Nov. 5, 1929 J. C. BITTMAN 1,734,360

WIRE BLOCK STRIPPING MECHANISM

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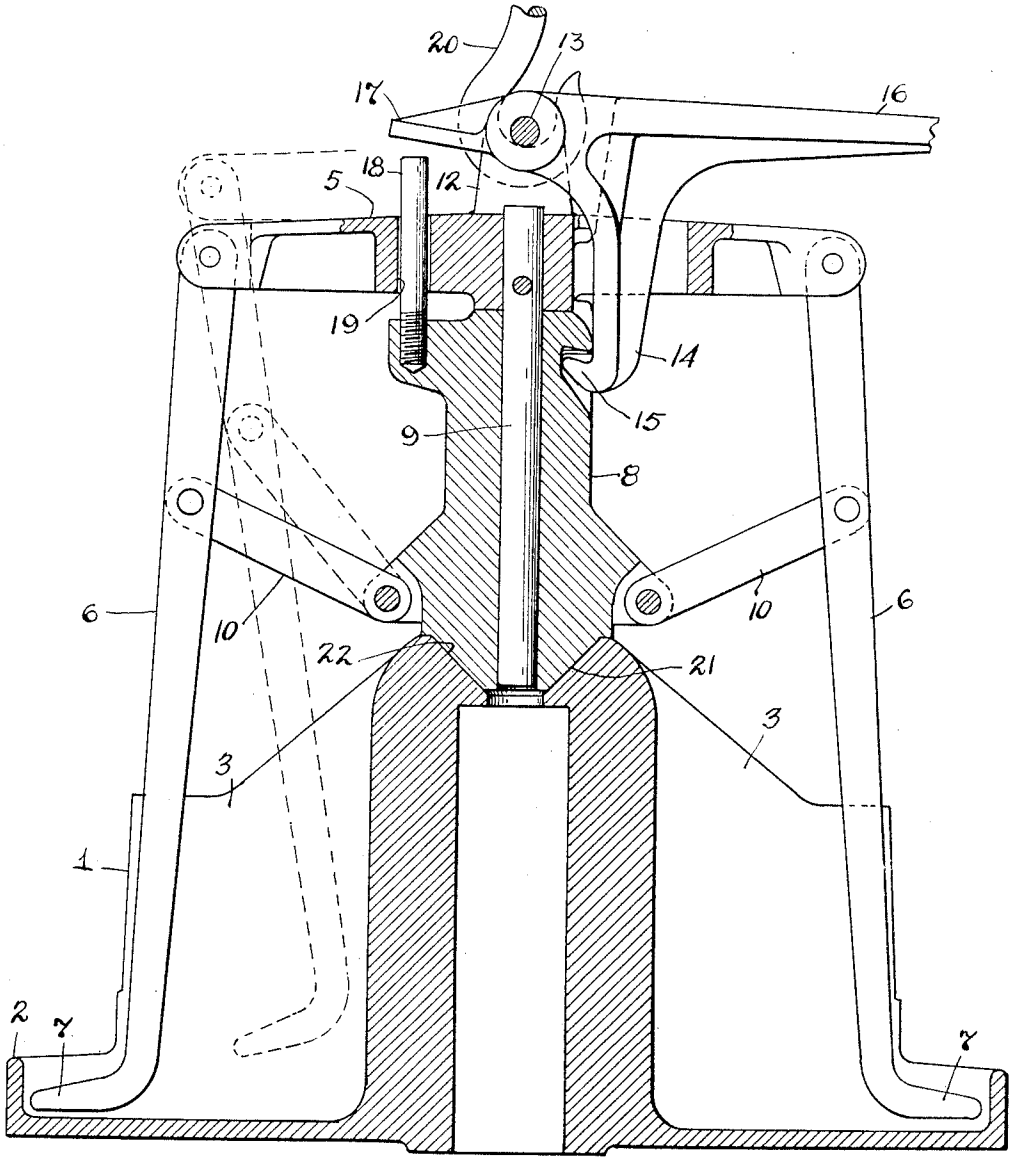

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WIRE-BLOCK-STRIPPING MECHANISM

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As indicated, the object of the invention is to provide a mechanism or device for stripping or removing a coil or bundle of drawn wire from the block and enable the same to be transferred to a reel or other support without requiring such coil to be handled manually.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims, the annexed drawing and the following description setting forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—

The single figure there appearing is partly an elevational view and partly a central section of my improved stripping mechanism or device.

It will be understood that the device in question is designed for use with the familiar type of block employed on wire drawing benches, such block 1 being made to taper upwardly and inwardly, as shown in the drawing, and having a flange 2 at the bottom on which the coil or bundle or wire rests during and following completion of the drawing operation. As is moreover usual, such block is formed with a plurality of vertical grooves or slots 3 to receive the fingers of the stripping device, see for example U. S. Patent No. 423,015.

The latter in its present improved form comprising as its main element a spider 5 formed with a plurality of radially extending equidistantly disposed arms, to the outer end of each of which is pivotally attached about a transverse axis a depending lever 6 formed at its lower end with an outwardly projecting finger 7. In the illustrated form, the device is designed to comprise four such levers and the spider will accordingly have a corresponding number of radial arms. It will be understood, of course, that the number of such levers and arms may be varied, depending upon the size of the bundle to be handled, and the main element need not be strictly in the form of a spider so long as it provides circumferentially spaced points from which the levers may thus be pivotally suspended.

Vertically reciprocably connected with spider 5 is a member 8 which is of tubular form, being thus secured to the spider by being fitted over a rod 9 that depends from the center of the spider and is fixedly secured to the latter. This member is operatively connected with levers 6 through the medium of links 10, as shown, the arrangement and disposition of these links being such that when the spider 5 rests on the top of the member, the lower ends of the levers are swung outwardly into the position shown in full lines in the figure in the drawing. However, upon separation of the spider and member as by the raising of the latter to the position shown in dotted outline in the drawing, the lower ends of the levers are drawn inwardly to the position likewise shown in dotted outline. It will further be noted that the disposition of the links is such as to cause them to move upwardly and not downwardly with respect to said member when the device is thus collapsed.

Integral with the upper face of spider 5 are two centrally located ears 12, only one of which appears in the drawing, between which is oscillatorily secured, by means of a pivot 13, a hook 14, such hook being arranged when the spider and member are brought together to engage a notch 15 in the corresponding side of the latter. For convenience in operating the same, the hook is provided with a laterally extending handle 16 and it is also provided with a projection 17 on the other side of its pivotal axis that is adapted to strike against an upwardly projecting pin 18 on member 8, such pin extending through an opening 19 in the spider. The device is designed to be lifted through spider 5, or equivalent supporting element, and to this end the latter is provided with suitable external attaching means which in the specific embodiment shown in the drawing consists of the pivot 13 about which hook 14 is oscillatory, said pivot being extended

to permit a hook 20 or the like to engage therewith, as will be readily understood.

When the device is in operative position with respect to the drawing block or drum 1, the lower end 21 of member 8 is designed to rest on the top of said block, and to facilitate the proper centering of the device, such end is preferably made of conical shape and the block is provided with a complementary tapered recess 22.

The operation of the device may now be briefly set forth. The device is not intended to remain in the block while the wire is being drawn, but when a bundle or coil is ready to be removed from said block, the device with the levers 6 in collapsed position is dropped onto the block with such levers disposed so as to enter the corresponding vertical slots or grooves 3 in the latter. Due to the fact that the device is suspended through the external attaching means, wherewith the spider 5 is provided, such collapsed position will normally be assumed under the influence of gravity whenever hook 14 is disengaged from notch 15 in member 8, but such collapse will be assisted, if necessary, by projection 17 on the hook striking against pin 18 which serves to positively force the spider and member apart. As the device is dropped, as aforesaid, onto the block, the lower end 21 of member 8 seats in the central tapered recess 22 which not only centers the device but of course stops further downward movement of the member. The continued downward movement of the spider thereupon automatically forces the levers outwardly into the full line position where they are adapted to pick up the bundle and the hook 14 will at the same time automatically re-engage slot 15 and so prevent the levers from being forced inwardly by the load. Thus the coil or bundle of wire may be lifted off the block and conveyed to a reel or elsewhere as desired.

Obviously, so far as the operation of the device is concerned, the block is merely typical of any suitable support for the formed coil of wire.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In a stripping device, the combination of a spider provided with external attaching means, a plurality of levers pivotally suspended from said spider at circumferentially spaced points and formed with outwardly directed fingers adapted to engage a bundle of wire on a suitable support, a rod depending from said spider, a member slidable on said rod, links connecting said member with said levers, respectively, whereby the latter may be swung in or out as desired, a hook pivotally attached to said spider and adapted to engage with said member, and an element on said member adapted to be struck by said hook, whereby said spider and member may be positively forced apart.

2. In a stripping device, the combination of a spider provided with external attaching means, a plurality of levers pivotally suspended from said spider at circumferentially spaced points and formed with outwardly directed fingers adapted to engage a bundle of wire on a suitable support, a rod depending from said spider, a member slidable on said rod, links connecting said member with said levers, respectively, whereby the latter may be swung in or out as desired, a hook pivotally attached to said spider and adapted to engage with said member, said hook being formed with a projection on the other side of its pivotal axis, and an upwardly projecting pin on said member adapted to be struck by such pin, whereby said spider and member may be positively forced apart.

Signed by me this 19th day of August, 1925.

JESSE C. BITTMAN.