R. M. HILL.

HOIST FOR PIANOS, SAFES, &C.

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To all whom it may concern:

Be it known that I, ROLAND M. HILL, a citizen of Canada, and a resident of Hamilton, in the county of Wentworth and Province of Ontario, Canada, have invented new and useful Improvements in Hoists for Pianos, Safes, and other Articles, of which the following is a specification.

My invention consists of a platform and means for suspending the same from an upper window-sill of a building jointly with the inner and upper side of the wall on each side of the window-frame and means for raising and lowering the platform and positioning the same with said window-sill for loading and unloading purposes.

The objects of my invention are, first, to remove and to deposit furniture and other articles from and to upper rooms; second, to afford facilities for attaching and detaching the hoist to the building without interfering with or injuring the building. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the device in loading and unloading position opposite to a window-opening, the window-sash of which is removed from the stationary frame and part of the building being in section. Fig. 2 is a front elevation of the same, a part of the wall on each side of the window-opening being broken away to show the end parts of the transverse supporting-bar; and Fig. 3 is an enlarged detail front elevation of one end of the upper bar of the hoist.

Similar characters refer to similar parts throughout the several views.

In the drawings the wall of the building is indicated by A, the stationary window-frame by B, and the window-sill by C. D and E are adjustable incline-posts, the lower end of which rest on the window-sill C and abut against the lower stationary window-frame B. The outer parts of said lower ends of the posts D are in contact with the inner parts of the window-opening E of the wall A. The top of the posts D are held in position by the cross-rail F, which is rigidly secured to said posts D by suitable U-shaped straps 2, which are secured to said posts and cross-bar F. A suitable strap 3 is secured to the bar F, and the rope-pulley blocks H are pivotally suspended from the strap 3 at A. The lower end of the pulley-block H is pivotally connected to the strap J, which is secured to the cross-bar M, being the upper part of the hoist proper.

On the upper part of the posts D are straps N, secured thereto, and the rods P are pivotally connected thereto. The opposite end of the stay-rods P protrude through the upper part of the window-opening E and a distance into the interior of the building. The rods P pass through a cross-beam R, which extends at both ends a distance beyond the frame of the window and in close proximity to the inner part of the wall A.

The beam R is retained in position against the wall by the weight of the posts D and the hoist and also by headed pins S, which are inserted through holes in the rods P. The collars T, with through-pins S, are for a similar purpose, as are the pins S of the beam R. When the collar T engages with the beam R, then the upper part of the posts D extend farther from the wall A. This feature allows the upper ends of the posts D to be placed at varying distances from the wall. 6 is the platform of the hoist and is strengthened by under-ends 7. 8 represents guide-rails on the platform 6. The cross-bar M of the hoist has reduced ends 9, on which the eyelets of the platform side supporting-rods 12, 13, and 14 are adapted to swivel. The central rod 12 extends below the ribs 7 and underneath, with lips 15 extending a distance on the inner side of said ribs to grip the same. All the side rods 13, 14 are similarly connected to the ends of the cross-bar M, and the lower ends of the rods 13 and 14 are pivotally connected to eyebolts 16 and 17, which are secured to the platform 6 and extending through the ribs 7 for strength.

Underneath the wall side of the platform are plates 18, pivoted at 19 thereto. The 95 plates 18 are adapted to rotate on their pivots 19 to close themselves in entirely underneath the platform and the outer ends thereof to
extend and bear a certain distance on the sill C in order to partially bear the wall side weight of the platform and to steady the same while the platform is being loaded or unload-
ed, as the case may be. The pulley-block rope is indicated by 20 and is broken and to which horse-power may be applied to raise and to lower the hoist. It will be noticed that the pulley-block-connecting straps 3 and J and the rails 8 of the platform are nearer to one side of the hoist than to the other side. This feature is to adapt the platform for piano carrying. The high and heavy side of the piano should be on the left-hand side of the platform in order to be nearer to the central part of the platform. Also when raising or lowering the hoist the plates 18 are closed under the platform, and when the same is brought to position opposite to a window-opening then the plates 18 are rotated and brought to bear upon the window-sill.

In Fig. 3 of the drawings is seen a retaining-bolt for the rods 12, 13, and 14. The inner end 22 of the bolt extends through the bar M and is held by a nut 23, and the outer end 24 of the bolt extends over the eyelets of the rods and continues through the outer part of the reduced ends of said bar to retain the rods on said bar. A very important feature in this invention is the platform adjustable retaining-hooks 32, which are adapted to grip the window-sill C in the interior of the room. The hooks 32 are on each side of the platform next to the building and are secured between the platform and the under ribs 7 by means of leather straps or belts V, which are held firmly to the platform by means of bolts or rivets 35. The straps V are supplied with ordinary buckles 33, which connect the straps V with the hooks 32. The outer and loose end 36 of the straps V may be longer or shorter, according to the width of the window-sill, and the strap ends 36 allow for the lengthening or the shortening of the distance between the hooks 32 and the platform to suit various thicknesses of walls and sills.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a hoist as described, inclined posts adapted to stand on a sill and about a window, a cross-rail uniting the upper end of the posts, a beam capable of extending across the inner sides of a window and beyond, means for adjustably connecting said posts and beam, a cross-bar, a platform suspended from said bar, a pulley-block and means connecting the pulley-block with the cross-rail and the cross-bar.

2. In a hoist as described, inclined posts adapted to stand on a sill and about a window, a cross-rail uniting the upper end of the posts, a beam capable of extending across the inner side of the window and beyond, means for adjustably connecting said posts and beam, a cross-bar, a platform, means for suspending the platform from said bar, means connecting said bar and cross-rail and means connected to the platform and adapted to rest on the sill, and to close in non-operative position.

3. In a hoist as described, a platform adapted to be raised and lowered, means connected to the platform and adapted to rest on a sill, and to be closed in non-operative position, and means to adjustably connect the platform to the sill and retain said platform in position to the sill.

4. In a hoist as described, a platform adapted to be raised and lowered, means connected to the platform and adapted to rest on a sill and to be closed in non-operative position, and guide-rails on the platform.

5. In a hoist as described, a cross-bar with reduced ends, side rods, eyelets on the rods to fit on said ends, a platform adapted to be raised and lowered connected to the lower end of said rods, means on the ends of the bar to retain said eyelets, and means connected to the platform to rest on a sill.

Witnesses:

JOHN H. HENDRY,
RICHARD BUTLER.