

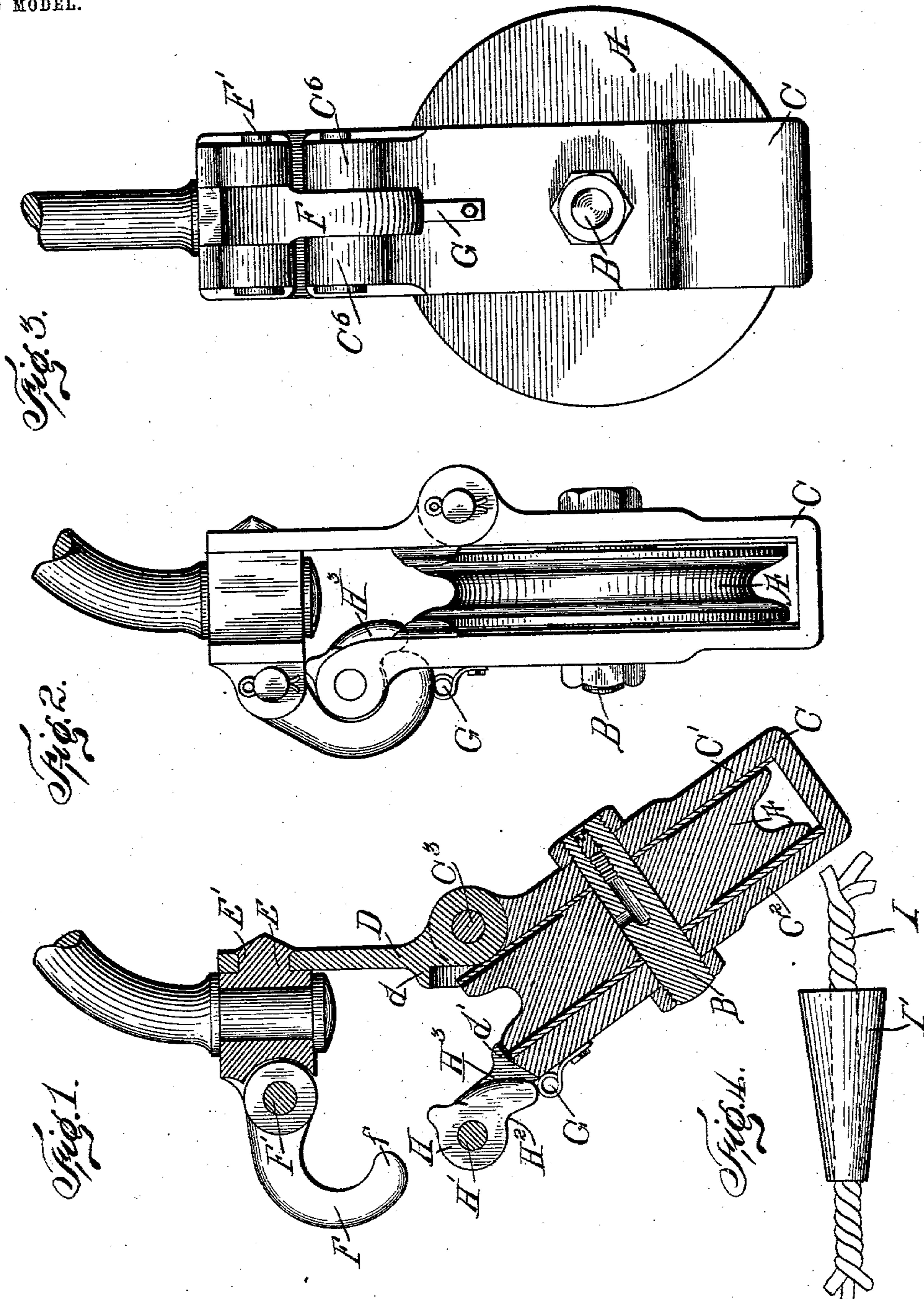
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PATENTED NOV. 10, 1903.

D. E. WELSH.
SNATCH BLOCK.

APPLICATION FILED APR. 8, 1903.

NO MODEL.



WITNESSES:

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SNATCH-BLOCK.

SPECIFICATION forming part of Letters Patent No. 743,965, dated November 10, 1903.

Application filed April 8, 1903. Serial No. 151,591. (No model.)

To all whom it may concern:

Be it known that I, DAVID EDWARD WELSH, a citizen of the United States, and a resident of Cottagegrove, in the county of Lane and State of Oregon, have made certain new and useful Improvements in Snatch-Blocks, of which the following is a specification.

My invention is an improvement in snatch-blocks, having for objects, among others, to provide a novel construction of automatic trip or releasing mechanism whereby the hauling-line will be thrown out of the block as the log or other object being hauled approaches the block to permit the log to pass the block, thus obviating the necessity of a signalman at each block and the stoppage of the engine, as is usual under the present conditions for the release of an ordinary snatch-block; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a longitudinal section, and Fig. 2 an edge view, of a block embodying my invention. Fig. 3 is a side view of the block, and Fig. 4 is a detail view showing the tripping projection on the rope or cable.

In carrying out my invention I provide the pulley A, supported on the pin B, carried by the pulley-frame C, having the side plates C' and C². The side plate C' is jointed at its upper end at C³ to the lower end of a hanger D, which pivots at its upper end on the trunnion E' of the cross-head E, so the pulley-frame when opened, as shown in Fig. 1, may swing on its connection with the cross-head. The connecting-hook F is jointed at F' to the cross-head E at the opposite side from the trunnion E', and the said hook F at its free end is designed to secure the pulley-frame in its closed position, as shown in Fig. 2. To this end when the pulley-frame is adjusted to the position shown in Fig. 2 the hook F may be pressed in at its free end to engage with the pulley-frame and secure the same closed, the swinging end of the hook F being engaged by the spring G, carried by the pulley-frame and operating to yieldingly hold the hook in engagement with the frame. To forcibly free the hook F, I provide the releasing-cam H,

jointed at H' between lugs C⁶ at the upper end of the side plate C² and provided with a hollow or depression H² in its outer side to receive the point f of the hook F and having a projecting portion H³ opposite the depression H² to protrude into the space between the side plates C' and C² and into the path of a projection I' on the rope I, so such projection by engagement with the releasing-cam at H³ when the parts are in the position shown in Fig. 2 will force said cam to the position shown in Fig. 1, releasing the hook F and permitting the block to open, as shown in Fig. 1, to discharge the rope so the log may pass. When the log has passed and it is again desired to guide the hauling-rope, such rope may be slipped into the pulley and the parts readjusted to the position shown in Fig. 2.

It will be noticed from the foregoing that I provide a block having movable devices for holding the block closed and means for operating positively upon said movable devices to release the same to permit the block to open. It will also be noticed that in carrying out my invention I provide by the swinging hanger D sufficient space between the pulley-frame and the cross-head for the arrangement and operation of the connecting devices and also ample space for the escape of the rope from the pulley-block when the latter is open.

The swinging hanger D is provided at d with a bead or projection to overlap the pulley A, and a similar bead or projection d' is arranged on the plate C², said beads d and d' guiding the rope to the pulley and preventing any jamming of the rope in the operation of the block.

As will be understood from Figs. 1 and 2, I prefer to provide the releasing-cam H on its inner side near its upper end with a projecting spur, which by contact with the cross-head in the operation of closing the block prevents the cam from being forced past its proper position between the jaws of the block. I also prefer to round the surface of the block H to provide an easier contact with the releasing-cam in the operation of the device.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The improvement in pulley-blocks here-

in described comprising the cross-head, the connecting-hook jointed at one end to said cross-head, the hanger jointed to the opposite side of the cross-head, the pulley, the pulley-frame having the opposite side plates, one of which is jointed to the lower end of the hanger, the other side plate being provided at its upper end with lugs spaced apart, the cam pivoted between the spaced-apart lugs of said side plate and provided at its outer side with a depression to receive the point of the connecting-hook and arranged at its inner side to protrude into the path of the projection of the rope or cable, and a spring for yieldingly holding the point of the connecting-hook in the outer depression of the cam substantially as set forth.

2. The combination of the pulley, the pulley frame and support to which one side of the frame is jointed so the frame may swing on said support, a connecting-hook for securing the opposite side of the frame, and a cam carried by the frame and arranged to positively disconnect the hook, said cam being arranged for operation by a projection on the rope guided by the pulley substantially as set forth.

3. A pulley-block arranged to open to permit the escape of the rope and provided with movable devices for holding the block closed, and with means for positively operating said movable devices to open the block, said means being arranged for operation by devices on the rope substantially as set forth.

4. The combination of the pulley, the pulley-frame, a hanger to which said frame is

jointed at one side, a cam carried by the other side of the frame and arranged to protrude into the path of a projection on the rope guided by the pulley and the connecting-hook arranged for operation by the cam substantially as set forth.

5. The combination of the cross-head, a hanger on the cross-head, the pulley-frame jointed to said hanger, a cam carried by the opposite side of the frame and arranged to protrude into the pulley-frame when the latter is closed, the hook jointed to the cross-head and movable into and out of position to hold the frame closed, and a spring for detachably securing the connecting-hook in position to hold the frame closed substantially as set forth.

6. The combination with the cross-head and the pulley-frame of the connecting-hook between the cross-head and frame and the releasing-cam carried by the frame and arranged to positively operate the hook to release the frame so the block may open substantially as set forth.

7. The combination with the pulley-frame and a support therefor to which the frame is jointed at one side, of devices for connecting the other side of the frame with its support and a cam arranged to positively release said devices, said cam being arranged for operation by a projection on the rope guided by the pulley-block substantially as set forth.

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Witnesses:

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