

Feb. 27, 1945.

W. MORGAN ET AL

2,370,482

WIRE BLOCK STRIPPER

Filed Oct. 7, 1942

3 Sheets-Sheet 1

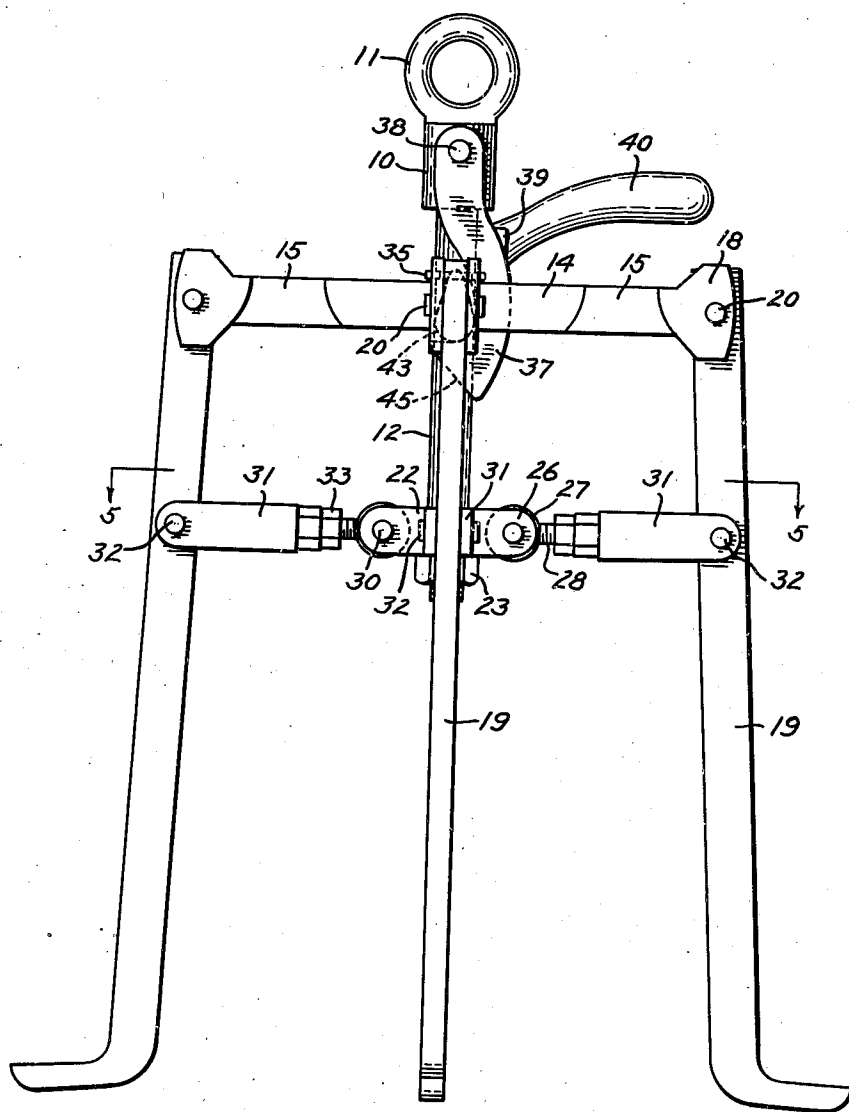


Fig. 1

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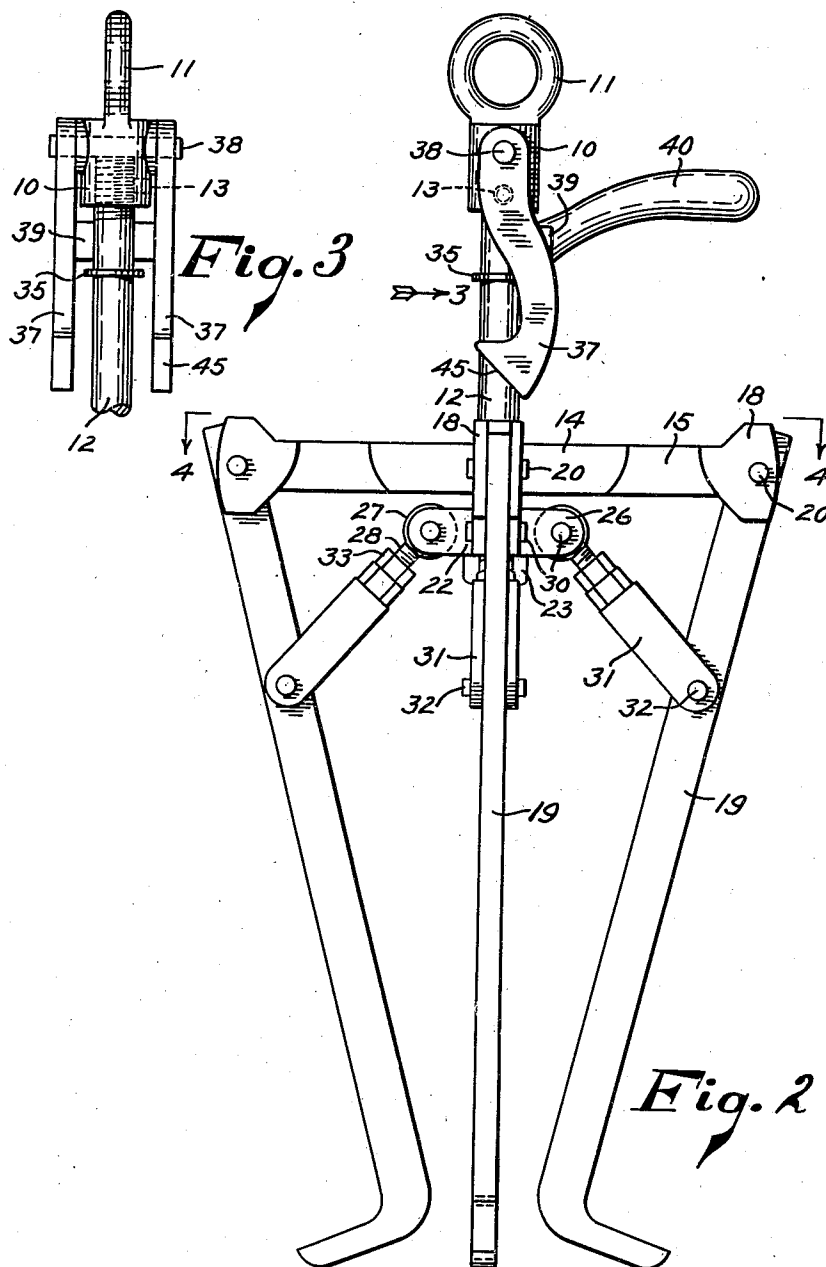
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3 Sheets-Sheet 3

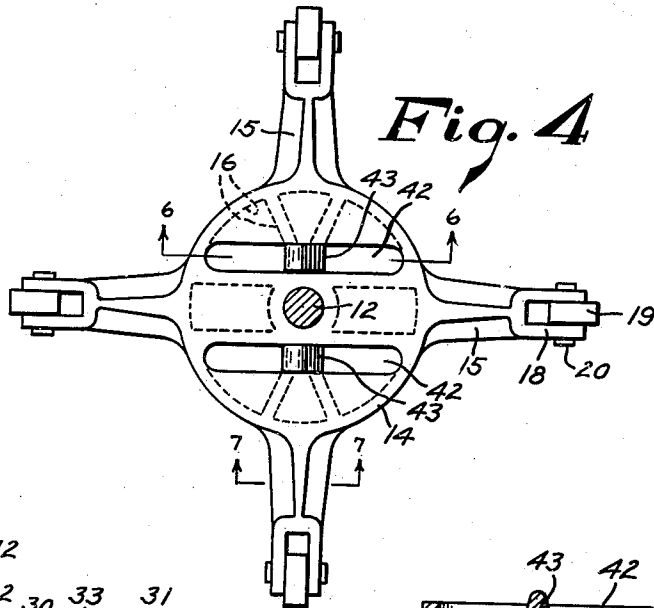


Fig. 4

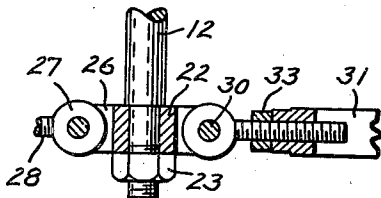


Fig. 8

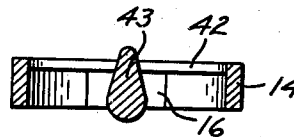


Fig. 6

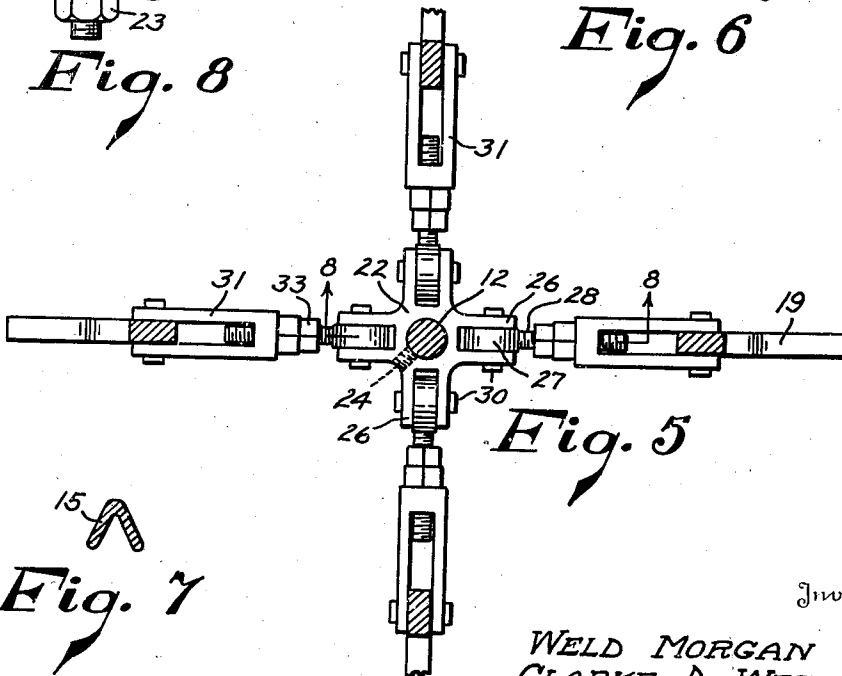


Fig. 5

Fig. 7

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UNITED STATES PATENT OFFICE

2,370,482

WIRE-BLOCK STRIPPER

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Application October 7, 1942, Serial No. 461,212

4 Claims. (Cl. 294—97)

This invention relates to wire block strippers, and more particularly to strippers of the collapsible type so arranged that the wire bundle can be readily dropped therefrom upon a truck or other place of deposit.

Strippers of this type as heretofore constructed have included a manually releasable latch to hold the bundle-supporting legs in their expanded positions. The wire bundles are heavy, and upon release of the latch the weight of the bundle causes the legs to drop very suddenly, carrying the latch and its handle with them. Since the operator is grasping the handle at the moment of release, he is subjected to a very unpleasant and dangerous jerk. Other difficulties are encountered in these prior strippers resulting from lack of sufficient rigidity, and failure of the various parts to remain in proper alignment.

It is accordingly one object of the invention to provide a collapsible stripper which will be safe and convenient for the operator.

It is a further object of the invention to provide a collapsible stripper which will remain in proper operating condition throughout a long life of service.

With these and other objects in view, as will be apparent to those skilled in the art, the invention resides in the combination of parts set forth in the specification and covered by the claims appended hereto.

Referring to the drawings illustrating one embodiment of the invention and in which like reference numerals indicate like parts,

Fig. 1 is an elevation of a collapsible stripper in its expanded condition;

Fig. 2 is an elevation of the stripper in its collapsed condition;

Fig. 3 is a fragmentary elevation taken in the direction of the arrow 3 in Fig. 2;

Fig. 4 is a section on the line 4—4 of Fig. 2;

Fig. 5 is a section on the line 5—5 of Fig. 1;

Fig. 6 is a section on the line 6—6 of Fig. 4;

Fig. 7 is a section on the line 7—7 of Fig. 4; and

Fig. 8 is a section on the line 8—8 of Fig. 5.

The embodiment illustrated comprises a cylindrical head or block 10 having an upwardly projecting eye portion 11 adapted to fit over the suspended hook (not shown) of a crane or other lifting apparatus. A vertical cylindrical rod 12 is screw-threaded at its upper end into the head 10 and depends therefrom, a set-screw 13 being provided to secure the rod in place. Upon this rod there is slidably mounted a flat circular hub 14 having four horizontal arms 15 radiating therefrom. The hub 14 is reinforced by means of ribs

16 (Fig. 4) on its lower surface. The arms 15 taper outwardly from the hub, and as best shown in Fig. 7 they are of inverted V form in cross-section. On the outer ends of the arms 15 there are provided forks 18 arranged to receive the upper ends of upright L-shaped legs 19 of rectangular cross-section, which are pivotally connected to the forks by means of pins 20. These forks 18 are considerably wider in the vertical direction than the arms 15, and the forks fit the sides of the legs 19 closely, so that the legs are accurately guided and can move only in radial planes.

The vertical movements of the hub 14 relative to the rod 12 are utilized to swing the legs 19 about the pivot pins 20. For this purpose a spider 22 is mounted on the lower end of the rod and held in place by means of a nut 23 and a set screw 24. This spider is provided with four radially extending forks 26 each of which receives the head 27 of an eye bolt 28. The heads 27 are connected to the forks 26 by means of pivot pins 30. Each bolt 28 is threaded into a U-shaped clevis 31 which straddles the corresponding leg 19 and is connected thereto by a pivot pin 32. The bolts 28 are provided with lock nuts 33 which can be tightened against the clevises. It will be apparent that each bolt 28 and its clevis 31 form a link which can readily be adjusted in length.

With the stripper fully expanded as shown in Fig. 1, the pins 30 and 32 will all lie in a common horizontal plane. The stripper may be maintained in this condition by preventing relative sliding movement of the rod 12 and the hub 14. For this purpose the rod is grooved circumferentially to receive a snap ring 35 which is arranged to engage the top of the hub when the stripper is expanded, thereby preventing the rod from dropping far enough to bring the pins 30 lower than the pins 32. Upward movement of the rod relative to the hub is prevented by means of a manually releasable latch comprising a pair of hooks 37 located on opposite sides of the rod and pivotally connected at their upper ends to the head 10 by means of a pin 38. This pin may be held in place by the upper end of the rod 12. The rear portions of these hooks 37 are joined by a bar or cross piece 39 from the center of which a handle 40 projects rearwardly. By engaging the rod 12, the cross piece 39 prevents the hooks 37 from swinging forwardly under the influence of the weight of the handle 40 when the stripper is collapsed. The hub 14 is provided with two parallel slots 42 (Fig. 4) located on opposite sides of the rod 12 and in position to receive the lower por-

tions of the hooks when the stripper is expanded. Each of these slots is bridged by a lug 43 which is preferably pear-shaped in cross-section, as best shown in Fig. 6. These lugs are in position to be engaged by the hooks when the head 10 is lowered to expand the stripper. Each of the hooks is preferably formed with an upwardly and forwardly inclined cam surface 45 on its lower end to guide it properly past its lug 43.

The operation of the invention will now be apparent from the above disclosure. A bundle of wire will be formed upon the finishing block of a wire-drawing machine, this block preferably having radial slots for the reception of the stripper legs 19, one suitable construction being disclosed in the patent to Morgan et al. No. 2,247,248, granted June 24, 1941. Upon completion of the bundle a crane will lower the stripper in its collapsed condition into the interior of the bundle, the stripper legs 19 entering the slots in the block and spreading outwardly to engage the bundle, while the rod 12 slides downwardly through the hub 14 until the ring 35 strikes the top of the hub. During this movement the cam surfaces 45 of the hooks 37 will engage the lugs 43 and cause the hooks to swing rearwardly until the stripper has been fully expanded, whereupon the weight of the handle 40 will swing the hooks forwardly again beneath the lugs to prevent collapse of the stripper. The stripper, with the bundle thereon, will now be lifted from the block by means of the crane and transported to a place of deposit. The operator will then lift the handle 40 and swing the hooks 37 rearwardly out of engagement with the lugs 43, allowing the head 14 to drop. The links 28-31 will swing the legs 19 inwardly to release the bundle and allow it to fall from the stripper. Since the handle 40 does not drop with the head 14, the operator will not be subjected to any sudden jerk when the latch is released. The arms 15, with their novel inverted V cross-section, are peculiarly adapted to withstand the heavy loads resulting from the weight of the wire bundles. The vertically widened forks 18 hold the legs 19 in proper alignment and restrict their movements to radial planes.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A collapsible wire block stripper comprising a head adapted to be suspended from its upper end, a vertical rod depending from the head, a hub vertically slidable on the rod and provided with radially extending arms, legs depending from the arms, a spider on the lower end of the

rod, links connecting the spider with the legs, a pair of lugs on the hub at opposite sides of the rod, two hooks pivotally secured to opposite sides of the head and depending therefrom to engage the lugs and prevent the hub from sliding downwardly to collapse the stripper, a bar connecting the hooks at the rear side of the rod, and a handle projecting rearwardly from the bar to release the hooks, the weight of the handle tending to swing the hooks forwardly, and the bar being so located as to limit this forward swinging by engaging the rod, when the stripper is collapsed, to position the hooks properly for automatic engagement with the lugs as the stripper is expanded again.

2. A collapsible wire block stripper comprising a head adapted to be suspended from its upper end, a vertical rod depending from the head, a hub vertically slidable on the rod and provided with radially extending arms, legs depending from the arms, a spider on the lower end of the rod, links connecting the spider with the legs, the hub having two slots therein on opposite sides of the rod, a lug bridging each slot, two hooks pivotally secured to opposite sides of the head and depending therefrom into the slots to engage the lugs and prevent the hub from sliding downwardly to collapse the stripper, and a handle connected to the hooks to release the same.

3. A collapsible wire block stripper comprising an upright element adapted to be suspended from its upper end, a hub vertically slidable on said element and provided with radially extending arms of inverted V form in cross-section, legs depending from the outer ends of the arms, a spider on the lower end of the rod, links connecting the spider with the legs, and a manually releasable latch arranged to prevent the hub from sliding downwardly to collapse the stripper.

4. A collapsible wire block stripper comprising an upright element adapted to be suspended from its upper end, a hub vertically slidable on said element and provided with radially extending arms, legs depending from the arms, a spider on the lower end of the rod and provided with radially extending forks, a U-shaped clevis straddling each leg and pivotally connected thereto, an eye bolt threaded into each clevis, each eye bolt having a head located within one of the forks and pivotally connected thereto, and a manually releasable latch arranged to prevent the hub from sliding downwardly to collapse the stripper.

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