(No Model.)

J. BYRNE.

TRIP SLING.

No. 388,021. Patented Aug. 21, 1888.

FIG. 1.

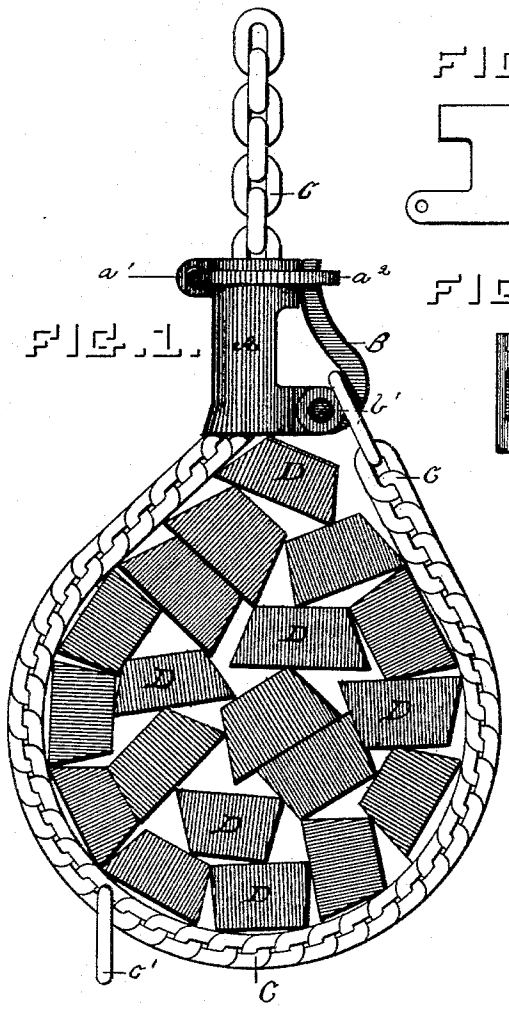


FIG. 4.

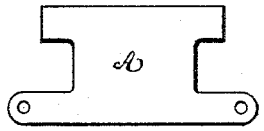


FIG. 3.

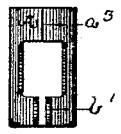


FIG. 2.

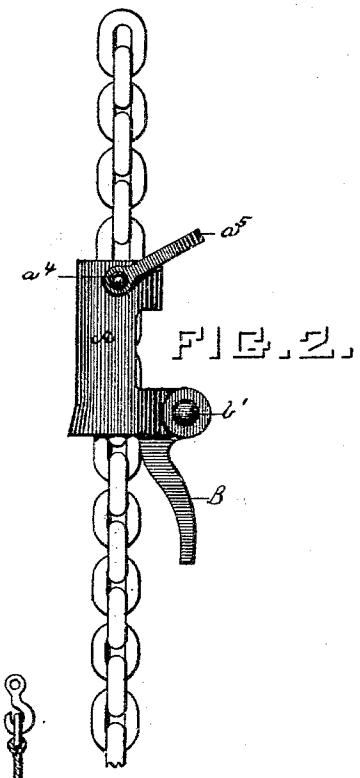


FIG. 5.

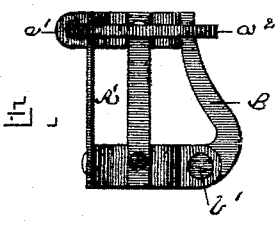
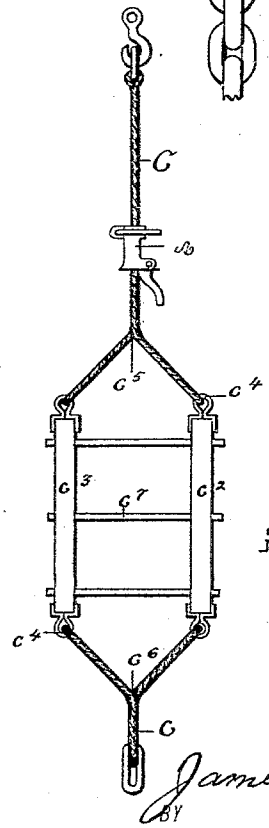


FIG. 6.



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UNITED STATES PATENT OFFICE.

JAMES BYRNE, OF BALTIMORE, MARYLAND.

TRIP-SLING.

SPECIFICATION forming part of Letters Patent No. 388,021, dated August 21, 1888.

Application filed October 25, 1887. Serial No. 253,293. (No model.)

To all whom it may concern:

Be it known that I, JAMES BYRNE, of the city of Baltimore and State of Maryland, have invented a new and Improved Trip-Sling, adapted for use with hoisting apparatuses, of which the following is a full description.

The accompanying drawings illustrate the invention.

Figure 1 is a side view of the device when at work. As represented in the figure, the sling is around a load of pig-iron and its end loop thrown over the trigger, which is held by the catch. Fig. 2 shows the device with the trigger down and the sling open, ready to be supplied with the load. Fig. 3 is a front view of a sleeve made of a single piece of iron welded at the top ends, with the lower ends brought together to form a support for the pin which pivots the trigger. Fig. 4 is a plain piece of metal cut in form to bend into the sleeve shown in Fig. 3; Fig. 5, a sleeve formed of upper and lower rings joined together by bracing bars or strips; Fig. 6, a view of the sleeve with its attachments and forked sling provided with skids for supporting and sustaining the load.

A represents a hollow sleeve constructed of iron or other suitable material. This sleeve is provided with a projection, a', to which is pivoted, in any suitable manner, a catch, a^2, as shown in Figs. 1 and 5. It is not necessary that this catch should be pivoted to the rear of the sleeve. Any suitable part of the sleeve will answer for this purpose. As shown in Fig. 2, the catch is pivoted about centrally of the sleeve, said pivot being marked a^4, and the catch, which is in the form of a semicircle, is marked a^5. To a suitable part of this sleeve is also pivoted or hinged a trigger, B, in position to be raised or lowered, so that the end opposite the hinge may be caught by the catch a^2 and held by said catch while the load is hoisted and released from the catch to discharge it. In the drawings the pivot or hinge of this catch is represented by the letter b'.

C is a sling, which may be either chain, rope, or wire cable. It may be made separately, or constructed to form a part of the hoisting chain or rope. It passes through the sleeve A, and may be provided with a projection or stop-link, as shown at c', to prevent the chain from passing upwardly through the sleeve when not at work, and at the same time limit the amount of chain to be pulled out in loading.

D D are intended to represent pigs of iron, for which the device is suitable. It is operated as follows: The chain or cable C, forming part of the hoisting-rope of a crane, derrick, or windlass, or else made in the form of a sling and attached to said hoisting-rope, is laid out upon the floor or ground where the load is convenient. The load is then piled upon it. The end of the sling is then brought around and over the load and hooked over the trigger B. This trigger is then thrown up and caught by the catch a^2. The device, with its load, is now ready for hoisting. As the hoisting proceeds, it will be seen that the sling tightens upon its load and holds it firmly in place until ready to be discharged. The catch a^2 is then disengaged from the trigger by knocking or otherwise, when the load falls, leaving the sling free. The position at this stage is shown in Fig. 2. In order to prevent the sleeve from slipping entirely off the rope, the stop c' may be placed at any convenient part of the sling, or the end link of the chain which hitches over the trigger may be enlarged for this purpose.

For the purpose of receiving and sustaining the load more firmly as the sling draws up, the sling may be forked, as shown at c^5 c^6, Fig. 6, and provided with a pair of skids or bars, as c^2 c^3, thus widening the sling and giving a firmer grip upon the load. These bars may be attached to the forked sling in any suitable way. As represented in the drawings, Fig. 6, they are attached by the rings c^4 c^4. These skids may be held apart by the cross-bars c^7.

The sleeve A (shown in Figs. 1, 2, 3, and 4) and its attachments may be made in a number of ways—as, for example, a hollow tube may be used with pivotal projections for the catch and trigger soldered or otherwise secured thereto; or, as shown in Fig. 5 and marked A', it may be made with metallic end rings, connected by bracing-bars; but the way I prefer to make it is shown in Figs. 3 and 4. A form such as shown in Fig. 4 is first prepared and then bent around in the shape of that shown in Fig. 3. Where the upper ends join, the

metal is welded, as at a^3. The lower ends are allowed to stand slightly open, and form the supports for the pivot, to which the trigger B is hinged.

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

1. A trip-sling for a hoisting apparatus, constructed in the form of a hollow cylinder, substantially as described, in combination with a catch suitably hinged or pivoted to the cylinder, and a trigger also pivoted to said cylinder, said catch and trigger operating together, substantially as described.

2. A trip-sling for a hoisting apparatus, constructed in the form of a hollow cylinder, in combination with a catch suitably hinged or pivoted to the cylinder, and a trigger also pivoted to the cylinder, substantially as shown, and a hoisting-rope arranged to pass freely through the cylinder, substantially as described.

3. A trip-sling for a hoisting apparatus, constructed in the form of a hollow cylinder, in combination with a catch suitably hinged or pivoted to the upper end of the cylinder, a trigger hinged or pivoted to the lower end of the cylinder and engaging with the catch, substantially as shown, and a hoisting-chain arranged to pass freely through the cylinder and provided with a stop-link, substantially as described.

4. A trip-sling for a hoisting apparatus, consisting of a sleeve made of a single piece of metal, substantially as shown, bent into the form of a tube, and having its upper ends secured together and its lower ends constructed to form supports for a pivot, in combination with a catch-ring pivoted to the upper end and a trigger engaging said catch-ring pivoted to the lower end, substantially as described.

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