Feb. 17, 1953

C. R. NULL

2,628,371

FOLDING BED

Filed April 12, 1950

2 SHEETS—SHEET 1

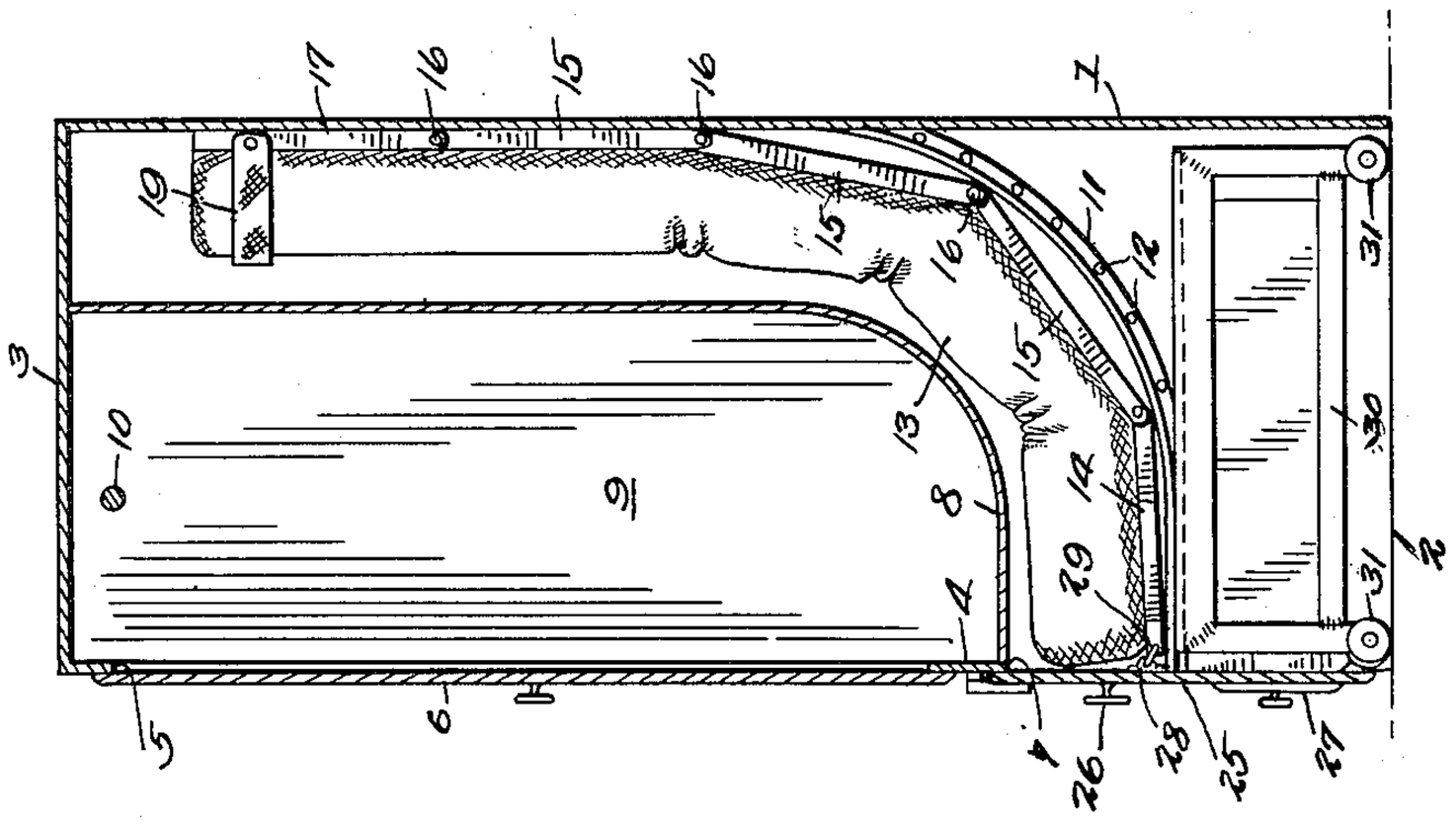

Fig. 2.

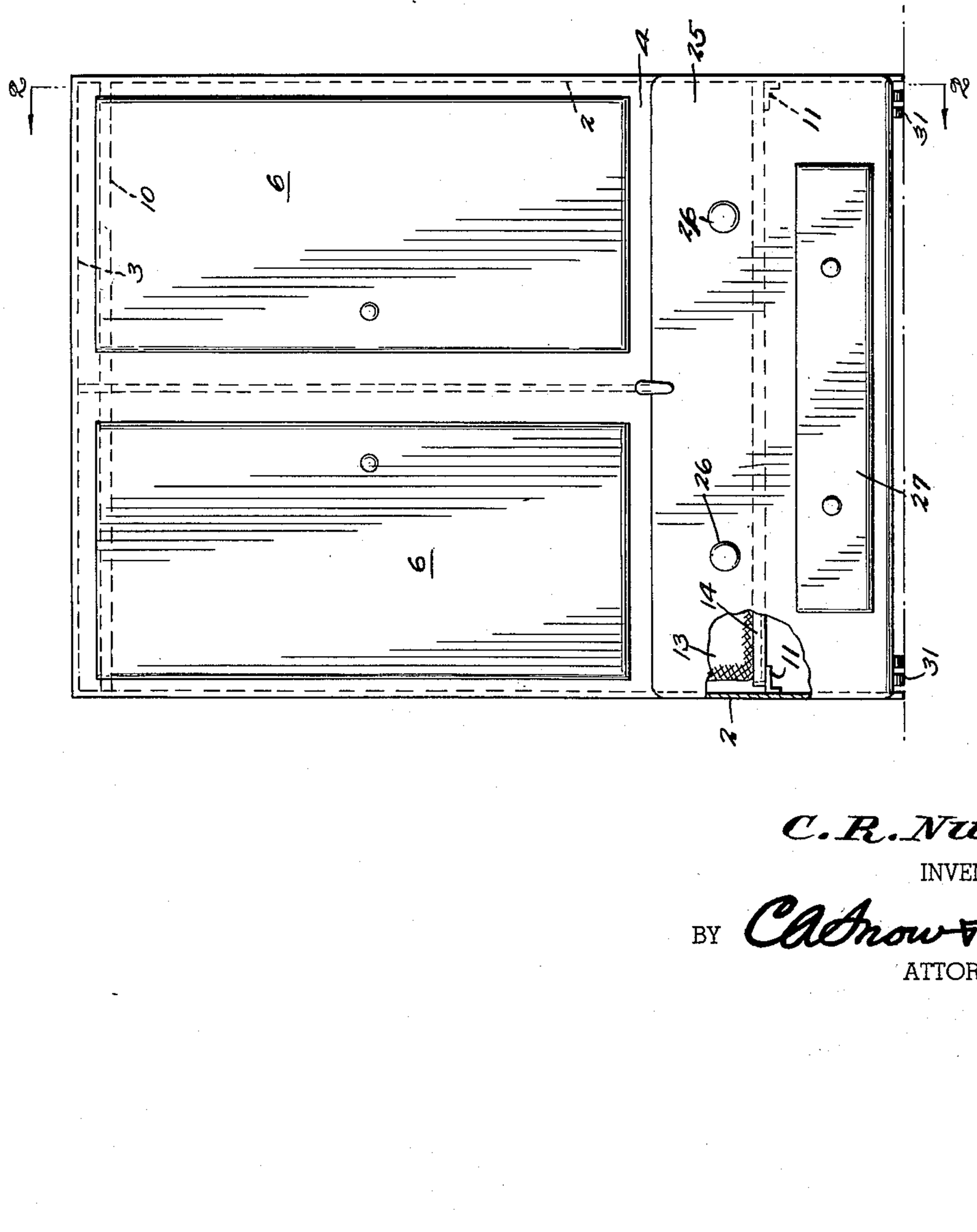

Fig. 1.

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2 SHEETS—SHEET 2

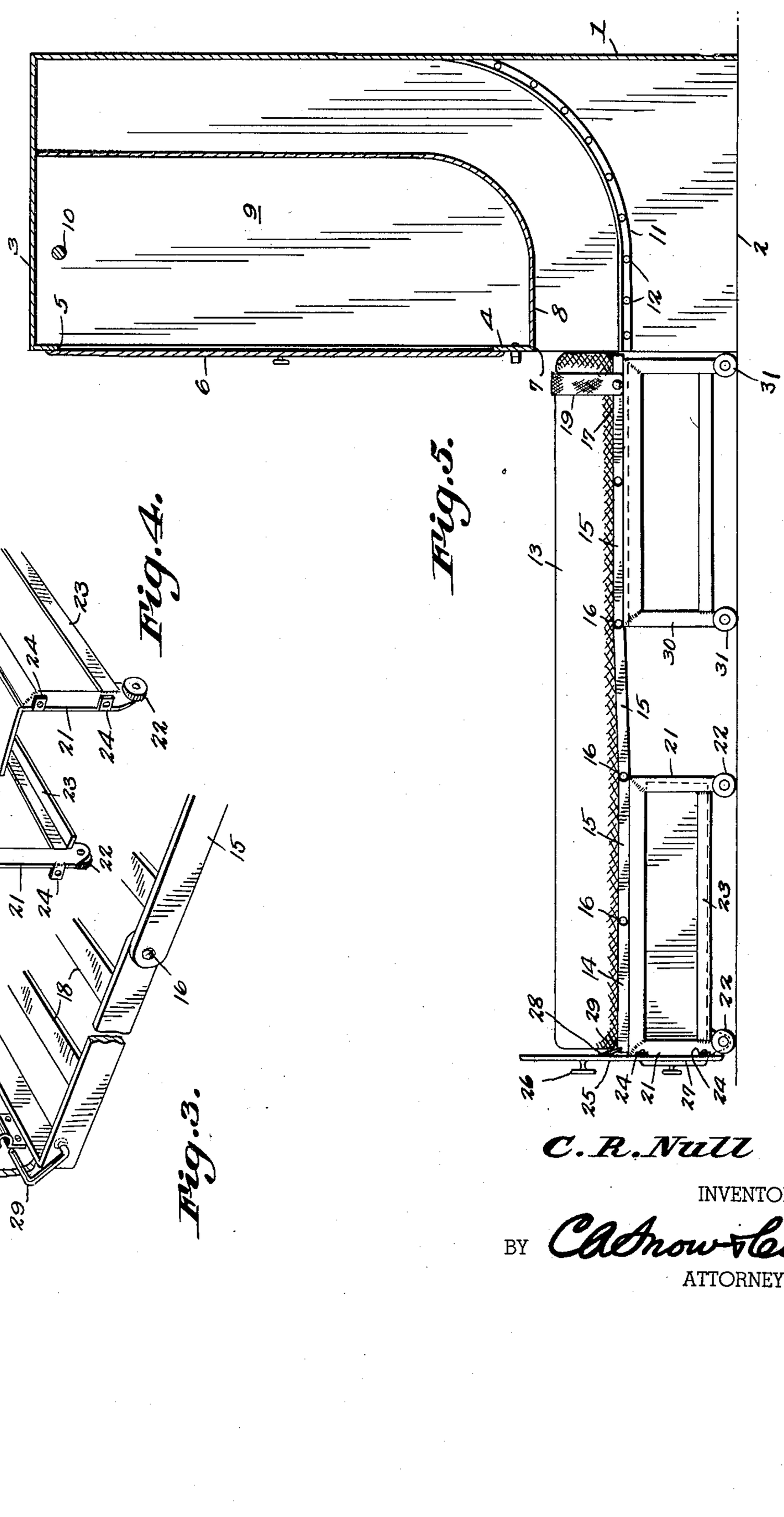

Fig. 3.

Fig. 4.

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Patented Feb. 17, 1953 2,628,371

UNITED STATES PATENT OFFICE

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FOLDING BED

Clement R. Null, Olney, Ill.

Application April 12, 1950, Serial No. 155,539

1 Claim. (Cl. 5—158)

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This invention relates to a folding bed construction.

By way of background, it may be noted that folding beds as heretofore constructed generally fold in such a manner as to require their being stripped of bedcovers before being folded away. Subsequently, on unfolding of the bed or extension thereof to operative position, the bed must be made up once more.

This is obviously undesirable, and the main object of the present invention, accordingly, is to provide a folding bed construction so designed as to permit the folding away of the bed without the necessity of stripping the bed of covers, so that the bed can be folded away fully made up, ready for use merely upon the pulling of the bed from its recessed or folded position.

Another important object is to provide a folding bed construction which is in effect a combination clothes closet or wardrobe and folding bed, that can be installed in any room and which, when so installed, will occupy a minimum of space, and will yet provide a bed and ample clothes hanging or storage space.

Another important object is to provide a folding bed construction wherein the folding and the unfolding of the bed is achieved with speed and facility.

Yet another object is to provide a construction for a folding bed which, considering the appreciable benefits obtained, can be manufactured at relatively low cost.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings

Fig. 1 is a front elevational view of a folding bed construction formed in accordance with the present invention.

Fig. 2 is a section taken substantially on line 2—2 of Fig. 1, the bed being shown in folded position.

Fig. 3 is an enlarged fragmentary detail perspective view of the front end portion of the bed spring.

Fig. 4 is a fragmentary perspective view of the front carriage.

Fig. 5 is a vertical section taken on the same cutting plane as Fig. 2, the bed being shown in extended position.

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Referring to the drawings in detail, the folding bed constituting the present invention is adapted to be recessed in a closet-like structure which, within the spirit of the invention, may be installed as a regular closet during the manufacture of a structure, or which alternatively can be a portable wardrobe for movement into any selected room.

In any event, in the present instance the closet is provided with a vertically disposed rear wall 1 and vertical side walls 2, the upper end of the closet being closed by top wall 3 and the front end being provided with the front wall 4, having the large upper openings 5 disposed in side-by-side relationship and closed by the doors 6. Below said doors 6, the front wall 4 is provided with the wide lower opening 7 into and out of which the bed is adapted to be moved between extreme positions shown, respectively, in Figs. 2 and 5.

Extending rearwardly from the top of the opening 7 is the partition 8, which after being extended rearwardly a short distance, curves upwardly and extends vertically in spaced relation to the rear wall 1, being secured at its upper end to the top wall 3. This partition defines a large storage space 9 to which access is had through the doors 6 and in which clothes can be hung upon a bar 10.

Secured to the opposite side walls 2 of the structure, and spaced a suitable distance below the top edge of the opening 7, are the tracks 11 which may be of angle iron or similar material, these extending rearwardly from the front of the closet and being curved upwardly as readily seen in Figs. 2 and 5. These tracks are secured rigidly to the side walls 2 by fastening elements 12. At their rear or inner ends the tracks merge into the vertical rear wall 1 of the closet which in effect is thus constituted as a slideway receiving the rear portion of the folded bed after said rear portion is moved upwardly past the trackway 11.

The bed proper includes a mattress 13 of the well known foldable construction, this being supported upon a bed spring of articulated construction. The front end of the bed spring 14 is of approximate U-shape, being extended rearwardly for connection to a medial section 15, the front end 14 and intermediate section 15 being pivotally connected by hinge pins 16. Any number of intermediate sections 15 are utilized, each being pivotally connected to the next preceding section as readily seen in Figs. 2 and 5. In this way, a longitudinally articulated bed spring is provided, the rearmost hinge section 15 being pivotally connected to a U-shaped rear end section 17 of the same general formation as the front

end section 14. The front and rear end sections and intermediate sections are each provided with spaced parallel transversely extending spring members 18 on which the mattress is firmly supported, said members 18 being rigidly connected at their ends to the side portions of the sections of which they are a part.

The rear end of the mattress 13 is attached to the rear end section 17 by a hold-down strap 19, which prevents the mattress from falling off the spring when the bed is folded as in Fig. 2.

I provide a pair of rollable carriages on which the bed is supported when it is pulled to extended position. A front carriage 20 includes a top plate (see Fig. 4) integral or otherwise made rigid with depending corner legs 21 each of which is provided with a roller wheel 22. Parallel longitudinal side braces 23 connect the front and rear legs and also serve as a slideway for a drawer in a manner to be made apparent.

The front end of the front carriage 20 is provided with the outturned ears 24 apertured for passage of connecting elements that extend into a drawer front 25 provided with the pulls 26. Mounted in the lower portion of the drawer front is the smaller drawer front 27 attached to a storage drawer that slides upon the longitudinal braces 23 of the front carriage 20. This drawer 27 can be pulled out for access to its contents when the bed is in folded position.

The front end of the bed spring is connected to the drawer front by a relatively loose pivotal connection (see Fig. 3), the drawer front 25 having sleeve brackets 28 into which extend the U-shaped pins 29 that are pivoted in the front end of the front end section 14.

A rear carriage 30 is also provided, this being slightly wider than the front carriage, so that the front carriage can telescope thereinto. The rear carriage 30 otherwise is of the same general construction as the front carriage and is provided with the roller wheels 31.

The telescoped carriages move into a space defined below the tracks 11, as readily seen from Fig. 2.

Assuming that the bed is in the folded position of Fig. 2 and is to be extended, the user simply pulls outwardly upon the drawer front 25 by means of the drawer pulls 26. This causes the front carriage to be pulled out of the rear carriage 30, and the bed is also pulled out of its recess at the same time. Continued outward pull causes the bed to be extended to a point where it will be desirable to initiate movement of the rear end carriage out of the closet. This can be done manually simply by pulling the rear end carriage out of the closet a slight distance to cause the bed to be supported thereupon, after which further pull upon the bed will pull the rear carriage outwardly. Or, I believe it is well within the spirit of the invention and sufficiently obvious as not to require special illustration that a flexible link can be provided between the front and rear carriages, which will act to pull the rear carriage after the front one after the front one has been pulled a predetermined distance away from the rear carriage.

To return the bed to recessed position, one simply presses to the right in Fig. 5 upon the drawer front 25. The bed spring moves up the trackway 11, while the rear carriage moves to recessed position below said trackway. Continued further pressure causes the bed spring to travel around the curve of the trackway this being permitted by reason of the articulated construction of the spring. Still further pressure causes the front carriage to telescope within the rear carriage and the bed to be recessed fully within the closet.

The closet is of course always available for storage in the space 9 without reference to the withdrawal or recessing of the bed.

What is claimed is:

In a folding bed of the type which includes an elongated rectangular cabinet having front, side and rear walls and a vertical partition between the front and rear walls separating the interior of the cabinet into a storage space and a bed receiving compartment, the front wall having an opening extending therethrough below the storage space which opening communicates with the compartment, an articulated bed spring mounted in said compartment to move horizontally through the opening in the front wall, and a drawer front carried by the bed spring and adapted to close the opening in the front wall when the bed spring is contained in the compartment, means to support said bed spring in a horizontal position when it is projected from the compartment and through the opening in the front wall comprising a carriage connected to the drawer front and extending beneath and engaged by the bed spring adjacent the drawer front, and a second carriage of greater width than the first mentioned carriage adapted to be engaged by and extended outwardly from the cabinet beneath the bed spring adjacent the end thereof remote from the drawer front, the said carriages being movable into the cabinet beneath the storage space and the compartment and the carriage adjacent the drawer front telescoping into the opposite carriage when the drawer front closes the opening.

CLEMENT R. NULL.

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