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C. B. LAU.

HOOK.

APPLICATION FILED JUNE 21, 1905.

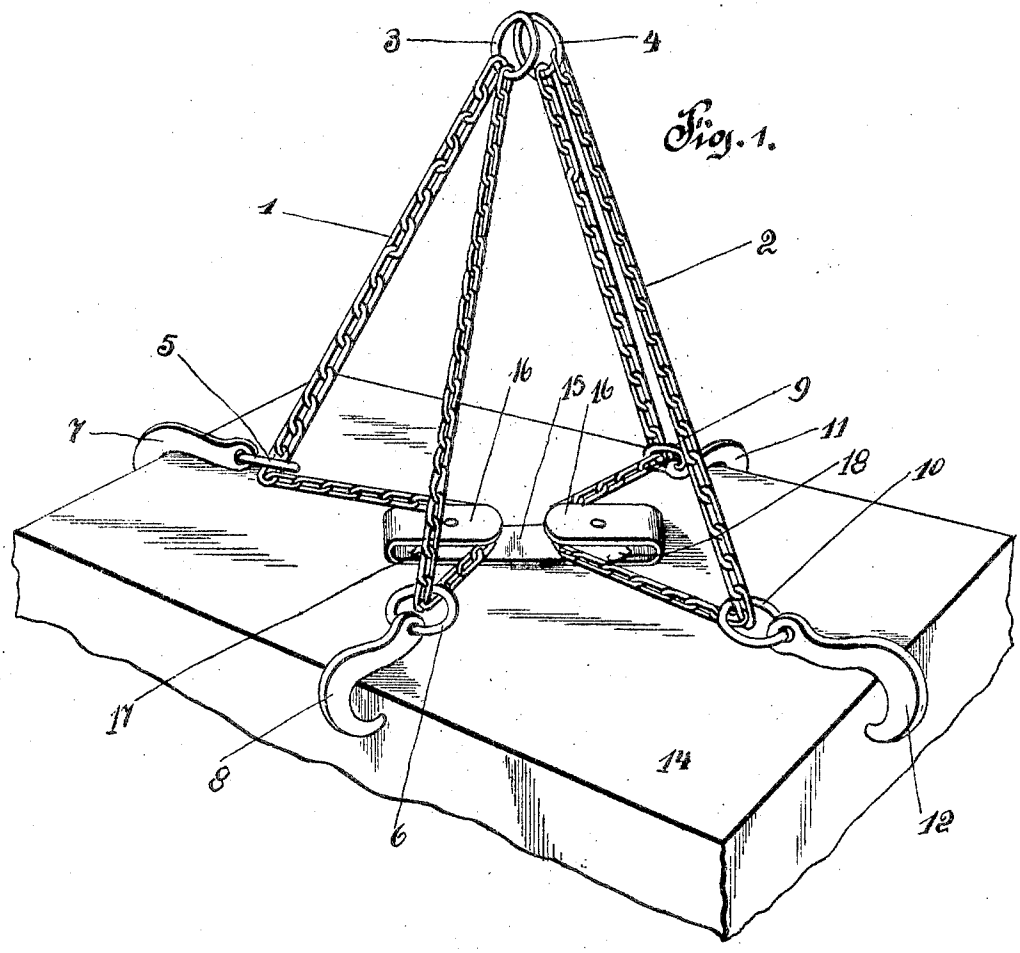


Fig. 1.

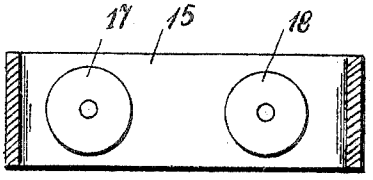


Fig. 2.

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UNITED STATES PATENT OFFICE.

CORNELIUS B. LAU, OF BRADDOCK, PENNSYLVANIA.

HOOK.

No. 802,815. Specification of Letters Patent. Patented Oct. 24, 1905.

Application filed June 21, 1905. Serial No. 266,287.

To all whom it may concern:

Be it known that I, CORNELIUS B. LAU, a citizen of the United States of America, residing at Braddock, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Hooks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in gripping devices for cranes and derricks; and the invention has for its object the provision of novel means for gripping objects whereby they can be quickly, safely, and conveniently lifted or elevated.

The invention aims to provide a device particularly adapted for use in connection with cranes and derricks or any apparatus employed for lifting and transferring objects. In this connection I have devised novel means for fastening the end of a hoisting-rope to an object whereby it can be elevated without endangering the lives of the persons performing the operation. To this end my improved gripping device is particularly adapted for use in connection with cranes and derricks employed for elevating and lifting objects, such as stone, and considerable trouble has been experienced in fastening the end of a rope to a large stone whereby it can be elevated without becoming detached from the end of the rope or breaking. In the elevation of large building-stones it has been the practice to employ a gripping device that is fastened to the two sides of the stone, and in many instances when the grip is not placed in engagement with the stone centrally thereof the same swings or tilts, in many instances causing the grip to become detached from the stone, permitting it to fall and break. Sometimes a cable is placed around the large stones after they have been partly elevated, this cable being employed to equally balance the stone, whereby it can be safely moved to a desired point. This operation requires time and considerable labor, and I have aimed to entirely obviate the danger heretofore experienced in elevating large stones by providing means for gripping the stone upon four sides. By the use of my improved gripping device a stone will be equally balanced when being elevated, novel means being employed to permit of the device adjusting itself to various sizes of stones.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts, which will be hereinafter more fully described and then specifically pointed out in the claims, and, referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout both views, in which—

Figure 1 is a perspective view of my improved gripping device as applied to a large stone, and Fig. 2 is a horizontal sectional view of a double pulley employed in connection with the device.

To put my invention into practice, I employ two chains 1 and 2 of a sufficient strength to support bodies or objects capable of being gripped by my improved device. The ends of the chains 1 and 2 are secured to links 3 and 4, which are adapted to be secured to the end of a hoisting-cable, whereby the chains may be elevated. Upon the chain 1 I mount links 5 and 6, carrying gripping-hooks 7 and 8, respectively, and upon the chain 2 I mount links 9 and 10, carrying gripping-hooks 11 and 12, respectively. These hooks are adapted to be engaged in the sides of an object or connected to the sides thereof. In Fig. 1 of the drawings I have illustrated a substantially rectangular stone 14, and have shown my improved gripping device as secured thereto preparatory to moving the stone 14. It will be observed that the gripping-hooks 8 and 11 are secured in the longitudinal sides of the stone, while the gripping-hooks 7 and 12 are secured in the ends thereof.

In connection with the chains 1 and 2 and their appurtenant parts I employ a double pulley, which consists of a plate 15, having its ends 16 16 bent to form yokes, in which are journaled pulleys 17 and 18. The double pulley is placed upon the top of the stone and that portion of the chain between the links 5 and 6 is placed in engagement with the double pulley, the chain engaging the pulley 17. That portion of the chain lying between the links 9 and 10 is similarly placed in engagement with the pulley 18. By adjustably connecting the chains 1 and 2 together by the double pulley the chains and gripping-hooks can be adjusted to different sizes of stones, it of course being understood that it will be impossible to use my improved device upon stones of a less width or depth than the length of the double pulley. The double pulley 15 serves functionally as a compensating device,

permitting of the stone or load being shifted to be properly balanced upon the hoisting rope or cable.

It will of course be seen that objects having odd shapes or irregular contours can be readily gripped by my improved device, and it is thought from the foregoing that the construction, operation, and advantages of the herein-described gripping device will be apparent without further description, and various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

What I claim, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination of two chains, a link carried by each chain and connecting their ends together, gripping-hooks carried by each chain, and a double pulley adapted to adjustably connect said chains together, substantially as described.

2. A device of the character described consisting of two chains having their ends connected together, gripping-hooks adjustably mounted upon said chains, and a double pulley adapted to detachably connect said chains together, substantially as described.

3. A device of the character described consisting of two chains, gripping-hooks adjustably mounted upon said chains, and means to adjustably connect said chains together, substantially as described.

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

CORNELIUS B. LAU.

Witnesses:
K. H. BUTLER,
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