

No. 770,514.

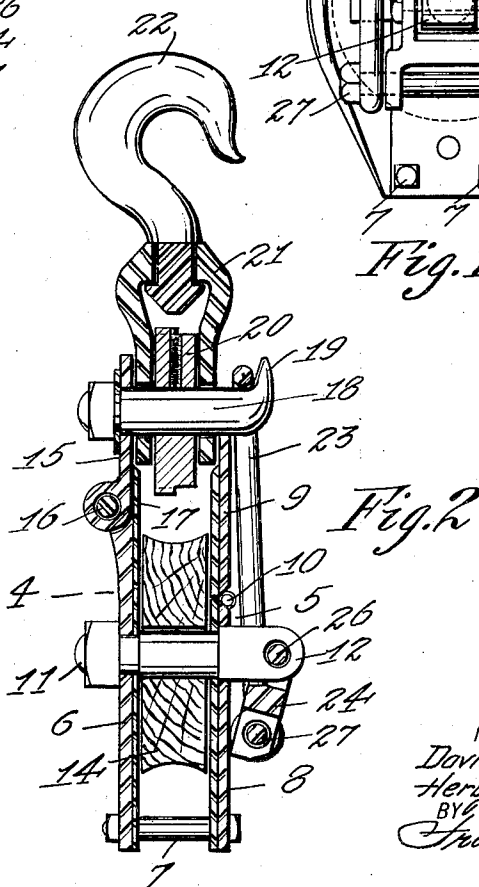
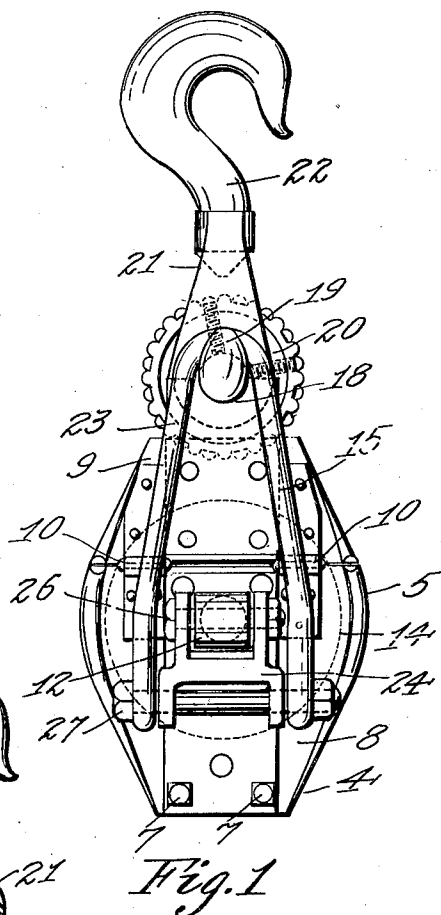
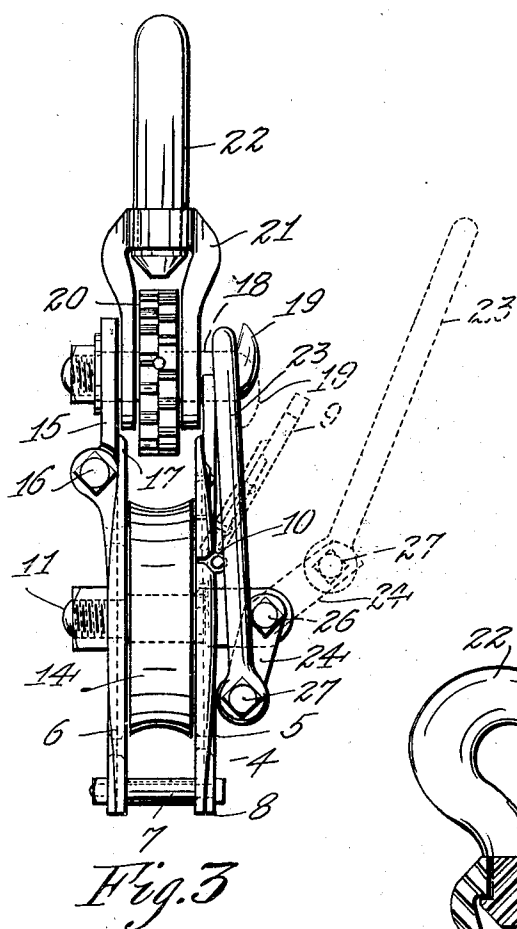
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SNATCH BLOCK.

APPLICATION FILED JAN. 7, 1904.

NO MODEL.



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SNATCH-BLOCK.

SPECIFICATION forming part of Letters Patent No. 770,514, dated September 20, 1904.

Application filed January 7, 1904. Serial No. 188,117. (No model.)

To all whom it may concern:

Be it known that we, DAVID THOMAS WALTERS and HERBERT GREGORY PRICHARD, citizens of the United States of America, and residents of the town of Goldbar, in the county of Snohomish and State of Washington, have invented certain new and useful Improvements in Snatch-Blocks, of which the following is a specification.

Our invention relates to improvements in snatch-blocks which are opened automatically by a protuberance on the rope, and has for its objects to provide a simplified, inexpensive, and durable snatch-block of this class embodying essential features of adaptability, utility, and general efficiency, which render it simple to apply the block to the rope, insures a positive opening of the block, and free clearance of the rope from the block when open.

The above-mentioned and other objects equally as desirable are attained by the constructions, combinations, and arrangements of parts as disclosed on the drawings set forth in this specification and succinctly pointed out in the appended claims.

With reference to the drawings filed herewith and bearing like reference characters for corresponding parts throughout, Figure 1 is a side view of our improved snatch-block. Fig. 2 is a vertical transverse section thereof, and Fig. 3 is an edge view of the block and shows by broken lines the position of the locking-hook and movable section of the cheek as the block is about to open and also the position of the stirrup when about to be engaged with said hook in closing the block.

This invention includes a shell 4, consisting of opposite cheeks 5 and 6, fastened together by suitable transversely-disposed distance-pieces, as collar-bolts 7, secured to the lower portion of the cheeks. The cheek 5 is formed of two sections 8 and 9, which are connected by suitable hinges, as 10, fastened on the outer surfaces of the sections and permitting the upper section 9 to swing outwardly.

Seated in suitable apertures formed in the cheek 6 and lower section 8 of cheek 5 is the

sheave-axle 11, which consists of a bolt slightly reduced in diameter at the point to afford a shoulder on the axle, which bears against the inner surface of cheek 6, and this bolt is formed with a square head 12 of considerable length, which projects outwardly and fits at the inner end in a corresponding recess provided in the outer surface of section 8 of cheek 5 about the axle-aperture therein to secure the axle from rotation, and upon this axle is rotatably mounted the sheave 14, which may be of any ordinary or desired construction.

At the upper end of cheek 6 is an upwardly-projecting plate 15, having a lug at the lower end, which fits freely between opposite lugs arranged on the upper end portion of said piece, and in these lugs corresponding apertures are formed to receive a suitable pintle, as a bolt 16, so as to form a hinged connection between the side piece and plate, and a lip, as 17, extends upwardly from cheek 6 to engage the inner surface of said plate to keep it from swinging inwardly. On plate 15 is a transversely-disposed locking-pin 18, which is suitably rotatably mounted at one end on said plate and extends across the frame 4 and is formed with a laterally-projecting hook 19 at the opposite end. On this pin a wheel 20 is fixedly mounted directly over the sheave 14, and this wheel is formed with two rows of teeth arranged about the periphery, with the teeth of one row set opposite to the spaces occurring between the teeth of the other row, so as to insure engagement with said wheel of the enlargements provided on the rope, and in the upper edge of section 9 of cheek 5 a semicircular notch is formed to receive the pin 18 when it is resting substantially parallel with the axle of the sheave. Upon the pin 18 is also mounted a yoke 21, the stems of which embrace the wheel 20 and are provided with corresponding apertures fitting said pin freely, and mounted on the head of this yoke is a hook 22, the stem of which is swiveled in a suitable aperture provided in said head at right angles to the pin 18, thus permitting the hook to swing about the pin and also turn

on the yoke, so that the block will be freer to conform more directly to the line of strain on the rope.

Reference-numeral 23 indicates a substantially V-shaped stirrup which is rounded at the apex to fit over pin 18 and is connected at the opposite ends of the stems with the block by a link 24, formed with opposite lugs at one end which embrace the head of axle 11, and these lugs and the head are formed with corresponding apertures through which a pivot-bolt 26 is passed to connect the link with the head, and the opposite end of this link is formed with opposite lugs spaced somewhat farther apart than the lugs at the other end and provided with corresponding apertures through which a pivot-bolt 27 is passed, and this bolt is of suitable length to project beyond said lugs and engage in suitable corresponding apertures formed in the separated ends of the stems of the stirrup, which are suitably separated at this end to embrace said link freely, so that the link will be free to swing downwardly and inwardly and rest against the cheek of the block when the opposite end of the stirrup is engaged with the pin 18, and thereby bring the pivoted connection of the link with the stirrup inwardly past the connection of the link with the block, and thus keep the block more securely closed while still permitting the stirrup to be brought well upwardly by swinging the link outwardly when desired to engage it with the locking-pin 18 in closing the block.

When the block is closed, the parts thereof will stand substantially as shown by bold lines in the several views of the drawings, and when the enlargement on the rope reaches wheel 20 it will carry same to rotation in passing through the block, and thus turn the locking-pin and bring the point of hook 19 downwardly, allowing the stirrup to slip free of the pin, and thereby release section 9 of cheek 5, which will be free to swing outwardly, and also releasing the shell of the block, so that it is free to swing on pivot 16, thus allowing the block to open widely for a free clearance of the rope.

This block is especially useful in snaking logs, as in each turn in the logway one of the blocks may be arranged to guide the hauling-rope, and as the enlargement of the rope made by the eye-splice reaches the block it serves to rotate the locking-pin, and thereby unlocks the block, which will then be caused to open by the strain on the rope.

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

1. In a snatch-block, the combination with a shell; of an upwardly-projecting plate hinged to one cheek of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate and having a hook at the op-

posite end, a link pivotally mounted on said shell, and a stirrup for said pin pivotally connected with said link.

2. In a snatch-block, the combination with a shell; of an upwardly-projecting plate hinged to one cheek of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate and having a hook at the opposite end, a link pivotally mounted on said shell and arranged to swing inwardly at the free end and rest against said shell, and a stirrup for said pin pivotally connected with said link adjacent the free end.

3. In a snatch-block, the combination with a shell having a cheek part movable to open the block; of a transversely-disposed locking-pin rotatably mounted on said shell and having a hook, a link pivotally mounted on the shell, and a stirrup adapted to engage said pin and pivotally engaged with said link and arranged to normally lie opposed to said cheek part.

4. In a snatch-block, the combination with a shell, an axle, and a sheave mounted thereon; of an upwardly-projecting plate hinged to one cheek of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate having a hook at the opposite end, means fixedly mounted on said pin over said sheave to be engaged by a part of the rope, and a stirrup for said pin swingably mounted on said shell.

5. In a snatch-block, the combination with a shell, an axle, and a sheave mounted thereon; of an upwardly-projecting plate hinged to one cheek of said shell, a locking-pin rotatably mounted at one end on said plate and having a hook at the opposite end, means fixedly mounted on said pin over said sheave to be engaged by a part of the rope, a link pivotally mounted on said shell, and a stirrup for said pin pivotally connected with said link.

6. In a snatch-block, the combination with a shell, an axle, and a sheave mounted thereon; of an upwardly-projecting plate hinged to one cheek of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate and having a hook at the opposite end, a toothed wheel fixedly mounted on said pin over said sheave and having opposite rows of teeth with the teeth of one row arranged opposite to the spaces between the teeth of the other row, and a stirrup for said pin swingably mounted on said shell.

7. In a snatch-block, the combination with a shell, an axle, and a sheave mounted thereon; of an upwardly-projecting plate hinged to one cheek of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate and having a hook at the opposite end, a toothed wheel fixedly mounted on said pin over said sheave and having opposite rows of teeth with the teeth of one row arranged opposite to the spaces between the teeth of the

other row, a link pivotally mounted on said shell, and a stirrup for said pin pivotally connected with said link.

8. In a snatch-block, the combination with
5 a shell, an axle, and a sheave mounted thereon; of an upwardly-projecting plate hinged to one cheek of said shell, a transversely-disposed locking-pin rotatably mounted at one end on
10 said plate and having a hook at the opposite end, means fixedly mounted on said pin over said sheave to be engaged by a part of the rope, a yoke embracing said wheel and pivotally engaged with said pin, a hook swiveled on said yoke, and a stirrup for said pin swingably mounted on said shell.

9. In a snatch-block, the combination with
15 a shell having one cheek formed with an upper and a lower section hinged together, an axle, and a sheave mounted thereon; of an upwardly-projecting plate hinged to the undivided cheek
20 of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate and having a hook at the opposite end, means fixedly mounted on said pin over said
25 sheave to be engaged by a part of the rope, and a stirrup for said pin swingably mounted on said shell.

10. In a snatch-block, the combination with
30 a shell having one cheek formed of an upper and a lower section hinged together, an axle, and a sheave mounted thereon; of an upwardly-projecting plate hinged to the undivided cheek of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate
35 and having a hook at the opposite end, a toothed wheel fixedly mounted on said pin over said sheave, a link pivotally mounted on said shell, and a stirrup for said pin pivotally connected with said link.

40 11. In a snatch-block, the combination with a shell having one cheek formed of an upper and a lower section hinged together, an axle, and a sheave mounted thereon; of an upwardly-projecting plate hinged to the undivided cheek
45 of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate and having a hook at the opposite end, means fixedly mounted on said pin over said sheave to be engaged by a part of the rope, a link
50 pivotally mounted on said shell and arranged to swing inwardly at the free end and rest against said shell, and a stirrup for said pin

pivotally connected with said link adjacent its free end.

12. In a snatch-block, the combination with 55
a shell having one cheek formed of an upper and a lower section hinged together, an axle projecting at one end beyond said divided cheek, and a sheave mounted thereon; of an
60 upwardly-projecting plate hinged to the undivided cheek of said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate and having a hook at the opposite end, a toothed wheel fixedly mounted on said pin over said sheave, a link pivotally
65 connected with the projecting end of said axle, and a stirrup for said pin embracing said link and pivotally connected therewith adjacent its free end.

13. A snatch-block comprising a shell hav- 70
ing one cheek formed of an upper and a lower section hinged together, an axle projecting at one end beyond said divided cheek, and a sheave mounted thereon, an upwardly-projecting plate hinged to the undivided cheek of
75 said shell, a transversely-disposed locking-pin rotatably mounted at one end on said plate and having a hook at the opposite end, a toothed wheel fixedly mounted on said pin over said sheave, a yoke embracing said wheel and pivotally engaged with said pin, a hook swiveled on said yoke, a link pivotally connected with the projecting end of said axle, and an inverted substantially V-shaped stirrup for said pin embracing said link and pivotally connected 85 therewith adjacent the free end.

14. In a snatch-block, the combination with
a shell having a cheek part movable to open the block, an axle, a sheave mounted thereon, and locking means; of a wheel arranged over
90 said sheave and operatively connected with said locking means and having opposite rows of teeth adapted to engage with a part of the rope and arranged with the teeth of one row opposite to the spaces between the teeth of 95 the other row.

Signed at Goldbar, Washington, this 16th day of December, 1903.

DAVID THOMAS WALTERS.
HERBERT GREGORY PRICHARD.

Witnesses:

O. S. LEWIS,
FRANCIS FIORINI.