

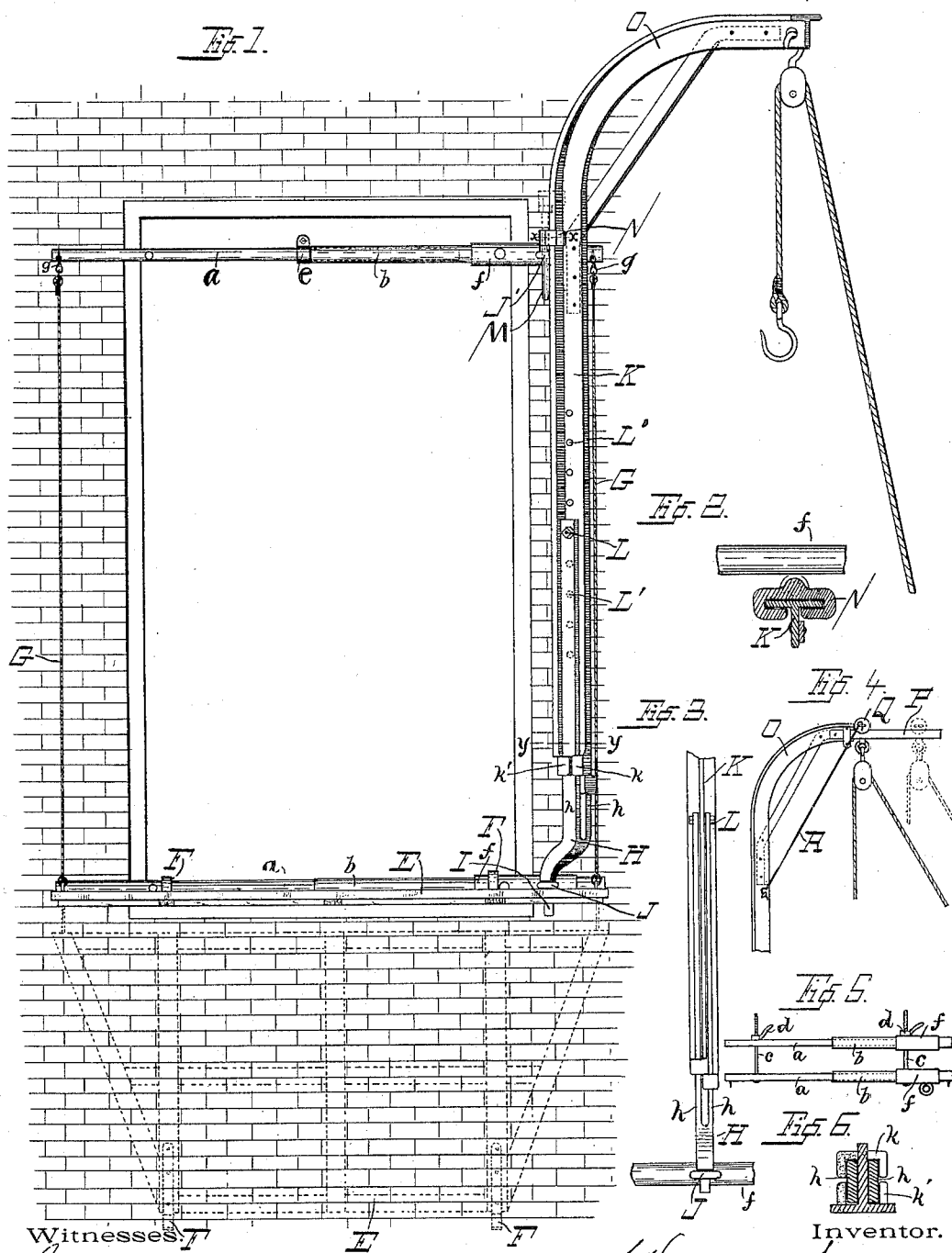
(No Model.)

2 Sheets—Sheet 1.

W. SAUER.
HOISTING APPARATUS.

No. 599,360.

Patented Feb. 22, 1898.



Witnesses. 77

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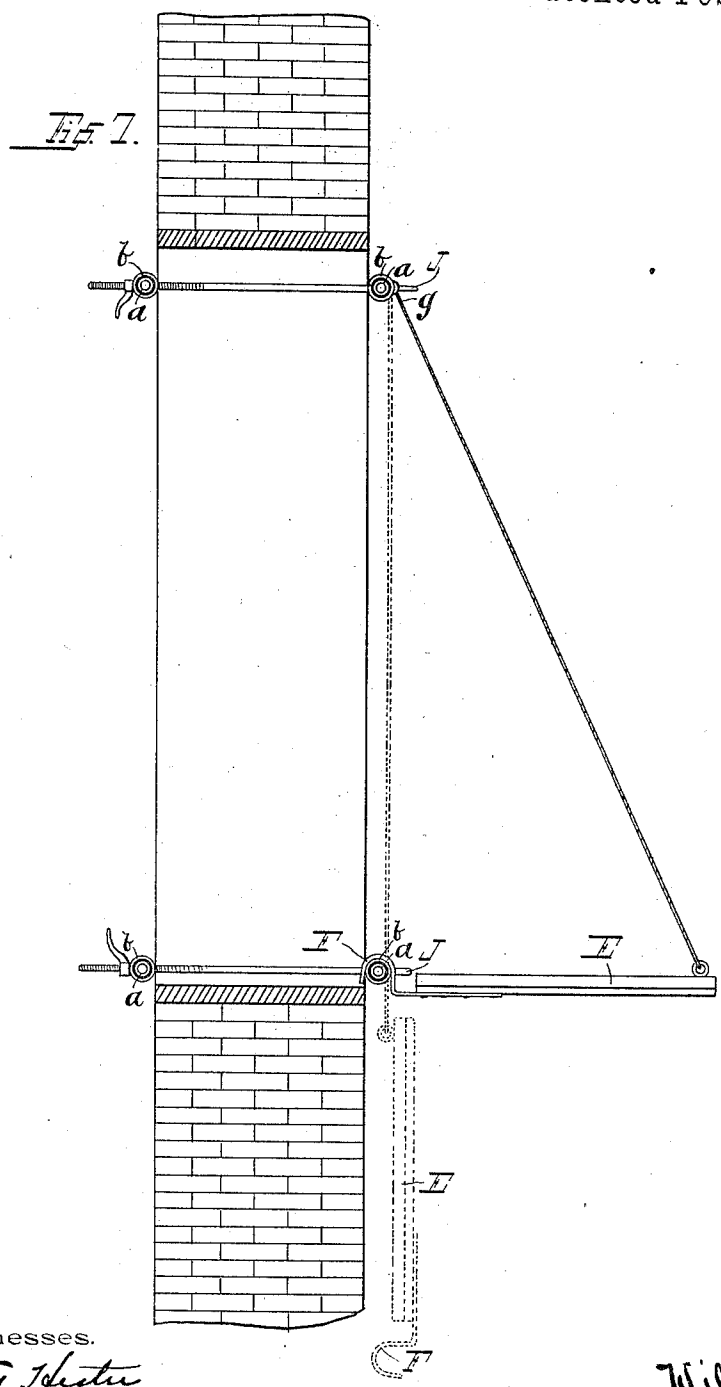
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HOISTING APPARATUS.

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UNITED STATES PATENT OFFICE.

WILLIAM SAUER, OF MILWAUKEE, WISCONSIN.

HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 599,360, dated February 22, 1898.

Application filed August 7, 1897. Serial No. 647,504. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SAUER, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Hoisting Apparatus, of which the following is a specification.

My invention relates to improvements in hoisting apparatus, with especial reference to that class of devices used by furniture-movers for elevating heavy or cumbrous articles to the upper-story windows of buildings.

The object of my invention is to provide a form of device which can be temporarily attached in any window, door, or other opening in a building without marring the casing and which can be readily adjusted with reference to the size of the opening.

In the following description reference is had to the accompanying drawings, in which—

Figure 1 is an elevation of a portion of a building, showing my invention as it is applied to one of the windows. Fig. 2 is a cross-section drawn on line X X of Fig. 1. Fig. 3 is a detail view of the lower portion of the crane post or mast in front elevation. Fig. 4 is a detail of the upper bent end or boom, showing an extensible arm applied thereto. Fig. 5 is a top view of the extensible holding or clamping frame, which engages the window-casing. Fig. 6 is a section view drawn on line Y Y of Fig. 1. Fig. 7 is a vertical section view drawn on a line through the center of the window shown in Fig. 1.

Like parts are identified by the same reference-letters throughout the several views.

For engaging the window-casing I have provided clamping-frames, which consist of the tubular telescoping bars *a a'* and *b b'*, united in pairs by means of screw-bolts *c* and adjusting-nuts *d*. The frames thus constructed can be readily adjusted both longitudinally and transversely and by means of the bolt *c* and nut *d* can be securely bound to the wall or casing on each side of the opening, one of the frames being located near the upper end of the opening and the other near its lower end, as shown in Fig. 1.

e is a set-collar which may be used to prevent the bars from telescoping together when loosened from the casing, and *f* is a strengthen-

ing-sleeve rigidly attached to the bar *b* to aid in supporting the crane-post.

E is a platform with its inner edge supported upon the bars *a a'* of the lower clamping-frame by means of hooks *F* and with its outer edge supported from the bars *a a'* of the upper frame by means of chains *G*, permanently attached to the platform and secured to the clamping-frame by means of snap-hooks *g*. When not in use, the platform may be disengaged at its inner edge and suspended by the chains *G*, as shown by dotted lines in Fig. 1.

The mast of my crane is also formed in adjustable sections, the lower section comprising a bifurcated bar *H*, offset at its lower end and formed into a hinge-pin *I*, which engages in a loop or eye *J*, projecting from the bar *b* of the clamping-frame. The upper section *K* of the mast is preferably formed of T-shaped iron, with the central flange fitting between the arms *h h* of the lower section and all three flanges slitted transversely near their lower ends and bent to form the clips *h'*, which engage the arms *h h*, as best shown in Fig. 6. The upper ends of the arms *h h* are secured to the T-iron by a bolt *L*, which fits interchangeably in the bolt-holes *L'* in the arms and T-iron flange.

M is the upper hinge-pin, removably engaged in an eye *J'* of the upper clamping-frame and provided with a bracket *N*, having a T-shaped channel, in which the cross-flanges of the T-iron are slidably engaged, as best shown in Fig. 2.

The upper end of the section *K* of the mast is provided with a rigid arm or boom *O*, which is preferably formed by bending the top of said section outwardly, as shown in the drawings, and the usual pulleys and tackle are secured to the outer end of the boom. If desired, however, the boom may be provided with an extension-section *P*, with a tackle-supporting pulley or roller *Q* supported thereon, the roller being held at any point of adjustment by means of adjustable stay-rods *R* on each side of the T-iron.

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

1. The combination of a pair of adjustable

clamping-frames adapted to be secured in a window, doorway or similar opening, a platform provided with hooks adapted to engage the lower clamping-frame, chains detachably
5 connecting the outer edge of the platform with the upper clamping-frame, and a crane removably supported from the clamping-frames, substantially as described.

2. The combination of a pair of telescoping
10 clamping-frames adapted to be secured in a window, doorway or similar opening, a platform adapted to be removably attached to said clamping-frames, and an adjustable crane removably hinged to the clamping-frames, sub-
15 stantially as described.

3. In a hoisting apparatus, substantially as described, the combination with the supporting clamping-frames, of the adjustable crane, comprising a lower mast-section bifurcated
20 at its upper end and formed into an offset hinge-pin at its lower end adapted to fit into an eye of the lower clamping-frame, an upper mast-section formed of T-iron with its upper end bent outwardly and provided with tackle,
25 and its lower end slidably engaged between the arms of the lower section, clips for securing the parts together, and a bolt for locking them at any desired point of adjustment, a hinge-pin slidably secured to the upper sec-

tion and adapted to be secured in an eye of
the upper clamping-frame, substantially as
described. 30

4. In a hoisting apparatus substantially as described, the combination with the supporting clamping-frames, of the adjustable crane,
35 comprising a lower mast-section bifurcated at its upper end and formed into an offset hinge-pin at its lower end adapted to fit into an eye of the lower clamping-frame, an upper mast-section formed of T-iron with its upper
40 end bent outwardly and provided with tackle, and its lower end slidably engaged between the arms of the lower section, clips for securing the parts together, and a bolt for locking them at any desired point of adjustment, a
45 hinge-pin slidably secured to the upper section and adapted to be secured in an eye of the upper clamping-frame, and an extension boom-piece secured to the outer end of the
50 T-iron, a tackle-supporting pulley mounted thereon, and stay-rods for adjustably supporting the pulley, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM SAUER.

Witnesses:

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A. B. BRIGGS.