

March 9, 1948.

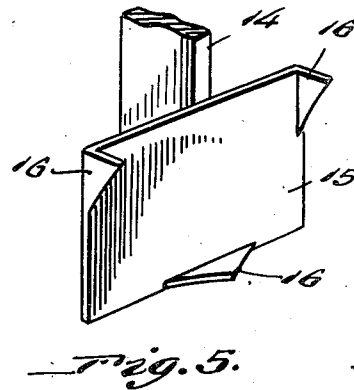
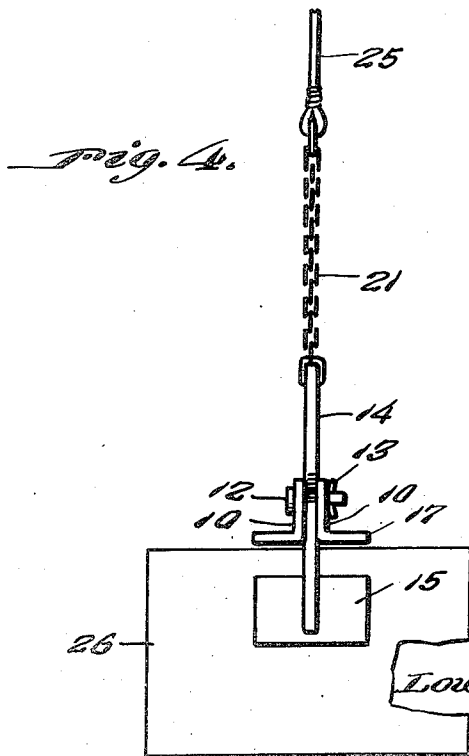
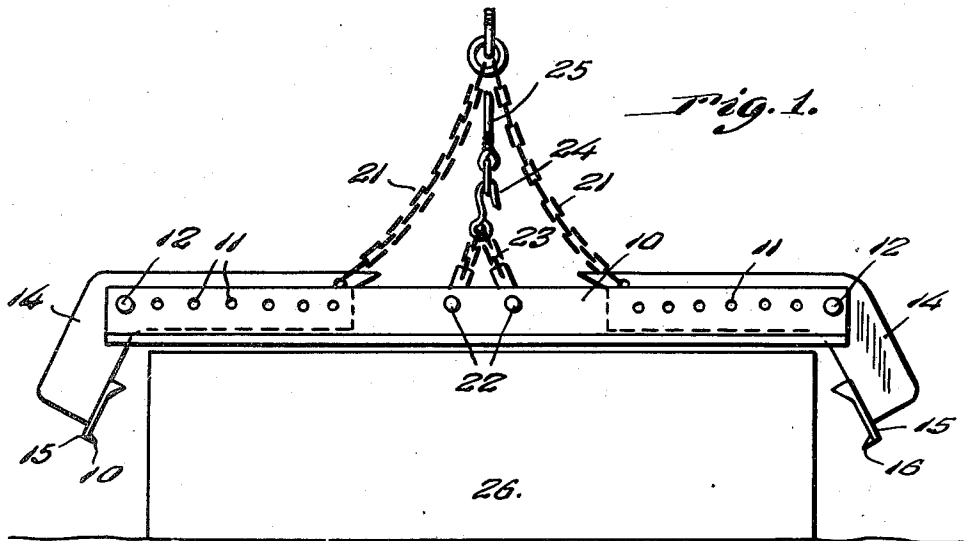
L. C. SONNENSCHN

2,437,485

BOX CLAMP

Filed Jan. 30, 1945

2 Sheets-Sheet 1



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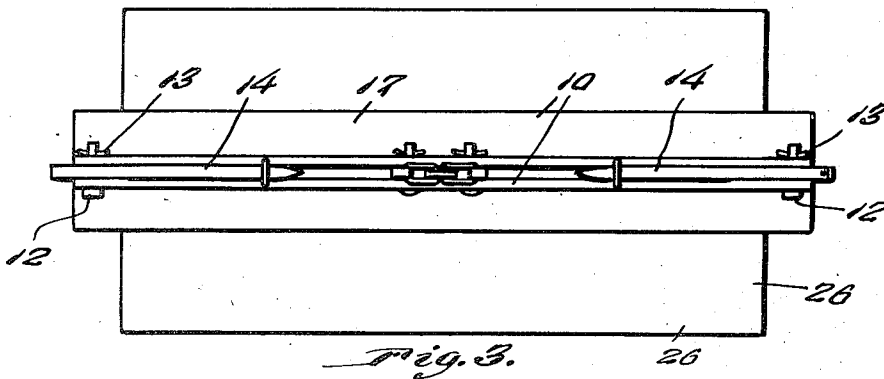
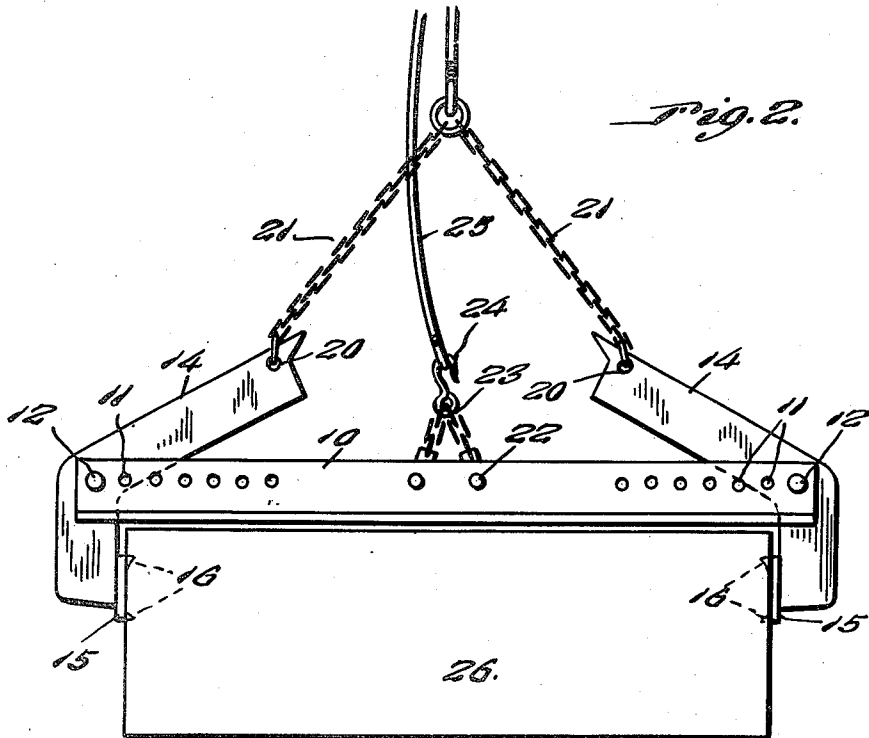
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UNITED STATES PATENT OFFICE

2,437,485

BOX CLAMP

Louis Carl Sonnenschein, Milwaukee, Wis.

Application January 30, 1945, Serial No. 575,248

1 Claim. (Cl. 294—106)

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This invention relates to a box clamp, and more particularly to such a clamp adapted to be utilized in conjunction with a crane for lifting a box or crate or the like.

A primary object of this invention is the provision of an improved clamp adapted particularly for the lifting of rectangular box or crates, obviating the necessity of involved cable slings or loops as now utilized.

An additional object of the invention is the provision of such a clamp which may be readily adapted to a variety of sizes of crates or boxes as desired.

A still further object of the invention resides in the provision of such a device which will effect a firm and secure clamping action on the edges of a box or crate to be lifted, and sturdily engage the same in such manner as to preclude the possibility of slippage and consequent damage to the box.

Still another object is the provision of such a device which will be sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture and assemble.

Other objects reside in the combinations of elements, arrangements of parts, and features of construction, all as will be more fully pointed out hereinafter and disclosed in the accompanying drawings, wherein there is shown a preferred embodiment of this inventive concept.

In the drawings—

Figure 1 is a side elevational view of one form of clamp embodying the instant inventive concept, shown as applied to a box and before gripping the same.

Figure 2 is a view similar to Figure 1 but showing the gripping effect of the clamp on the box.

Figure 3 is a top plan view of the parts shown in Figures 1 and 2.

Figure 4 is an end elevational view of the device, and

Figure 5 is a perspective view of one of the clamping elements per se.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Having reference now to the accompanying drawings the box clamp of the instant invention is comprised of a pair of oppositely positioned aligned plates or bars 10, each provided with a plurality of apertures 11 extending inwardly from a point adjacent its extremities. Between the bars 10 are pivotally mounted as on pivot pins 12, secured in position by cotter pins 13, a pair

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of clamping members generally indicated at 14. Each of the members 14 is comprised of a shank of generally bellcrank configuration, the pivot points 12 thereof being positioned substantially at the point of divergence of the angle, to the lower extremity of which is secured a clamping plate 15, provided with a plurality of tongues 16 terminating in points adapted to engage an article to be lifted. As best shown in Figure 4, the plates or bars 10 are preferably comprised of angle iron and may include a lower flange 17.

The inner extremities of the members 14 are provided with apertures 20 adapted to be engaged by chains 21 extending from a suitable lifting mechanism (not shown). The central portion of the members 10 may also be provided with centrally disposed apertures 22 adapted to engage chains 23 terminating in a hook 24, to which is secured a cable 25 correspondingly adapted to engage with suitable lifting mechanism as may be desired.

From the foregoing the operation of the device should now be readily understandable. When it is desired to lift the box the bars or plates 10 are positioned along the top of the box 26, until the plates assume the position shown in Figure 1.

An upward pull upon the chains 21 will then cause the members 14 to pivot about the pivot 12, and cause the points 16 of the plates 15 to firmly engage the sides of the box. As long as the tension remains constant it is impossible for the box to slip or drop.

The box may then be lifted by means of the cable 25 engaging the hook 24 of the chains 23.

Obviously if desired the cable 25 may be omitted and the entire lifting effect achieved by means of the chains 21 and their associated lifting mechanism.

Under certain conditions when the box is lowered and it is desired to release the grip on the same the chains 21 are permitted to slack until the prongs 16 are in a position to be disengaged from the box or crate 26, whereupon a simple pressure upon the upper angled portions of the members 14 will readily release their engagement with the box.

From the foregoing it will now be seen that there is herein provided a device accomplishing all the objects of this invention and others including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that

all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

Obviously, if desired, a variety of sizes of boxes may be clamped by the device by the appropriate positioning of the pins 12 in the holes 11.

I claim:

A box clamp comprising a pair of spaced parallel interconnected body members having laterally extending opposed base flanges formed integrally therewith, a pair of bell crank lifting members supported between said body members and adjacent the ends thereof for horizontal adjustment, angularly toothed clamping plates on the ends of said lifting members, flexible means connected with the inwardly directed ends of said lifting members for connection with a lifting cable, and a second lifting cable secured to said body members at a point intermediate said lifting members.

LOUIS CARL SONNENSCHNEIN.

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