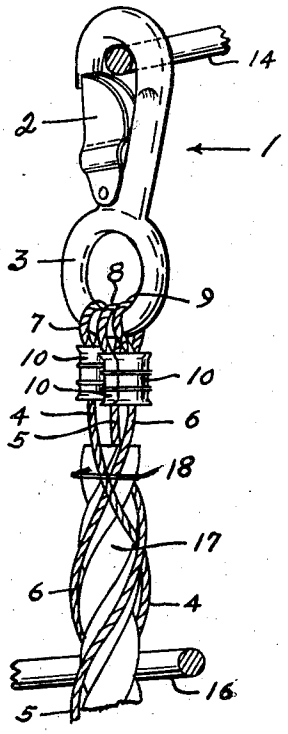
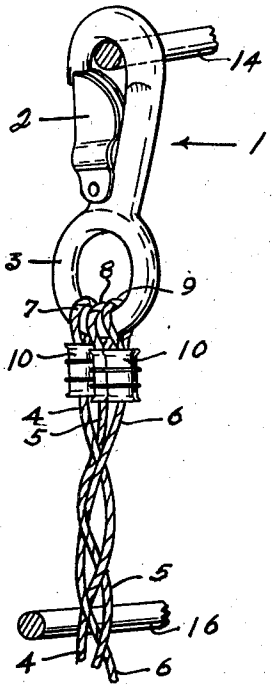
Dec. 17, 1946. C. T. LEWIS 2,412,895

LINE FOR SAFETY-BELTS

Filed Sept. 4, 1945





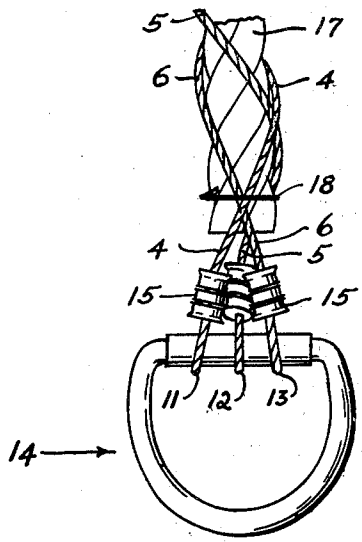


FIG. 2

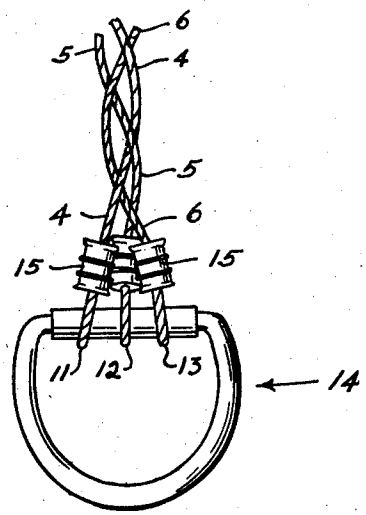


FIG. 1

INVENTOR.
Charles T. Lewis
BY
Loyd J. Miller
ATTORNEY

Patented Dec. 17, 1946

2,412,895

UNITED STATES PATENT OFFICE

2,412,895

LINE FOR SAFETY BELTS

Charles T. Lewis, Oklahoma City, Okla.

Application September 4, 1945, Serial No. 614,352

2 Claims. (Cl. 87—8)

1

My invention relates to lines adapted to be attached to the belts or harnesses of persons whose duties must be performed a considerable distance above ground, and relates particularly to safety lines for oil well derrick-men.

Men who work on the fourble-board of an oil well derrick usually wear a heavy belt which is connected at the rear to the derrick by a safety line. The line most commonly used is a three-quarter or one inch manila rope of sufficient length to allow the derrick-man free movement to any part of the platform or fourble-board in the upper part of the derrick. In order to allow the derrick-man free movement, the safety line must be several feet in length, and should he slip from the board, he is subject to a fall of a few feet before the end of the line is reached.

At the present time, a manila rope is used because it is more flexible than steel cable, but a rope of the size mentioned is cumbersome and heavy to drag around. A steel cable having the necessary factor of safety is smaller in diameter, but is too stiff to be practical.

A safety line for the purpose set forth must be able to withstand the shock of a man's falling body without snapping in two. A manila rope, after being exposed to the elements for a few days, has little or no resiliency, and a steel cable likewise will not stretch lengthwise in any appreciable amount.

It is the prime object of the present invention to provide a safety line for the purpose set forth which will combine lightness of weight and flexibility, and which will at the same time have ample resistance to a snapping force.

In reaching these three results, the line of the present invention embodies an inherent resiliency which permits some elongation, thus making it possible to use lighter material than would ordinarily be possible.

Another object of the invention is to provide a safety-line which may be assembled from standard and well known materials and elements.

A further object is to provide a safety line which is comparatively cheap to manufacture.

Other objects will be apparent from the following description when taken in conjunction with the accompanying one sheet of drawings, wherein;

Figure 1 is a fragmentary elevational perspective view illustrating one embodiment of the invention; and,

Figure 2 is a similar view of a slightly different embodiment.

2

Like characters of reference designate like parts in the figures wherein they occur.

In the drawing:

The reference numeral 1 indicates, as a whole, a usual heavy duty safety snap-hook having a spring actuated pivotally mounted tongue 2 and a loop or eye 3. Three small metal cables or strands 4, 5 and 6, have loops 7, 8 and 9 respectively which engage within the eye 3, and which are held against removal therefrom by three suitable cable clamps 10. The cables are preferably made of soft or annealed twisted wire.

The cables 4, 5 and 6 are braided together loosely throughout their lengths as shown, and at their other ends are formed loops 11, 12 and 13 which pass through a suitable metal ring 14. Cable clamps 15 act to hold the loops 11, 12 and 13 engaged within the ring 14.

In use, the snap end of the device may be first passed through a safety ring 16 which forms a part of a usual safety belt, not shown, is then passed around a member of the well derrick, not shown, and is finally snapped into the ring 14.

If desired, the ring 14 could be made a part of the safety belt. In such a case, the snap end of the device will be looped around the derrick member, and the snap will then be snapped around the cables.

A device made as described, of three small metal cables braided together, has sufficient flexibility to retard no action of the worker. Should the worker fall, the loosely braided cables offer sufficient resilience to somewhat dampen the shock entailed by the abrupt stopping the fall of his body.

Before the full extent of the device can be reached, the braided cables 4, 5 and 6 must tighten about each other, and for this reason, the snapping force of the falling body is dampened.

In Figure 2 is illustrated a slightly different embodiment of the invention. In this embodiment, the construction is identical with that of Figure 1, except that the wire cables 4, 5 and 6 are braided around a soft fibrous rope or cable 17 which extends throughout the major portion of the length of the device. Small wire loops 13 act to hold the cables 4, 5 and 6 in close engagement with the end portions of the rope 17.

The object of the rope or core 17 is to increase the resistance to a snapping shock, without materially detracting from the flexibility of the device.

Obviously, the device could well be formed of more than three of the wire cables if desired, and other slight changes in construction could

well be made without detracting materially from the practicability of the device. For instance, the ring 14 could be supplanted by another one of the hooks 1, or other attaching elements could be used in lieu of the snap-hook 1 and the ring 14. I therefore do not wish to be limited to only the structure shown and described herein, further than I am limited by the scope of the appended claims.

I claim:

1. A safety line including: a hook having an eye; a ring; a plurality of pliable twisted strands loosely braided together throughout the major portions of their lengths, the similar ends of said strands being passed through said eye and being doubled back upon themselves, the opposite ends of said strands being passed through said ring and being doubled back upon themselves; and a plurality of clamps, each clamp engaging one of said ends and anchoring it to its own strand.

2. A safety line including: a hook having an eye; a ring; a plurality of pliable twisted strands loosely braided together throughout the major portions of their lengths, the similar ends of said strands being passed individually through said eye and being doubled back upon themselves, the opposite ends of said strands being passed individually through said ring and being doubled back upon themselves; and a plurality of clamps, each clamp engaging one of said ends and anchoring it to its own strand.

CHARLES T. LEWIS.