(No Model.)

E. M. WATSON.

PIPE LIFTING MACHINE.

No. 333,577. Patented Jan. 5, 1886.

Fig. 1.

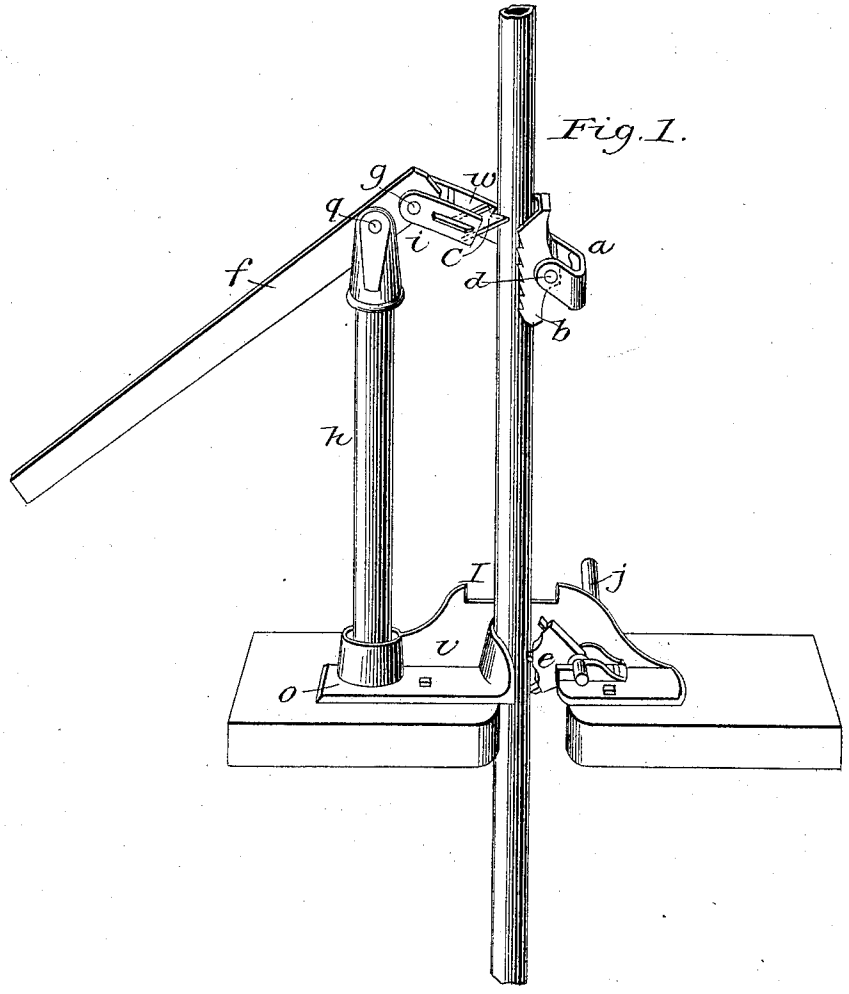
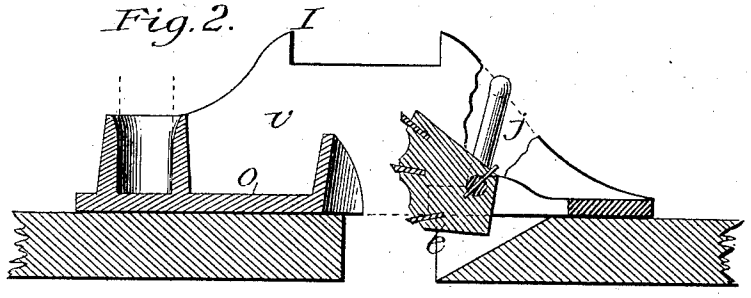


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

ELIAS M. WATSON, OF BELOIT, WISCONSIN.

PIPE-LIFTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 333,577, dated January 5, 1886.

Application filed February 24, 1885. Serial No. 156,811. (No model.)

To all whom it may concern:

Be it known that I, ELIAS M. WATSON, a citizen of the United States, residing at Beloit, county of Rock, and State of Wisconsin, have invented a new and useful Pipe-Lifting Machine, of which the following is a specification.

My invention relates to an improved machine for lifting and supporting pump-pipes when being taken out or returned into wells, and the withdrawing of pipes when driven for well purposes; and the object of my invention is, first, to provide convenient means for grasping (without adjusting) pipes of different sizes; second, to provide automatic means for holding the different-sized pipes from falling into the well. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the entire machine as it appears when in use. Fig. 2 is a vertical section of the base of the machine.

Similar letters refer to similar parts throughout both views.

The yoke or clamp *a* is made of malleable iron or other suitable material in suitable shape, (I prefer the shape shown in drawings,) to give the necessary strength, see Fig. 1, and is provided at *w* with a socket, to receive dog *c*. At opposite end from socket yoke *a* is U-shaped, to receive oscillating saddle *b*. At *i* yoke *a* is provided with projections or lugs, to receive end of lever *f*. Dog *c* is made of tempered steel with V-shaped recess at outer end with rounded recess at bottom of V, as shown, to facilitate the keeping of the edge sharp and give a better hold on the pipe. Oscillating saddle *b* is V-shaped on its inner surface, so as to fit on pipe of different sizes and prevent injuring the pipe with pressure in lifting. The inner surface of saddle *b* may be corrugated, to give a better grip on the pipe. Saddle *b* is attached to yoke *a* by means of pin *d*, and allowed to oscillate freely on pin *d*, so as to adjust itself to pipe when yoke *a* is at different angles to pipe, by which means yoke *a* is made automatic, so as to hold pipe of different sizes. Lever *f* is made of a bar of wrought-iron or other suitable material of convenient length. The handle end is made as shown, Fig. 1, for convenience in lengthening said lever with pipe. The lever *f* is secured to yoke *a* by means of pin *g*, as shown, Fig. 1; also to vibrating standard *h* by pin *q* at a suitable distance from yoke *a*, to give the necessary leverage to lift with, as shown in Fig. 1. Vibrating standard *h*, I prefer to make of a piece of pipe of suitable length, with a casting fitted to top with recess to receive lever *f*. Base *o* is made, as shown, Figs. 1 and 2, with strengthening-rib *v*, recess to receive pipe, socket to receive vibrating standard *h*, lugs to receive cam-clamp *e*, and holes to receive lever *j*. The strengthening-rib *v* is provided at I with notch to receive and hold tongs or other device to hold the pipe from turning while being screwed together or taken apart at the joints. The socket provided to receive vibrating standard *h* is constructed in such a manner that vibrating standard *h* can vibrate freely longitudinally with base *o*, to compensate for the arc described by short end of lever *f* in raising pipe. Cam-clamp *e* is constructed in such a shape that it will readily grasp and hold pipes of different sizes by pressing them against curved recess provided to receive pipe in base *o*, as shown in Figs. 1 and 2. Cam-clamp *e* is supported and controlled by lever *j*. Lever *j* is constructed of a rod of iron bent in such a form that after passing through cam-clamp *e* and hole provided in rib *v* of base *o* it will form a convenient lever on which to place the foot to control cam-clamp *e* when lowering pipe in well, or when attaching or removing lifter from pipe.

What I claim as my invention, and wish to secure by Letters Patent, is—

1. Yoke *a*, provided with dog *c*, oscillating saddle *b*, and pin *d*, in combination with lever *f*, pin *g*, vibrating standard *h*, and pin *q*, all substantially as described and set forth.

2. Base *o*, with rib *v* and notch I, in combination with cam-clamp *e* and lever *j*, all substantially as described.

3. Vibrating standard *h*, in combination with base *o* and lever *f*, as set forth.

4. Cam-clamp *e* and lever *j*, in combination with base *o*, as described.

5. Yoke *a*, in combination with dog *c*, oscillating saddle *b*, pin *d*, lever *f*, pin *g*, vibrating standard *h*, pin *q*, base *o*, notch I, cam-clamp *e*, and lever *j*, all substantially as described, and for the purpose set forth.

ELIAS M. WATSON.

Witnesses:

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