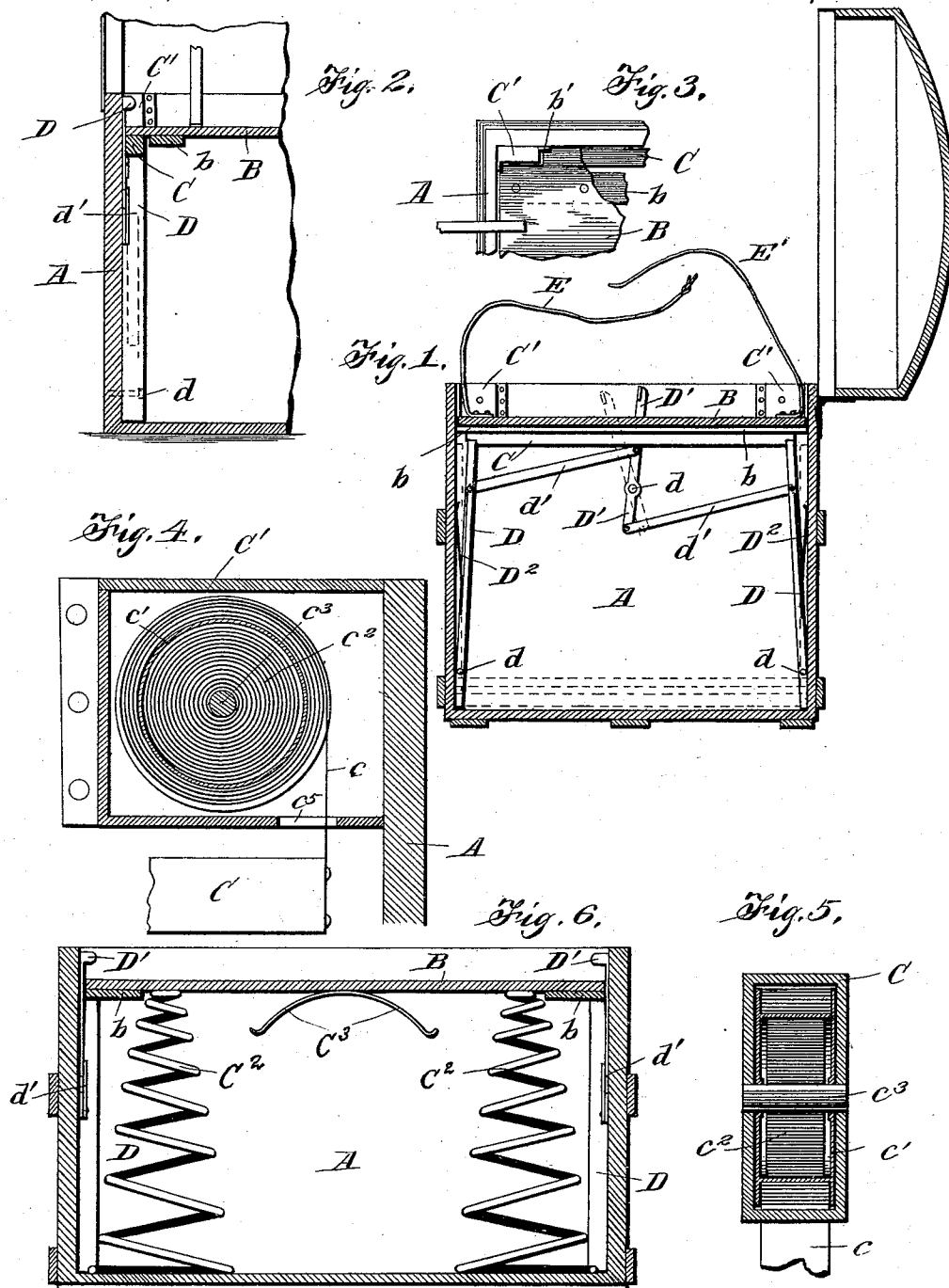


(No Model.)

M. J. MICHELSON.
TRUNK.

No. 484,217.

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Witnesses:

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UNITED STATES PATENT OFFICE.

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TRUNK.

SPECIFICATION forming part of Letters Patent No. 484,217, dated October 11, 1892.

Application filed December 22, 1891. Serial No. 415,854. (No model.)

To all whom it may concern:

Be it known that I, MAX J. MICHELSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Trunks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in trunks.

It has for its object to provide a trunk which may be conveniently packed and unpacked, and one in which any article contained therein may be easily and quickly found, and which when found will be easily accessible.

A device embodying my invention embraces a movable tray or false bottom adapted to be moved up and down in said trunk, balancing-springs arranged to act upwardly against said false bottom, whereby it is held normally in its raised position at the top of the trunk when the trunk is empty, but allowing the tray to be pushed down, so that goods thereon will go into the trunk, and means for temporarily supporting the tray at the top of the trunk during the process of packing or unpacking.

Trunks embodying this invention are of special value and utility as applied for the use of commercial travelers who sell goods by sample, large numbers of which they carry with them, and which, in exhibiting the same to customers, they must of necessity pack and unpack very often. Such trunks, however, are equally well adapted for general use.

In the accompanying drawings a trunk embodying the improvements which are the subject of this invention is fully illustrated.

Figure 1 is a vertical cross-sectional view of a trunk embodying this invention, showing the means for supporting the false bottom during the process of packing and unpacking and the means for withdrawing said supports to allow the false bottom to be lowered into the trunk. Fig. 2 is a partial vertical longitudinal section of the same. Fig. 3 is a partial top plan view of the trunk, the cover being raised to expose the parts in the bottom thereof. Figs. 4 and 5 are details of

the balancing-springs. Fig. 6 is an alternative construction adapted to carry out the objects of this invention, coiled springs being substituted for the band-springs to balance the false bottom of the trunk.

In said drawings, A represents the body of a trunk, which may be of any approved construction and of any suitable material. This trunk is provided with a tray or false bottom B, made of wood or other suitable material and strengthened by means of a transverse strip or cleat *b*, fastened to the under side thereof. There are holes or notches *b'* at each corner of the tray to enable it to clear certain parts in its passage from top to bottom of the trunk, as will hereinafter appear. This tray, as shown, has no rigid attachment to the trunk, but is preferably loose and free to be lifted out of the trunk during the process of packing or unpacking, suitable straps or handles being provided at each end of said tray to provide convenient means for handling the same. Yielding supports upon which this tray may rest are provided, consisting of strips or ledges C, one at each end of the trunk, said ledges being supported at their ends by cords or flexible straps *c*, wound around barrels *c'*, inclosing flat band-springs *c²*, wound helically, like the mainspring of a watch, the outer ends thereof being attached to the barrels *c'* and the inner ends to pins *e³*, passing through the centers thereof and rigidly secured at their ends in the casings *C'*, inclosing said cords or wires, barrels, and springs.

Holes *c³* are formed in one edge of each of the inclosing cases, through which the ends of the cords or wires intended for attachment with the strips or ledges supporting the tray pass.

These cases inclosing the cords or straps, barrels, and springs are attached to the ends of the trunk, so that one will be directly above each end of each of the strips or ledges supporting the tray of the trunk and will be adapted to allow said strips or ledges to move up and down from top to bottom of the trunk. The tension on the springs *c²* will be so adjusted that when the trunk is empty the strips or ledges and the tray carried thereon will be held normally at the top of the trunk, the under surfaces of the spring-casings serving as a stop to determine the upward limit of their

movement. When possible to do so, the tension of the springs will be preferably so adjusted that in addition to the tray they will just support the intended contents of the trunk when the tray containing said intended contents is placed upon the ledges supported by said springs, a slight downward pressure in addition to the weight of the tray and contents being then sufficient to force them into the trunk. For rigidly supporting said tray and its contents at the upper limit of their movement during the operations of packing and unpacking or for any other reason means are herein provided, as follows: Two upright catches or detents D are provided at each end of the trunk, the same consisting of upright bars the lower ends of which are hinged to the end of the trunk by pivots *d d*, so as to allow their upper ends to be moved inwardly, and thus brought under the ends of the strips or ledges C, or outwardly, so as to be free therefrom, the ledges being made shorter than the distance between the front and rear walls of the trunk to afford spaces at their ends for the said detents. Leaf-springs D² D² are shown as attached to the said detents and arranged to act at their free ends against the trunk-walls, so as to throw the detents into position for engagement with the ledges. These detents at each end of the trunk are operated by means of a hand-lever D', pivotally supported on the end of the trunk by means of a pivot-stud *d* and connected with the detents D by means of the links *d'*, an end of each of which is attached to the lever D', one above and one below the pivot of said lever, the other ends of said links being attached one to one brace and the other to the other brace. The lever thus arranged will move both props or braces in the same manner relatively to the sides against which they rest and also relatively to the ends of the ledge to which they are adjacent. These detents will be located directly under the casings containing the springs and barrels actuated thereby, and both are so situated that when the tray is placed on the ledges and lowered they will pass through the holes or notches *b'*, formed in the corners of said tray. In Fig. 1 the position of the parts is such as they will occupy when the detents have been moved out so as to rigidly support the tray. Their retracted position—that which they will occupy when they are in position to allow the tray to be lowered—is shown in dotted lines.

In another form of construction embodying a main feature of my invention (shown in Fig. 6) helically-wound coiled springs C², adapted to be compressed longitudinally, are made to bear upwardly directly upon the under side of the tray, tending to raise the same, and the strength of which may be made to meet any requirements. A curved leaf-spring C³ is also secured to the under surface of the tray, the object of this spring being to supplement the action of the springs C² and to

insure that the tray will be raised a short distance through the combined action of the two springs as soon as it is free to do so, and thus facilitate the lifting of the tray and its contents. In this form of the invention likewise the tray may be held rigidly at the upper limit of its movement by means similar to those shown in the preferred form of the invention first described. In this case, however, the detents will bear directly upon the under side of the tray or of cleats thereon, as in this case there need be no ledges to support it.

In Figs. 1, 2, and 3, E E' indicate straps attached to the side margins of the tray or bottom and adapted for being placed and secured around the mass or bundle of clothing or other articles placed on the tray, so as to hold the same firmly in place while being depressed or thrust into the trunk and to hold them in compact form while within the trunk. The employment of such straps or other similar holding devices, while convenient for holding the articles in place, is not essential to the operation of the main parts constituting my invention; but by reason of their convenience in practice they are herein claimed, in connection with the vertically-movable tray described, as a separate and further improvement.

As far as the main feature of my invention is concerned—to wit, the vertically-movable trunk-bottom or tray and the springs yieldingly sustaining the same—any form of locking or holding device for temporarily sustaining the bottom or tray at the upward limit of its movement may be employed, and such holding devices need not necessarily be attached to the trunk and act directly upon the tray or bottom, but may be otherwise arranged or applied. The particular construction shown, however, embracing spring-detents mounted on the trunk and engaging the bottom or tray or the ledges which support the same, has the advantage of being simple in construction and efficient in operation and is herein claimed as part of my invention.

A principal and important advantage gained by the use of a tray which is arranged to stand at the top of the trunk while the goods are being packed thereon and may be lowered into the trunk after the goods have been so packed thereon is that such location of the tray at the time of packing saves the labor and inconvenience of stooping or bending over the trunk during the act of packing the same. This is a serious and troublesome matter, especially where many trunks are to be packed, as is the case with commercial travelers carrying many samples, upon whom the labor of stooping over in the work of packing and arranging the goods in a number of trunks is a matter involving hard labor and serious inconvenience. In a trunk constructed as proposed by me the packing can be accomplished with little or no stooping and with great convenience, while at the

same time the goods are much more easily unpacked and access more conveniently had thereto, because when the tray is lifted any lower part of the pile of goods on the tray without disturbing the others, and the position of any article may be seen at a glance by viewing the side or edge of the pile of goods. For these and other reasons a trunk embodying my invention constitutes an important improvement, which may not only be applied to the particular uses described, but for ordinary and general uses—as, for instance, to ordinary traveling-trunks.

15 I claim as my invention—

1. The combination, with a trunk, of a vertically-movable tray or bottom therein, springs yieldingly sustaining said tray or bottom, and a locking device for supporting the said tray or bottom independently of the sustaining-springs when elevated, substantially as described.

2. The combination, with a trunk, of a vertically-movable tray or bottom, springs yieldingly supporting said tray or bottom, detents on the trunk engaging said tray or bottom when the same is at the upward limit of its

movement, and means for actuating said detents, substantially as described.

3. The combination, with a trunk, of a vertically-movable tray or bottom therein and means for yieldingly supporting the same, consisting of a plurality of revolving barrels mounted on the trunk, springs actuating said barrels, and straps wound upon the barrels and connected with the said tray or bottom, substantially as described.

4. The combination, with a trunk, of a vertically-movable tray or bottom, horizontal strips or ledges located adjacent to the ends of the trunk, upon which the said tray or bottom rests, revolving barrels mounted in the corners of the trunk, springs applied to actuate said barrels, and straps wound upon the barrels and attached to the ends of said strips or ledges, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

MAX J. MICHELSON.

Witnesses:

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GEORGE W. HIGGINS, Jr.