No. 876,505. PATENTED JAN. 14, 1908.

C. A. TERRY.

LIFTING SHACKLE.

APPLICATION FILED MAY 29, 1907.

Fig. 1,

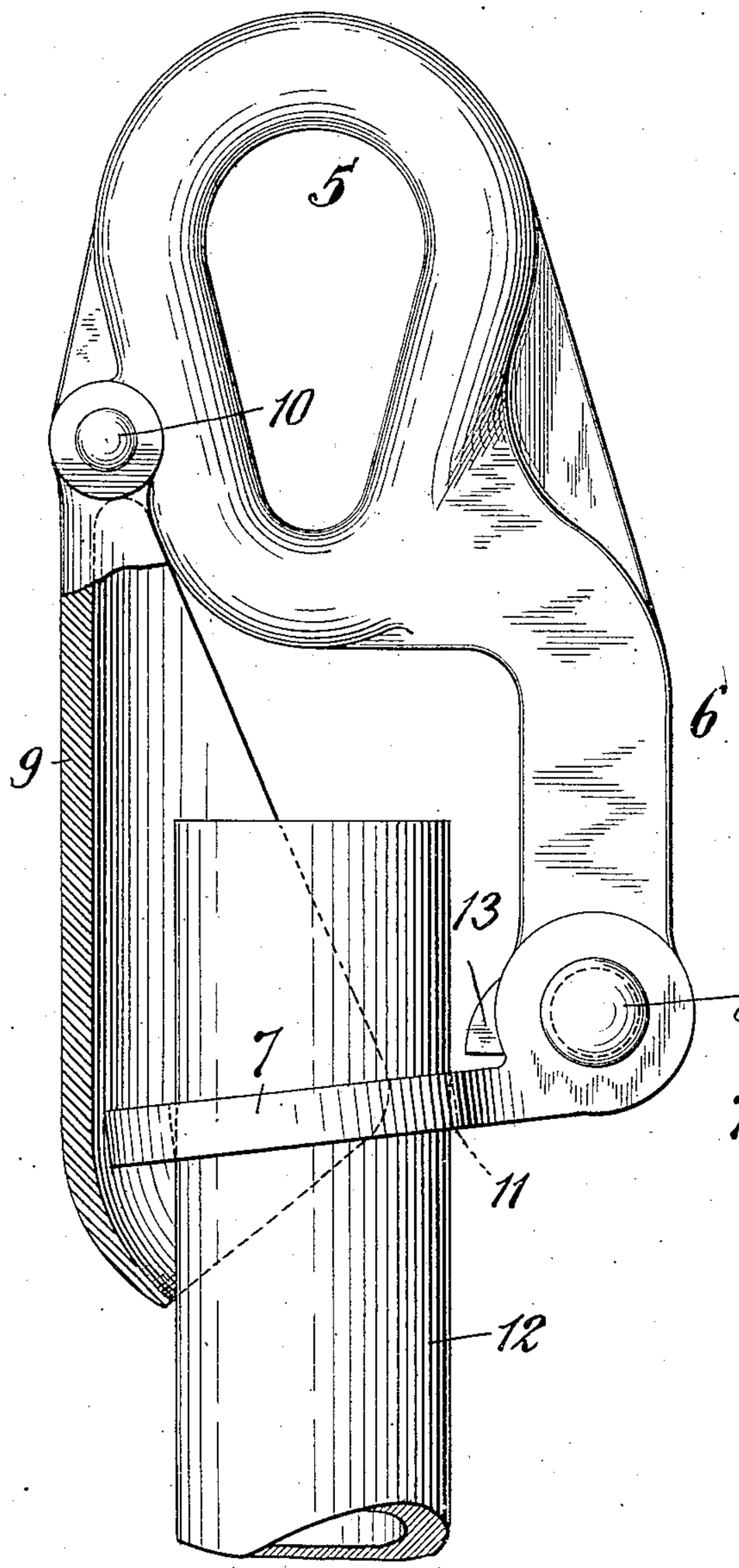
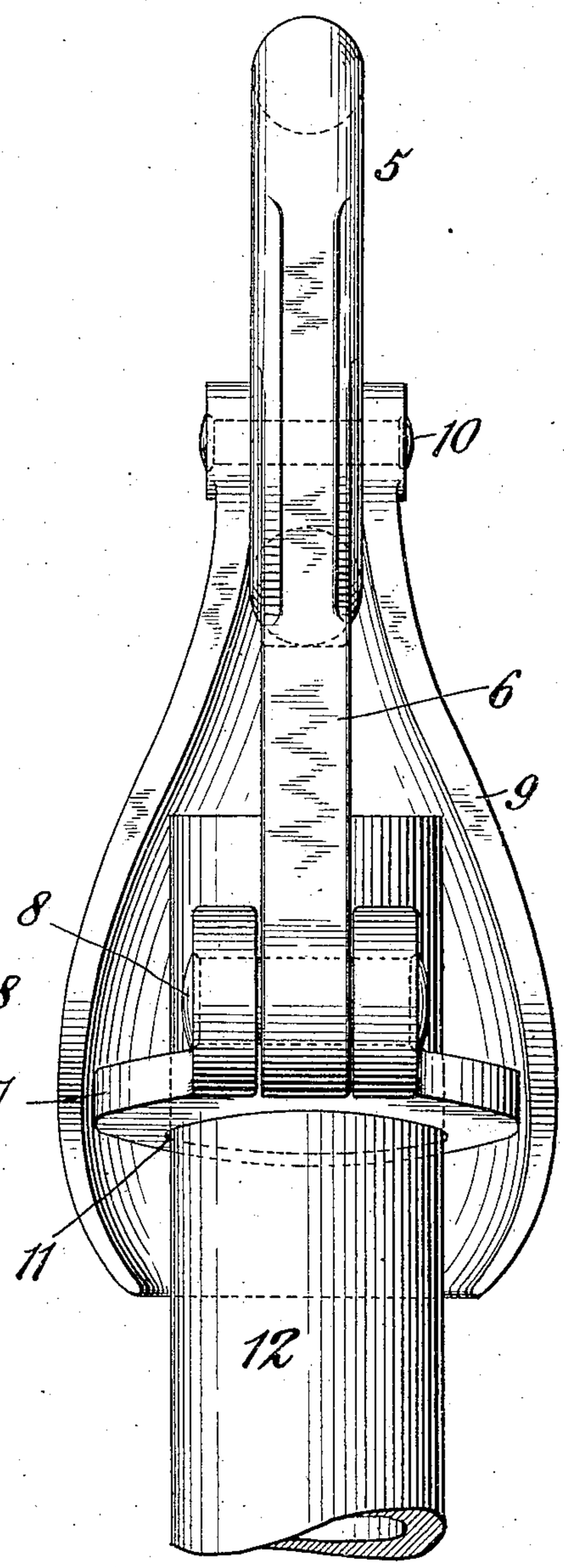


Fig. 2,



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LIFTING-SHACKLE.

No. 876,505. Specification of Letters Patent. Patented Jan. 14, 1908.

Application filed May 29, 1907. Serial No. 376,301.

To all whom it may concern:

Be it known that I, COLEMAN A. TERRY, a citizen of the United States of America, and a resident of the borough of Manhattan, of the city of New York, county and State of New York, have invented certain new and useful Improvements in Lifting-Shackle, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in a lifting shackle, and the main object of my invention is to provide a shackle which is particularly adapted for readily grasping cylindrical objects; which will be caused to grasp such objects with increasing pressure when subjected to lifting strain, but will immediately release such objects when such lifting strain is removed; and which is protected against accidental release of the object grasped until such time as lifting strain is removed. I attain this object by certain novel details of construction and combination of parts as will hereinafter be more fully set forth, and in order that my invention may be fully understood, I will describe an embodiment thereof in detail, having reference to the accompanying drawings illustrating same, and will then point out the novel features in claims.

In the drawings: Figure 1 is a view in side elevation of a lifting shackle embodying my invention, showing the same as lifting a section of piping, the pivoted guard of said shackle being shown mainly in central longitudinal section. Fig. 2 is a view in rear elevation of the device.

The shackle comprises a lifting member including an eye-piece 5 to which a hook may be connected when the device is in use, an offset portion 6, a clamp plate 7 pivoted at 8 to said portion, and a guard member 9 pivoted at 10 to the said eye-piece on the opposite side thereof to which the offset portion 6 is located. The clamp plate 7 has an opening therethrough substantially corresponding in cross-section to the object to be lifted. In the present instance the shackle is designed for lifting cylindrical objects such as piping, hence the opening 11 through the clamp plate 7 is substantially cylindrical. If the object to be lifted were of other shape in cross section, the opening 11 would be correspondingly different. The opening 11 is slightly larger than the object to be lifted, hence, if the clamp plate 7 be held in a horizontal position, it will pass freely over the object. The general tendency, however, of the clamp plate 7 is to drop out of such horizontal position, owing to the fact that the center of gravity thereof is considerably to one side of the center about which it is pivoted.

Viewing the parts as they are shown in Fig. 1, it will immediately be apparent that the clamping plate may be slipped freely over the pipe 12 and may be caused to follow down over the said pipe without any substantial resistance. If the clamp plate attempts, by reason of friction or otherwise, to so engage the pipe as to turn upon its pivotal support 8, it will be engaged by a stop 13 as it comes to a horizontal position, so that its normal tendency will be to assume a position most favorable for being moved downward. Directly lifting strain, however, is applied to the shackle, the clamping plate will be caused to assume such a position as is shown in the drawings, and it will be immediately caused to clamp the pipe by reason of the fact that the upper edge of the opening 11 will grasp the pipe on one side, and the lower edge of the said opening will do likewise upon the other. The greater the lifting strain to be applied, *i. e.*, the greater the weight of the pipe or the resistance to its upward movement, the greater will be the clamping pressure of the plate 7, and the lifting power of the device will be limited only by the strength of its parts or the strength of the piping itself. The fact that the part 6 is offset from the eye-piece so as to bring the eye-piece in a direct line with the center of the opening 11, and hence in a direct line with the center of the pipe 12 being lifted, will cause an even pull to be exerted upon the part being lifted, in other words, the lifting strain in the present case will be axially in line with the pipe 12 as is desirable.

In order to prevent the accidental release of the article being held by the lifting shackle, as by an accidental blow being imparted in an upward direction to the free end of the clamp plate 7, such as by bringing such end of the clamp plate in contact with some object while the device as a whole is being lowered, I have provided the guard plate 9 above briefly referred to. This guard plate is arranged to swing freely from the pivot pin 10, so that it may be readily swung aside in order to obtain access to the clamp plate 7 when desired, but it will hang freely down to par-

tially surround the clamp plate 7, as shown in the drawings, so as to protect same. With the clamp plate thus protected, it will be seen to be almost impossible for the same to receive any accidental blow such as would tend to release the object being held thereby. To actually release the object, however, it is necessary only to give a slight blow to the clamp plate at the free end thereof, first, of course, swinging the guard clear, or to hold the object 12 stationary while slightly lowering the lifting shackle.

One of the many uses to which my lifting shackle may be put is the raising and lowering of pipe employed in well driving or for well casing.

What I claim is:

1. In a lifting shackle, the combination with a lifting member having an eye-piece and a portion laterally offset therefrom, of a clamp plate pivoted freely to said offset portion, said clamp plate having an opening therethrough substantially corresponding to the cross section of the object to be lifted.

2. In a lifting shackle, the combination with a lifting member having an eye-piece and a portion laterally offset therefrom, of a clamp plate pivoted freely to said offset portion, said clamp plate having an opening therethrough substantially corresponding to the cross section of the object to be lifted, and a stop for preventing the said clamp plate from moving upward beyond a substantially horizontal position.

3. In a lifting shackle, the combination with a lifting member having an eye-piece and a portion laterally offset therefrom, of a clamp plate pivoted freely to said offset portion, said clamp plate having an opening therethrough substantially corresponding to the cross section of the object to be lifted, and a guard arranged in proximity to said clamp plate for protecting same.

4. In a lifting shackle, the combination with a lifting member having an eye-piece and a portion laterally offset therefrom, of a clamp plate pivoted freely to said offset portion, said clamp plate having an opening therethrough substantially corresponding to the cross section of the object to be lifted, and a guard plate pivoted to said lifting member having a portion arranged to partially surround said clamp plate.

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Witnesses:
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