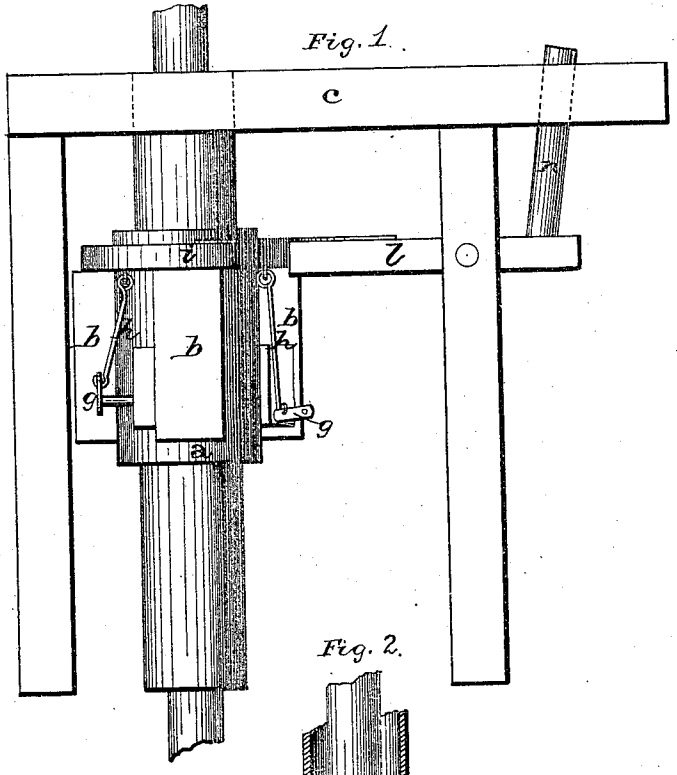


Fig. 2.

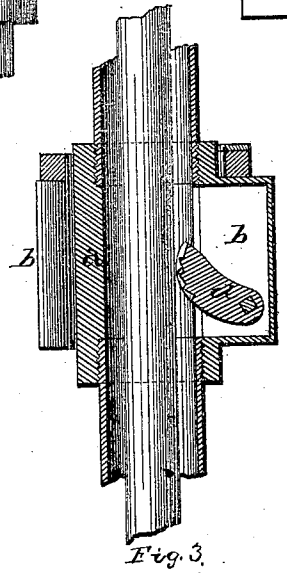
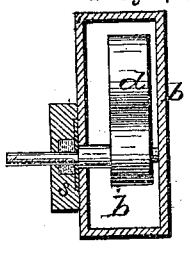


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

LEMUEL PATTERSON, OF PARKER CITY, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO W. A. MYERS, OF SAME PLACE.

IMPROVEMENT IN DEVICES FOR PREVENTING OIL-WELL TUBING FROM FALLING.

Specification forming part of Letters Patent No. **193,278**, dated July 17, 1877; application filed June 26, 1877.

To all whom it may concern:

Be it known that I, LEMUEL PATTERSON, of Parker City, in the county of Armstrong and State of Pennsylvania, have invented certain new and useful Improvements in the Tubing of Oil-Wells; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in devices for preventing the tubing of oil-wells from falling into the well; and it consists in a suitable head which is placed between the ends of the two pipes, and in which head are pivoted three dogs or clutches, which are arranged to be operated by means of a treadle or lever, and which catch against the sides of the tubing and support it in position, as will be more fully described hereinafter.

The accompanying drawings represent my invention.

a represents a suitable head or casting, which has a screw-thread in each of its ends to receive the ends of two of the casing-pipes, as shown, the opening through the head being of the same diameter as the opening through the said pipes. This head will be located at any suitable distance below the derrick floor, *c*. Around this head are made two or more pockets or recesses, *b*, in each one of which is located a pivoted dog or clutch, *d*, which fall forward by their own weight, so as to grasp the sides of the tubing that pass through the casing, or can be moved backward, so that they will not obstruct the inside of the casing in any manner whatever. Upon the outer end of each one of the journals of these dogs is placed a crank, *g*, which is connected by means of the connecting-rods *h* with a ring, *i*, that fits down over the top of the head *a*. To this ring is secured a pivoted lever, *l*, which is operated by means of a rod, *n*, which passes down through the derrick floor and bears upon the outer end of the lever.

In lowering the tubing into the well the foot is pressed downward upon the rod *n*, so as to depress the outer end of the lever *l*, and thereby raise the ring *i* upward. In raising the ring *i* upward the outer end of the cranks are also drawn upward, thereby turning the dogs back into the recesses *b*, so as to leave the interior of the casing perfectly unobstructed. As soon as the tubing has been lowered sufficiently far, or in case it should be desired temporarily to arrest its descent, the foot is removed from the rod *n*, and the dogs instantly fall forward by their own weight, so as to grasp or bite into the sides of the tubing. While thus held by the dogs the tubing can descend no farther, but will be held in that position until it is desired to remove them from the well, when the upward pull upon them instantly causes the dogs to release their hold.

By means of this device tubes can be prevented from falling back into the well while being removed, or after they have been once placed in position they will be prevented from settling downward, as is always the case.

Upon the outside of each one of the recesses, where the crank-shaft passes through, is secured a block, *s*, and inside of this block is a washer or other suitable packing, for the purpose of preventing the escape of gas around the shaft.

Having thus described my invention, I claim—

1. The head *a*, provided with the recesses *b*, in combination with the pivoted dogs and the mechanism for operating them, substantially as described.

2. The head *a*, in combination with the casing of an oil-well, the dogs *d*, cranks *g*, connecting-rods *h*, ring *i*, lever *l*, and rod *n*, the parts being arranged to operate substantially in the manner and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of June, 1877.

LEMUEL PATTERSON.

Witnesses:

W. A. MYERS,

CHAS. MOFFITT.