

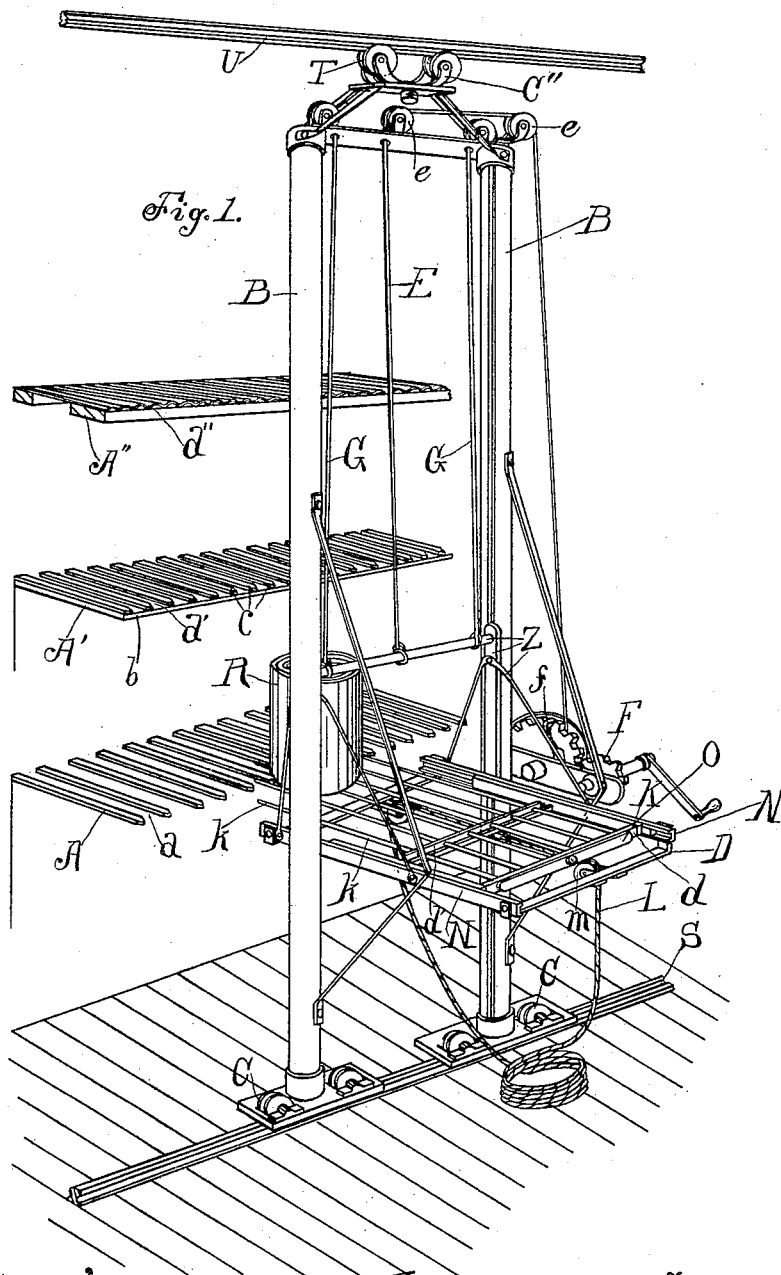
(No Model.)

2 Sheets—Sheet 1.

T. BESSING & W. A. BARKER.
DISPLAY SHELF AND CARPET ELEVATOR.

No. 493,542.

Patented Mar. 14, 1893.



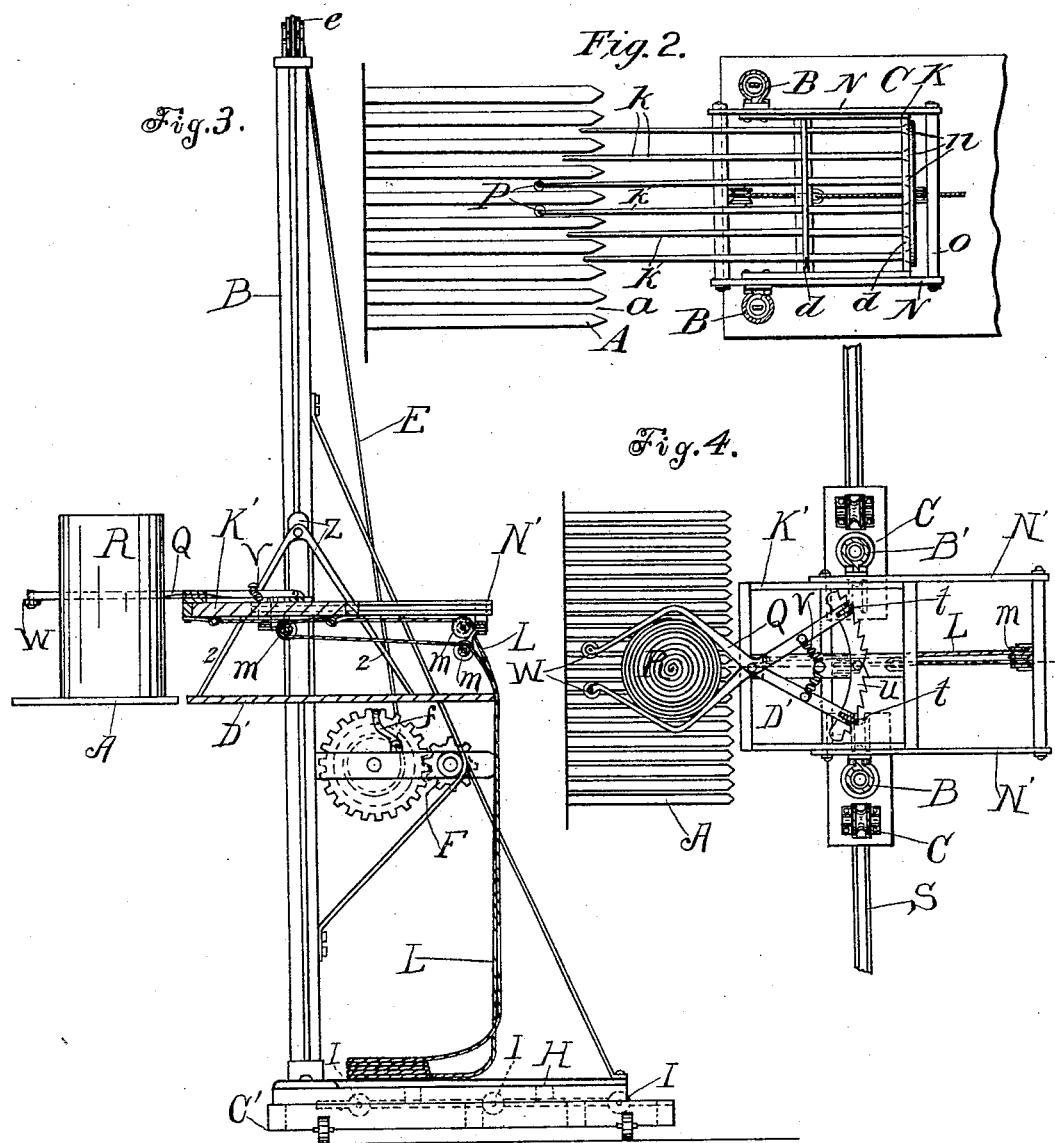
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UNITED STATES PATENT OFFICE.

THEODORE BESSING AND WILLIAM A. BARKER, OF LOS ANGELES,
CALIFORNIA.

DISPLAY-SHELF AND CARPET-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 493,542, dated March 14, 1893.

Application filed February 18, 1892. Serial No. 422,051. (No model.)

To all whom it may concern:

Be it known that we, THEODORE BESSING and WILLIAM A. BARKER, citizens of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Combined Display-Shelf and Carpet-Elevator, of which the following is a specification.

The object of our invention is to facilitate handling carpets.

Our invention consists essentially in the combination of a load-receiving shelf, an elevator frame arranged to move parallel with such shelf, an elevator platform mounted upon such frame and arranged to register with such shelf; means arranged to move the load to deposit it upon or remove it from the shelf when the platform and shelf register with each other, and means for raising, lowering and sustaining the platform.

The accompanying drawings illustrate our invention in several forms.

Figure 1 is a perspective view of one form of elevator with three forms of shelf adapted for use therewith. Fig. 2 shows the tips of the load sustaining fingers. Fig. 3 is a vertical section of our elevator provided with another form of the means for moving the carpet, which form is the substantial equivalents of the means shown in the other views for this purpose. A shelf with carpet thereon is also shown in this view. Fig. 4 is a plan view of the elevator shown in Fig. 3 with the exception that the elevator is mounted on a rail as shown in Fig. 1 instead of being mounted on the platform shown in Fig. 3.

A A' and A'' indicate load-receiving and sustaining shelves.

B indicates the elevator frame which is arranged on a truck C (C') to move parallel with such shelves.

D indicates an elevator platform.

Suitable appliances or means for raising, lowering and sustaining the platforms are indicated by the line or cord E arranged to pass over suitable pulleys *e* at the top of the frame and connected with the winch F, such winch and the pawl *f* with which it is provided. Weight cords G G are also provided for this purpose attached to the cord or platform to assist in elevating it. All these ap-

pliances are of well known construction and no extended description thereof is necessary.

The means for depositing the load upon the shelf and removing it therefrom may be of various descriptions which I will now describe. They may consist in the combination of a horizontally sliding frame K comprising a series of load supporting fingers *k* arranged to enter a series of finger chambering spaces *a* (*a'* or *a''*) in the shelf, the shelf provided with such spaces; means for moving the sliding frame toward and from the shelf to insert the fingers into and withdraw them from such spaces and the means for raising, lowering and sustaining the platform.

It also comprises the combination in an elevator of the class described of the elevator frame, an elevator platform provided with a horizontally sliding frame K comprising a series of load supporting fingers *k*; appliances for raising and lowering the elevator platform and holding it elevated; the shelf or series of shelves provided with a series of finger chambering spaces (*a*, *a'*, *a''*) means for moving the sliding frame toward and from the shelf to insert the fingers into, and withdraw them from such spaces.

The means shown for moving the sliding frame toward and from the shelf comprise the line L having its ends attached to the sliding frame and passing thence over pulleys *m* to the rear of the elevator. The pulleys *m*, *m*, are attached to the platform.

The horizontally sliding load-moving device consisting of the sliding frame and the line and pulleys just described and shown in Fig. 1 constitute auxiliary means arranged to move the load horizontally toward and from the shelf when the platform and shelf register with each other. In Figs. 3 and 4 is shown a modification of such auxiliary means comprising movable tongs arranged above a load sustaining platform to perform the function of the sliding frame when the platform and shelf register.

N (N') indicates the horizontal guides fixed to and forming part of the elevator cage Z and in which guides the sliding platform K (K') is arranged to slide.

The fingers *k* are inserted from rear to front through the two transverse perforated bars

d, d' , forming part of the platform D. They are provided with suitable heads n to prevent them from slipping too far forward, and a latch bar O, is pivoted to the rear side of the rear perforated bar d and is arranged to be turned into and out of the path of the fingers so as to secure them in the frame or to allow their withdrawal therefrom.

P. P indicate rollers arranged at the ends of two of the fingers to guide them into the spaces in the shelf. A greater or less number of the fingers may be provided with rollers as may be desired.

The auxiliary means shown in Figs. 3 and 4 for moving the load horizontally toward or from the shelf to deposit it upon or remove it from the shelf when the platform and shelf register with each other, consist of a pair of tongs Q pivoted to the sliding frame K' which is controlled by the line in the same manner as the sliding frame K shown in Fig. 1 so that when the platform D' is brought flush with the shelf A as shown in Fig. 4, the sliding frame with the tongs can be moved toward and from the shelf to move the carpet off of the shelf onto the platform and vice versa. The top of the platform D' (D) is smooth to allow the load to be slid freely thereon. These auxiliary means enable the operator to adjust the roll and change its position upon the shelf while the platform is stationary.

In practice a roll of carpet (R) is placed upon the elevator platform, the elevator is then moved along parallel with the shelf until opposite the place desired to deposit the roll, and then the appliances for elevating and sustaining the platform are operated to bring the platform to and retain it at the desired height, that is to say;—in case the platform having the fingers is used,—until the tops of the fingers are slightly above the top of the shelf. Then the platform is forced forward until its fingers enter or are above the finger receiving or chambering spaces $a (a', a'')$ with the carpet roll above the shelf. Then the elevator platform is lowered until its fingers are chambered in the spaces $a (a', a'')$ and the roll of carpet rests upon the shelf. Then the platform is withdrawn until the fingers are withdrawn from such spaces. Then the platform may be lowered or operated to take other rolls of carpet from the same or other shelves.

In the forms shown in Figs. 1 and 4 the carpet is moved toward and from the shelf by means of the line alone as the truck is arranged to run on a fixed rail S and the top of the frame is held against front and back movement by the top wheel T and rail U which top wheel and rail are shown in Fig. 1.

In Figs. 2, 3 and 4 the truck consists of a roller supported platform C' upon which is mounted a suitable base H by means of rollers I and slides $h c$ arranged to allow such base to move toward and from such shelf. The elevator frame is mounted upon such

base and the top rail and trolley shown in Fig. 1 is dispensed with. The combination forming this base is not claimed herein as it forms the subject matter of our application for Patent Serial No. 406,467 filed in the United States Patent Office September 22, 1891.

C'' indicates the guide trolley at the top of the elevator frame in Fig. 1. It will be understood that the horizontal guides N' shown in Fig. 4 are attached to the diagonal braces 2, and, with such guides, support the sliding platform K'.

In operating with the forms shown in Figs. 3 and 4 the arms of the tongs are pushed in between the rolls of carpet on the shelf so as to clamp between them the roll of carpet to be removed from the shelf. The rear arms of the tongs are provided with pawls t which engage a ratchet bar u to retain the front arms of the tongs in their closed position; but when the tongs are being applied the pawls are thrown out of engagement with the rack so as to allow the tongs to open to receive the roll. The pawls may be thrown out of engagement with the rack by the hand or by any other means suitable for the purpose; such means do not form any part of our invention and illustration is not deemed necessary. Springs V are arranged to press the rear arms apart to force the front arms toward each other. Antifriction wheels W are shown journaled to the ends of the arms to allow the arms to enter between the rolls without catching in the carpet.

The several shelves shown in Fig. 1 differ from each other in construction. The lower shelf A is formed of a series of slats. The second shelf A' consists of a board upon which slats c are secured. The third shelf A'' has a surface formed of corrugated metal.

No claim is herein made to the combination of the slatted shelf and platform and an elevator frame arranged upon a base adapted to be moved toward and from the shelf, as such construction forms the subject matter of our application for Letters Patent filed in the United States Patent Office, September 22, 1891, Serial No. 406,467.

Now, having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the elevator frame; an elevator platform provided with a horizontally slidable frame comprising a series of load supporting fingers; appliances for raising and lowering the elevator platform and holding it elevated; a shelf provided with a series of finger-chambering spaces, and means for moving the slidable frame toward and from the shelf to insert the fingers into and withdraw them from such spaces.

2. In an elevator of the class set forth, the combination of the shelf provided with the finger chambering spaces; the elevator frame; the elevator platform or cage; the horizontal guides fixed to the elevator cage; the slidable

platform provided with the load carrying fingers, and arranged to slide in such guides; appliances for raising and lowering the platform and holding it elevated; and means for
5 moving the sliding frame toward and from the shelf.

suitable heads and inserted through the perforations in the bars; and the latch bar pivoted to the rear side of the rear perforated bar.

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3. In an elevator platform of the class described, the combination of the transverse perforated bars; the fingers provided with

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