Oct. 11, 1927. 1,645,014

W. H. McKISSICK

SAFETY SHEAVE BLOCK

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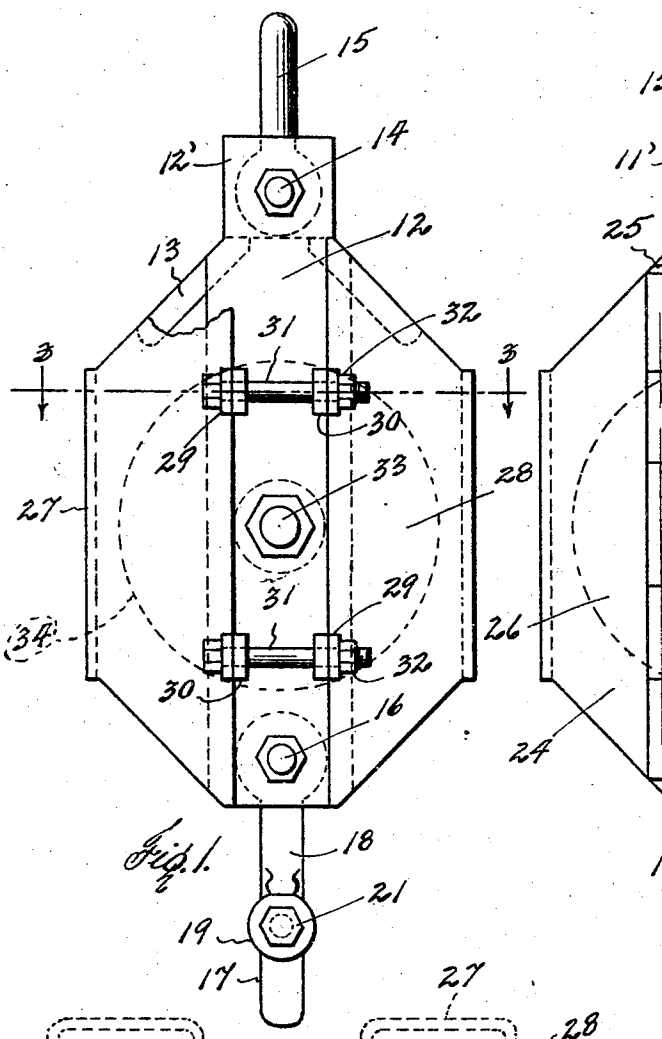


Fig. 1.

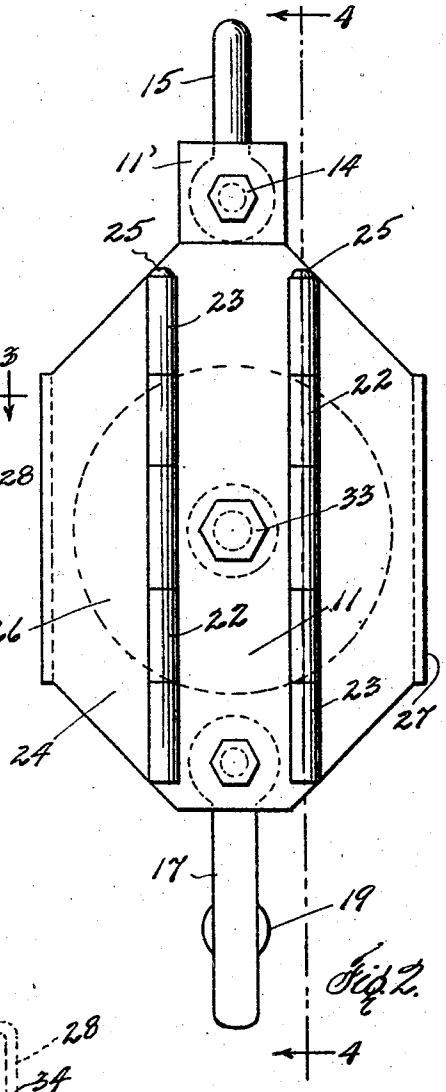


Fig. 2.

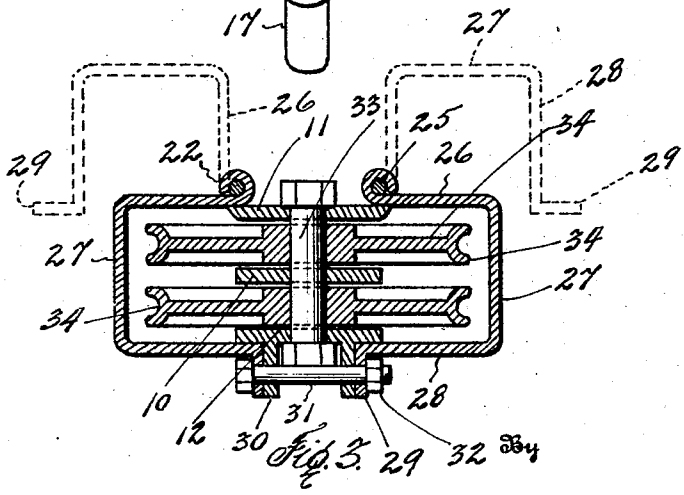


Fig. 3.

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SAFETY SHEAVE BLOCK

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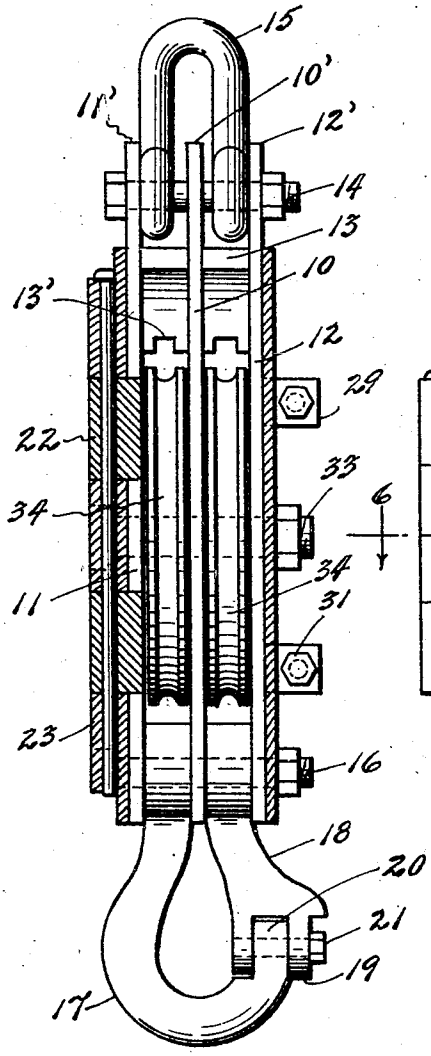


Fig. 4.

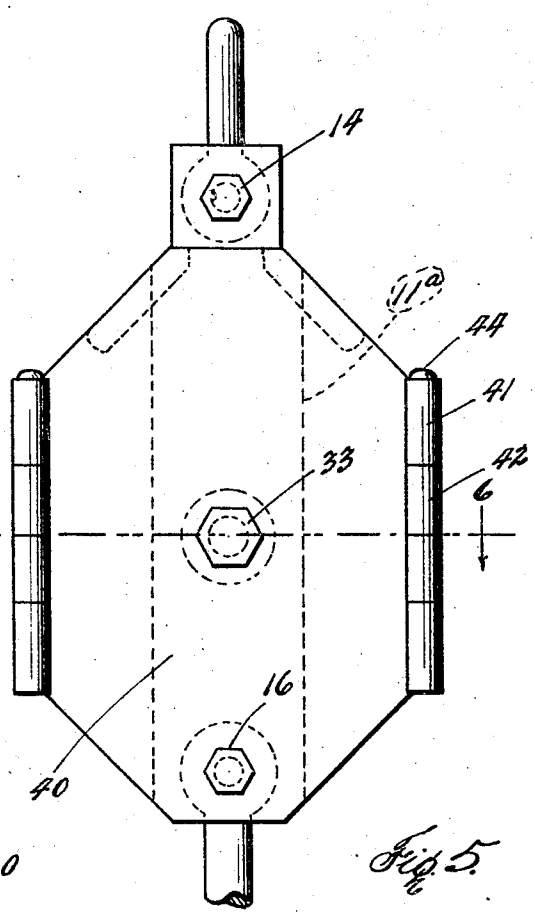


Fig. 5.

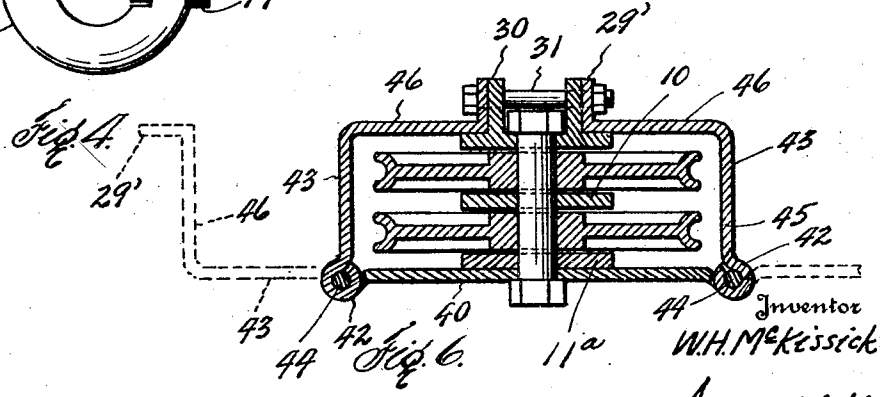


Fig. 6.

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UNITED STATES PATENT OFFICE.

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SAFETY SHEAVE BLOCK.

Application filed January 11, 1927. Serial No. 160,379.

This invention relates to new and useful improvements in safety sheave blocks.

The object of the invention is to provide a sheave block with a hinged housing arranged when suspended to be opened and swung horizontally to each side, whereby the sheave is exposed for removing and replacing the cable lines.

Another object of the invention is to provide a housing for completely enclosing the sheave circumferentially of the block, whereby the walls of said housing are free from vertical openings.

A further object of the invention is to provide in combination with a closed housing, upper guard and spacer members which act to space the supports apart and also to partially close the top of the housing to protect the workman's hands.

A still further object of the invention is to provide a housing comprising side members or wings arranged to be swung back, whereby the face, as well as the front side of the sheave, is exposed and access thereto is given.

A construction designed to carry out the invention will be hereinafter described, together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings, in which an example of the invention is shown and wherein:

Fig. 1 is a front elevation of a sheave block constructed in accordance with my invention,

Fig. 2 is a rear elevation of the same,

Fig. 3 is a horizontal cross-sectional view taken on the line 3—3 of Fig. 1,

Fig. 4 is a transverse vertical sectional view taken on the line 4—4 of Fig. 2,

Fig. 5 is a rear elevation of another form in which the invention may be carried out, and

Fig. 6 is a horizontal cross-sectional view on the line 6—6 of Fig. 5.

In the drawings the numeral 10 designates a central vertical partition or center bar, from which upright side bars 11 and 12, respectively, are spaced by spacer blocks or guards 13 welded, or otherwise secured thereto. The upper ends 10′, 11′ and 12′, respectively, of the center bar and the side bars are reduced to form ears receiving a transverse becket bolt 14. An upper becket 15 straddling the ear 10′ is pivoted on the bolt 14 and supports the block.

A lower becket bolt 16 passes through the lower ends of the parts 10, 11 and 12. A lower becket straddling the center bar 10 between the bars 11 and 12 comprises a hook member 17 pivoted on the bolt 16 and a keeper member 18 also pivoted on said bolt. The keeper member has spaced ears 19 on its lower end receiving an ear 20 on the end of the bill of the hook member. A locking bolt 21 is passed through the ears for securing the parts. When it is desired to thread the lower becket, the bolt 21 is withdrawn and the keeper member 18 is swung to one side.

On each vertical edge of the rear bar 11, I provide hinge ears 22 suitably spaced to receive in alternate relation complementary hinge ears 23, formed on wings or side housing members 24. Pintles 25 passing vertically through the ears hinge the wings to the bar 11. As is shown in Fig. 3, the housing wings 24 each comprise a rear plate 26, an intermediate plate or member 27 and a front plate 28, all disposed vertically and substantially at right-angles to each other.

The front plates 28 have their free edges overlapping the front bar 12 and provided with outwardly directed lugs 29 registering with lugs 30 extending outwardly from said bar. Locking bolts or pins 31 passing through the said lugs are secured by nuts 32, whereby the housing wings are locked. I have shown two sets of ears and bolts, one near the bottom and the other near the top of the housing.

The rear plates 26 and the front plates 28 are inclined at their top and bottom edges toward the side bars from the plates 27 and it will be seen that all of these plates are free from vertical openings, thereby reducing the housing which is entirely enclosed circumferentially.

An axle bolt 33 is passed centrally through the parts 10, 11 and 12 and sheaves 34 are mounted thereon. It will be seen that the sheaves are carried entirely by the parts 10, 11 and 12, which form a support. While I have illustrated two sheaves, the block may

be constructed with one sheave or a plurality of sheaves. The housing is entirely free from the becket and axle bolts and access may be had thereto without disturbing the housing wings.

The plates 27 are spaced sufficiently from the faces of the sheaves to fully accommodate the cable lines. It is preferable to make the guards 13 overhang the sheaves and provide them with notches 13′ to receive the cable lines, thus substantially closing the top of the housing and saving the workman's hands from injury, as will be obvious.

The housing is readily opened by removing the nuts 32 and withdrawing the bolts 31 from the ears 29 and 30. When the wings are swung back, as is shown in dotted lines in Fig. 3, it will be seen that the faces of the sheaves are exposed and free access thereto may be had. By removing the lower becket bolt 16 the lower becket may be removed and the cable lines easily removed or replaced. It is obvious that other forms fastening the wings could be used.

As a further illustration of the invention, I have shown another form in Figs. 5 and 6 in which all parts are substantially the same, except the housing and the rear bar of the support. In this form the rear bar 11^a is made substantially the same as the center bar 10. The housing comprises a vertical rear plate 40 suitably fastened to the bar 11^a and the bolts 14, 16 and 33 pass through said plate in this form. Along each vertical edge of the rear plate 40 I form hinge ears 41, spaced to receive similar ears 42 on the rear edges of wing members 43. The wing members are hinged to the rear plate by vertical pintles 44.

Each wing member comprises a vertical end plate 45 and a front plate 46, substantially at right angles thereto. Lugs 29′ fastened on the front edge of each wing member register with the lugs 30 for receiving the bolts 31 as in the other form. It will be seen that when the bolts 31 are removed, the wing members 43 may be swung back, as is shown in dotted lines of Fig. 6. This form has the advantage that the block may be laid horizontally with the rear plate 40 next to the derrick floor, or other platform, and the housing easily opened.

Various changes in the size and shape of the different parts, as well as modifications and alterations, may be made within the scope of the appended claims.

What I claim, is:

1. In a safety sheave block, a support, a sheave journaled on the support, and a housing carried by the support and comprising side wings hinged to be swung each horizontally when the block is suspended vertically.

2. In a safety sheave block, a support, a sheave journaled on the support, a housing carried by the support and comprising side wings hinged to be swung each horizontally when the block is suspended vertically, and means for fastening the wings to close the housing.

3. In a safety sheave block, a support, a becket from which the support is suspended, a sheave journaled on the support, and a housing carried by the support and including side wings mounted to be swung each horizontally when the block is suspended vertically.

4. In a safety sheave block, a support, a becket from which the support is suspended, a sheave journaled on the support, a housing carried by the support and including side wings mounted to be swung each horizontally when the block is suspended vertically, and means for fastening the wings to close the housing.

5. In a safety sheave block, a support, a becket from which the support is suspended, a sheave journaled on the support, a housing carried by the support and including side wings mounted to be swung each horizontally when the block is suspended vertically, and means for fastening the free ends of the wings to the support to close the housing.

6. In a safety sheave block, a support, a becket from which the support is suspended, guard members on each side of the becket at the upper portion of the support, a sheave journaled on the support under the guard members, and a housing carried by the support and including side wings mounted on the support to be swung each horizontally when the block is suspended vertically to open and close the housing.

7. In a safety sheave block, a support, a becket from which the support is suspended, guard members on each side of the becket at the upper portion of the support, a sheave journaled on the support under the guard members, a housing carried by the support and including side wings mounted on the support to be swung each horizontally when the block is suspended vertically to open and close the housing, and means for fastening the wings to close the housing.

8. In a safety sheave block, an upright support, a becket from which the support is suspended, a sheave journaled on the support, and a housing including wing members hinged to the rear side of the support for swinging horizontally and fastened to the front of the support.

9. In a safety sheave block, an upright support, a becket from which the support is suspended, a sheave journaled on the support, a housing including wing members hinged to the rear side of the support for swinging horizontally, and means for detachably fastening the front edges of the wings to the front of the support.

10. In a safety sheave block, an upright central bar, side bars spaced from the central bar, sheaves journaled on each side of the central bar between the side bars, a becket suspending the bars, guard members between the bars overhanging the sheaves, a housing including horizontally swinging wings carried by the rear side bar, lugs on the front side bar, other lugs on the wings registering with the lugs of the front side bar, and fastening bolts passing through said lugs.

In testimony whereof I affix my signature.

WILLIAM H. McKISSICK.