

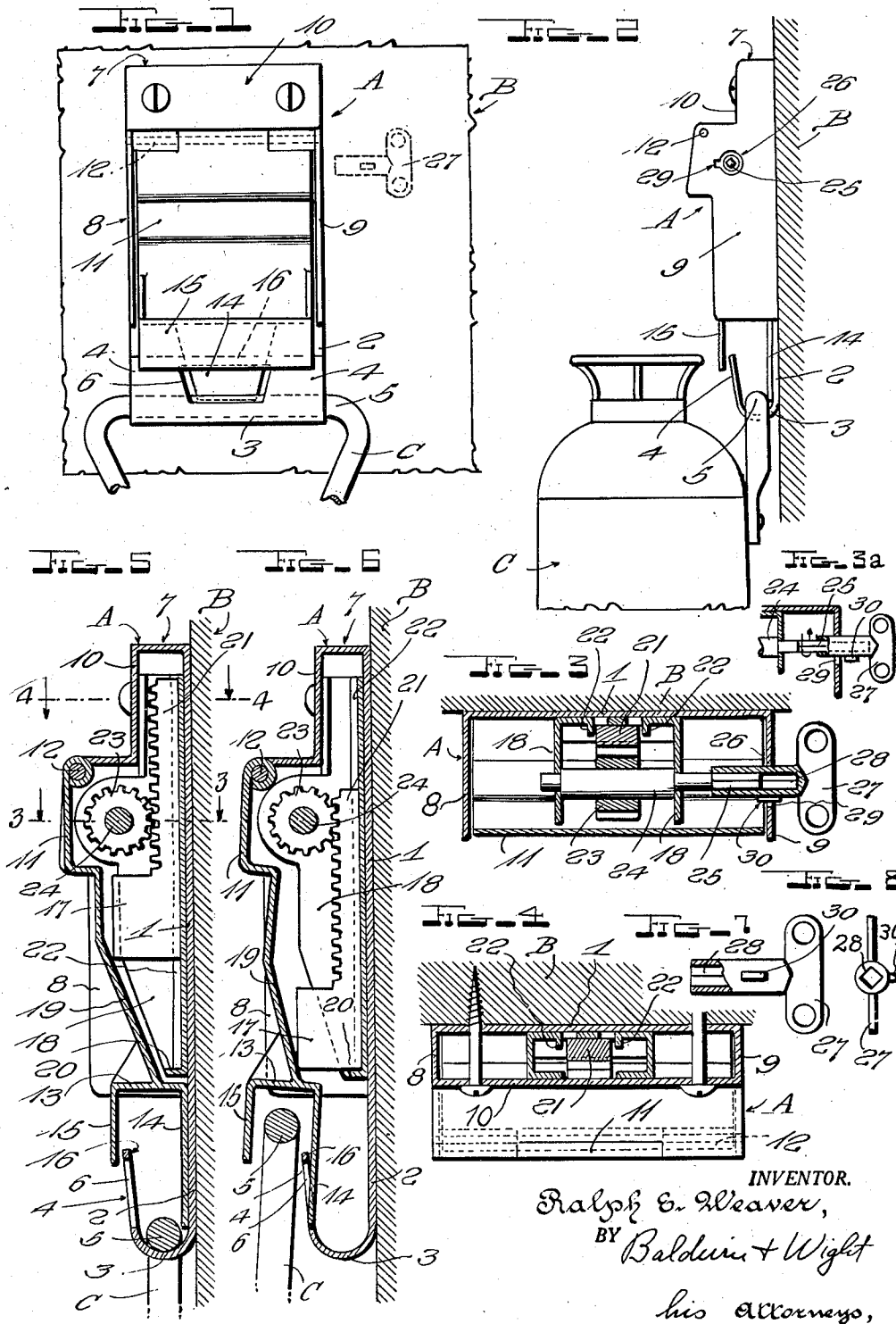
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HANGER FOR EMERGENCY EQUIPMENT

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HANGER FOR EMERGENCY EQUIPMENT

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9 Claims. (Cl. 248—203)

This invention relates to article supports or hangers, and, more particularly, to hangers for fire extinguishers or other emergency equipment.

Fire extinguishers customarily are supported or hung on a bracket or hanger of such construction that the extinguisher may be readily removed for use in case of necessity. Obviously, any fire extinguisher so supported or hung in position and apparently ready for use should be charged with extinguishing fluid, and a general object of the present invention is to provide a support or hanger which is adapted automatically to be disabled for receiving an extinguisher after the latter has been removed from the hook, requiring the conditioning of the hanger by a responsible person for again receiving and supporting the extinguisher. Because the hanger thus automatically becomes disabled or rendered incapable of receiving the extinguisher as soon as the extinguisher has been removed from the hook, it is not possible for an unauthorized person to replace the extinguisher.

A further object of the invention is to provide a hanger of the character described which is of rugged construction and which is positive in its operation and is adapted to be constructed of non-corrosive materials so as to dispense with the necessity of using springs or other parts which cannot easily be made of non-corrosive materials.

Other objects will become apparent from a reading of the following detailed description, the appended claims, and the accompanying drawing, in which:

Figure 1 is a front elevation of a hanger embodying the invention shown as applied to a wall, and showing also a bail or handle of a fire extinguisher supported by the hanger;

Figure 2 is a side elevation of the equipment shown in Figure 1;

Figure 3 is a horizontal section taken on the line 3—3 of Figure 5 and showing an operating key in one position;

Figure 3^a is a fragmentary sectional view also on the line 3—3 of Figure 5, and showing the operating key in another position;

Figure 4 is a horizontal section on the line 4—4 of Figure 5;

Figure 5 is a central vertical sectional view of a hanger embodying the invention and showing the parts in the positions occupied when a fire extinguisher or the like is supported on the hanger;

Figure 6 is a view similar to Figure 5 but showing the positions occupied by the parts when the

extinguisher or other supported article has been removed from its position of support on the hanger;

Figure 7 is a plan view, partly in section, of an operating key; and

Figure 8 is an end elevation of the key shown in Figure 7.

As an illustrative embodiment of the invention, the drawing shows a hanger A secured to a wall generally designated B and supporting a fire extinguisher generally designated C.

The hanger comprises a support including a back plate 1 terminating at its lower end in a hook shank 2 continuing through a hook loop 3 to an upturned hook free end portion 4. The hook opens upwardly to receive the bail 5 of the extinguisher C, and the free end portion of the hook is cut away as at 6 for a purpose to be set forth later.

Fixed with respect to the hanger support and, in this instance, integral therewith, is a housing including a top wall 7, side walls 8 and 9, and an upper front wall 10. The bottom edges of the side walls 8 and 9 are disposed horizontally and extend across and above the hook opening in spaced relation to the top of the free end portion 4. As thus disposed, these bottom portions constitute blocking parts which limit upward movement of the bail 5 but are spaced sufficiently above the hook free end portion to provide clearance, permitting movement of the bail 5 horizontally between the top of the free end portion and the bottom edges of the side walls 8 and 9.

A blocking member generally designated 11 is pivoted as at 12 on the front wall 10, and at its lower end is formed with a horizontal part 13 and with two spaced, vertically extending parts 14 and 15. The part 14 normally extends alongside the hook shank 2 and between the latter and the bail 5, as shown in Figure 5. The vertically extending part 15 normally is in the position shown in Figure 5, in which it spans the clearance between the bottom edges of the walls 8 and 9 and the top of the hook free end portion. When it is desired to remove the fire extinguisher from the hanger, the extinguisher is raised until the top part of the bail 5 is at a level above the top of the hook free end portion 4, and the bail is then moved away from the hook shank to the position shown in Figure 6, the bail thereby being positioned free of the hook, whereupon the extinguisher may be lowered and put into use. Movement of the bail to the position shown in Figure 6 is accompanied by outward swinging movement of the member 11, which positions the blocking

part 14 so as to span the clearance between the hook free end portion and the lower edges of the side walls 8 and 9.

In order to prevent the extinguisher from being returned to the hanger, means are provided for locking the member 11 in the position shown in Figure 6 in response to movement of the blocking member to this position. In the form shown, a weight 17 is mounted to slide between guide bars 18 secured to the support. Normally, the weight 17 is in an elevated position, as shown in Figure 5, wherein it engages an inclined part 19 of the member 11 which maintains the weight in its elevated position. The member 11 normally is restrained against outward swinging movement by engagement of the lower end of the blocking part 14 with the bail 5, as shown in Figure 5. When the bail is lifted and moved outwardly, the weight 17 pushes downwardly on the inclined part 19 and cams the member 11 to the position shown in Figure 6, the weight finally coming to rest on a limiting flange 20. The bar 16 extending across the top of the hook free end portion 4 is engaged by the blocking part 14 for limiting the outward swinging movement of the member 11. When the parts have moved to the positions shown in Figure 6 it will not be possible to return them to the positions shown in Figure 5 without first raising the weight 17.

Preferably, means for raising the weight are so constructed that the weight can be raised only by the use of a key or similar device entrusted to one responsible for seeing that the extinguisher is refilled before being replaced on the hanger. To this end the weight is provided with a rack 21 adapted to slide between guide flanges 22-22. A pinion 23 in mesh with the rack 21 is fast with the shaft 24 journaled in the guide bars 18 and provided with a square, key-receiving, end portion 25 aligned with an opening 26 in the housing wall 9. A key 27 provided with a squared opening 28 adapted to fit over the squared end 25 of the shaft is adapted to be engaged with the shaft for manual rotation thereof and lifting of the weight 17. In order to maintain the weight in its elevated position temporarily while replacing the extinguisher on the hanger, the housing is formed with a slot 29 adapted to receive an exterior lug 30 on the key shank. The arrangement is such that the key must first be engaged with the shaft and the latter rotated to raise the weight to the position shown in Figure 5, after which the key is slid in further over the shaft 25 until the lug 30 moves into the slot 29, whereby the key and shaft will be restrained against rotation, thus enabling the operator to use both hands in replacing the extinguisher on the hanger. After the extinguisher has been placed on the hanger, the member 11 will have been moved to the position shown in Figure 5, wherein the inclined portion 19 engages the weight 17, preventing the weight from moving downwardly, and the key may then be withdrawn.

It will be observed that the vertically extending part 14 at the bottom of the member 11 constitutes a blocking part which, when in the position shown in Figure 6, spans the clearance space between the hook free end portion 4 and the bottom edges of the walls 8 and 9. The vertically extending part 15 of the member 11 constitutes a guard which spans the clearance space when the parts are in the position shown in Figure 5, thereby preventing or rendering it difficult for anyone to place any other object on the hook

which might interfere with removal of the fire extinguisher. The guard 15 also is engageable by the bail 5 when the extinguisher is removed from the hook, whereby the member 11 may be positively swung to its blocking position.

The parts normally will be positioned as shown in Figure 5. In order to remove the fire extinguisher from the hanger, the extinguisher is raised until the top of the bail 5 is above the level of the hook free end portion 4, and the hook and bail are then moved outwardly away from the wall. The bail 5 will engage the guard 15, positively moving the member 11 outwardly to the position shown in Figure 6, such movement being assisted by the camming action of the weight 17 which moves downwardly to its lower position as shown in Figure 6. The blocking part 14 then spans the clearance between the hook and bottom edges of the side walls 8 and 9, rendering it impossible to replace the bail and extinguisher, and the weight 17 will hold the member 11 in its Figure 6 position. After the extinguisher has been refilled, an operator having the key 27 inserts the key through the opening 26 and over the squared end 25 of the shaft, but pushes the key inwardly only until driving engagement with the shaft has been effected without moving the lug 30 into the slot 29. The shaft and pinion are then turned until the weight has been restored to its elevated position, and the key is then pushed inwardly until the lug 30 enters the slot 29. This will hold the shaft and pinion against turning, and the extinguisher may be placed on the hook, the member 11 then being returned to its Figure 5 position, after which the key may be removed.

The construction shown herein embodies the invention in its now preferred form, but it will be understood that various changes may be made without departing from the invention as defined in the claims.

I claim:

1. In a supporting hanger of the class described, a relatively fixed supporting hook having a shank portion and a free end portion; a first blocking part adapted to extend across and in spaced relation to the hook opening with clearance between said blocking portion and the hook free end portion for permitting insertion and withdrawal of an article to be supported; and a second blocking part extending substantially at right angles to said first blocking part and being mounted for pivotal movement to a first position adjacent said hook shank portion and to a second position substantially spanning the clearance between the hook free end portion and said first blocking part.

2. In a supporting hanger of the class described, a relatively fixed supporting hook opening upwardly and including a shank portion and a free end portion; a first blocking part extending substantially horizontally across the hook opening and in vertically spaced relation to said free end portion to provide clearance between said first blocking part and said free end portion; a second blocking part normally positioned adjacent said shank portion; a guard normally positioned to substantially close said clearance; and means mounting said second blocking part and said guard to move to other positions in which said second blocking part substantially spans said clearance and said guard does not span said clearance.

3. In a supporting hanger of the class described, a relatively fixed supporting hook open-

ing upwardly and including a shank portion and a free end portion; a first blocking part extending substantially horizontally across the hook opening and in vertically spaced relation to said free end portion to provide clearance between said first blocking part and said free end portion; a member comprising a second blocking part normally positioned adjacent said shank portion and a guard normally positioned to substantially close said clearance; and means mounting said member pivotally to move to a position in which said second blocking part substantially spans said clearance and said guard is disposed away from the clearance.

4. In a supporting hanger of the class described, a relatively fixed supporting hook opening upwardly and including a shank portion and a free end portion; a first blocking part extending substantially horizontally across the hook opening and in vertically spaced relation to said free end portion to provide clearance between said first blocking part and said free end portion; a second blocking part normally positioned adjacent said shank portion; a guard normally positioned to substantially close said clearance; means mounting said second blocking part and said guard to move to other positions in which said second blocking part substantially spans said clearance and said guard does not span said clearance; and means operable automatically in response to movement of said second blocking part and said guard for preventing return thereof to said first named positions.

5. In a supporting hanger of the class described, a relatively fixed supporting hook opening upwardly and including a free end portion; blocking means including a part normally positioned so as to permit movement of a supported article from the hook and over the free end portion thereof; means mounting said blocking means to move to a second position in which it obstructs movement of an article over said free end portion; a weight normally in an elevated position in which it permits said blocking means to be positioned with its said part in said normal position; and means mounting said weight to be responsive to movement of said blocking means to its said second position for shifting to a lower position in which said weight prevents return of said blocking means to its normal position.

6. In a supporting hanger of the class described, a relatively fixed supporting hook including a free end portion; blocking means extending from a level substantially above said free end portion to a level not substantially thereabove and including a part adapted normally to be positioned so as to permit removal of a supported article from said hook and over said free end portion; means mounting said blocking means to shift relatively to said hook to place said part in a second position in which it obstructs movement of said article over said free end portion; a weight engageable with said blocking means when its said part is in its normal position for maintaining said weight ele-

vated; and means mounting said weight to be movable downwardly to a lower position in response to said shifting of said blocking means, said weight when in its lower position obstructing return movement of said blocking means.

7. In a hanger of the class described, a support adapted to receive an article to be hung; a blocking part normally positioned so as to permit removal of said article from said support; means mounting said blocking part for movement to a second position in which it prevents placing of said article on said support; a normally elevated weight; means mounting said weight to move to a lower position in response to movement of said blocking part to its said second position, said weight when in its lower position preventing return of said blocking part to its normal position; and means for elevating said weight including a rack on said weight, and a key-operable pinion journaled to rotate about an axis fixed with respect to said support.

8. In a hanger of the class described, a support adapted to receive an article to be hung; a blocking part normally positioned so as to permit removal of said article from said support; means mounting said blocking part for movement to a second position in which it prevents placing of said article on said support; a normally elevated weight; means mounting said weight to move to a lower position in response to movement of said blocking part to its said second position, said weight when in its lower position preventing return of said blocking part to its normal position; a rack connected to said weight; a pinion meshing with said rack; a shaft journaling said pinion on said support and having a key-receiving end; a housing fixed with respect to said support and enclosing said rack, pinion, and shaft; and a key opening in said housing aligned with said key-receiving shaft end.

9. In a hanger of the class described, a support adapted to receive an article to be hung; a blocking part normally positioned so as to permit removal of said article from said support; means mounting said blocking part for movement to a second position in which it prevents placing of said article on said support; a normally elevated weight; means mounting said weight to move to a lower position in response to movement of said blocking part to its said second position, said weight when in its lower position preventing return of said blocking part to its normal position; a rack connected to said weight; a pinion meshing with said rack; a shaft journaling said pinion on said support and having a key-receiving end; a housing fixed with respect to said support and enclosing said rack, pinion, and shaft; a key opening in said housing aligned with said key-receiving shaft end; a slot in said housing; and a key formed to engage said shaft end and having an exterior lug engageable at will in said slot for maintaining said key and shaft against rotation.

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