

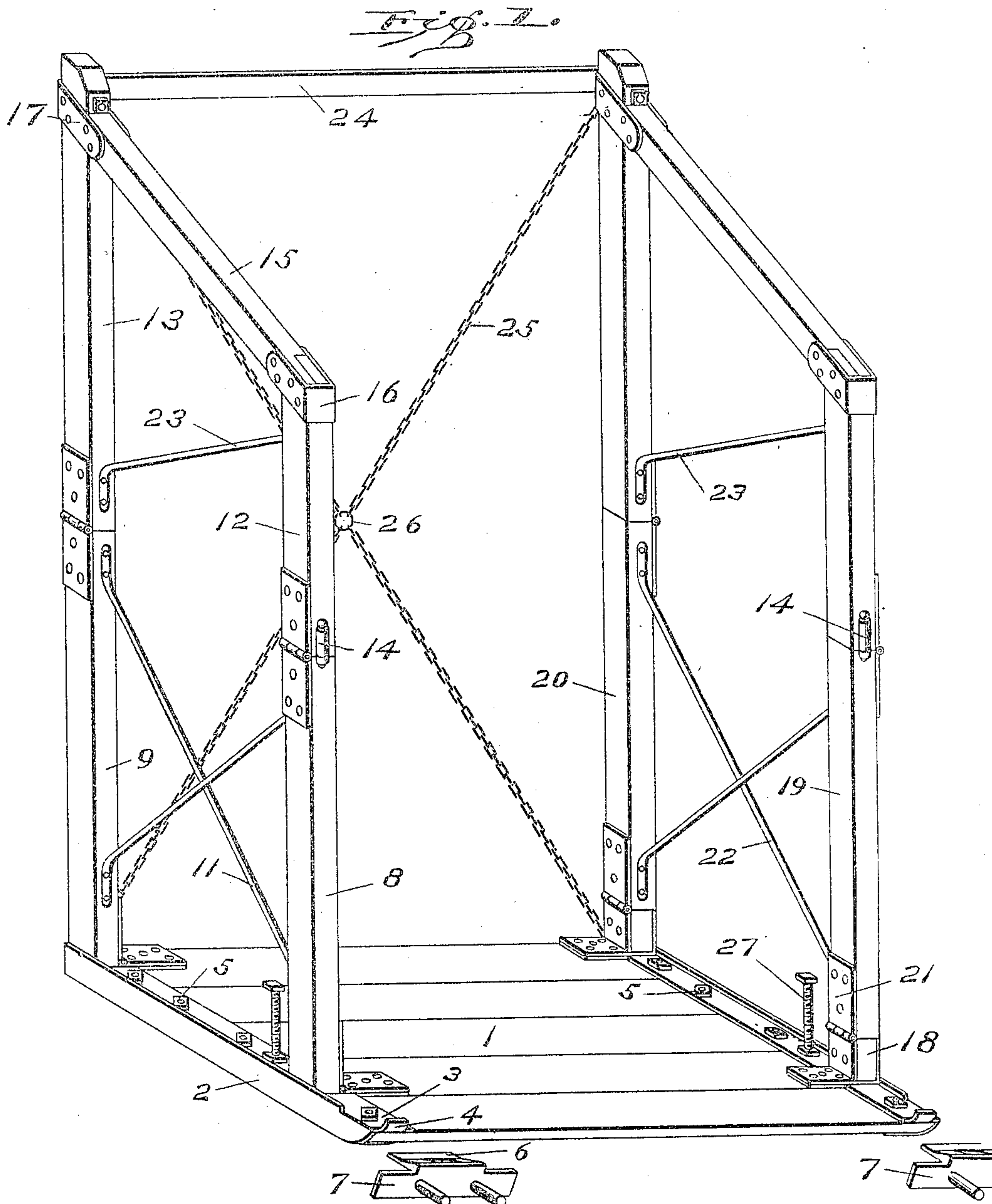
No. 808,681.

PATENTED JAN. 2, 1906.

E. G. RAFF.
COLLAPSIBLE WINDOW PLATFORM.

APPLICATION FILED AUG. 20, 1904.

3 SHEETS—SHEET 1.



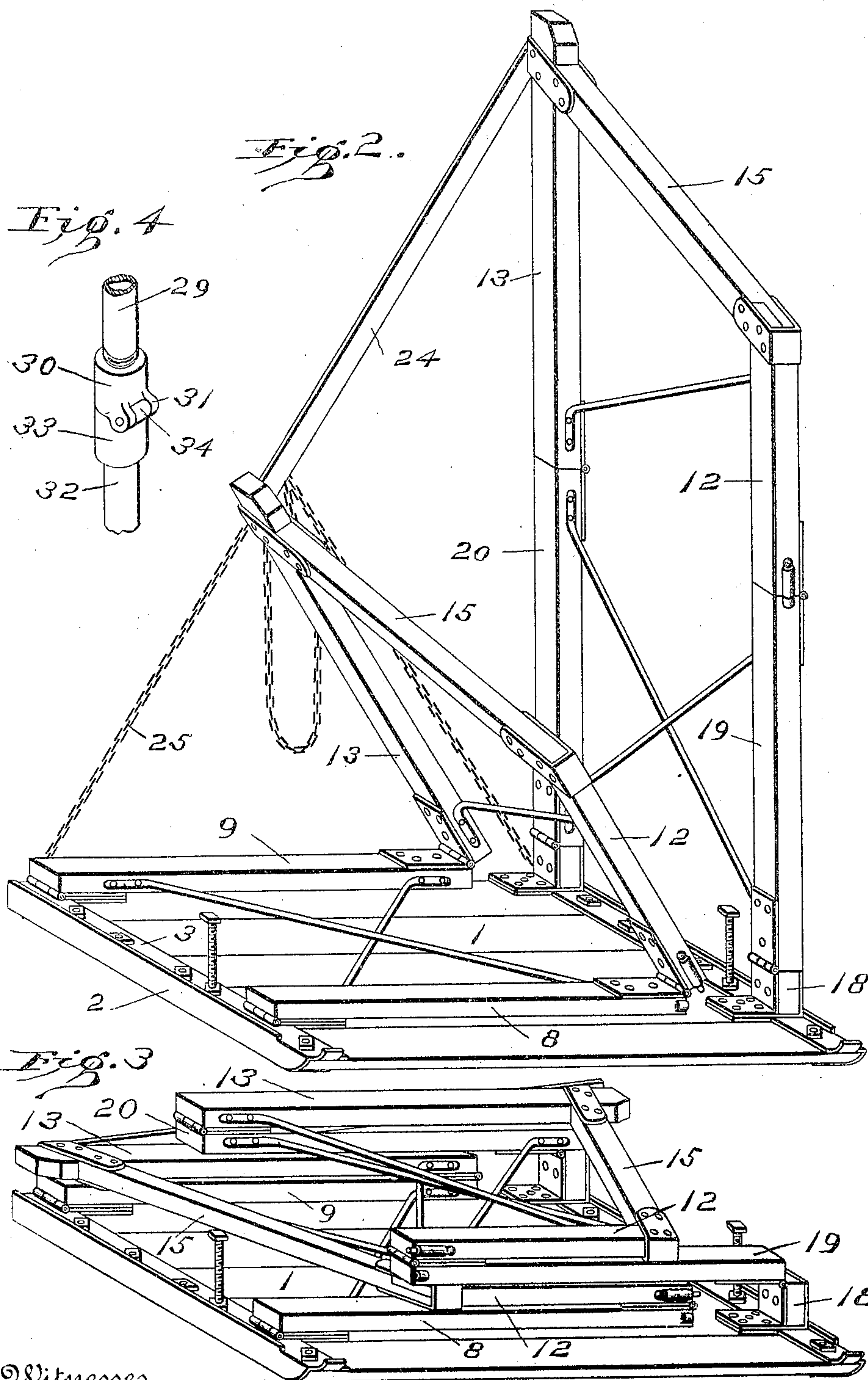
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3 SHEETS—SHEET 2.



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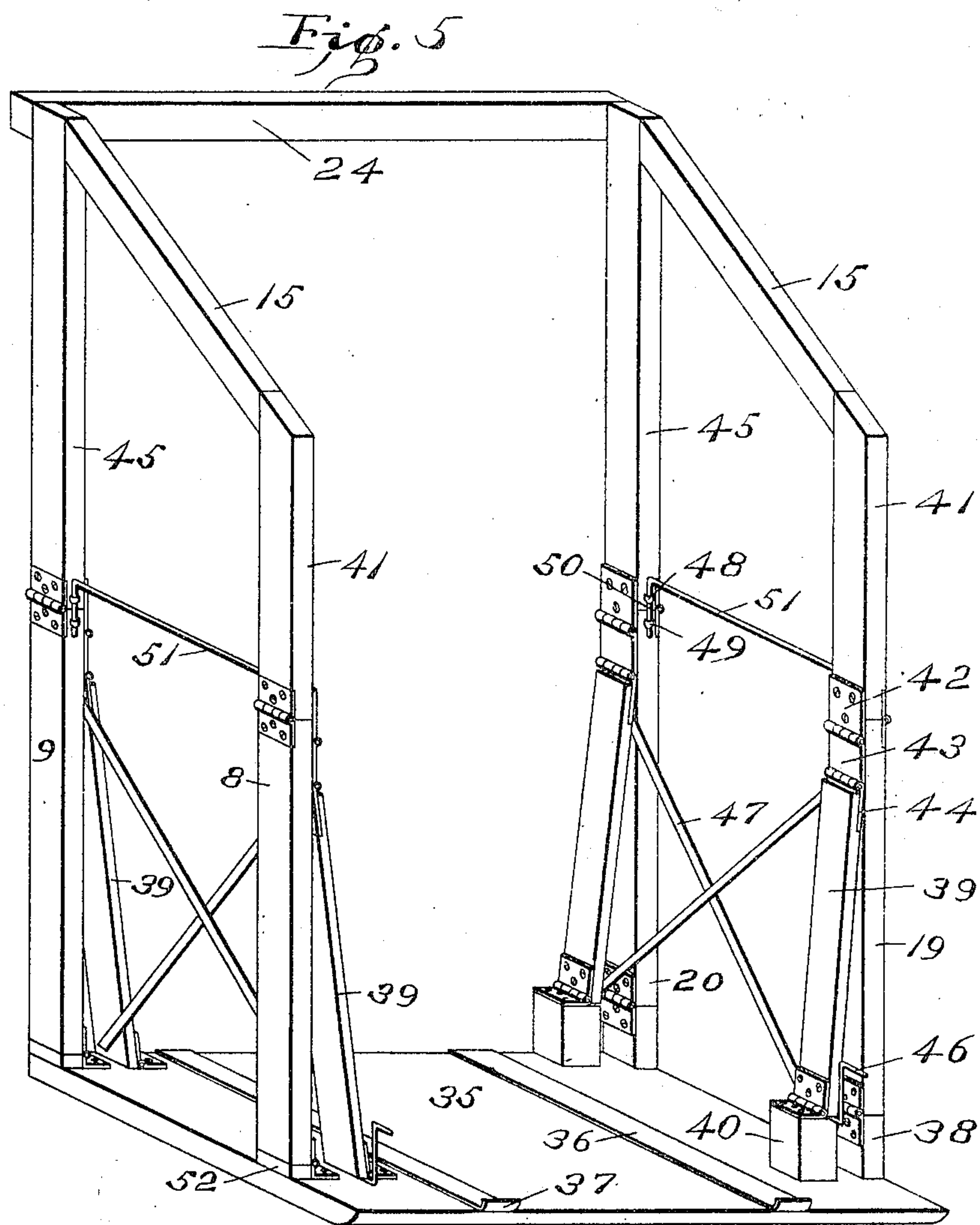
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

ERNEST G. RAFF, OF NEW YORK, N. Y.

COLLAPSIBLE WINDOW-PLATFORM.

No. 808,681.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed August 20, 1904. Serial No. 221,482.

To all whom it may concern:

Be it known that I, ERNEST G. RAFF, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Collapsible Window-Platforms, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to apparatus adapted for use as a means of support upon walls, and more particularly to window-platforms.

One of the objects thereof is to provide a simple and efficient device of the above type which can be compactly folded and rigidly extended.

Another object is to provide a device of the above type all parts of which lie in their folded position substantially parallel to and within the outline of the floor.

Other objects will be in part obvious and in part pointed out hereinafter.

25 The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts, which will be exemplified in the device herein described and the scope of the application of which will be indicated in the following claims.

30 In the accompanying drawings, wherein are shown several of various possible embodiments of my invention, Figure 1 is a perspective view showing one embodiment in extended position. Fig. 2 is a similar view of the same, showing it in a partially-collapsed form. Fig. 3 is a similar view showing the same embodiment completely folded. Fig. 4 is a detail perspective of a part of another embodiment. Fig. 5 is a perspective view showing another form in extended condition.

40 Similar reference characters refer to similar parts throughout the several views.

Preliminary to a description of the embodiments of my invention herein set forth, it may be noted that compactness is essential in devices of the type with which this invention is concerned. As it is intended that one platform be used for several windows, it is necessary that the same be carried from window to window and possibly from building to building. The above requirements render it imperative that the platform be folded in as small, light, and compact form as is consistent with strength and rigidity in its extended condition. Another feature which is requisite in constructions of this type is that the hooks or other means upon the platform whereby it is

secured to the building are of a strong construction and are rigidly secured to the platform, so as to minimize the danger of tearing loose from the same. It is also highly desirable that the side and rear guards be sufficiently high to obviate any chance of the user falling over the same and yet that these proportions be attained without sacrifice of the compactness and neatness of the structure in folded condition. The above and other advantages are attained in constructions of the nature of that hereinafter described.

Referring now to Fig. 1, there is represented at 1 a "floor" or platform proper, which is shown in this embodiment as comprising several parallel members, and this construction is preferred, as the chance of warping is thereby reduced and other advantages attained. The ends of the component members of floor 1 rest within channel-shaped members, which may be integral, but preferably comprise angle members 2 and straps 3, the latter extending from front to rear entirely across the floor and being preferably flanged, so as to engage the rear surface thereof, and having at their front ends hooks 4 integrally formed therewith. Straps 3 and angle members 2 are secured one to another and to the members of floor 1 by means of bolts 5, which pass through these parts, as indicated in the drawing. Hooks 4 are adapted to coact with the perforated lugs 6 upon plates 7, which are secured to the building in any desired manner. At one end of floor 1 are mounted the uprights 8 and 9, being connected to the platform by means of hinges 10 and rigidly held in parallel position with reference one to another by means of braces 11. Hinged to the upper portions of these uprights are the extension members 12 and 13, respectively, the former being maintained in its extended position by means of a spring-bolt 14 or other securing device. The upper ends of extension members 12 and 13 are secured one to another by means of cross-piece 15, which is preferably joined thereto, as shown, and rigidly held in position by means of straps 16 17. Upon the opposite end of the platform are secured blocks 18 of a height substantially equal to the combined thickness of upright 8 and extension member 12. Mounted upon blocks 18 are uprights 19 and 20, which are secured thereto by means of hinges 21 and are stiffened by means of the braces 22, which are substantially identical with braces 11, above described. Hinged

upon uprights 19 and 20 are extension members 12 and 13, which are maintained in upright position by means of bolt 14. The upper ends of these members are connected by means of cross-piece 15, the latter members being substantially identical with the corresponding parts upon the other side of the platform. Braces 23 may also be provided, if desired, so as to stiffen the upper portions or extensions of the side guards. The term "extension" will be used herein to designate the upper portions of the side guards comprising the extension members, cross-piece 15, and brace 23, and "side guards" will be used to designate the entire uprights erected upon the ends of the floor, as above indicated. These terms, however, are used in a broad sense and are intended to comprehend any equivalents of the same. It may also be noted at this point that the term "channel members" will be used throughout this description and in the following claims as designating any channel-shaped member, whether integral or of composite construction, as herein shown and described. Pivotaly connecting the upper rear portions of the extensions upon both sides of the platform is a rigid link 24 for a purpose hereinafter described. The side guards are also preferably connected to the rear of the platform by means of flexible cross members 25, which are herein shown as composed of chains intersecting in a ring 26, but may obviously be of any equivalent form, such as cords or straps, if desired, although chains have been found to be peculiarly adapted for the purpose in view. Bolts 27 are provided with stop-nuts 28 and extend entirely through the channel-shaped end members and the end of the floor 1 and are adapted to engage the sill in such manner as to maintain a substantially level position of the floor irrespective of the inclination of the sill of the window or part upon which the platform rests.

45 The operation of the above-described embodiment of my invention is as follows. Assuming the platform to be in folded condition, as shown in Fig. 3, it is inserted through the window and hooks 4 and placed in engagement with the perforated lugs 6, which are secured to the wall of the building or to the window-sill in any desired manner. The extension or upper part of the side guard, which is mounted upon blocks 18, is then raised to a position shown in Fig. 2 and is secured in such position by means of bolt 14. This movement draws the remaining side guard to a partially-extended position, as shown in Fig. 2, by means of link 24, and the erection of the platform is completed by means of pushing this guard into the completely-extended position shown in Fig. 1 and securing it in such position by means of bolt 14. Bolts 27 are now adjusted, if necessary, so as to bring the floor into a level position. In this condition

the side guards are braced at their upper extremities by means of link 24, so as to prevent relative movement either toward or away one from another, and the stiffness of the entire structure is materially increased by means of the diagonal chains 25. The platform is now in condition for use and may be used in an obvious manner, after which it is collapsed by a series of operations which is the reverse of that above described. It may here be noted that the word "collapse" is used throughout in a broad sense as denoting any relative movement whereby the two parts approach one another, whether that movement be folding, sliding, or telescopic. In its collapsed form it is usually removed from engagement with lugs 6 merely by means of tilting upwardly the outer end of the platform, and it may thus be withdrawn through the window without endangering the user thereof.

It will thus be seen that I have provided a window-platform which is of simple and inexpensive construction and may be used in connection with the windows of any building merely by securing a pair of plates to the sill or adjacent part thereof. It will also be seen that the platform herein described is rigid in its extended condition and that this rigidity is attained without the sacrifice of lightness or compactness of the several parts. It will also be noted that when the platform is in its folded condition the several parts lie parallel one to another and are entirely within the space outlined by the floor of the platform. Moreover the feature whereby the floor may be maintained in a substantially level position irrespective of the inclination of the part upon which it rests is of marked importance.

The invention may be embodied in a construction similar to that above described, but differing in that the several members comprising the side guards and connecting-link may be formed of piping, if desired. The means whereby this substitution may be made should be largely obvious, the manner of hinging two parts of piping being shown in Fig. 4 of the drawings. In this figure piping 29, which corresponds to the member 12 in the above-described embodiment, is tapped into a socket 30, which is provided with perforated hinge-lugs 31 at one side thereof. The piping 32, corresponding to member 8, is tapped into a similar socket 33, provided with a hinge-lug 34, adapted to coact with lugs 31 and form a hinge therewith, as shown in the drawings. The other changes in the first-described embodiment necessary in order efficiently to use piping in place of the rectangular members therein shown should be largely obvious from the above description and the construction shown in Fig. 4 of the drawings.

In Fig. 5 is shown another embodiment of my invention, which differs from those above described in several details. The construction of the floor 35 is substantially the same

as that of floor 1, and it is supported, by means of hooks 36, upon straps 37 in a manner which will be obvious from the description of the function of the corresponding members in the first-described embodiment. The side guard upon one side of the platform is mounted upon blocks 38, similar in character and identical in function with blocks 18, above described, and this side guard is supported in its extended position by means of the braces 39, which have a hinged connection with blocks 40, slightly shorter than blocks 38, and are connected with the upper members or extension of the side guard as follows: Secured to the lower part of member 41 of the upper extension of this side guard is a hinge-plate 42, pivotally connected with which is a plate 43. Secured to the upper end of the corresponding brace 39 is a hinge-plate 44, which also has a pivotal connection with the plate 43. A substantially identical connection is provided between the remaining brace 39 and extension member 45. Fixed to the lower end of the inner brace 39 is preferably a crank 46, by means of which the brace, together with the remaining brace 39, which is secured thereto by means of the stiffening members 47, may be rotated about the hinged connection with blocks 40 away from the side guards. Staples 48 and 49 are secured, respectively, to the extension and to the upright immediately below the same, and through these members is thrust bolt 50, which is preferably formed integral, by means of cross-bar 51, with a similar bolt adapted to coact with similar parts on the remaining upright and extension member. Upon the opposite side of the floor 35 is mounted another side guard which is substantially identical with that immediately above described, differing mainly in that the braces 39 are mounted directly upon the platform and the uprights are mounted upon short blocks 52 of a height substantially equal to the thickness of the braces. When it is desired to collapse this platform, the braces 39 are rotated away from the corresponding uprights by means of the cranks 46, and the bolts 50 are withdrawn from the staples in which they are positioned. The side guards then may be folded in a manner substantially identical with that set forth in connection with the first-described embodiment.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. I desire it also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a mat-

ter of language, might be said to fall therebetween.

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

1. In a device of the class described, in combination, a floor, rigid frames connected to the same upon either side thereof, rigid extensions mounted upon each of said frames, and a rigid bar pivotally connecting said extensions, said extensions being hinged to said frames and said frames having a hinged connection with said floor.

2. In a device of the class described, in combination, a floor, rigid frames having a hinged connection with the same upon either side thereof, rigid extensions having a hinged connection with said rigid frames, and flexible members connecting the rear portions of said extensions and said floor.

3. In a device of the class described, in combination, a floor, rigid frames having a hinged connection with the same upon either side thereof, rigid extensions having a hinged connection with each of said frames, flexible members connecting the rear portions of said frames and said extensions, and a rigid bar pivotally connecting the upper portions of said extensions, said bar being adapted to swing in a plane substantially parallel to the rear or outer edge of said floor.

4. In a device of the class described, in combination, a floor, channel-shaped end members within which the ends of said floor are embraced, retaining devices upon said end members formed integral therewith, bolts passing through said floor and the upper and lower portions of said channel-shaped members, rigid frames mounted upon said floor at either side thereof and adapted to collapse with reference thereto, rigid extensions mounted upon said frames and having a hinged connection therewith, and a rigid bar pivotally connected to the upper end of said extensions.

5. In a device of the class described, in combination, a floor having channel-shaped end members, retaining devices formed integral with said end members, rigid frames having a hinged connection with said floor and mounted thereon at either side thereof, extensions mounted upon said rigid frames, flexible connecting members diagonally connecting the rear portions of said floor with said extensions, and a rigid bar pivotally connecting said extensions.

6. In a device of the class described, in combination, a floor, channel-shaped end members having retaining means formed integral therewith, rigid frames hinged to said floor at unequal distances from the plane of the lower surface thereof, rigid extensions mounted upon said frames, and means whereby the rear portions of said floor and said extensions are connected.

7. In a device of the class described, in com-

5 bination, a floor, channel-shaped end members within which the ends of said floor are secured, retaining devices formed integral with said channel-shaped end members, rigid frames
10 having a hinged connection with said floor at unequal distances from the plane of the lower surface thereof, rigid extensions mounted upon said frames and having a hinged connection therewith, a rigid member pivotally connecting said extensions, and flexible means whereby the rear portions of said extensions and said floor are connected.

15 8. In a device of the class described, in combination, a floor, channel-shaped end members embracing the same and resting in contact with the upper and lower surfaces thereof, retaining means formed integral with said end members, adjustable screws passing through said floor and the upper and lower portions
20 of said channel-shaped members substantially at right angles thereto, rigid frames hinged to

the opposite sides of said floor, rigid extensions hinged to said frames, and a rigid bar pivoted to said extensions.

9. In a device of the class described, in combination, a floor, a rigid frame hinged thereto at one side thereof, a pair of blocks rigidly secured to said floor at the opposite side thereof, a rigid frame hinged to said blocks, rigid extensions mounted upon each of said frames
30 and having hinged connection therewith, a rigid bar pivoted to the upper end of each of said extensions, and flexible means adapted to connect the rear portions of each of said extensions with the floor at the opposite side
35 from said extensions.

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

ERNEST G. RAFF.

Witnesses:

J. B. KNOX,
H. S. DUELL.