

(No Model.)

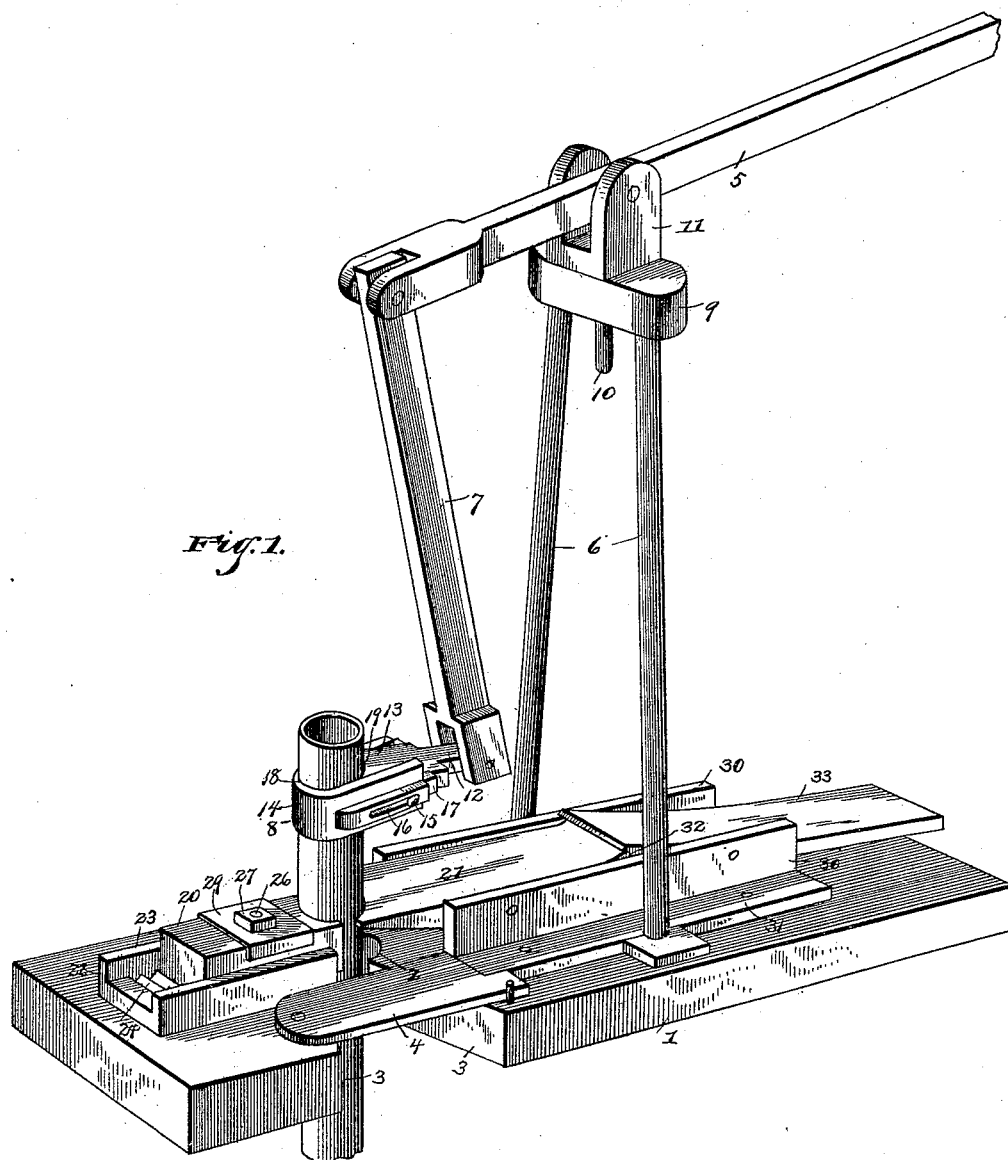
2 Sheets—Sheet 1.

E. A. WANAMAKER.

MACHINE FOR RAISING OR LOWERING WELL TUBING.

No. 493,392.

Patented Mar. 14, 1893.



Witnesses

B. S. Ober
N. M. Wiley

Inventor
Edward A. Wanamaker,

By *his* Attorneys,

C. Snow & Co.

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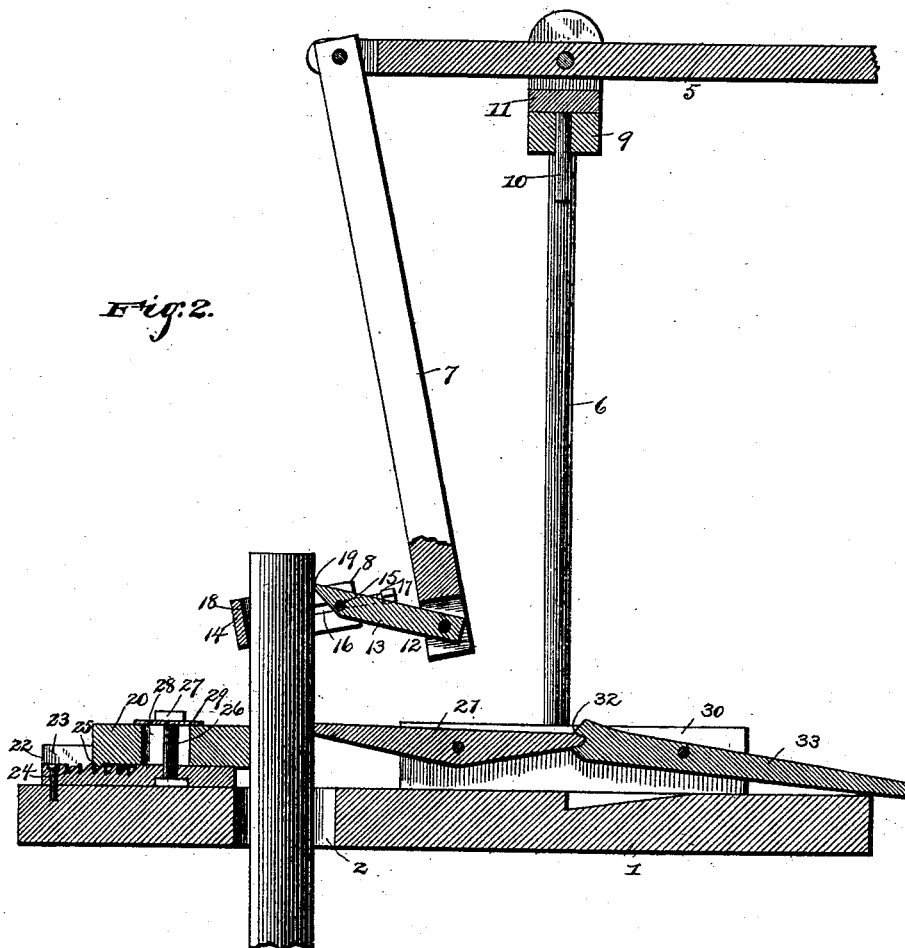
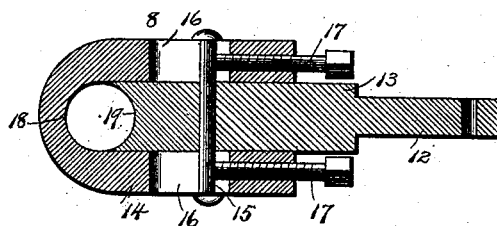


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD A. WANAMAKER, OF MONTFORT, WISCONSIN, ASSIGNOR TO HENRY MUENDER AND WILLIAM MUENDER, OF SAME PLACE, AND WILL A. JOHNSON, OF LANCASTER, WISCONSIN.

MACHINE FOR RAISING OR LOWERING WELL-TUBING.

SPECIFICATION forming part of Letters Patent No. 493,392, dated March 14, 1893.

Application filed June 17, 1892. Serial No. 437,042. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. WANAMAKER, a citizen of the United States, residing at Montfort, in the county of Grant and State of Wisconsin, have invented a new and useful Machine for Raising and Lowering Well-Tubing, of which the following is a specification.

The invention relates to improvements in machines for raising and lowering well tubing.

The object of the present invention is to provide a machine by which pipes and tubing may be readily placed in a well and removed therefrom.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a machine for handling tubing and pipes constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a detail sectional view of the grapple.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a base designed to form a platform over the top of a well and provided with an opening 2 through which pipe or tubing is lowered or raised and having a recess 3 at one side forming a mouth to the opening 2, which mouth is closed when not in use by a latch-bar 4 having one end pivoted to the platform at one side of the recess, and having its other end detachably secured at the opposite side of the recess. The pipe or tubing is raised and lowered by means of a lever 5 fulcrumed at the top of standards 6, and having connected to it by a link-bar 7 a grapple 8. The standards 6 rise from opposite sides of the base 1 and have their upper ends connected by a cross-bar 9 in a central vertical opening of which is arranged a fulcruming pivot 10 having a bifurcated head 11 which is enlarged and receives the lever; and the latter is adapted to be both raised and lowered and swung horizontally. One end of the lever is shaped into a handle, and its other end is bifurcated and has pivoted within the bifurcation, the

upper end of the link bar; and the lower end of the latter is bifurcated and has pivoted in it the shank 12 of a pawl 13 of the grapple 8. The grapple which engages and clamps the pipe or tube above the platform or base 1, and which raises and lowers the same consists of a U-shaped yoke 14 having parallel sides between which is pivoted the pawl 13 by a pintle or pivot 15, which is arranged in longitudinal slots 16 of the sides of the yoke, and which is adapted to be adjusted backward and forward in the slots by means of set-screws 17 to adjust the grapple to different sizes of pipes or tubes. A pipe is clamped in the grapple between the rounded end 18 and the engaging end 19 of the pawl, which is beveled and concavely curved to conform to the configuration of one side of a pipe. The set screws 17 are arranged in threaded longitudinal openings communicating with the slots and they are adapted to secure the pivot in its adjustment. A pipe is moved vertically by raising and lowering the lever 5, and it is held while the grapple is disengaged from it to obtain another hold by an adjustable dog 20 and a pivoted dog 21 which have their engaging ends arranged over the opening 2, and which are mounted on the base 1. The dog 20 is mounted on a plate or block 22, which is provided at its sides with flanges to form ways for the slide, and which is provided with transverse teeth 24 forming notches or depressions and adapted to be engaged by a tooth 25 on the outer end of the dog 20, and at the lower face thereof; and the dog is secured in its adjustment by a set screw 26 and a clamping nut 27 arranged in a slot 28 of the dog 20 and a plate 29 is interposed between the clamping nut and the upper face of the dog. During the operation of the machine, the pawl or dog 20 is stationary, but it is made adjustable in order to suit pipes of different sizes. The pivoted dog 21 is arranged between the flanges 30 of plates 31, and its rear end is arranged in a horizontal notch 32 of an operating lever 33 which is adapted to be depressed to cause the dog 21 to bite a pipe or tube to hold the same when the grapple is being adjusted to take a new hold. When the piping or tubing of a pump is raised, and the pump cylinder is lifted within a short

distance of the platform or base 1, the latch bar 4 is swung open and the piping is moved laterally by turning the lever 5 on its fulcruming pivot sufficiently to carry the piping or tubing beyond the base, after which the cylinder is raised above the base, and the pipe or tubing is moved through the mouth 3 into the opening again. By raising the operating lever 33, the pivoted dog is lifted out of engagement with the piping or tubing.

It will be seen that the machine is simple and comparatively inexpensive in construction, and will enable well piping and tubing to be readily handled.

15 What I claim is—

1. The combination of a base, standards rising from the base, a pivot vertically disposed at the top of the standards and having an enlarged bifurcated head, a lever fulcrumed in the bifurcation of the head, a link bar having its upper end pivotally connected to the lever, and a grapple comprising a U-shaped yoke adapted to receive a pipe or tube, and a pawl adjustably mounted on the yoke and provided with a shank pivotally attached to the lower end of the link bar, substantially as described.

2. The combination of a base, standards rising from the base, a lever fulcrumed at the

top of the standards and pivotally connected therewith, a link bar having its upper end pivotally connected to the lever and a grapple comprising a U-shaped yoke adapted to receive a pipe or tube, and a pawl adjustably mounted on the yoke and provided with a shank pivoted to the lower end of the link bar, substantially as described.

3. The combination of a base having an opening, an adjustable dog mounted on one side of the opening, a pivoted dog arranged at the opposite side of the opening, standards rising from the base, a lever fulcrumed at the top of the standard and pivotally connected therewith, a link-bar having its upper end pivotally connected to the lever, and a grapple comprising a U-shaped yoke adapted to receive a pipe or tube, and a pawl adjustably mounted on the yoke and provided with a shank pivotally attached to the lower end of the link bar, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD A. WANAMAKER.

Witnesses:

P. T. STEVENS,
HENRY MUENDER.