

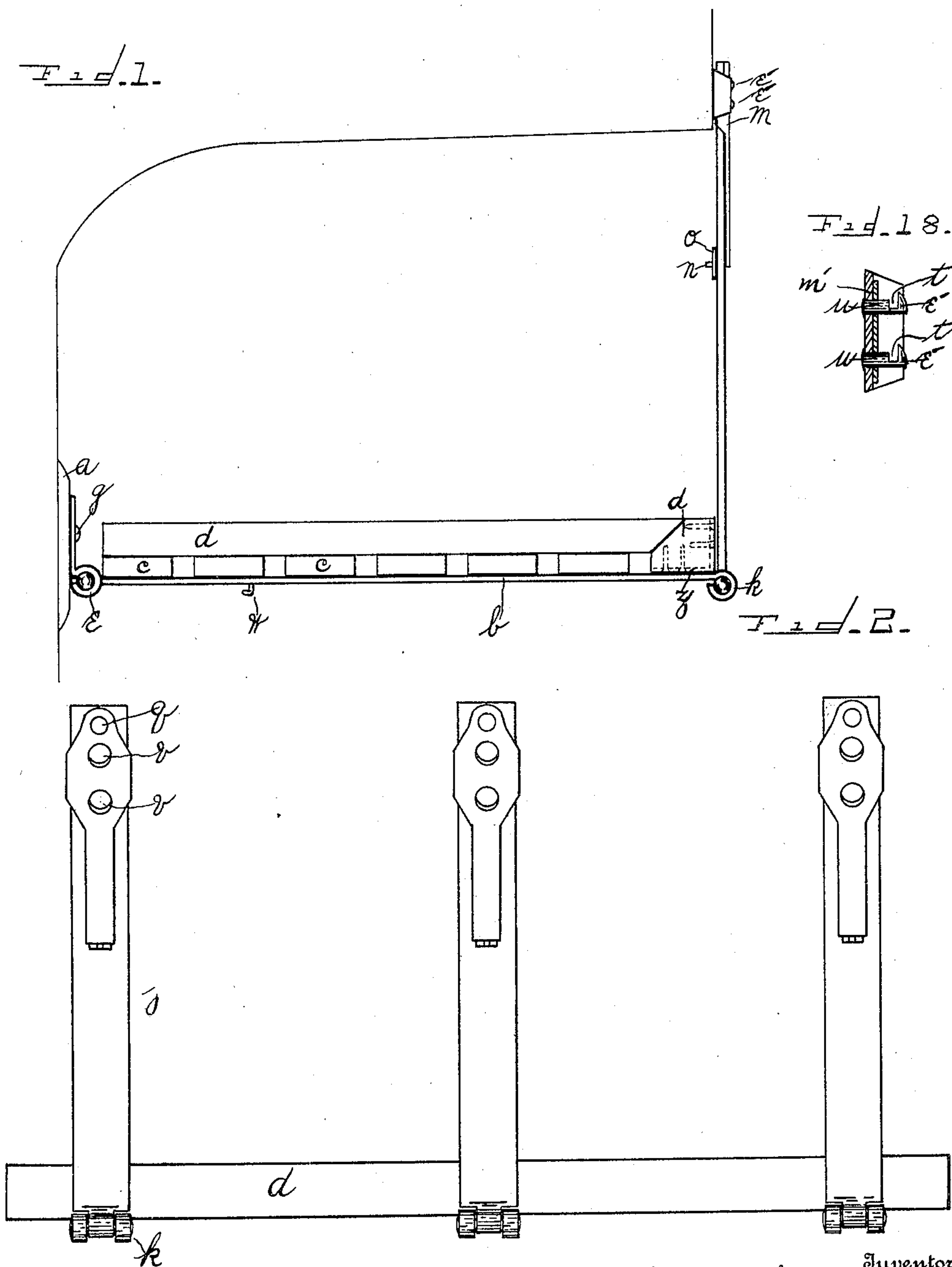
No. 793,459.

PATENTED JUNE 27, 1905.

A. E. MITCHELL.
FOLDABLE BRACKET FOR RAILWAY CARS.

APPLICATION FILED APR. 21, 1905.

3 SHEETS—SHEET 1.



Inventor
August E. Mitchell
Witnesses Charles T. Dickinson
Arthur Sturges By William A. Sturges
Attorney

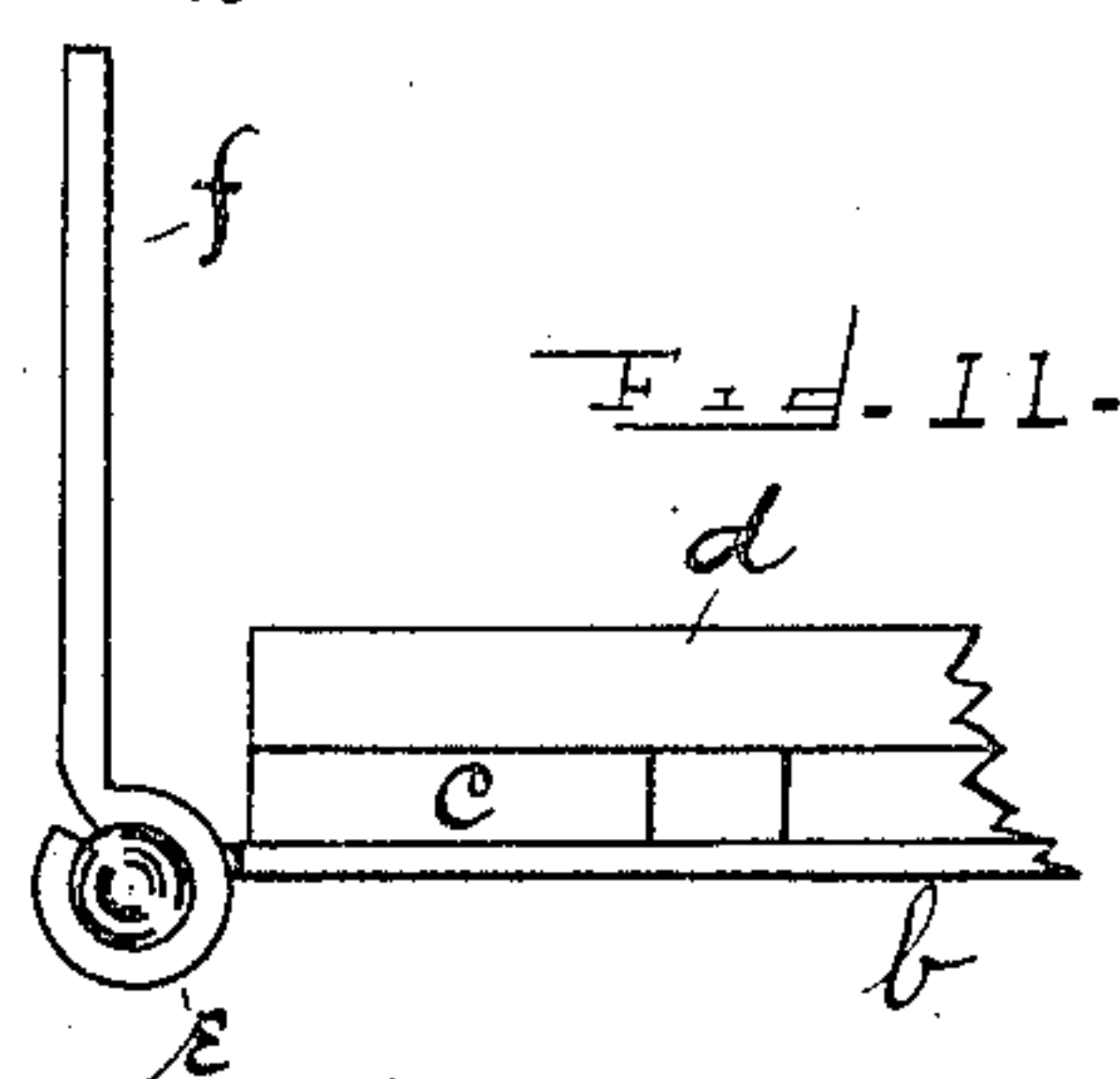
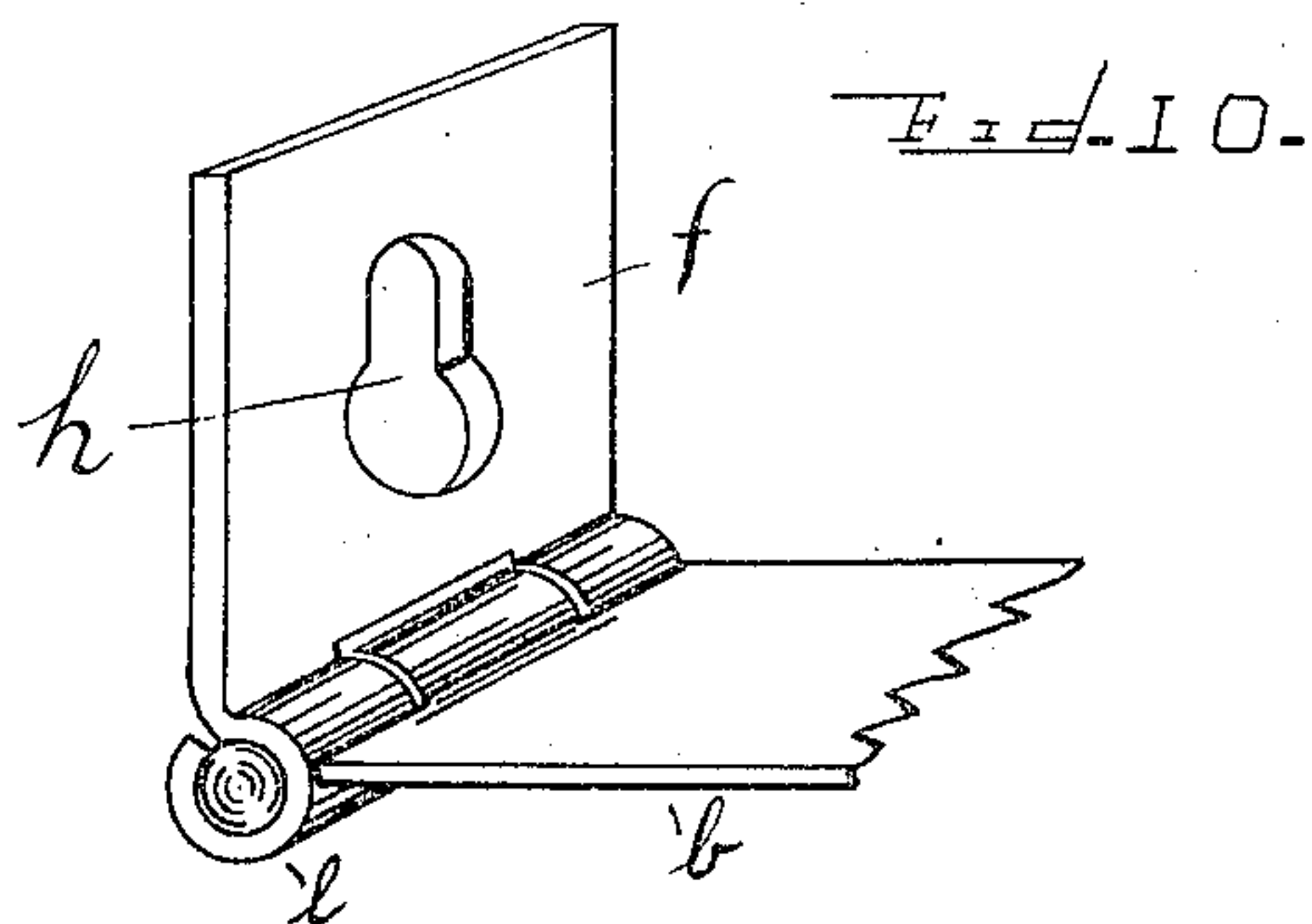
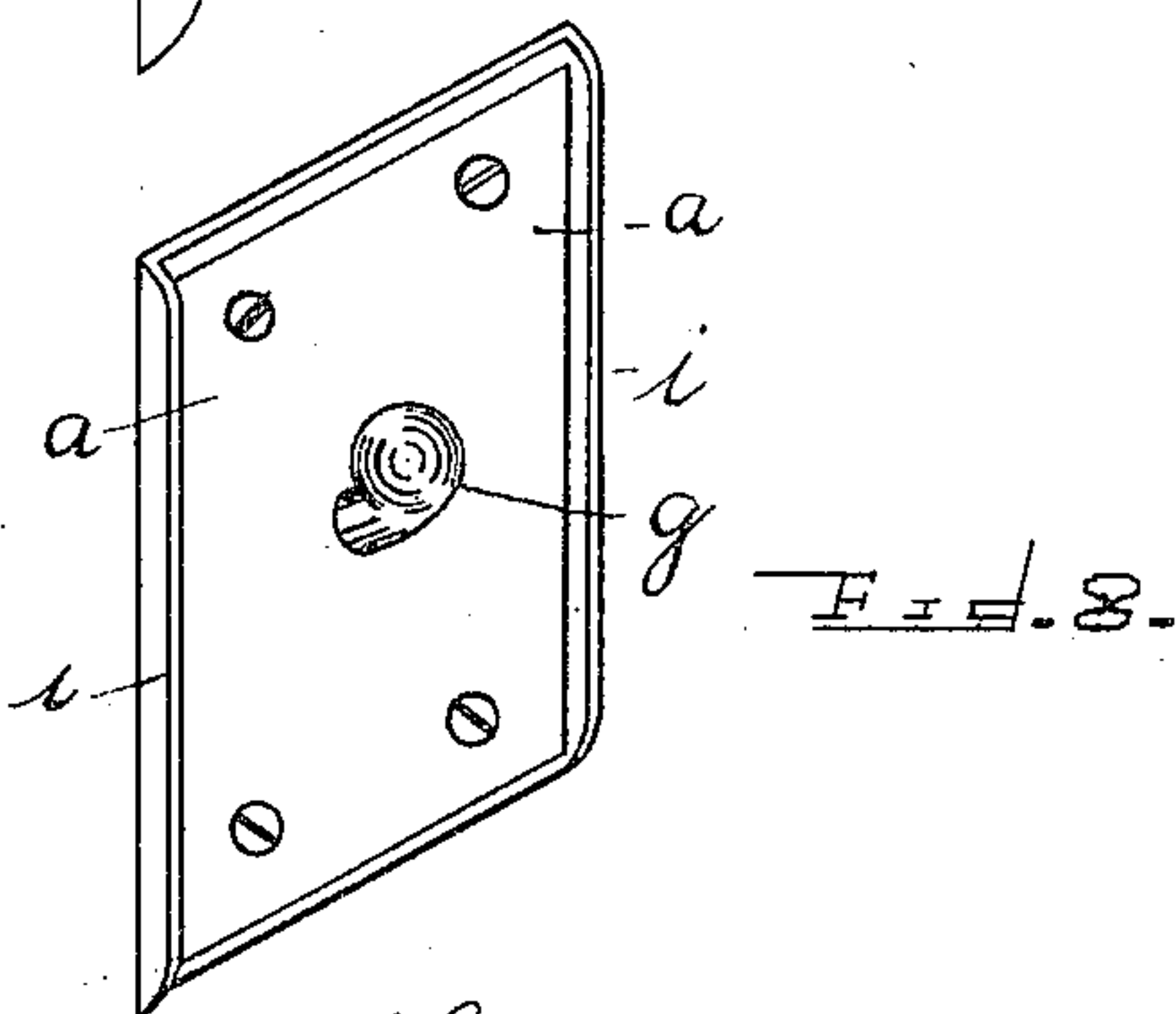
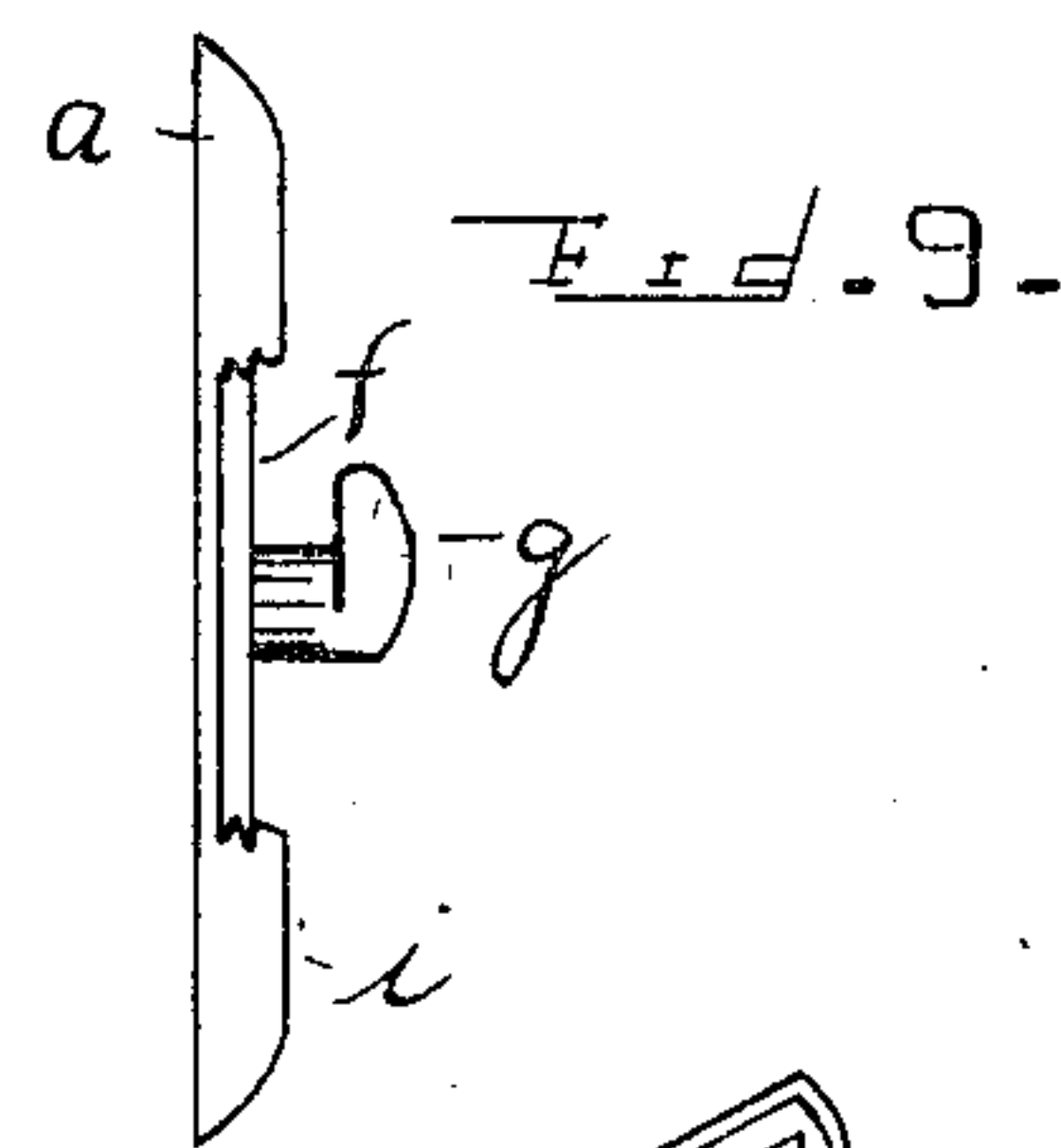
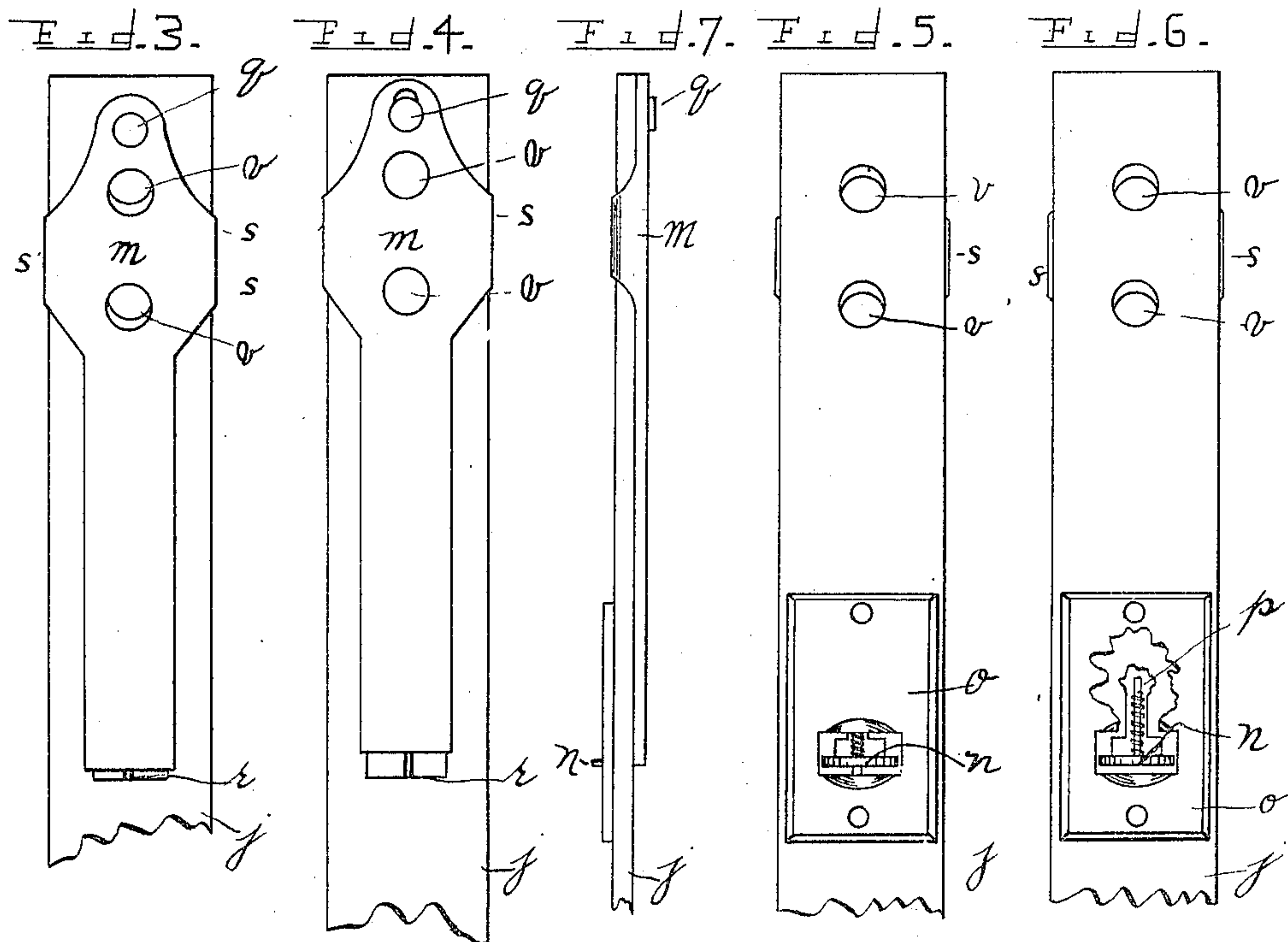
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3 SHEETS—SHEET 2.



Witnesses *Charles J. Lockman*
Arthur Sturges By

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3 SHEETS—SHEET 3.

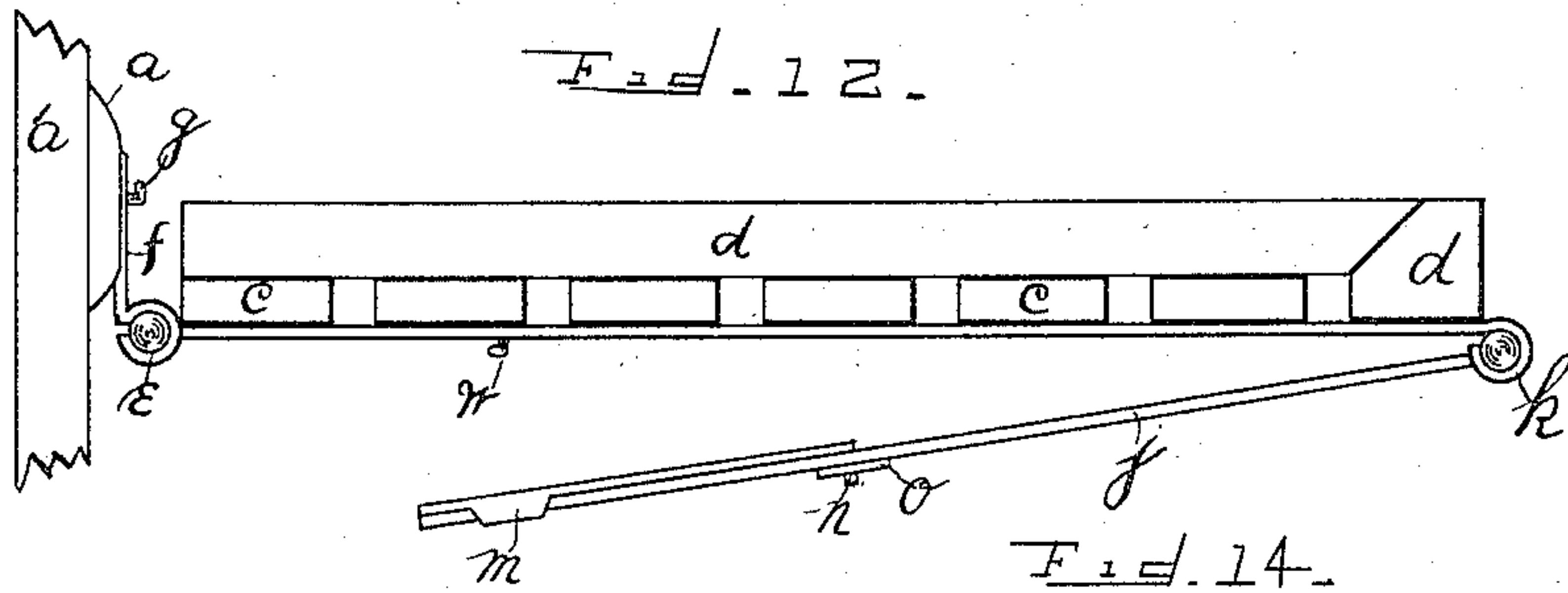


Fig. 14.

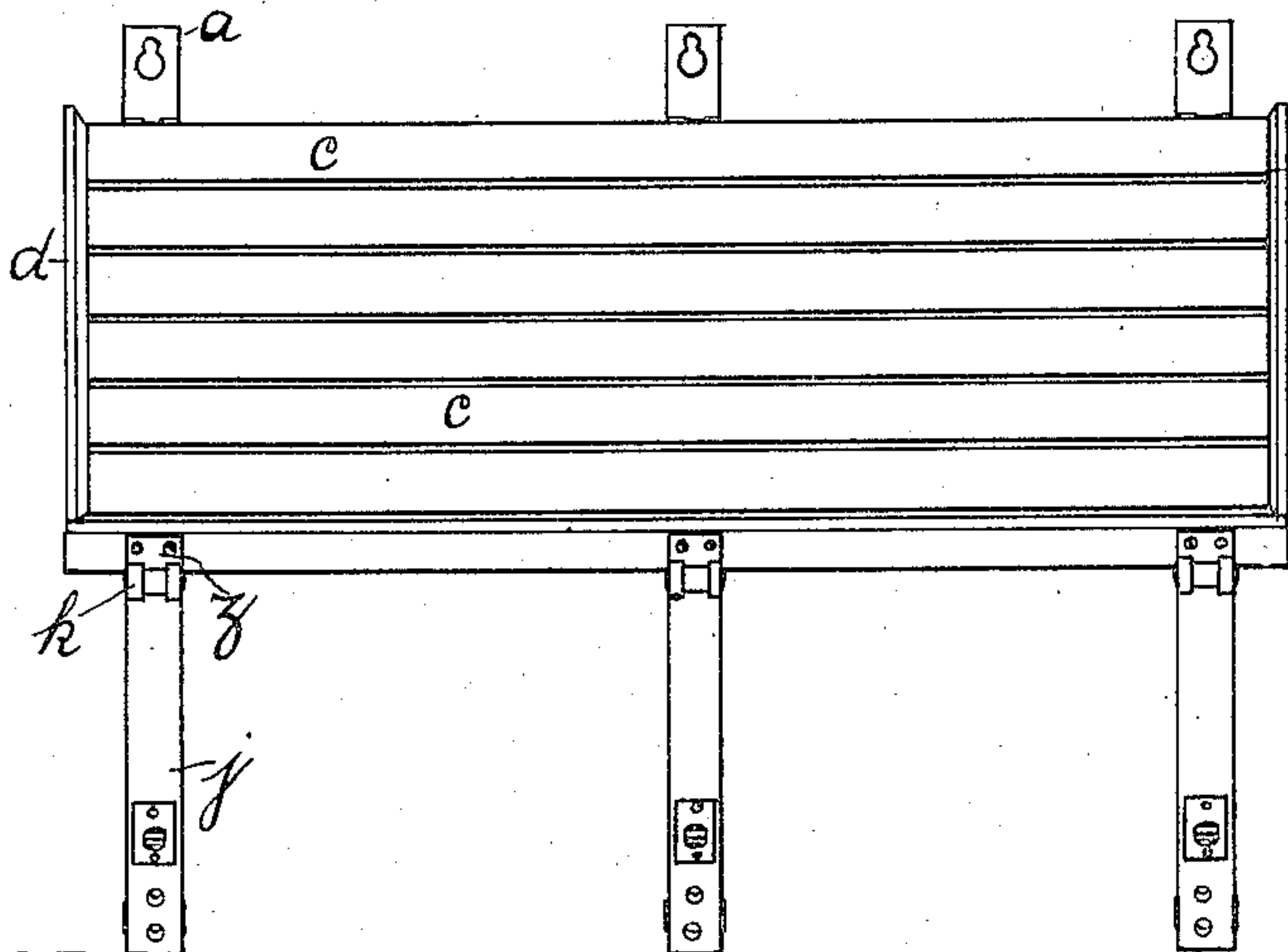


Fig. 15.

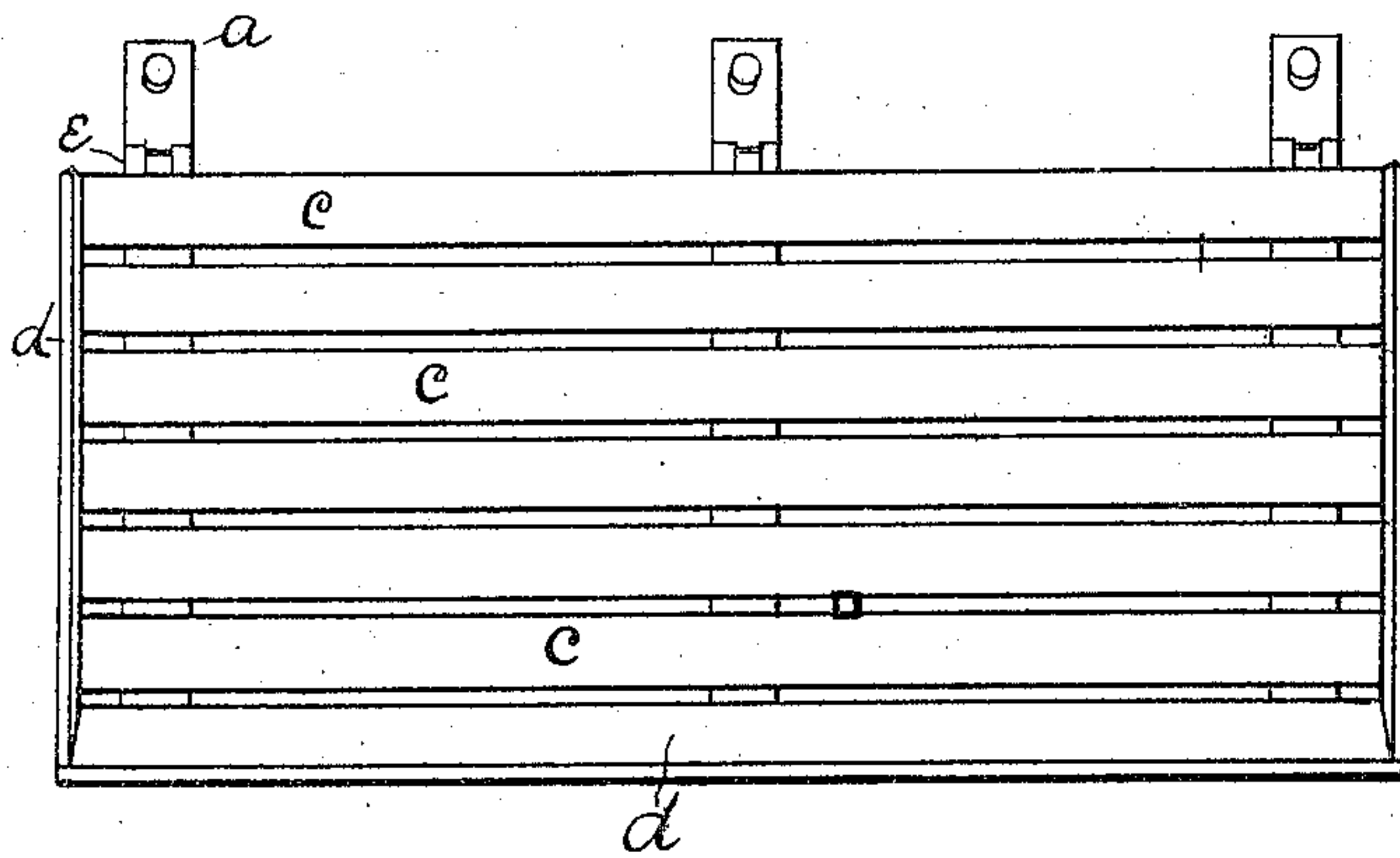


Fig. 17.

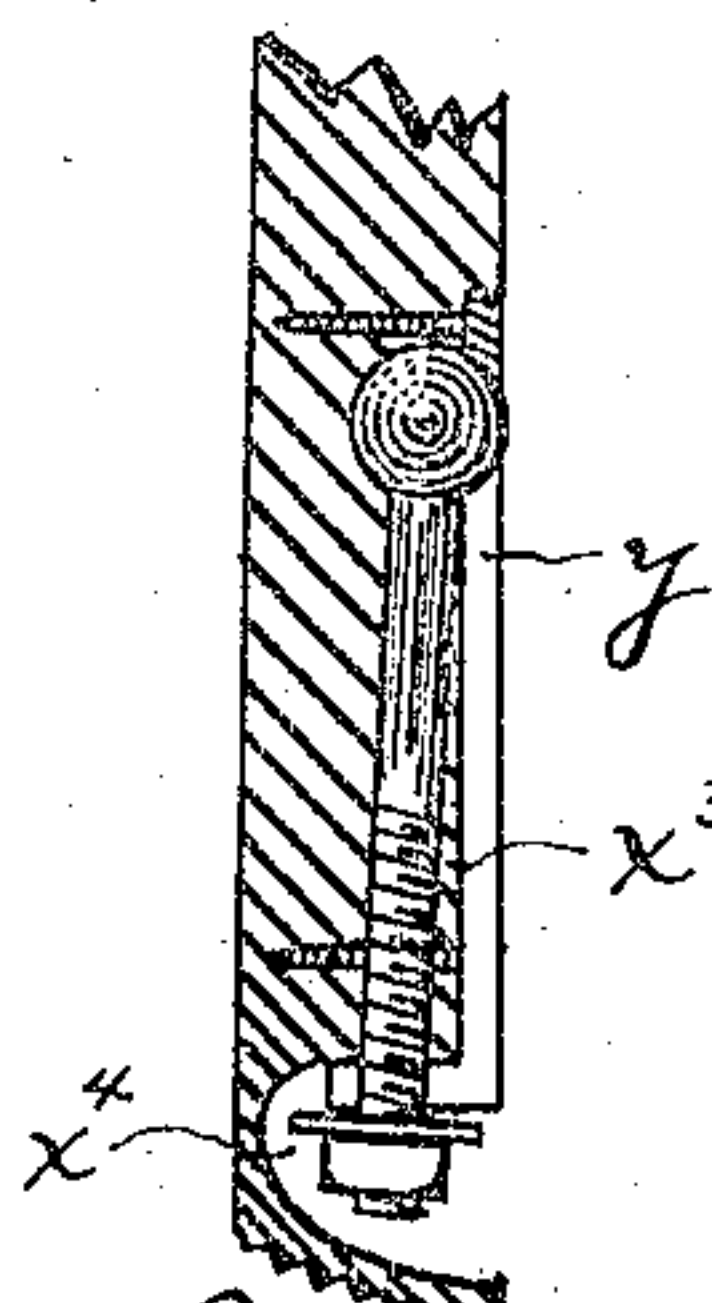
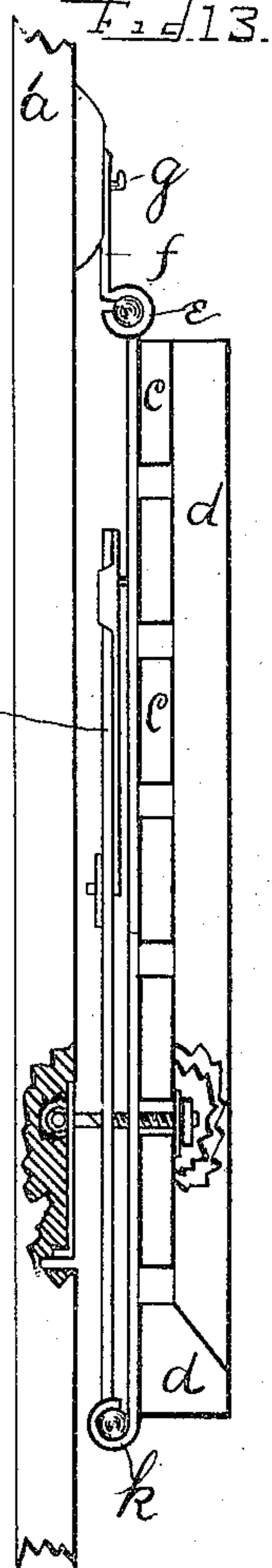
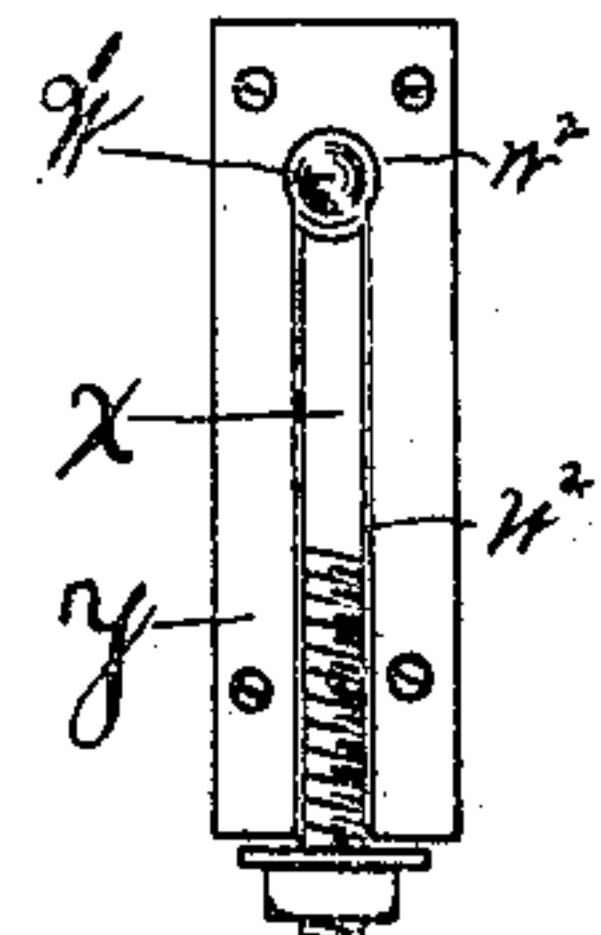


Fig. 16.



August E. Mitchell, Inventor

Witnesses Charles T. Dickinson

Arthur Sturges By Hiram A. Sturges,
Attorney

UNITED STATES PATENT OFFICE.

AUGUST E. MITCHELL, OF COUNCIL BLUFFS, IOWA, ASSIGNOR OF ONE-HALF TO LOUIS D. CARRIER, OF OMAHA, NEBRASKA.

FOLDABLE BRACKET FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 793,459, dated June 27, 1905.

Application filed April 21, 1905. Serial No. 256,774.

To all whom it may concern:

Be it known that I, AUGUST E. MITCHELL, a citizen of the United States, residing at Council Bluffs, in the county of Pottawattomie and State of Iowa, have invented certain new and useful Improvements in Foldable Brackets for Railway-Cars, of which the following is a specification.

My invention relates to improvements in foldable brackets for railway-cars, and has reference more particularly for use in baggage and express coaches for railway-trains to occupy a portion of the space upon the wall next below the curved contour of the car's hip. It has been the custom heretofore to construct shelves to occupy said space and to support the shelves in a permanent manner in express and baggage cars for conveniently storing small packages, and these shelves frequently have to be taken down to make provision for enlarged space, and considerable time and expense attends these changes.

My invention could also be employed in other than railway-cars.

The object of my invention is to provide a receiving-space supported upon brackets to occupy and utilize the portion of the car already designated, and refers particularly to new combination of means for supporting the bracket upon the wall, locking it thereto, unlocking it or of folding it upon the wall, a bracket which will admit of extension or reduction, which may be readily placed in its position for use or detached by a single employee, and which shall be so constructed that it may be rigidly and securely locked upon the car-walls to be practically free from movement from vibration of the car when either in the extended position for use or when folded upon the vertical wall, and to employ supports upon the wall which shall be unobtrusive and which shall be simple in construction and practically inexpensive.

With these objects in view my invention presents novel features of construction and arrangement of parts, substantially as disclosed herein and illustrated by the drawings, wherein—

Figure 1 is a vertical side plan view of my

invention, also showing wall-line and contour 50 hip-line of car. Fig. 2 is a vertical front view of Fig. 1. Figs. 3 and 4 are front views of the stirrup to illustrate its engaging means. Figs. 5 and 6 are rear views of Figs. 3 and 4, respectively, to exhibit engaging means and 55 location of spring *p* and guard-plate *o*. Fig. 7 is a side view of Figs. 3, 4, 5, and 6. Fig. 8 is a perspective front view of the lower wall-plate *a* to illustrate supporting and detaining means. Fig. 9 is a vertical side view of Fig. 60 8 with torn-away portion to illustrate construction of parts. Fig. 10 is a perspective view of the lower engaging plate. Fig. 11 is a vertical side view of Fig. 10. Fig. 12 is a side view of my invention secured to the car- 65 wall *a'*; showing the relation of parts when partly folded. Fig. 13 is a vertical side view of my complete invention when folded, secured to the car-wall *a'*. A part of the car-wall and bracket is shown in section to illustrate the position of the oscillating and threaded bolt with nut hereinafter described as "de- 70 taining means." Figs. 14 and 15 are front views of my invention to illustrate the position of the parts when in process of folding 75 and to show reinforcing members. Figs. 16 and 17 are details of detaining means, and Fig. 18 is a detail of the upper wall-plate.

I construct and permanently secure to the vertical wall of the car the series of lower 80 wall-plates *a*, with which to partially sustain the weight of the bracket. The supporting-arms *b* of the bracket have rigidly secured thereon a series of slats *c* and a guard-rail *d*. The slats and rail are preferably constructed 85 of wood or light material, and the balance of the bracket is of metal. The arms *b* are hinged at *e* upon the series of engaging plates *f*. The wall-plates *a* are provided with supporting-lugs *g*, each being curved at the outer 90 and lower edge, and a hook formed thereon by having its upper rear face beveled on the same angle as the vertical wall-plate and the engaging plate *f* is provided with a slot *h*, adapted to fit over this supporting-lug, the 95 smaller upper portion of the slot fitting within the beveled walls of the supporting-lug, a considerable part of the weight of the bracket

coming upon the supporting-lug. The engaging plate is locked beyond lateral movement upon the supporting-lug, since the wall-plate is provided with the flanges *i*, contacting with its sides. After the lug *g* has been fitted within the slot *h* the hinge *e* permits a vertical swinging movement only of the supporting-arm *b*.

I connect the extension-arm *j* with the supporting-arm *b* by means of the hinge *k*, and upon the upper wall of the car beneath the ventilator-deck I secure the upper supporting-plates *m'*, with their two supporting-hooks *e' e'* for the support of each extension-arm, and slidably mounted upon the extension-arm is the stirrup *m*, (best seen in Figs. 3, 4, 5, 6, and 7,) with the thumb-piece *n* and guard *o*. The extension-arm *j* by reason of the hinge *k* is adapted to move upon planes in alinement with the supporting-arm *b*, and when connected with the supporting-hooks *e' e'* these arms from an end view will approximately present a right angle relatively, the bracket-arm *b* being horizontally disposed, the bracket-arm *j* being vertical and will occupy the space within the car already designated. In order that the bracket-arm *j* after being extended may become securely locked upon the supporting-hooks *e' e'*, I construct each of these hooks with an axial vertical groove upon its upper horizontal body about midway from its apex to its base, extending downward about half its diameter, as shown in Fig. 18, and employ these hooks with these receiving means for the engagement and support of the arms *j* by the engaging and locking means now to be pointed out.

The stirrup *m* has a slight longitudinal movement upon the extension-arm *j* by means of the spring *p* embedded therein, (best illustrated by Fig. 6,) and guiding-lugs *q* are located integrally upon the arms *j* near the extreme free ends, which, with the guiding-post *r* and the overlapping sides *s*, cause the stirrup to ride with a true and limited movement upon said arm *j*. The arms *j*, as well as the stirrups *m*, are perforated near their ends, as shown at *v*, and the circular openings or perforations of both arms and stirrups are identical in size and in longitudinal alinement, and these openings have a sufficient diameter to allow them to slip over the supporting-hooks *e' e'*. A locking of the extension-arm *j* upon the hooks *e' e'* is effected by simply pressing the arm *j* or the stirrup *m* against these hooks. During the period while the spring is at its greatest tension the parts of the stirrup upon the arm assume the positions illustrated by Fig. 4, and upon being locked the stirrup recedes from the end of the arm, as shown in Figs. 2, 3, 5, and 6. The entire thickness of the stirrup metal enters the groove *t* (shown by Fig. 18) upon being locked and remains within the groove *t* until by compressing the spring it is released, and during

the period while thus locked the extension-arm *j* rests upon that portion *u* of the supporting-hooks *e'* between the groove and base of said hooks. The guard-plate *o* occupies a position upon the extension-arm *j* and is conveniently furrowed to permit access to the thumb-piece *n*, and the use of this guard-plate is simply to protect the adjacent spring and thumb-piece from external injury.

In the use of my invention the series of upper supporting-plates, with their hooks *e' e'*, are secured to the inner wall of the car just below the ventilator-deck. These wall-plates are shown in detail by Fig. 18 and are provided with side flanges which contact with the sides of the arms *j*, and thereby prevent any lateral movement of these arms while the bracket is in use. About three sets of bracket-arms will be sufficient for any desired length of slats for a complete bracket, and consequently three sets of upper supporting-plates, with hooks *e' e'*, are used, together with the three corresponding lower wall-plates *a*, and they are to be secured to the vertical walls of the car, as already described, each of the wall-plates of its series to be in horizontal alinement with each other and each alternate plate of both upper and lower series to be in front vertical alinement with the arms *b* and *j* of the bracket. The slot *h* of each engaging plate *f* is then passed over the supporting-lug *g*. The arms *b* and *j* of the bracket are then placed in the positions shown in Fig. 1, at which time the slats occupy a level plane supported by the arms *b*. The arms *j* are then locked upon the supporting-hooks *e' e'*, and the bracket is then ready for use. The guard-rail tends to prevent dislodgment of its contents from vibrations of the car. When this designated space is required for other purposes, this bracket may be readily removed by folding the arms *j* down from their hooks *e' e'*, as shown in Fig. 14, and by continuing the movement of folding the parts will assume the position shown in Fig. 12, and upon pressing together the arms *b* and *j* the lug *w* will enter the end perforation of the stirrup, which securely locks these arms together, and the bracket will then have a folded vertical position upon the side wall of the car and will occupy the position shown in Figs. 13 and 15 within a very limited lateral space. In order that the bracket while folded and suspended upon the wall of the car may be secured from vibrating against the car-wall, I employ the bolt *x*, (shown in Figs. 16 and 17,) which is confined at its upper end by the ball *w'* within the enlarged end of the longitudinal slot *w²* of the confining-plate *y*, these parts being placed beyond obstruction within a suitably-recessed chamber in the car-wall *x³* adjacent to one of the crevasses between two of the bracket-slats. The ball *w'* being confined within this socket its free threaded end may oscillate, and a nut and washer are em-

ployed upon this threaded end, the deeper chamber x^1 being formed within the car-wall for their reception, also beyond obtrusion. The plate y is fitted in a vertical position upon the car-wall, and when not in use the locking of the bracket against the wall may be effected by placing bolt outwardly between the slats. The nut upon the bolt is then screwed down and a bearing made of the washer and nut upon the slats, as shown in Fig. 13, and by these simple means the bracket may be compressed against the wall of the car, so that the vibrations of the car will not cause any noisy effects. The entire bracket may be removed whenever desired by raising the engaging plates f until the upper portions of the slots h are free from the supporting-lugs g . After the bracket has been removed from the wall the bolt with its washer and nut may be disposed with the slot w^2 and recess x^1 , already described.

I employ a reinforcing member z beneath the hinge h (shown in Figs. 1 and 14) for the purpose of enabling the parts to withstand additional strain.

By the use of my invention the supporting means attached to the interiors of cars are not obtrusive, and since these supports upon the walls of the car are always placed at predetermined distances apart and the engaging means of the bracket correspond thereto there will be no confusion in its use upon the trains of railways adopting its service, and it is apparent that its use presents economy in time and expense in the transposition of space within the car. The bracket when not in use and when handled separately presents means for the locking of its arms, so that the chances for injury of its parts from rough handling are reduced to a minimum, and when in use upon the car its means for locking and for preserving an exact alinement is such that it is not susceptible to vibrations of the car, whether in an extended position or folded.

What I claim as my invention is—

1. In a foldable bracket for railway-cars, in combination, a series of pairs of end-to-end hingeably-attached bracket-arms, the free end of one of each vertically-disposed arm of said pairs having engaging and interlocking means for a support upon the car-walls at predetermined points of similar altitude, and the series of supporting means thereon disposed at said predetermined points to receive said interlocking means; each of the others of said arms of each pair being horizontally disposed, the free ends thereof having hingeably-attached engaging means for a support at similar points of altitude in substantial vertical alinement with each of said first-mentioned arms respectively upon a plane of lower altitude upon the car-walls than said predetermined points, and the supporting means thereon disposed to receive said engaging means.

2. In a foldable bracket, the combination

consisting of a number of pairs of end-to-end hingeably-attached bracket-arms, one arm of each of said pairs being provided at its free end with engaging and interlocking means and to be supported in a substantially vertical position upon the same planes of vertical and horizontal alinement by a series of supports suitably and rigidly adherent upon a wall, said supports being upon a similar and predetermined plane of altitude upon said wall and adapted to receive said interlocking means; each of the others of said arms of each pair being horizontally disposed, the free ends thereof having hingeably-attached engaging means for a support upon a wall at similar points of altitude in substantial vertical alinement with each of said first-mentioned arms respectively upon a plane of lower altitude upon the wall than said predetermined points, and the supporting means disposed upon the wall to receive said engaging means.

3. A foldable bracket, consisting of a series of end-to-end hingeably-attached bracket-arms, one arm of each of said pairs being provided at its free end with engaging and interlocking means and to be supported in a substantially vertical position upon the same planes of vertical and horizontal alinement by a series of supports suitably and rigidly adherent upon a wall, said supports being upon a similar and predetermined plane of altitude upon said wall and adapted to receive said interlocking means; each of the others of said arms of each pair being horizontally disposed, the free ends thereof being provided with engaging means hingeably attached thereto for a support upon a wall at similar points of altitude in substantial vertical alinement with each of said first-mentioned arms respectively upon a plane of lower altitude upon the wall than said predetermined points, and the supporting means disposed upon the wall to receive said engaging means, in combination with suitably-disposed shelving upon said arm or arms.

4. A foldable bracket of the class described, consisting of a series of end-to-end hingeably-attached bracket-arms, one arm of each of said pairs being provided at its free end with engaging and interlocking means and to be supported in a substantially vertical position upon the same planes of vertical and horizontal alinement by a series of supports suitably and rigidly adherent upon a wall, said supports being upon a similar and predetermined plane of altitude upon said wall and adapted to receive said interlocking means; each of the others of said arms of each pair being horizontally disposed, the free ends thereof being provided with engaging means hingeably attached thereto for a support upon a wall at similar points of altitude in substantial vertical alinement with each of said first-mentioned arms respectively upon a plane of lower altitude upon the wall than said prede-

terminated points, and the supporting means disposed upon the wall to receive said engaging means, in combination with suitably-disposed shelving upon said arm or arms.

5 5. A foldable bracket of the class described, consisting of a series of end-to-end hingeably-attached bracket-arms, one arm of each of said pairs being provided at its free end with engaging and interlocking means and to be
10 supported in a substantially vertical position upon the same planes of vertical and horizontal alinement by a series of supports suitably and rigidly adherent upon a wall, said supports being upon a similar and predetermined
15 plane of altitude upon said wall and adapted to receive said interlocking means; each of the others of said arms of each pair being horizontally disposed, the free ends thereof being provided with engaging means
20 hingeably attached thereto for a support upon a wall at similar points of altitude in substantial vertical alinement with each of said first-named arms respectively upon a plane of lower altitude upon the wall than said prede-
25 termined points, and the supporting means disposed upon the wall to receive said engaging means, in combination with suitably-disposed shelving upon said horizontal arm, means to fold and rigidly lock one arm upon
30 the other arm, means to support the folded bracket in a position dependably hung from the supports of lower altitude, and means to attach or detach the bracket to or from the supports at will.

35 6. A foldable bracket of the class described, consisting of a series of end-to-end hingeably-attached bracket-arms, one arm of each of said pairs being provided at its free end with engaging and interlocking means and to be
40 supported in a substantially vertical position upon the same planes of vertical and horizontal alinement by a series of supports suitably and rigidly adherent upon a wall, said supports being upon a similar and predetermined
45 plane of altitude upon said wall and adapted to receive said interlocking means; each of the others of said arms of each pair being horizontally disposed, the free ends thereof being provided with engaging means hingeably
50 attached thereto for a support upon a wall at similar points of altitude in substantial vertical alinement with each of said first-named arms respectively upon a plane of lower altitude upon the wall than said predetermined
55 points, and the supporting means disposed upon the wall to receive said engaging means, in combination with suitably-disposed shelving upon said horizontal arm, means to fold and rigidly lock one arm upon the other arm,
60 means to support the folded bracket in a position dependably hung from the supports of lower altitude, means to attach or detach the

bracket to or from the supports at will, and means to lock the folded bracket upon the vertical wall.

7. In combination, bracket-supports rigidly positioned upon a wall upon different vertical planes and at different altitudes, and end-to-end hingeably-attached bracket-arms, the free end of one arm having interlocking means
70 upon the support of higher altitude, the other arm being horizontally disposed and having upon its free end hingeably-attached engaging means to be received upon the support of lower altitude, said horizontal arm to be pro-
75 vided with shelving suitably disposed thereon.

8. In combination, bracket-supports rigidly positioned upon a wall upon different vertical planes and at different altitudes, and end-to-end hingeably-attached bracket-arms, the free end of one arm having interlocking means
80 upon the support of higher altitude, the other arm being horizontally disposed and having upon its free end hingeably-attached engaging means to be received upon the support of lower altitude, said horizontal arm to be pro-
85 vided with shelving suitably disposed thereon, means to fold and rigidly lock one arm upon the other, and means to attach or detach the bracket to or from the supports at will.

9. In combination, bracket-supports rigidly positioned upon a wall upon different vertical planes and at different altitudes, and end-to-end hingeably-attached bracket-arms, the free end of one arm having interlocking means
90 upon the support of higher altitude, the other arm being horizontally disposed and having upon its free end hingeably-attached engaging means to be received upon the support of lower altitude and means to support the folded
95 bracket in a position dependably hung from the support of lower altitude.

10. In combination, bracket-supports rigidly positioned upon a wall upon different vertical planes and at different altitudes, and end-to-end hingeably-attached bracket-arms, the free end of one arm having interlocking means upon the support of higher altitude, the other arm being horizontally disposed and having upon its free end hingeably-attached engaging means to be received upon the support of lower altitude, means to support the folded bracket in a position dependably hung from the support of lower altitude, means to lock the folded bracket upon the vertical wall, and means to attach or detach the bracket to or from the supports at will.

In testimony whereof I have affixed my signature in presence of two witnesses.

AUGUST E. MITCHELL.

Witnesses:

HIRAM A. STURGES,
LINES D. CARRIER.