July 6, 1948. F. E. KALNING ET AL 2,444,776

APPARATUS FOR HANDLING MATTRESSES

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Fig. 1.

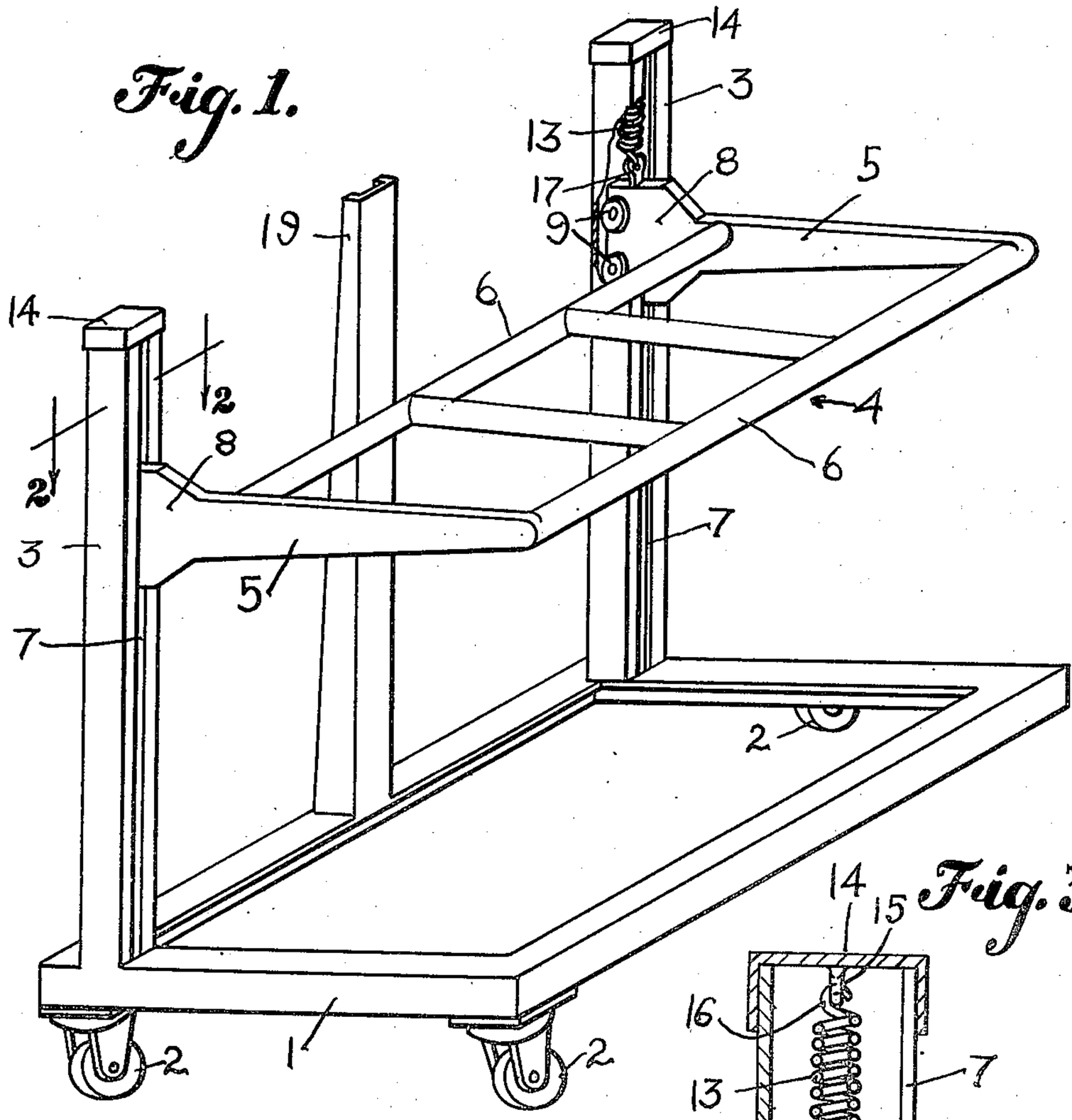

Fig. 2.

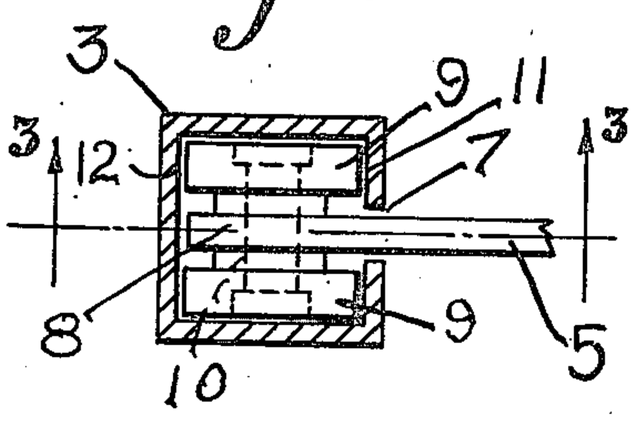

Fig. 3.

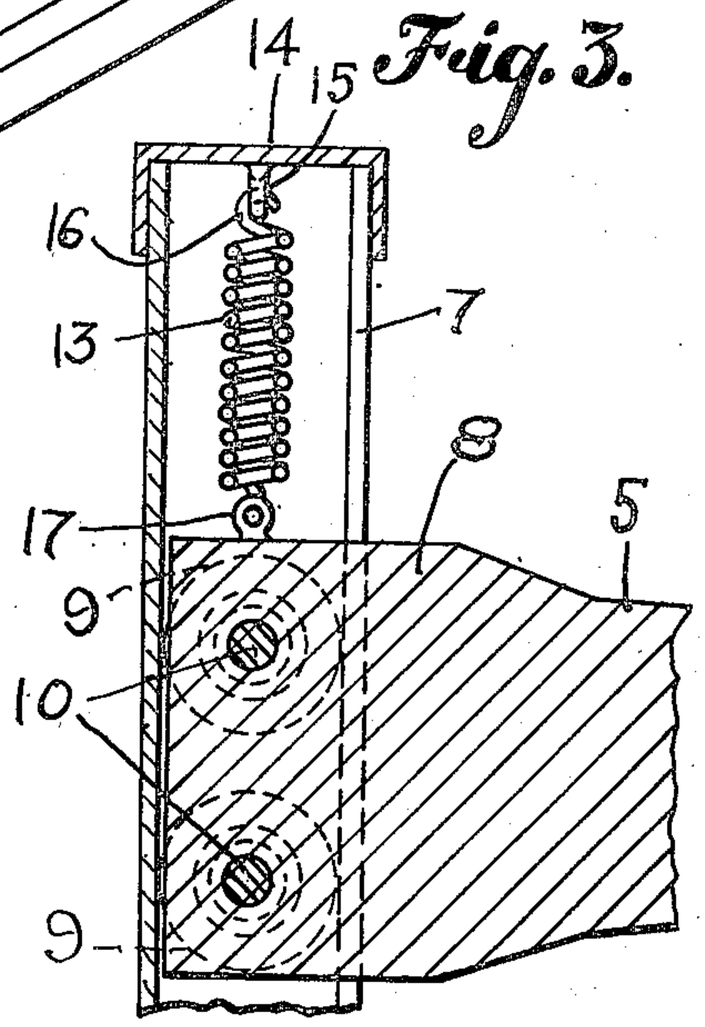

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Fig. 4.

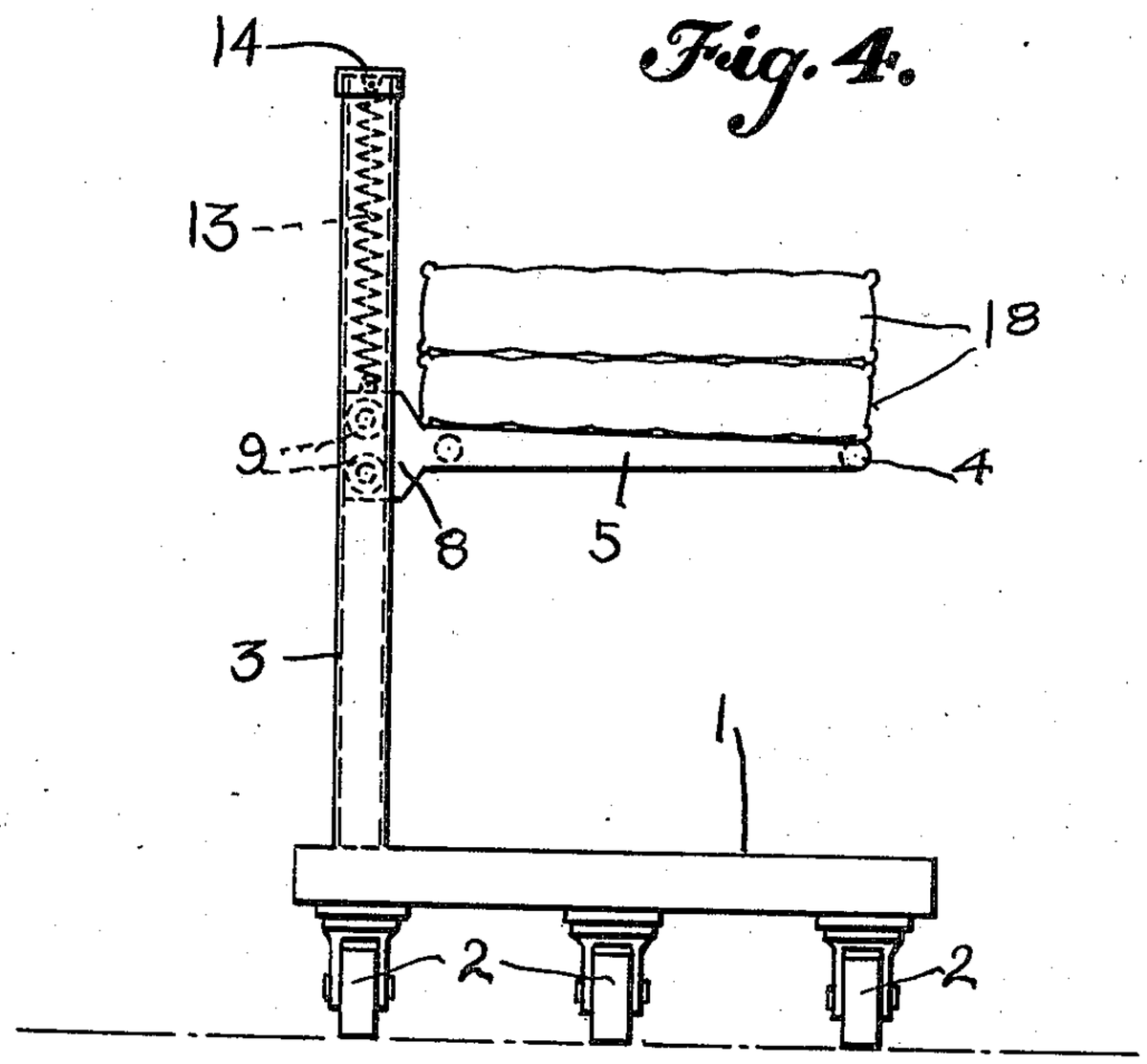
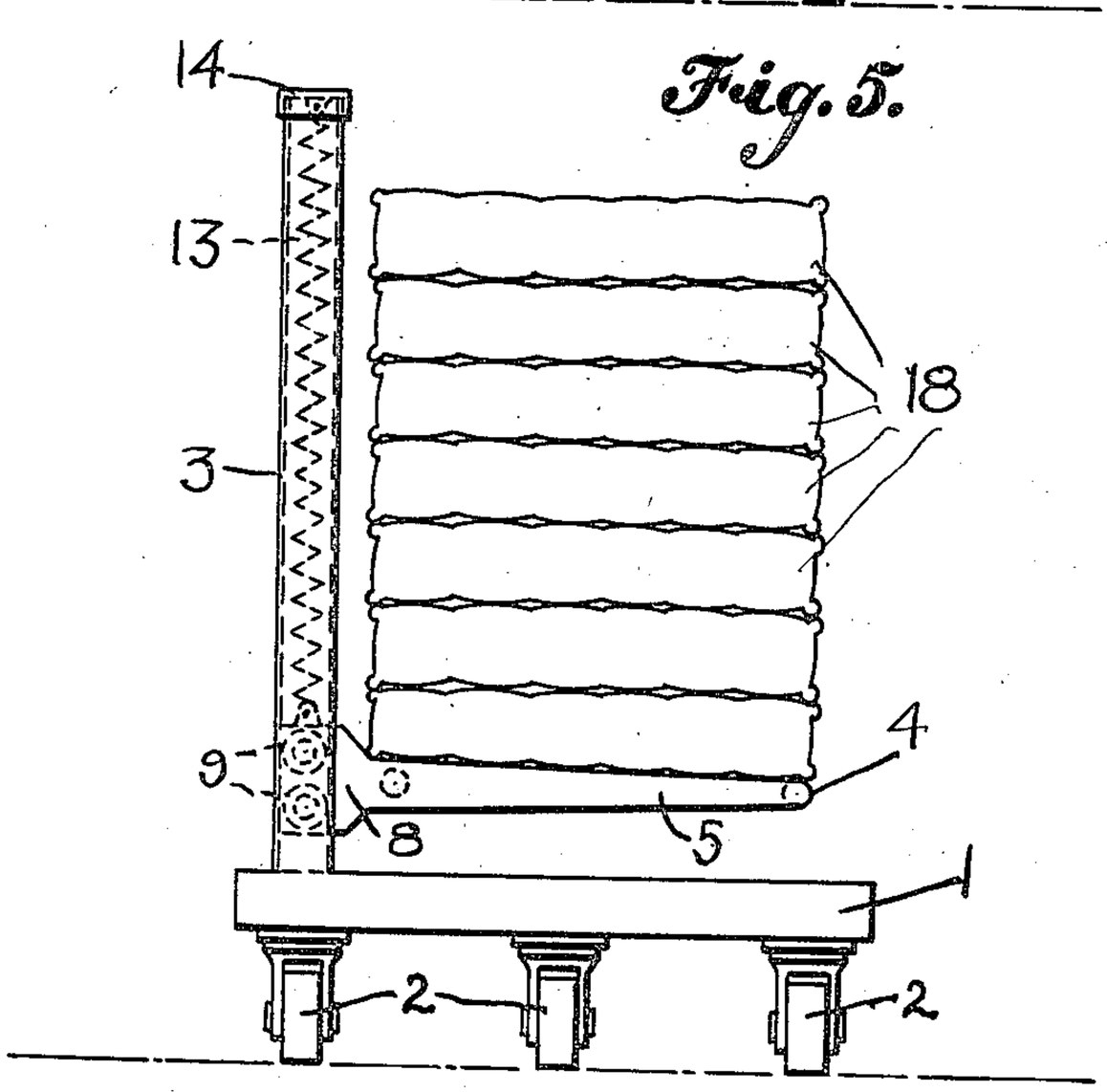


Fig. 5.



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APPARATUS FOR HANDLING MATTRESSES

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Application July 24, 1946, Serial No. 685,850

3 Claims. (Cl. 211—28)

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This invention relates to an apparatus designed to assist a workman in handling and transporting mattresses during the process of making the mattress.

The manufacture of a bed mattress involves the steps of filling the ticking with the filling material, sewing up the filled ticking and perhaps forming thereon a roll edge, and then tufting the filled ticking. The performance of these operations necessitates that the mattress should be transported from one machine to another, and it is now a common practice in mattress manufacturing establishments for a workman to carry the mattress on his head from one location to another.

A mattress is a notoriously unwieldy thing to handle, and it is not an easy matter for a person to pick a mattress up off the floor and balance it on his head. Moreover, as the mattresses in a mattress manufacturing establishment are conveyed from one machine to another, it is a more or less common practice to deposit the mattresses in piles adjacent the machine which is to perform some operation thereon, and this necessitates the lifting of each mattress from the pile onto the bed of the machine.

If the pile of mattresses is at the proper height, it is relatively easy to slide the top mattress off the pile and onto the machine bed, but when the pile is nearly exhausted, it is an awkward and difficult matter to lift the mattress which was at the bottom of the pile from the floor and deposit it onto the machine bed.

It is, therefore, an object of our invention to provide a novel apparatus for receiving mattresses in a pile, and by which a plurality of mattresses may be readily conveyed from one point to another, and which is so constructed that the top mattress of the pile of mattresses on the device will always be maintained at a convenient level for the operator to manipulate it in transferring it from the pile of mattresses to a machine.

In order to give an understanding of the invention, we have illustrated in the drawings a selected embodiment thereof which will now be described, after which the novel features will be pointed out in the appended claims.

In the drawings:

Fig. 1 is a perspective view of an apparatus embodying our invention.

Fig. 2 is a section on the line 2—2, Fig. 1.

Fig. 3 is a section on the line 3—3, Fig. 2.

Fig. 4 is a view of the apparatus showing it in use supporting two mattresses, and illustrating how the top mattress is supported in a convenient elevated position.

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Fig. 5 is a similar view showing the apparatus when it is supporting a considerable number of mattresses, said figure also illustrating how the top mattress of the pile is supported in a convenient position.

Our improved mattress handling apparatus is made with a base portion 1 that is preferably mounted on casters 2 so that it can be readily moved over a floor, said base portion being provided at each end adjacent one side with a post element 3.

The device also includes a mattress-supporting platform 4 which is mounted on the posts 3 and is vertically movable.

Such platform 4 is herein shown as provided with two end members 5 which are connected by front and rear connecting members 6, said platform being of a size to receive a mattress.

Each of the posts 3 is provided in its front face with a slot 7 which extends from the top to the bottom thereof, and each end member 5 is widened at its rear end as indicated at 8, the wide ends of said end members extending into the slots 7. Each end member 5 is provided with two pairs of rolls 9, each pair of rolls being rotatably mounted on a supporting pin 10 carried by the end 8 of the end member.

Each post 3 is hollow as shown best in Fig. 2, and the rolls 9 are of a size to fit freely between the front wall 11 and the back wall 12 of the post. With this arrangement, the rolls permit the platform to move freely up and down, and the two pairs of rolls on each end member are spaced apart sufficiently so that they operate to hold the platform in its horizontal position.

The platform 4 is supported by spring means which is so constructed that said platform when unloaded will be held at a convenient height for the operator to load a mattress thereon as indicated in Fig. 1, this height being somewhere near the height of the bed of the mattress sewing machine or mattress tufting machine.

The spring means for supporting the platform 4 is also so constructed that when a mattress is loaded onto the platform it will yield and allow the platform to move downwardly a distance substantially equal to the thickness of the mattress, so that the top surface of a single mattress on the platform will be at substantially the same level as that of the unloaded platform.

Said spring means is further so constructed that if additional mattresses are deposited on the platform, the weight of each mattress will lower

the platform a distance substantially equal to the thickness of the mattress, and hence the top surface of the top mattress on the platform, whether there be one, two, three, or any number of mattresses deposited on the platform, will always be substantially at the same level as that of the unloaded platform.

The spring means for thus yieldingly supporting the platform may have various constructions. A simple spring means is a coil spring 13 located within each post, the spring being attached at its upper end to the top of the post and at its lower end to the end portion 8 of the end member 5. In the construction herein shown, each post is provided with a cap 14 which is formed with an eye 15 to which the hooked upper end 16 of the spring is attached. The lower end of the spring is shown as attached to an eye 17 with which the end 8 of the end member 5 of the platform is provided. As stated above, these springs are so constructed that they will hold the unloaded platform at a normal elevation such as shown in Fig. 1. When a mattress 18 is deposited on the platform, the weight of the mattress will stretch the springs 13 and lower the platform 4 by an amount substantially equal to the thickness of the mattress. If a second mattress is then placed on the platform, the added weight of said second mattress will stretch the springs still more, thus lowering the platform again by an amount substantially equal to the thickness of the mattress, and therefore the top surface of the second mattress on the platform will be at substantially the same height as that of the unloaded platform, as seen in Fig. 4.

As other mattresses are deposited on the platform, the additional weight of each mattress will lower the platform a distance substantially equal to the thickness of the mattress and hence when the platform is fully loaded with mattresses, the top mattress is still at a convenient level for the workman to lift it off from the pile of mattresses.

This truck device when loaded with mattresses, can be easily trundled over the floor to carry the mattresses from one machine to another, and when the loaded truck arrives at any machine, the top mattress of the pile of mattresses thereon will still be at a convenient height so that the operator can readily slide it off from the pile onto the machine bed.

As each mattress is removed from the platform, and the weight on the platform is thereby reduced, the springs will raise the platform by an amount substantially equal to the thickness of the mattress, so that regardless of the number of mattresses on the platform, the top mattress will always remain at the normal convenient level as shown in Figs. 4 and 5.

The springs 13 are constructed so that they so balance the weight of the mattresses on the platform that the top mattress is always at a predetermined convenient level, whether there be only one or a plurality of mattresses on the platform.

This apparatus, therefore, eliminates entirely the necessity for the workman to stoop over and pick up a mattress from the floor, because the

mattress which is to be handled will always be the top mattress on the platform, and the springs 13 act automatically to maintain such top mattress at the convenient height for the operator.

The base portion 1 of the truck is shown as having a post 19 rising from its back side near the center, the purpose of which post is to prevent the mattresses from slipping off from the platform between the end posts 3.

It will be observed that the front or right-hand side of the truck is entirely free and unobstructed, the posts 3 and 19 being located on the back side. There is, therefore, no obstruction to interfere with placing the mattresses on or removing them from the front thereof.

We claim:

1. A device to assist in handling and transporting mattresses comprising a truck frame, a post rising therefrom at each end thereof, a vertically movable mattress-supporting platform, said posts having means for guiding the platform in its vertical movement, and spring means for supporting the platform when unloaded at a predetermined level, and adapted when the platform is loaded with one or more mattresses to support the load at a level at which the top mattress on the platform is at substantially said predetermined level.

2. A device of the class described comprising a truck frame, a post rising therefrom at each end thereof, a vertically movable mattress-supporting frame, said posts having means for guiding the platform in its vertical movement, and spring means for supporting the platform when unloaded at a predetermined level, said spring means being constructed to yield sufficiently in response to the weight of a mattress placed on the platform to permit the level of the platform to be lowered by an amount substantially equal to the thickness of the mattress.

3. A device of the class described comprising a truck frame, a post rising therefrom at each end adjacent one side, the opposite side of said truck frame being unobstructed, a vertically movable mattress-supporting platform, said posts having means for guiding the platform in its vertical movement, and springs connected to the platform for supporting it when unloaded at a predetermined level and adapted when the platform is loaded with one or more mattresses to support the load at a level at which the top mattress will be at substantially said predetermined level.

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