

M. FISCHER.
FIRE ESCAPE APPARATUS.
APPLICATION FILED MAY 4, 1909.

958,383.

Patented May 17, 1910.

3 SHEETS—SHEET 1.

Fig. 1.

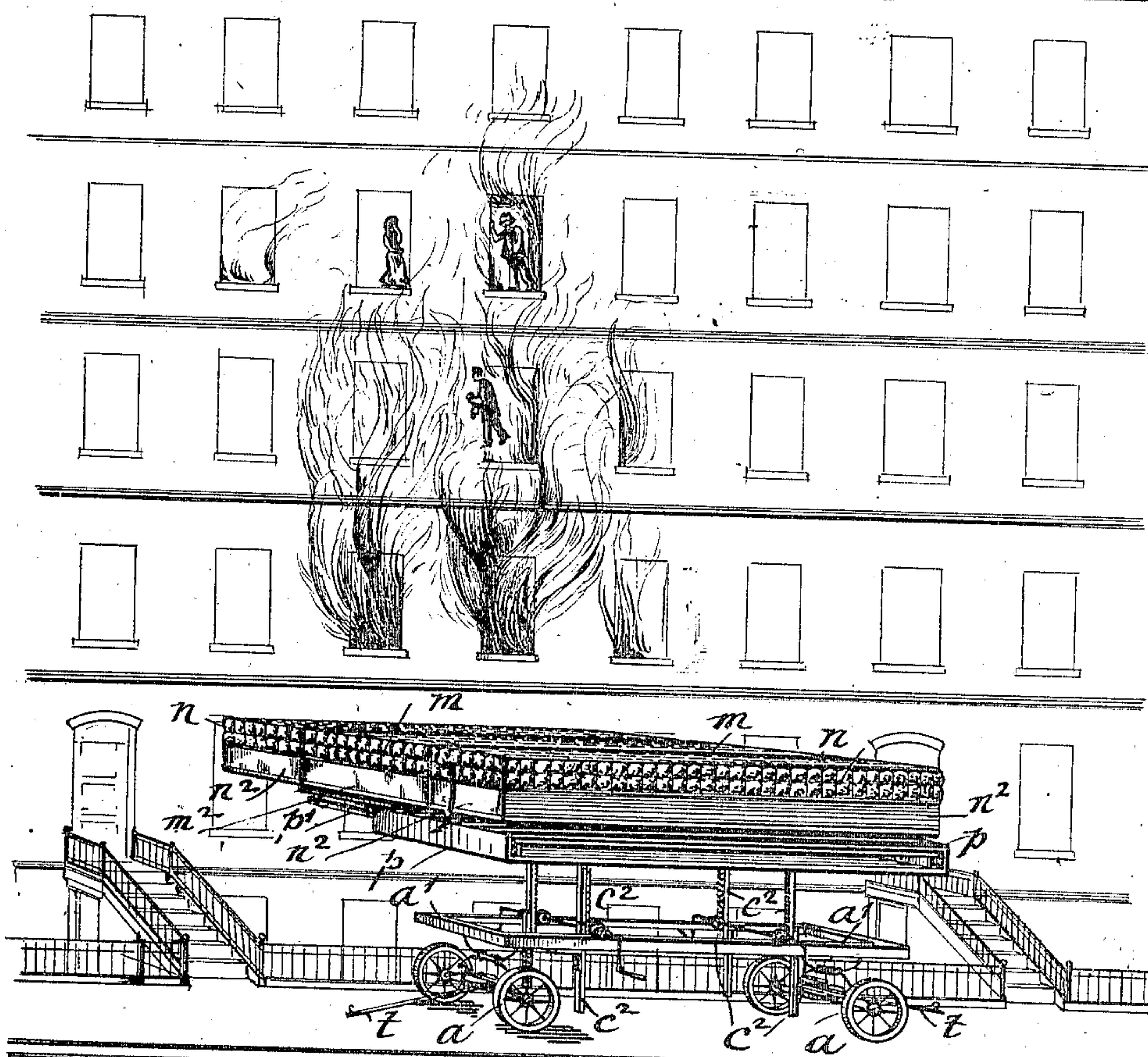
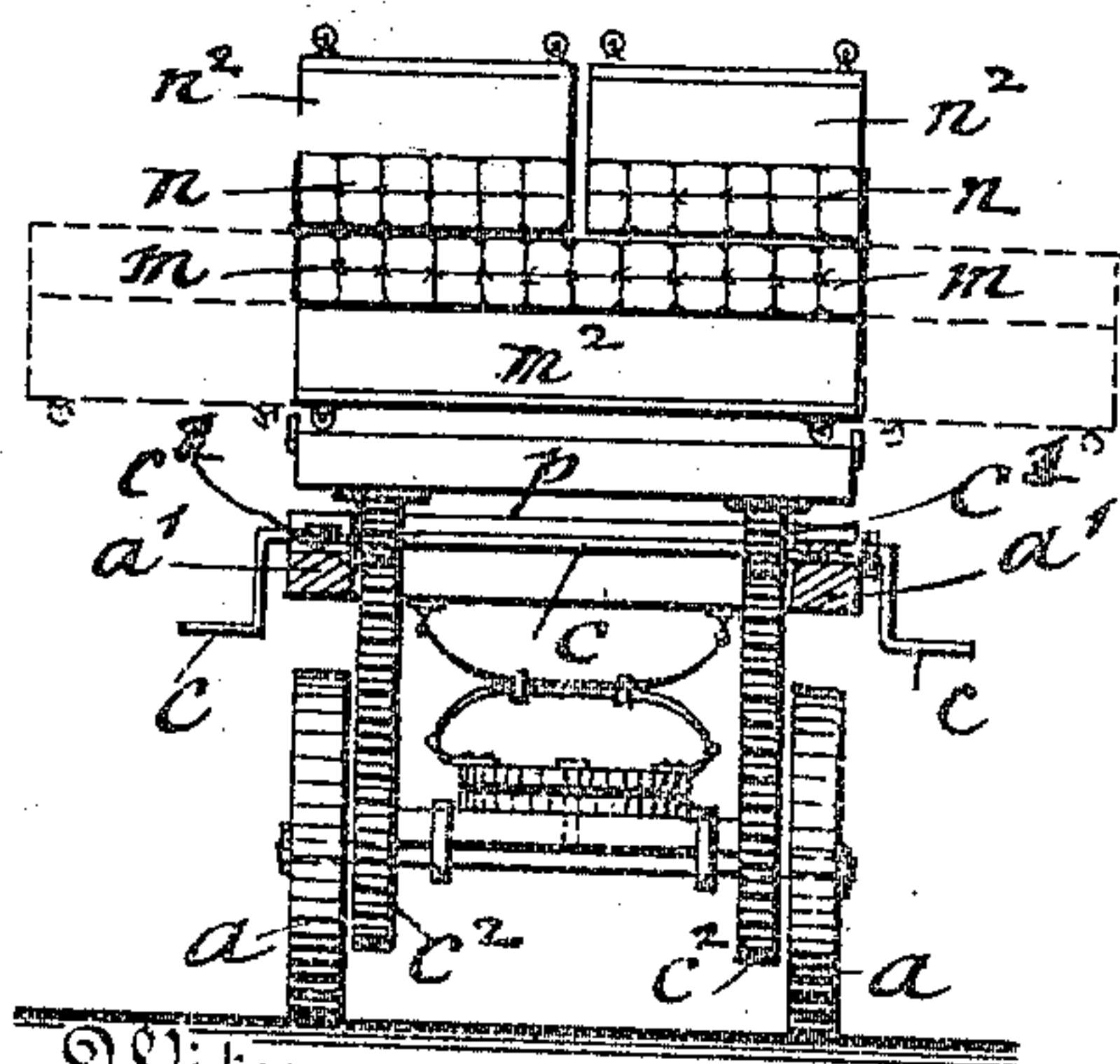


Fig. 2.



Witnesses
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Fig. 3.

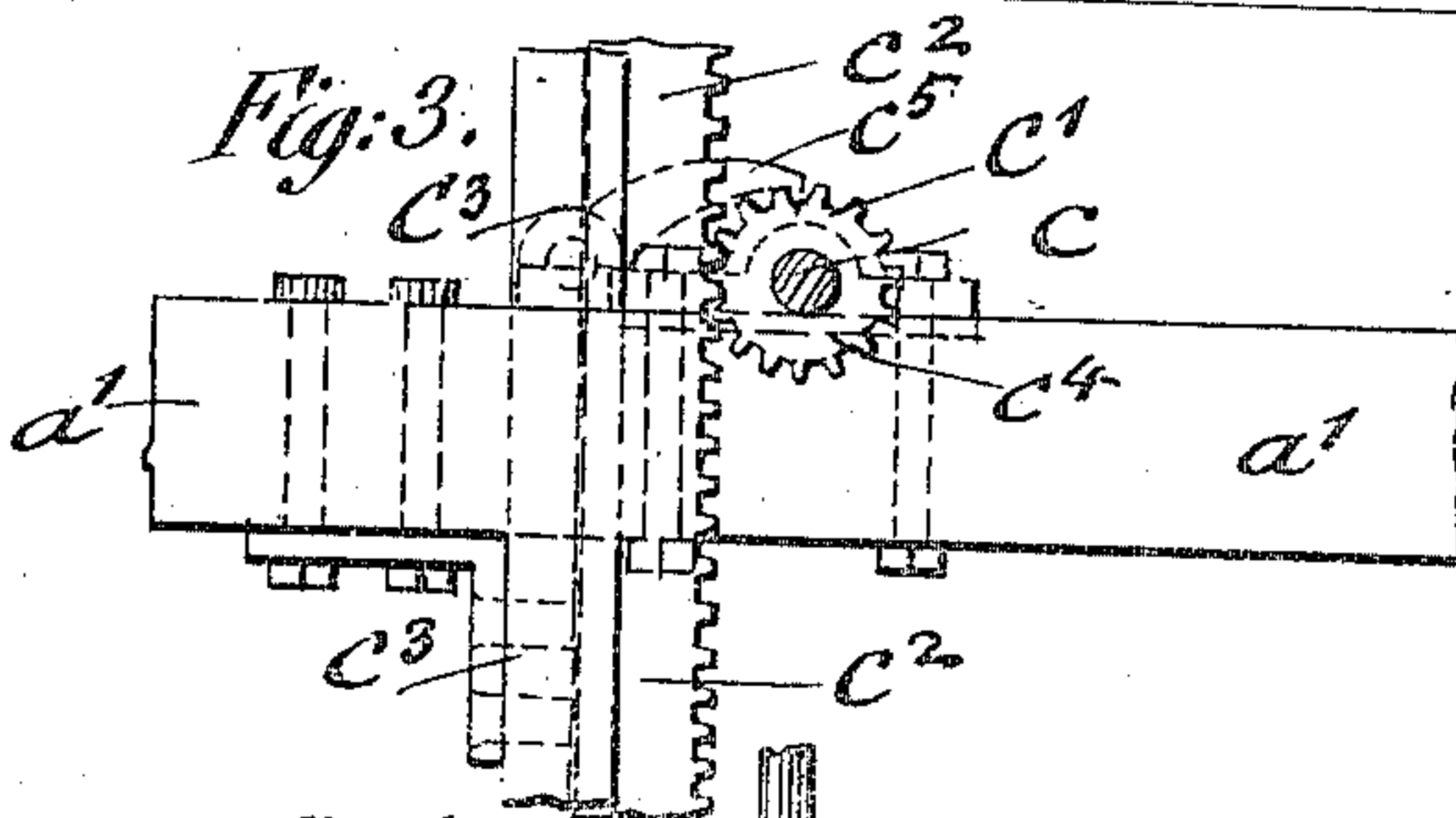
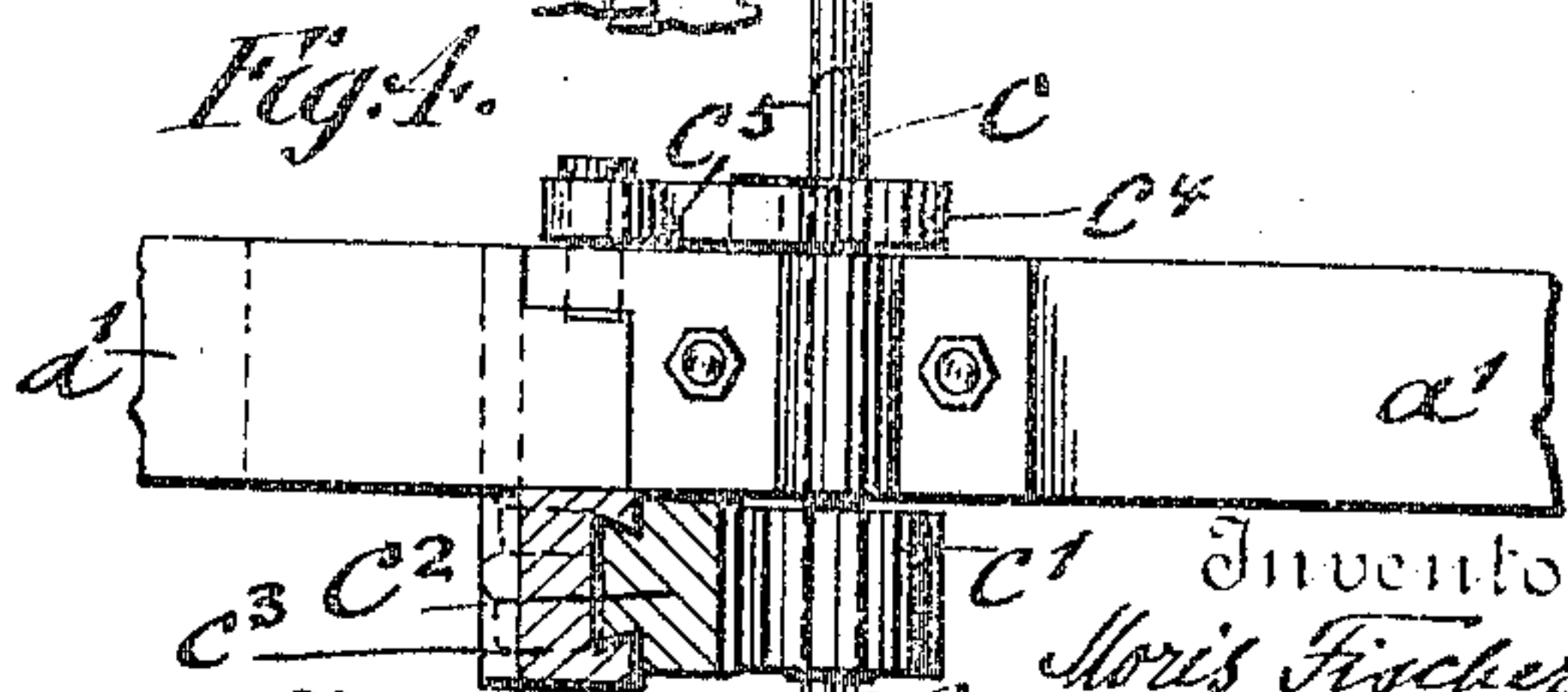


Fig. 4.



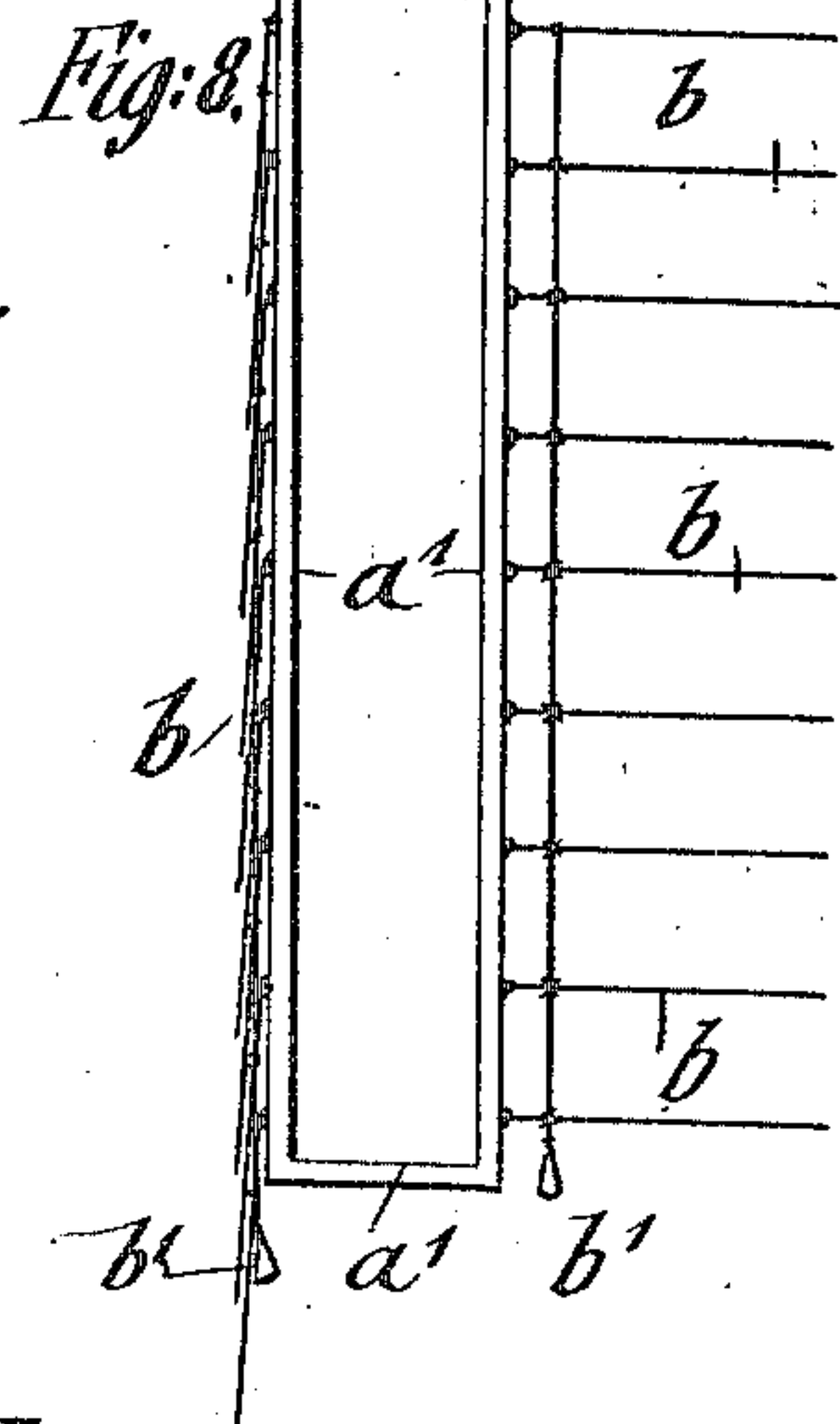
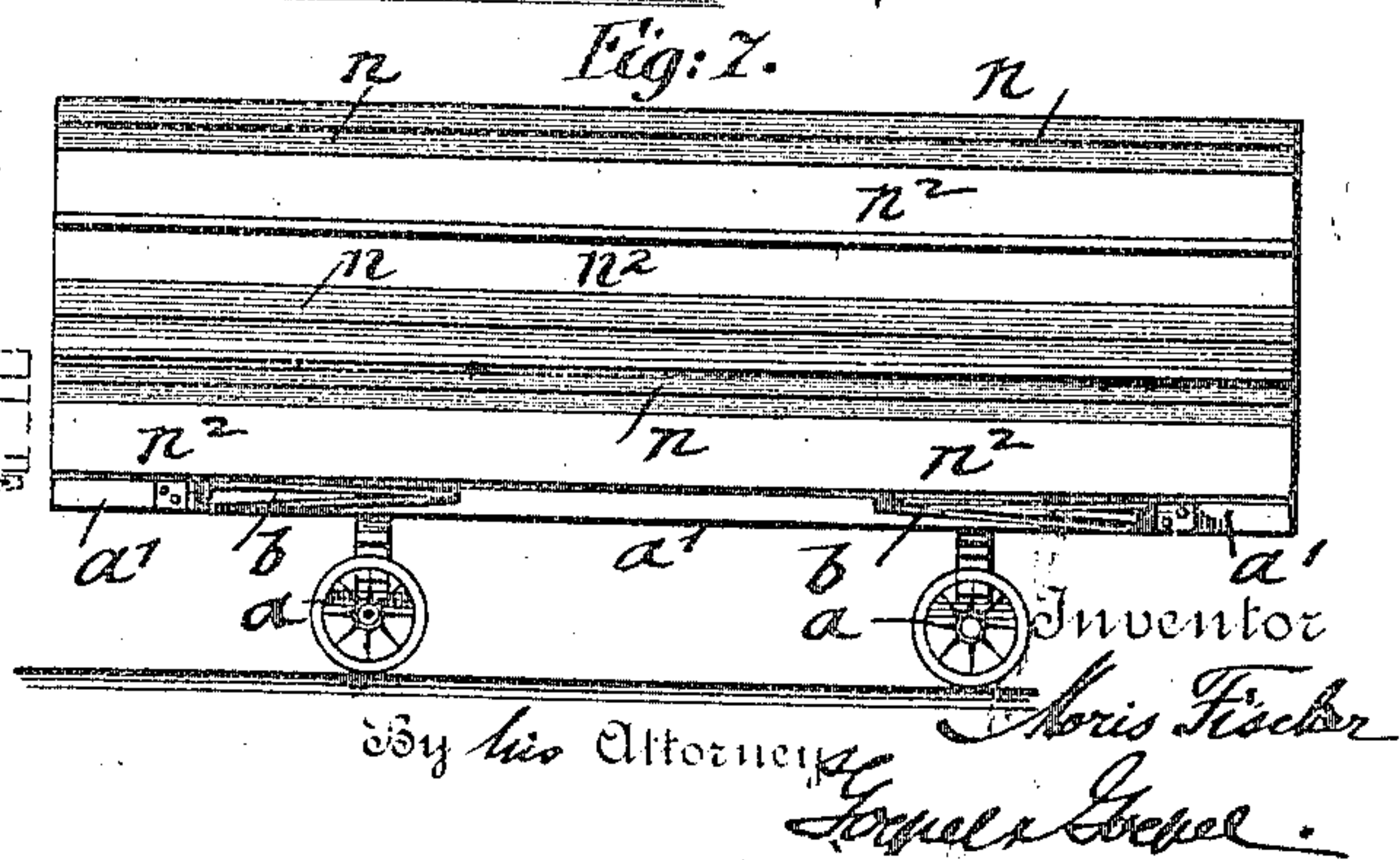
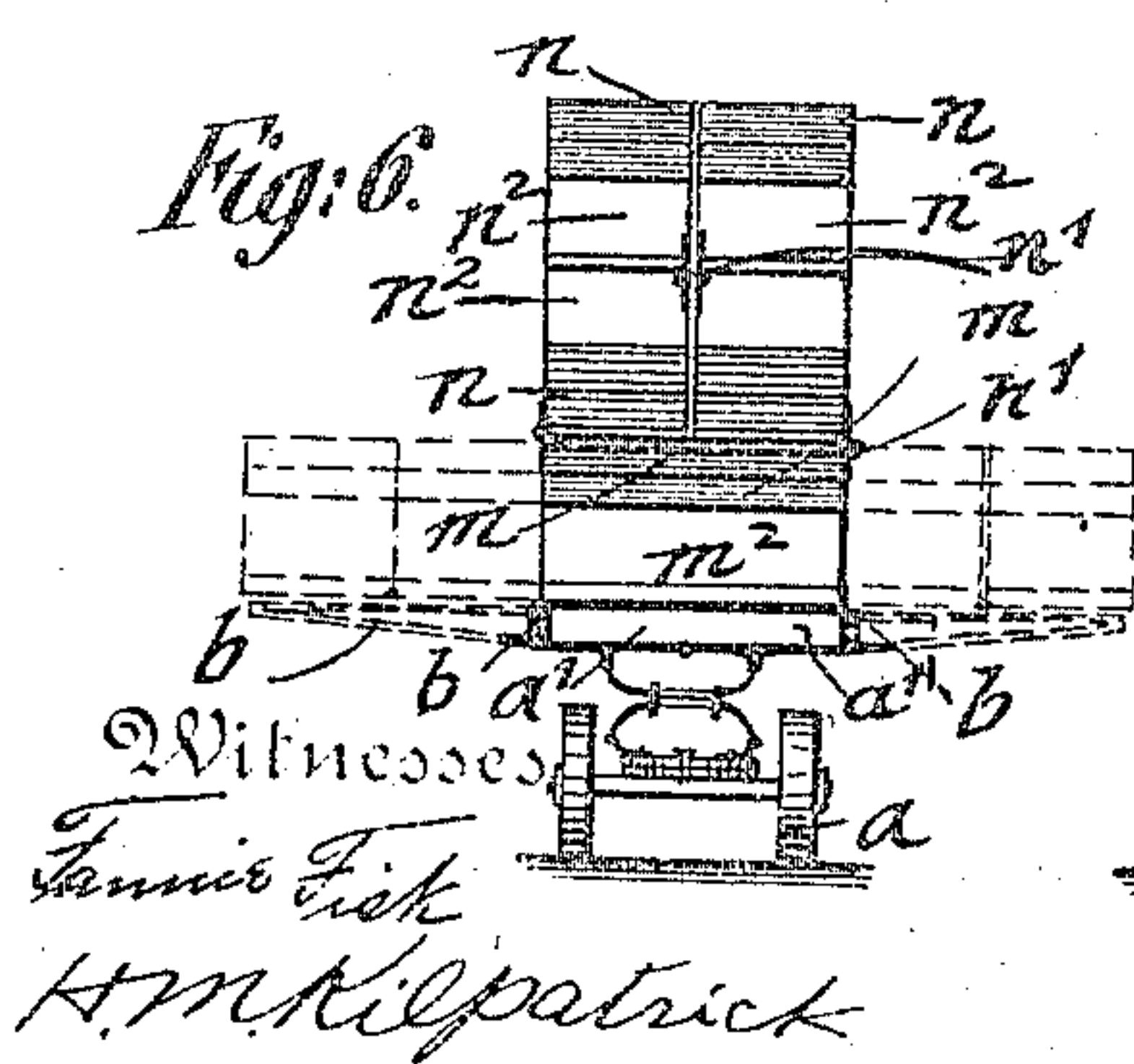
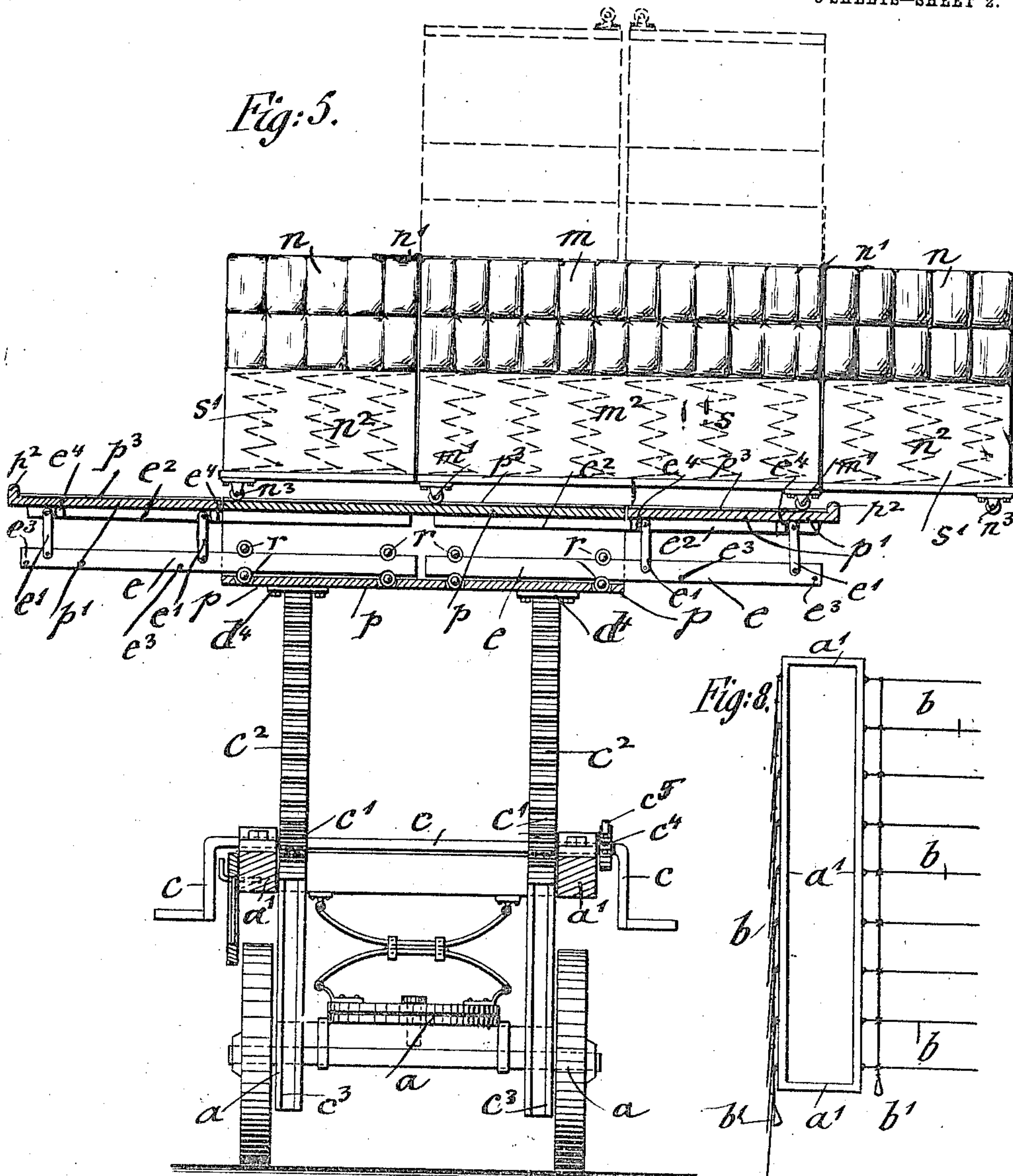
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

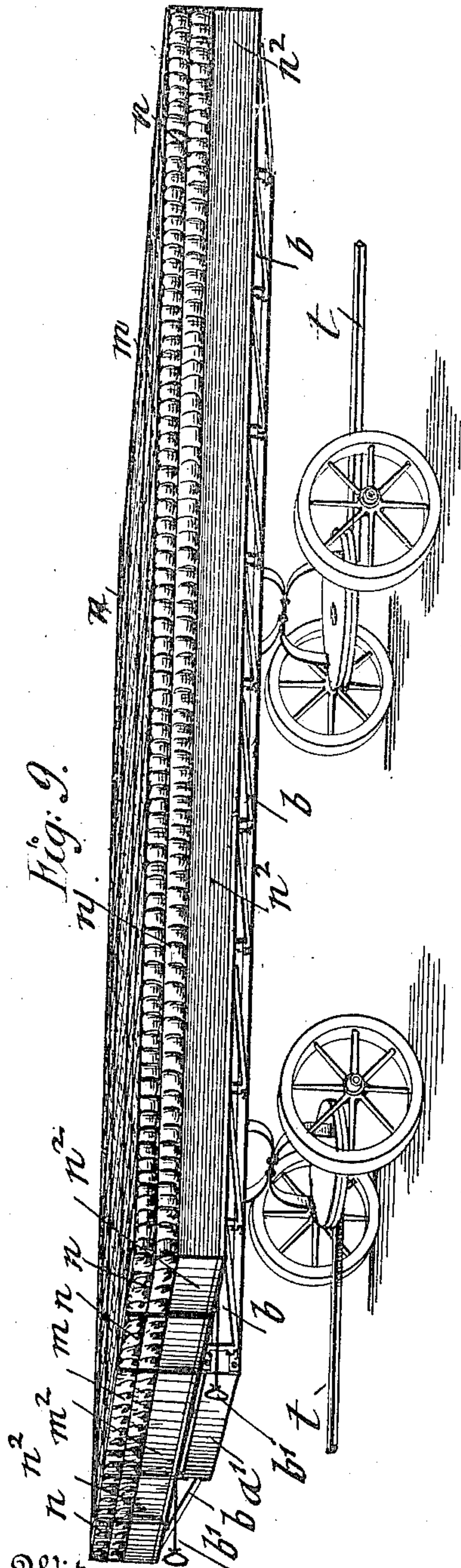


Fig. 9.

Witnesses:
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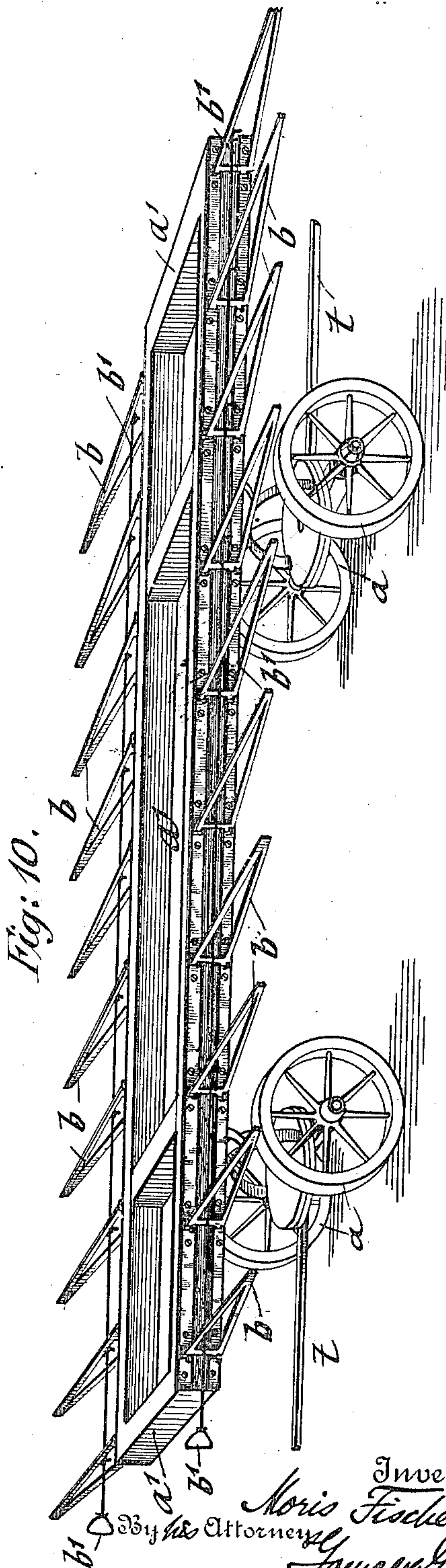


Fig. 10.

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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE APPARATUS.

958,383.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MORIS FISCHER, a citizen of the United States of America, residing in New York, in the borough of Manhattan, county and State of New York, have invented certain new and useful Improvements in Fire-Escape Apparatus, of which the following is a specification.

This invention relates to certain improvements in fire-escape apparatus of that class in which a spring-cushioned and upholstered mattress, capable of extension in lateral or longitudinal direction, is supported on a platform and moved up to a burning building so as to permit the escape of persons from a burning building by jumping on the mattress; and for this purpose the invention consists of a truck, a platform supported on the same and capable of being raised to a certain height above the truck said platform being provided with a central stationary section and extensible sections and a movable upholstered and spring-cushioned mattress, also formed of a central section and hinged extensible sections, said mattress being adapted to be moved in an extended state over the platform close to a burning building so as to furnish a large and soft surface for a person to jump on from the windows of the burning building. The platform is raised or lowered in vertical guideways on the trucks by means of suitable mechanism so as to bring the entire apparatus, after the mattress is folded up and the movable sections of the platform are shifted inwardly under the stationary section, into comparatively small size for transportation.

The invention consists further of certain details of construction which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view of my improved fire-escape apparatus, showing the same in position near a burning building, ready for use, Fig. 2 is an end-elevation of the apparatus, showing it folded up and lowered onto the truck for being stored or moved to the place of fire, Figs. 3 and 4 are respectively a detail side-elevation and a sectional plan-view of the rack-bars and the mechanism for lifting or lowering the movable platform on the truck, Fig. 5 represents an end-elevation, partly in section, of the

platform, showing the fire-escape apparatus in raised and extended position for use, Figs. 6 and 7 show an end view and a side-view of a simplified construction of the apparatus, in which the vertical adjustment of the platform is dispensed with, Fig. 8 is a plan-view of Fig. 6, showing a modified arrangement of supporting the platform of a larger sized apparatus, Fig. 9 is a perspective view of the apparatus shown in Figs. 6 and 8, drawn on a larger scale and showing the mattress-sections in extended position, ready for use, and Fig. 10 is a perspective view of the truck-frame and its laterally-swinging side-bars.

Similar letters of reference indicate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, *a* represents a truck of suitable size. The truck is composed of an oblong frame *a*¹ the transverse bolsters of which are supported on springs and a fifth wheel placed on the axle of the truck-wheels, as shown in Figs. 2 and 5. The oblong frame *a*¹ is preferably braced at points intermediately of its length so as to impart to it the required degree of stiffness. On the frame *a*¹ are supported in suitable journal-bearings transverse crank-shafts *c*, which are provided with pinions *c*¹ that mesh with vertical rack-bars *c*² which are guided in stationary ways *c*³ and attached at their upper ends by means of fastening-plates *d*⁴ to the under-side of a platform *p*. The rack-bars *c*² are guided in stationary uprights *c*³ having dovetailed guide-grooves in which corresponding tongues of the rack-bars are guided. By turning the crank-shafts *c* at the front and rear ends of the truck the rack-bars and the platform are raised, the rack-bars being held in position by means of ratchet-wheels *c*⁴ on the crank-shafts and pawls *c*⁵ which are pivoted to the frame *a*¹, as shown in Figs. 3 and 4. The stationary uprights are cut short at a sufficient distance from the lower ground so as not to interfere with the proper movement of the apparatus to the place of fire. The rack-bars *c*² are of such a length that when they are in their lowermost position, their lower ends are even with the lower ends of the stationary uprights.

The platform *p* is made box-shaped and corresponds in length and width with the truck-frame *a*¹. The box-shaped platform

p is closed at the ends and open at the sides. In rollers r applied to the ends of the platform p and at intermediate points of the same are guided slidable rails e which are capable of being moved in an outward direction at opposite sides, as shown in Fig. 5, the rails being connected by means of pivot-links e^1 with rails e^2 at the underside of the auxiliary platforms p^1 that can be lowered on the rails e and then pushed inwardly into the box-shaped platform p so as to be out of the way. The rails e^2 of the auxiliary platforms p^1 rest when lowered, on stop-pins e^3 of the lower slide-rails e , while when they are raised they abut against stops e^4 , as shown in Fig. 5. The auxiliary platforms p^1 are provided along their outer edges with longitudinal ledges or stop-rails p^2 . On the main and auxiliary platforms p p^1 is supported a spring-cushioned and upholstered main-mattress m , which is provided with casters m^1 at its bottom so as to move over flat rails p^3 on the stationary and auxiliary platforms p and p^1 in one or the opposite direction until the casters m^1 arrive at one of the stop-rails p^2 , according as the mattress is moved toward the left or right over the platforms. The mattress m is supported on a lower box-shaped portion m^2 , in which strong cushioning springs s are arranged, as shown in dotted lines in Fig. 5. The springs s in connection with the thickness of the upholstered mattress m give the required degree of softness and resiliency to the mattress so as to permit the jumping on the same from a burning building without danger of injury.

To the upper opposite ends of the box-shaped frame of the mattress m are hinged by means of stout strap-hinges n^1 auxiliary mattress sections n which are supported on the mattress m when the fire-escape apparatus is in fold-up condition, as shown in dotted lines in Fig. 5. The hinged mattress-sections n are also provided with box-shaped lower portions n^2 having cushioning springs s^1 and casters n^3 at their outer corners, so that they can be rolled with the mattress m over the platforms p , p^1 . When both mattress-sections n are moved from their folded position on the mattress m into their extended position sidewise of the same, a large spring-cushioned and upholstered surface is formed on which the persons who desire to save themselves from a burning building can jump with safety. When the truck-frame is about 30 feet long and 6½ feet wide, an upholstered mattress surface of 195 square-feet is obtained, which when the side-sections are of six feet, are added, makes the mattress surface 375 feet, which is sufficient for most practical purposes, especially when the truck-frame is moved close up to the burning building and below the windows from which the persons in danger have to

jump on the mattress. When larger dimensions are selected for the platforms and mattresses, a larger mattress-surface is obtained. After the apparatus has been used, the mattress-sections are returned into the folded position shown in dotted lines in Fig. 5, and the auxiliary platforms moved back into the main platform, so as to be in condition to be returned to the station-house or other place of storage. The same effect may also be obtained by supporting the stationary and extension-mattresses directly on the frame of the truck, in which case the platforms p , p^1 and the rack-bars and the mechanism for lifting or lowering the same are dispensed with. This arrangement is shown in Figs. 6 to 10. Fig. 7 shows two laterally-swinging side-bars b and Figs. 8 to 10 a plurality of bars on brackets b pivoted to the sides of the truck-frame. Otherwise, as regards the auxiliary mattress-sections, the arrangement is the same as that shown in Figs. 1 to 5, only that in place of the extensible platforms the side-bars b are used, which are pivoted to opposite sides of the truck-frame and which are swung together in outward direction into a position at right angles to the truck-frame by longitudinal handle-bars b^1 that are pivoted to the side-bars so as to support the extensible mattress-sections n , n^2 . In this case two additional hinged mattress-sections n are used which are supported on top of the intermediate mattress-sections, so as to furnish a still wider mattress when the auxiliary sections are placed in extended position, on the side-bars, as indicated in dotted lines in Fig. 6 and in full lines in Fig. 9. By the simultaneous swinging of all the side-bars in outward direction the apparatus is quickly placed into condition for use. In this case the entire surface of the extended mattress is larger than the mattress-surface of the apparatus, shown in Figs. 1 to 5.

If it be desired to obtain a mattress surface of still greater length, the platform can be so arranged that the auxiliary platform sections can be hinged and extended in longitudinal direction at the ends of the main-platform. The platform can also be constructed with longitudinal rails instead of transverse rails. In this case longitudinally-extensible instead of laterally-extensible mattress-sections would be used. When the mattress-sections should become too large and unwieldly, they can be divided into smaller sections and provided with handles for turning the same.

The entire apparatus can be drawn by horses which are hitched to tongues t applied either to the front and rear-axles, so that the apparatus can be easily moved forward and backward without requiring turning. The truck may also be provided with a suitable motor so that the entire appara-

tus is driven by power, without requiring horses for moving it to the place of fire.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A fire escape-apparatus comprising a truck-frame, laterally-movable extensions at both sides of the truck-frame formed of bracket-bars, and spring-cushioned and upholstered main mattress-sections, and extensible mattress sections hinged to the main-section.

2. A fire-escape apparatus comprising a wheeled truck-frame, an extensible platform supported on said truck-frame, extensible spring-cushioned and upholstered mattress-sections supported on said platform.

3. A fire-escape apparatus comprising a wheeled truck-frame, an extensible platform supported on said truck-frame, means for raising or lowering said platform, and extensible spring-cushioned and upholstered mattress-sections supported on the extensible platform.

4. A fire-escape apparatus comprising a wheeled truck-frame, a center-platform, means for vertically adjusting the platform, laterally-extensible side-platforms, and an extensible spring-cushioned and upholstered mattress-sections supported on said center and side-platforms.

5. A fire-escape apparatus comprising a wheeled truck-frame, vertical guide-posts supported on the truck-frame, rack-bars guided on said posts, means for raising or lowering said rack-bars, an extensible platform supported on said truck, and an ex-

tensible spring-cushioned and upholstered mattress supported on said platform.

6. A fire-escape apparatus comprising a wheeled truck-frame, a box-shaped center-platform, means for vertically adjusting the center-platform, auxiliary extension-platforms, means for moving the same outwardly in line with the center platform, and an upholstered and spring-cushioned main mattress-section, and hinged auxiliary mattress-sections adapted to be moved over the main and extension platforms.

7. A fire-escape apparatus comprising a wheeled truck-frame, a box-shaped center platform, means for raising or lowering the center-platform on the truck-frame, laterally movable extension-platforms adapted to be moved into the box-shaped main-platform or extended alongside of the same, said extension-platforms being provided with longitudinal ledges or stop-rails at their outer ends, and an extensible mattress composed of a spring-cushioned and upholstered main-section and auxiliary spring-cushioned and upholstered sections hinged thereto, the center and auxiliary mattress-sections being provided with casters for being moved in either direction on the main and extension-platforms.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

MORIS FISCHER.

Witnesses:

PAUL GOEPEL,

HENRY J. SUJBIE.