

(No Model.)

4 Sheets—Sheet 1.

W. J. BRASHEARS.  
COMBINED PARLOR AND SLEEPING CAR.

No. 364,750.

Patented June 14, 1887.

Fig. 1.

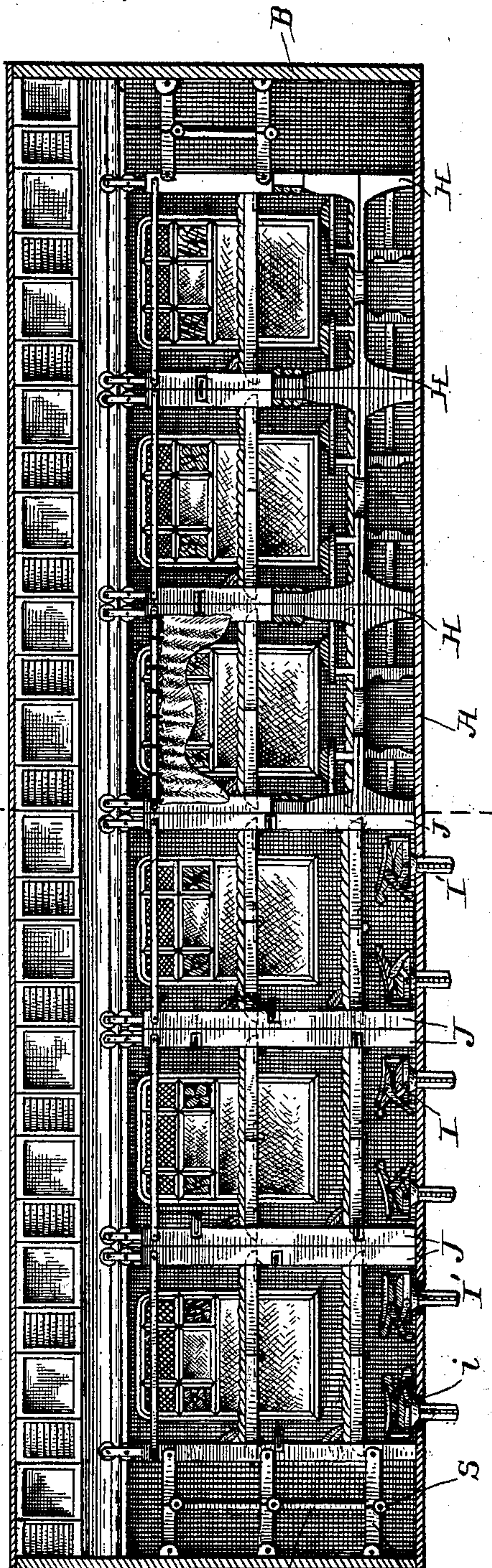
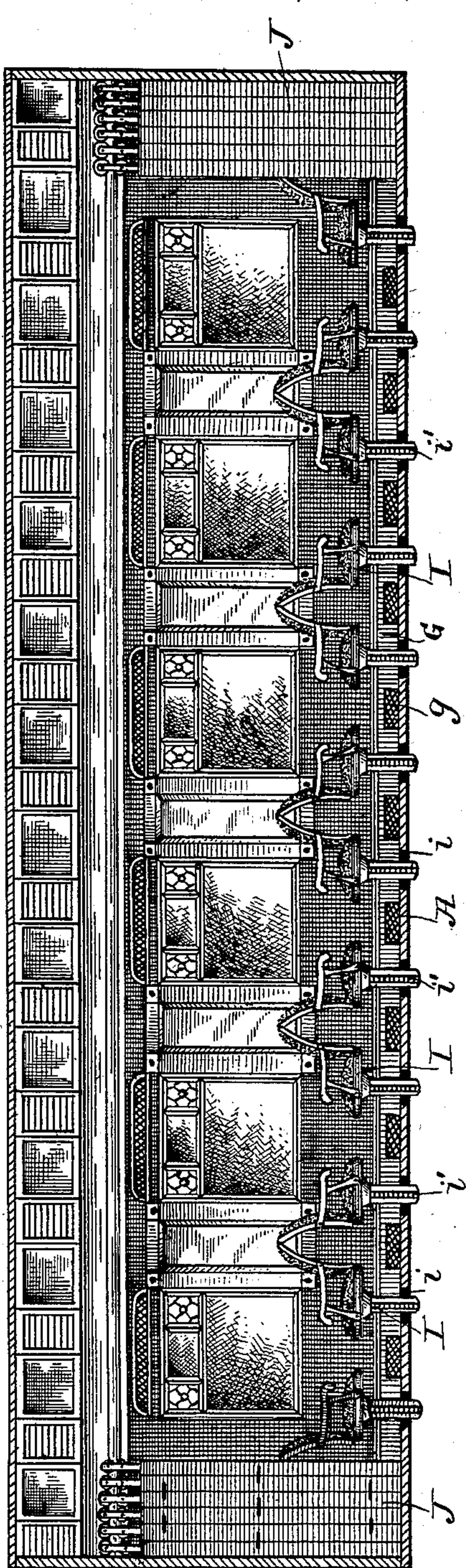


Fig. 2.



Witnesses

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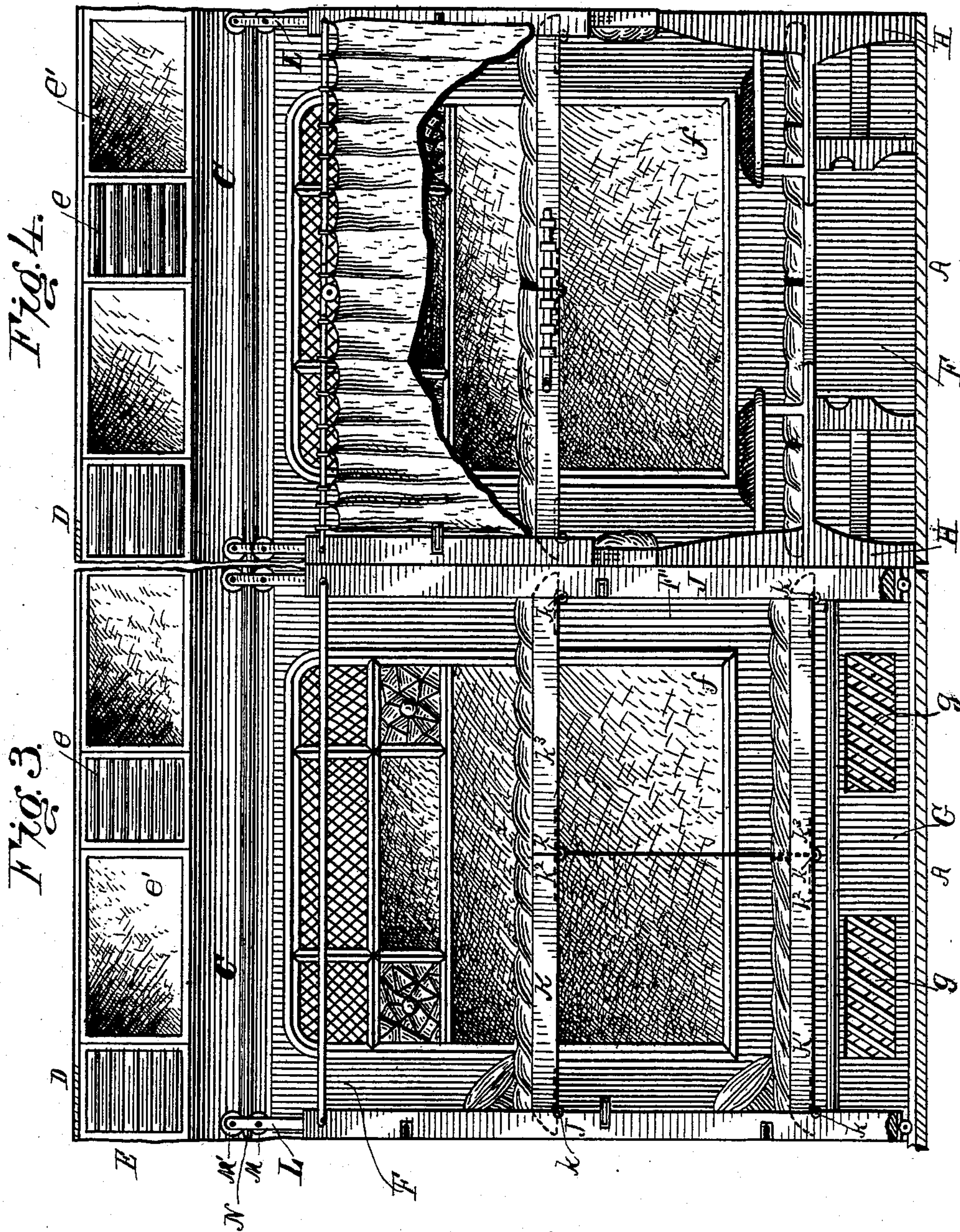
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4 Sheets—Sheet 2.

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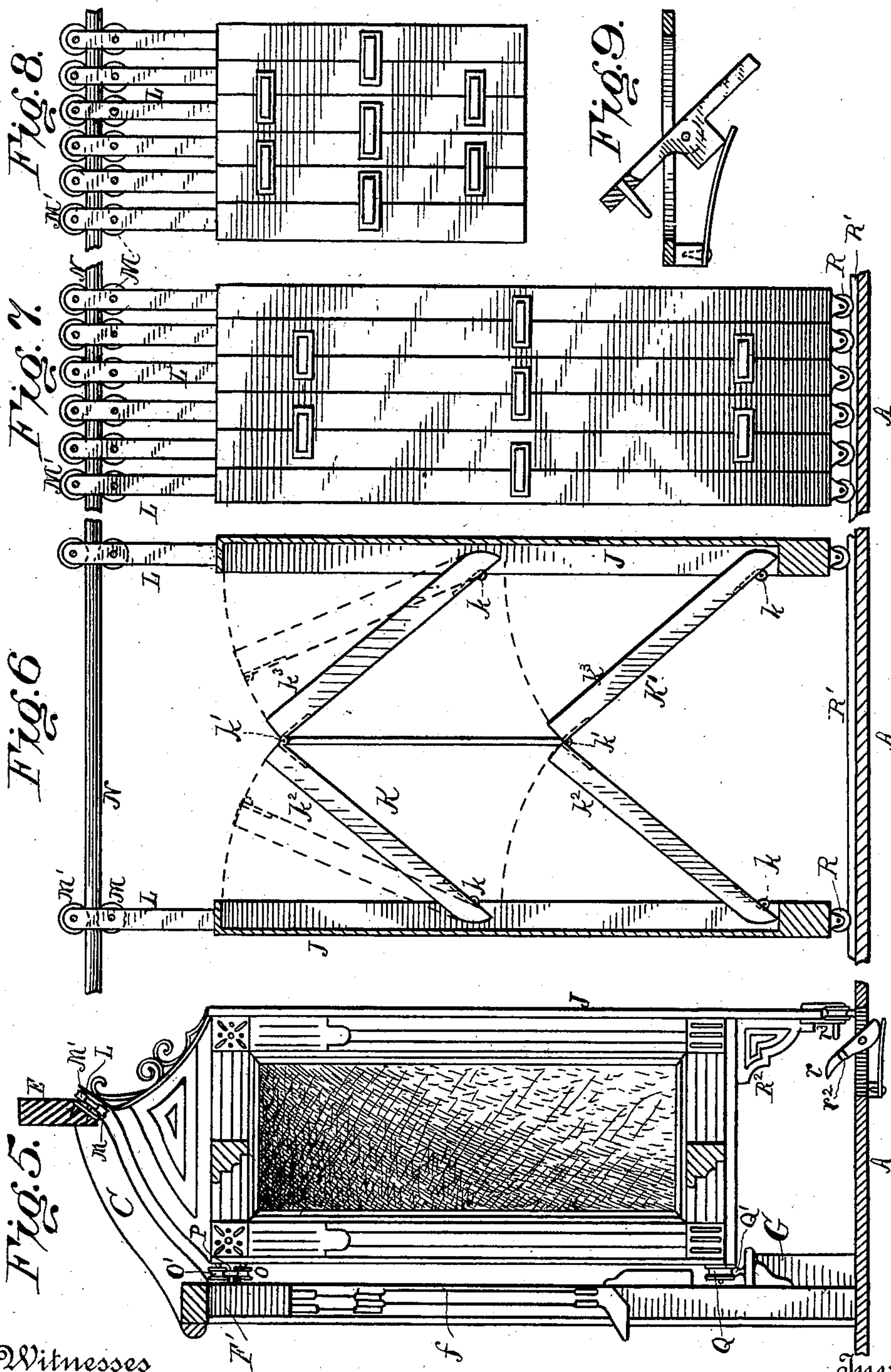
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Fig. 10.

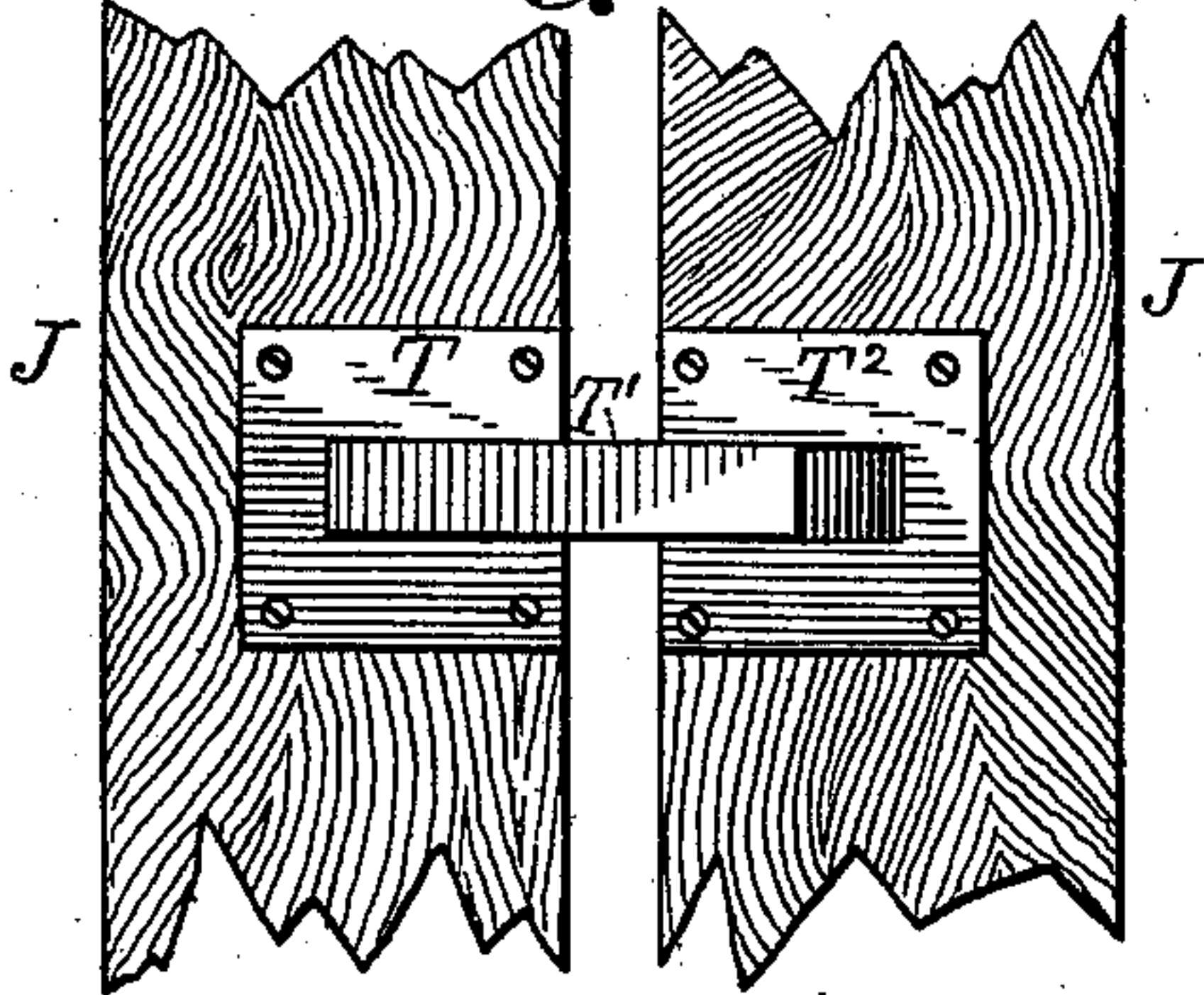


Fig. 11.

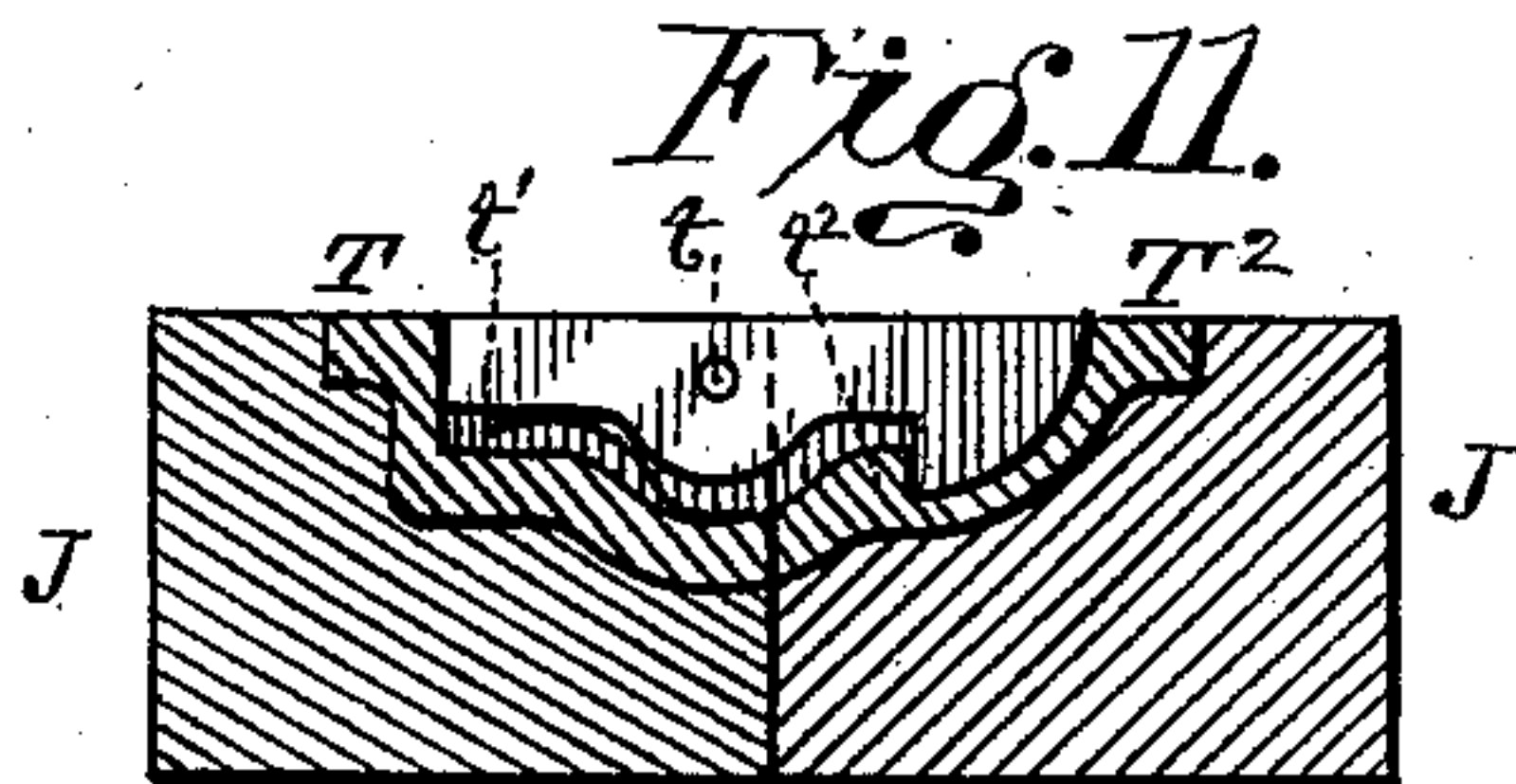


Fig. 12.

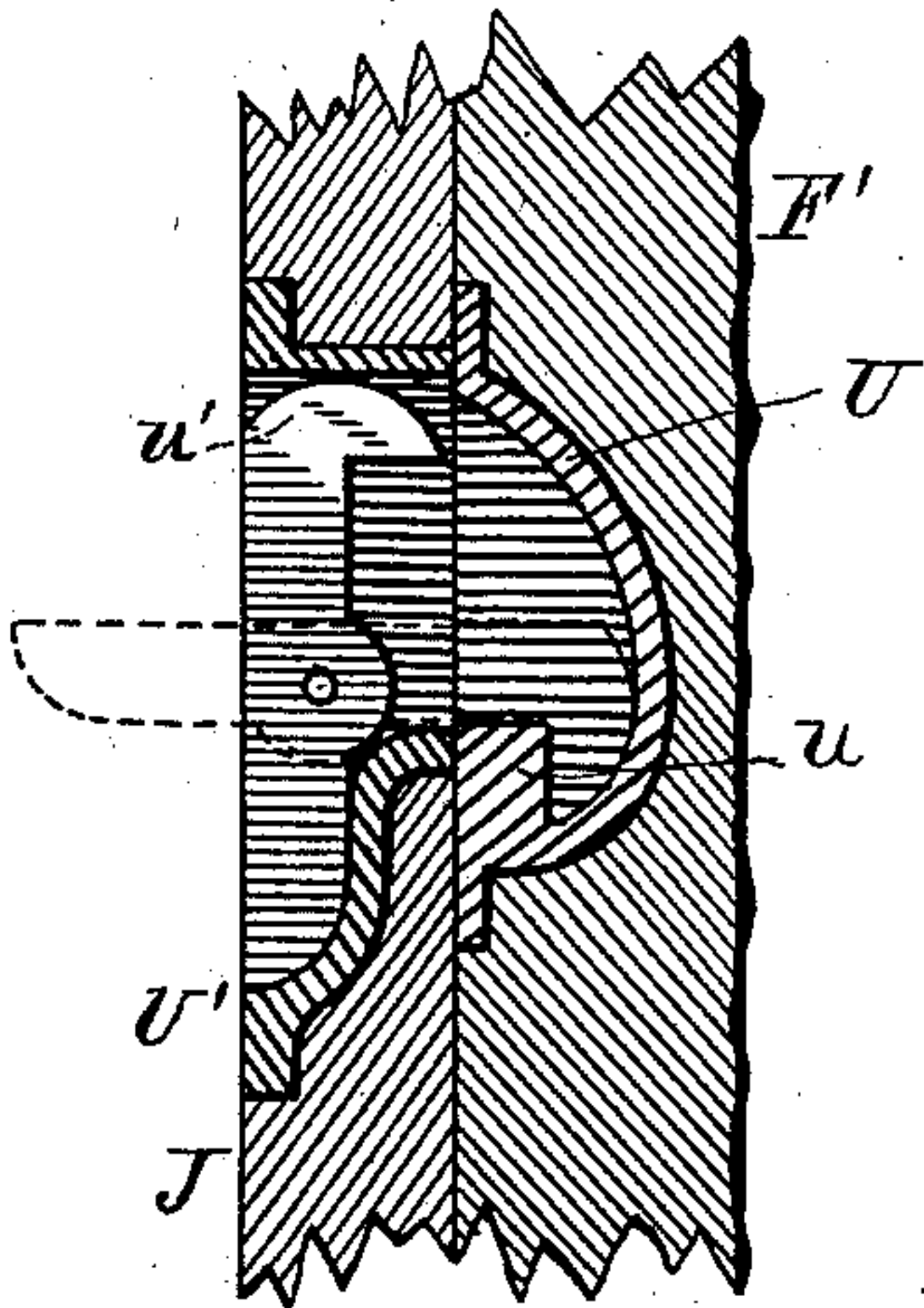


Fig. 13.

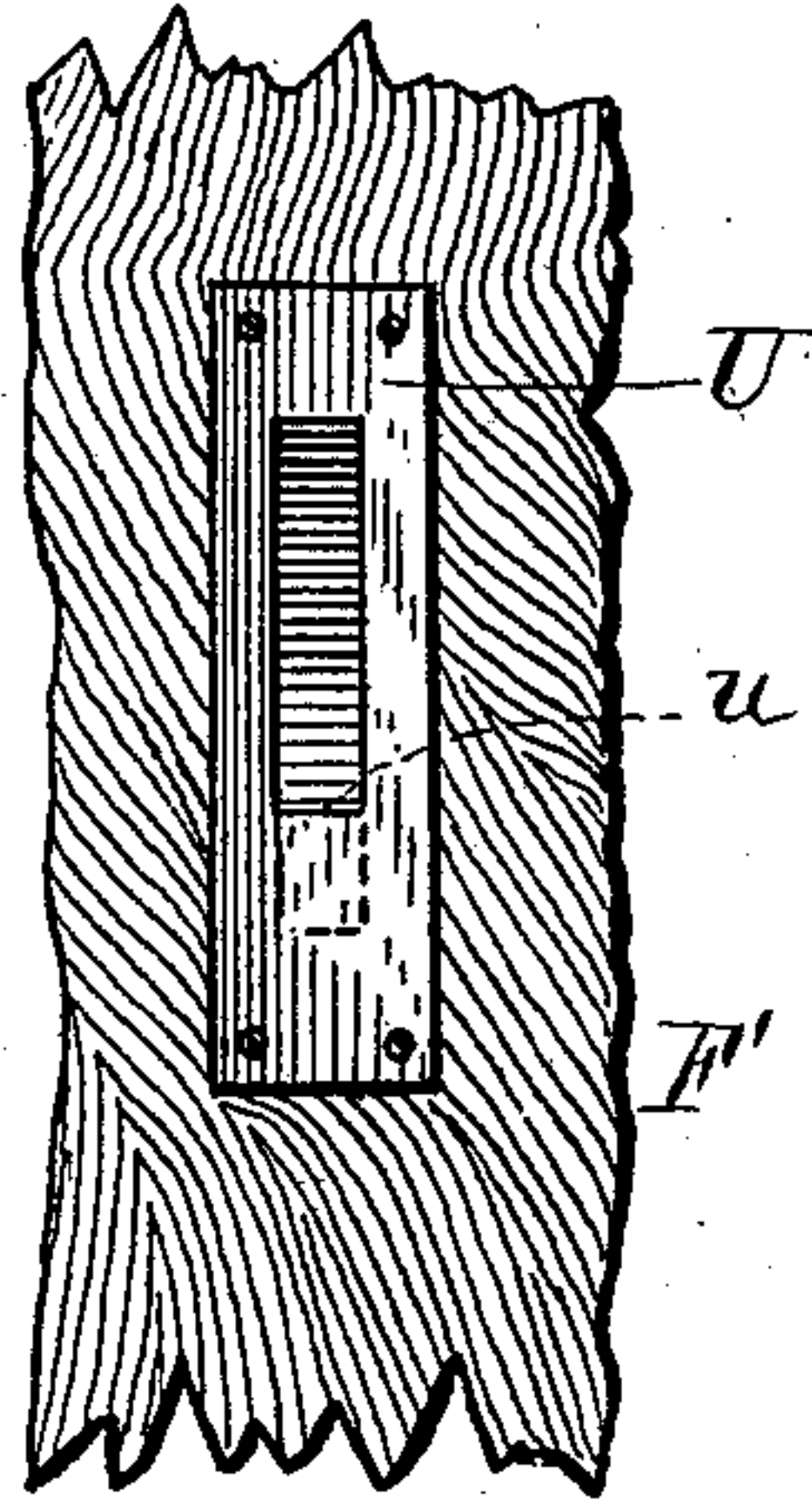


Fig. 14.

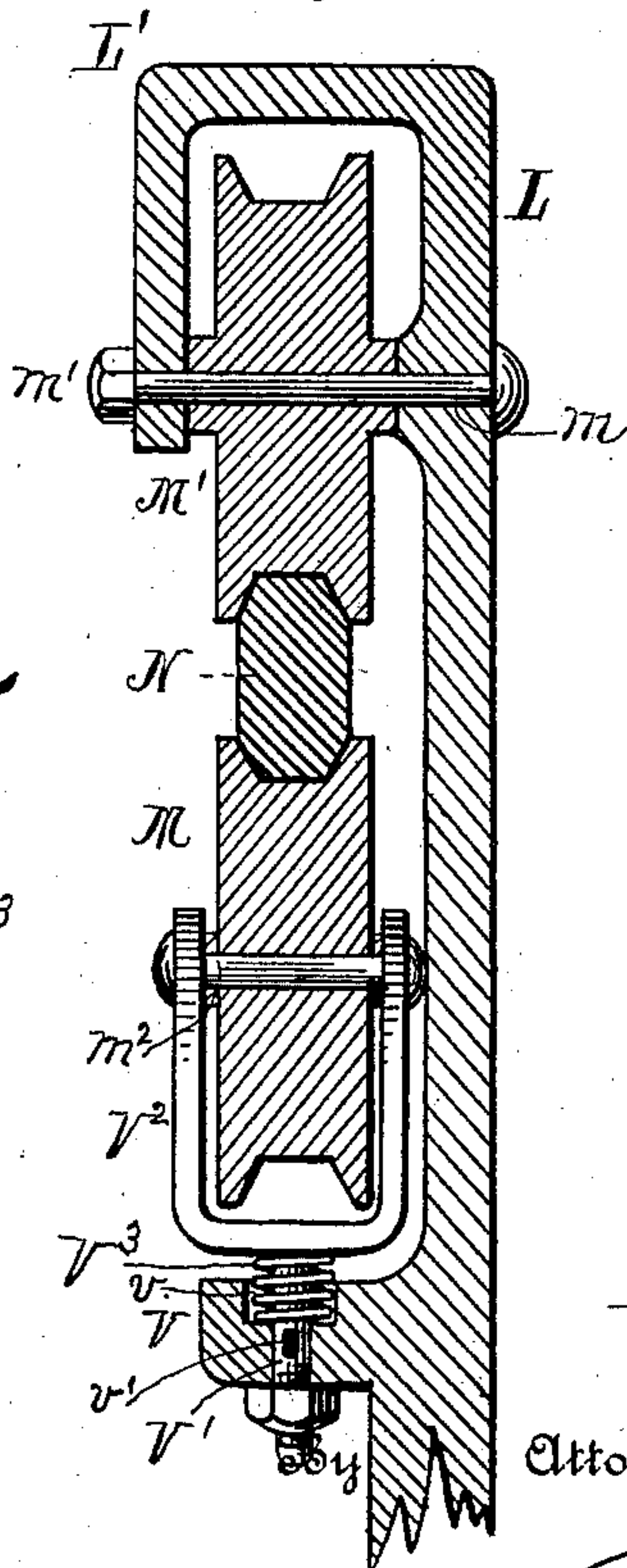
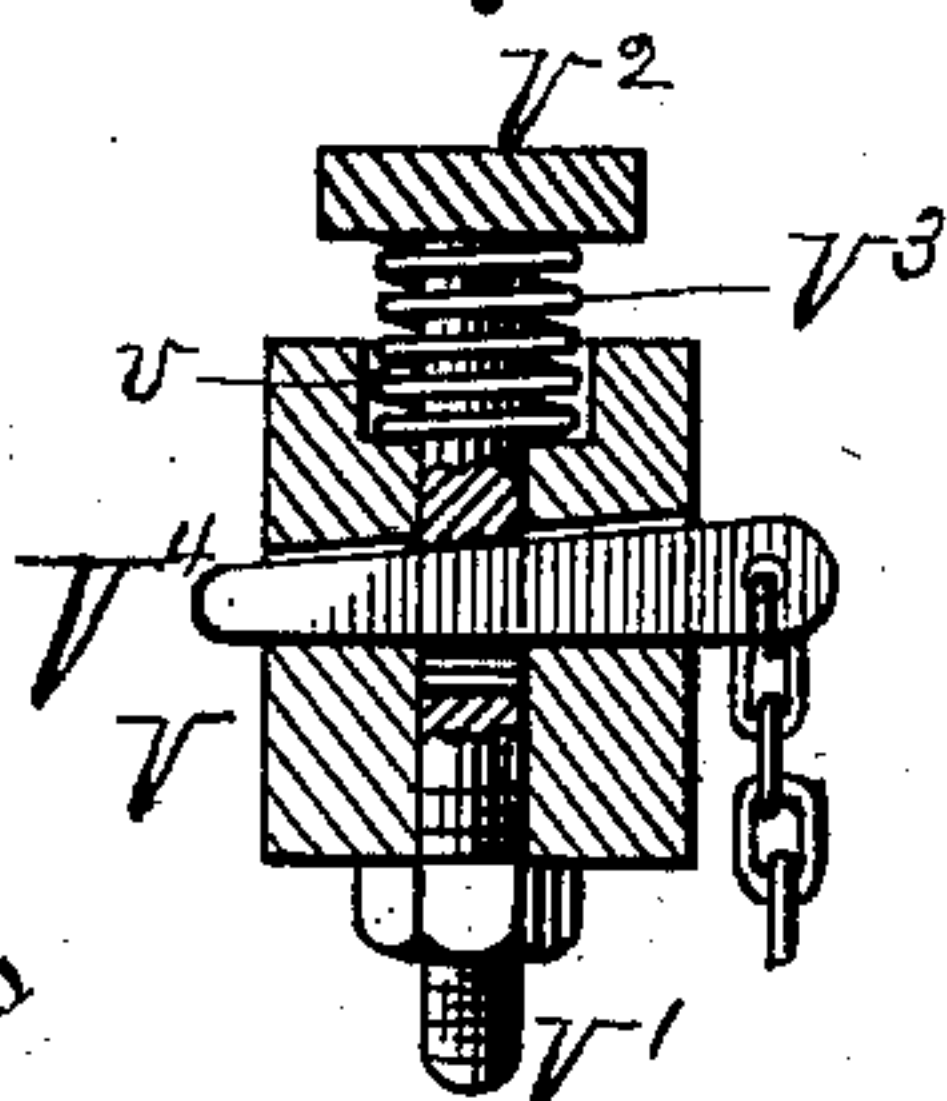


Fig. 15.



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# UNITED STATES PATENT OFFICE.

WILLIAM J. BRASHEARS, OF ST. DENIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE BRASHEARS PARLOR AND SLEEPING CAR COMPANY, OF BALTIMORE, MARYLAND.

## COMBINED PARLOR AND SLEEPING CAR.

SPECIFICATION forming part of Letters Patent No. 364,750, dated June 14, 1887.

Application filed August 10, 1886. Serial No. 210,536. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. BRASHEARS, a citizen of the United States, residing at St. Denis, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Combined Parlor and Sleeping Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to railway passenger-cars, and has for its object to provide a car which is especially adapted for long runs, by reason of the fact that it can be readily converted from a day or parlor coach into a sleeper, and its construction is such that when used as a day or parlor coach it is complete in every respect for such purposes, and no signs of a sleeping-car can be easily seen, and when in use as a sleeping-car it is provided with all the appliances of a perfect sleeper.

One of the most prominent advantages of my car is the ease with which the conversion from one form to the other may be effected.

My invention consists, particularly, in providing a car with berths and berth-supports mounted on rods or ways extending longitudinally of the car, whereby they may be slid on said ways to the ends of the car, and with receptacles located at the ends of the car in which to stow the berths and berth-supports, and, generally, in the improved construction, arrangement, and combination of parts, herein-after fully described, and afterward specifically pointed out in the appended claims.

In the drawings, Figure 1 is a section taken longitudinally through the center of the parlor section or compartment of a car provided with my improved berths and berth-supports, showing six sections of berths made up, the three sections on the left of the figure having both the upper and lower berths and berth-supports extending to the bottom of the car, thus illustrating the manner in which I apply my improvements to a parlor-car provided with the well-known parlor-car seats or chairs, and the three sections on the right having

carrying only the upper berths, thus illustrating the manner in which I apply my improvements to a car constructed with rigid seats, as in the ordinary and well-known sleeping-cars of the "Pullman" style, the berth-supports in this instance resting, when the berths are in position for use, on the top of the backs of such rigid seats and the lower berths being made up of the backs and seats in the usual manner. Fig. 2 is a similar longitudinal section through the parlor compartment, the berths being in their stowed-away positions at the ends of the car, the whole compartment being provided with chairs and full-length berth-supports with upper and lower berths, as on the left-hand side of Fig. 1, and the inside of the lockers in which the berth-supports are stowed being omitted to show the position of the stowed berths. Fig. 3 is view, on an enlarged scale, of a full-size berth-support section made up ready for occupancy, the berths being in place and the chairs omitted. Fig. 4 is a similar view of a section having rigid seats, such as are shown on the right in Fig. 1, the parts being drawn on an enlarged scale. Fig. 5 is a vertical cross section through one side of a car, showing in elevation the outer berth-support of one of the series of sections furnished with a mirror, showing the ways or rods and the manner of securing the bottom of the berth-supports to the floor when the car is made up as a sleeper. Fig. 6 is a view showing one of my sections, the berth-supports being in section and partly separated to show the manner of folding the berths, and ways or rods and the supporting brackets and rollers in elevation. Fig. 7 is an interior elevation of six berth-supports folded together, the supports being such as shown in Fig. 1 on the left, for carrying upper and lower berths. Fig. 8 is a similar view of six berth-supports, such as shown on the right of Fig. 1, for carrying an upper berth only. Fig. 9 is a detail view showing a modified form of fastening the berth-supports in position. Fig. 10 is a view in front elevation of a portion of two berth-uprights, showing them partially open and illustrating the spring catches for holding them together. Fig. 11 is a central sectional view through Fig. 10, showing the same parts,



the berth-uprights being closed together. Fig. 12 is a sectional view of part of one of the rear berth-supports, showing the catch for fastening it to the pilaster of the car, part of the pilaster being also shown. Fig. 13 is a fragmentary view showing the plate in the pilaster, with which the catch shown in Fig. 12 engages. Fig. 14 is a vertical central sectional view showing the bracket and double rollers for engaging the inner guide-rail, showing said rail also in section. Fig. 15 is a sectional view on a plane at right angles to that on which Fig. 14 is taken, showing the means for clamping the two rollers tightly on the guide-rail.

Like letters of reference mark the same parts wherever they occur in the several figures.

In illustrating my invention I have considered it unnecessary to show any more than the parlor compartment, inasmuch as a car having my improvements may be provided with the usual styles of toilet and smoking rooms and buffet, and these parts may be altered at will without affecting my invention.

Referring to my invention by letters, A marks the floor of the car; B B', the end partitions of the parlor compartment; C, the roof of the car; D, the roof of the ventilator; E, the side of the ventilator, shown as composed of ventilating-blinds *e* and windows *e'*. F marks the side of the car, having pilasters F', ornamented or filled in with mirrors *f'*, between which are located windows *f*.

G is the box which usually covers the heating-pipes, and in which are located the series of registers *g* for the admission of hot air into the car.

H H H, on the right-hand side of Fig. 1 and in Fig. 4, mark seat-frames having the ordinarily-constructed seats, backs, &c., whereby may be formed the lower berths, as shown.

I I I I I in Figs. 1 and 2 show parlor-chairs, which are swiveled on the pedestals I' I' I' I' I', said pedestals being inserted in sockets *i i i i i*, secured in the floor A and provided with racks *i' i' i' i' i'*, into which suitable pawls (not shown) engage, whereby said seats may be raised and lowered at will and secured in any desired position. The backs of these chairs are pivoted, so that they can be folded flat down on the seats.

J J J J J, Figs. 1, 2, 3, 5, 6, 7, 10, and 11, mark my berth-supports, of which there are two to each section. The berths K K K K K and K' K' K' K' K' (the former being the upper and the latter the lower berths) are pivoted or hinged to these supports by pivots or hinges *k*, and are pivoted centrally, as at *k'*, forming each into two parts, *k<sup>2</sup>* and *k<sup>3</sup>*. These berth-supports are vertical, and are provided with brackets L, (shown on enlarged scale in Figs. 14 and 15,) which carry grooved rollers M M', which rollers embrace a guide-rod, N, secured or suspended from the roof of the car at or about the point where the sides of the elevated ventilator-walls join said roof by means of suitable brackets. The berth-

supports are supplied at their rear upper ends with similar grooved rolls, O O', for similarly clamping a guide-rod, P, suitably supported at or about the point of juncture of the side wall and the roof of the car. A single grooved roll, Q, is secured or mounted at the rear lower end of each berth-support to engage a guide-rail, Q', on the truss-board or top of the heater-box, and each berth-support may be provided with a grooved roller, R, to engage a rail, R', secured to the floor of the car.

The main portion of the berth-supports does not extend to the floor, (see Fig. 5,) and, as a consequence, when the roller R and rail R' are used the front of the support must be carried down to the floor, and is braced by a suitable bracket, as at R<sup>2</sup> in said figure.

Instead of extending the front down, I may hinge a short piece to it, long enough to reach to the floor, to be used merely as a part to engage a fastening by which to secure it in place.

In the construction—viz., where the front extends to the floor and the roller R is used—I use a spring-catch, *r*, Fig. 5, which, when not in use, is let into the floor, but when in use engages, by means of its perforation *r<sup>2</sup>*, the projecting end of the pintle *r<sup>3</sup>* of the roller R. When the hinged piece is used, I prefer a catch, as shown in Fig. 9, in which a pin engages a perforation in said hinged piece.

I have shown the parlor compartment as of a size to accommodate six sections on each side of the car; consequently I show in Fig. 2 six berth-supports at each end. These are in their folded or stowed-away condition—as when the car is in use as a day car—and are in a small locker at each end of the parlor compartment, the front of said lockers being removed to show the berth-supports. When the berths are made up, the sections are pulled out, as in Fig. 1, and in order to prevent them from being pulled too far I connect the last support of the end sections to the partition by pivoted links S, of which there may be as many as necessary, three being shown on the left of Fig. 1, their pivots *s* being connected by a rod, *s'*, to cause them to move in unison.

When the berths are stowed, they are held in position by spring-catches, the end support being secured to the partition in the back of the locker, and each support being jointed to its neighbor by one or more of such catches. A catch for this purpose is shown in detail in Figs. 10 and 11, in which a plate, T, is sunk into one of the supports, carrying a latch, T', pivoted at *t*, and held in its inactive or flush position by means of a spring, *t'*, which also causes it, when two supports are brought together, to automatically engage a tooth, *t<sup>2</sup>*, in a groove in a plate, T<sup>2</sup>, sunk in the adjoining support. The action of this catch will be apparent at a glance. To release it, it is only necessary to raise the hook by pressing upon the rear end back of the pivot.

To hold the supports in their outer positions, (when the car is made up as a sleeper,) I pro-



vide, in addition to the latches for holding to the floor, latches such as shown in detail in Figs. 12 and 13. In these, U is a plate sunk in the pilaster of the car above or below the mirror, or both, having a tooth, *u*, to engage a hook, *u'*, pivoted in a metallic plate, U', sunk or mortised into the rear edge of the berth-support, operated from the front, in substantially the same manner as the catches, to hold the adjoining supports together.

Where an upper and a lower berth are used, as in the left of Fig. 1 and in Fig. 2, it is necessary, or at least very desirable, that both berths shall move in unison in folding and unfolding. I therefore provide a rod, as clearly shown in Figs. 3 and 6, to connect the central hinges of the berths K and K'. When the double-berth supports are used, and, in fact, also, when the single-berth supports are used, a person hiring a whole section may desire only the lower berth. In such case I provide the upper berths with movable pivots for their central hinges, *k'*, so that said upper berths may be folded into the berth-supports and the lower berths allowed to remain extended for use. Each portion *k<sup>2</sup>* and *k<sup>3</sup>* is provided with any desirable form of hook or catch to secure it in such folded condition.

In most of the figures I have shown the rollers as simply pivoted in the brackets without any provision for adjustment toward each other or means for clamping the guide-rod by bringing them forcibly together; but in Fig. 14 I show the bracket with an overhang, L', at the top, in which the top roll, M', is pivoted on a bolt, *m*, secured by a nut, *m'*. Projecting from the lower part of the bracket is an arm, V, in which is vertically pivoted a stem, V', carrying on its top a fork, V<sup>2</sup>, in which is pivoted or journaled the lower roll, M, upon a pin or bolt, *m<sup>2</sup>*. A spring, V<sup>3</sup>, rests in a pocket, *v*, in the arm V, encircling the stem V', and bearing upward against the fork V<sup>2</sup>, whereby the lower roll, carried by said fork, is normally held in its upper position in spring contact with the guide-rod N. The arm V is slotted horizontally (see Fig. 15) to receive a wedge, V<sup>4</sup>, which also passes through a slot, *v'* in the stem V', so that when the wedge is pushed in the stem is forced up, carrying the fork and roll with it, and securely clamping the guide-rod N between the rollers M and M' and holding the bracket L and the berth-support to which it is attached, firmly in any position.

When desired, slight downward bends may be made in the guide rods and rails to receive the rolls when the berth-supports are in the positions in which they are to be rigidly secured, such bends serving to stop the rollers, but allowing them to be pushed over them when desired. Ordinarily, in using the bends I would make one of them at each point where a berth-support is to be stopped, whether the berths be open (as in Fig. 1) or stowed away (as in Fig. 2) in the lockers.

As before stated, I have shown on the right hand of Fig. 1 and in Fig. 4 how the main feature of my invention may be applied to cars provided with rigid seat-frames and seats and backs which may be adjusted to form the lower berths, as in cars now in use. In this instance my berth-supports are of a length to reach from the top of these rigid seat-frames to the top of the car, and when in position, as shown, rest upon and are secured to the top of said frames by spring-catches of any desired construction, and are secured to the pilasters and guide-rod in the same manner as are the full-length-berth supports. When stowed away, they occupy the upper half of each locker, in the position shown in Fig. 8, the lower half being utilized for other purposes.

W are rods upon which to hang the curtains usually used in sleeping-cars, and are sufficiently rigid to serve as auxiliary means for stiffening the whole structure when the berths are made up, the sides *k<sup>2</sup>* *k<sup>3</sup>* of the berths and the links S serving the same purpose, making the structure very firm and stiff.

The parlor-chairs I are, as before stated, pivoted or swiveled in their pedestals, so that they may be revolved at will thereon, the pedestals remaining stationary, said pedestals being cylindrical in section or otherwise and fitted in sockets set into the floor of the car, and correspondingly shaped. These pedestals are adapted to be raised and lowered in said sockets, and may be held at any desired height by means of a pawl engaging a ratchet or rack on one side of each pedestal, so that they may be adjusted in height to suit the persons occupying them, or let down until the seats rest on the floor, as shown in Fig. 1, in which position the backs are folded down on the seats, so that the lowered and folded chair will offer no impediment to the sliding of the berth-supports, and will remain under the lower berths when they are made up, as shown in Fig. 1.

The operation of my invention may be described briefly as follows, viz: Supposing the car to be in the position shown in Fig. 2, as a parlor-car, and it being desired to convert it into a sleeping-car, the porter will proceed to fold down the seats of three sections, dropping them to the floor. He now releases the catches which hold the berth-supports in the locker and draws out three sections—six supports—which will extend to the center of the compartment, and secures them in such position, as shown in Fig. 1. As they are drawn out the berths automatically unfold. This is repeated for each series of three sections, and all the berths will be in position in a very short length of time. The *modus operandi* with the short upper-berth supports is substantially the same. To change again to a parlor-car the operation is simply reversed, it being necessary in doing so to start each berth to folding in the beginning. The outer berth of each series is finished with a mirror, as



seen in Fig. 5, so that when the berths are stowed away, as in Fig. 2, there will be a mirror in each corner of the parlor compartment.

My invention may also be applied with good effect in the smoking-room or the buffet usually provided in sleeping-cars by putting up berths in such compartments.

It will also be of incalculable value in converting steamboat dining-rooms into sleeping cabins or saloons, thus doing away with the necessity of placing the dining-room below deck, as is now often done.

Another important use to which my invention may be applied is in furnishing the state-rooms of steamboats. Of a necessity such apartments are small, and if one of my improved berth-sections were set up therein it could be readily stowed in one end of the state-room during the day and drawn out at a moment's notice for use during the night. In such instance one of the berth-supports would be fixed at one end of the state-room (or the end wall of the room could be made to act as one of the berth-supports) and the berths hinged to it and its fellow, the proper rods being put up and proper catches being used for the purpose of securing the supports in either the open or closed position.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A car provided with upright bed-supports, in combination with horizontal ways secured to the car longitudinally thereof, upon which said supports slide longitudinally of the car, as set forth.

2. A car provided with a horizontal longitudinal rail and upright berth-supports having devices to engage with and slide on said rail, for the purpose set forth.

3. In combination with a pair of upright parallel berth-supports, a berth or berths made in two parts hinged centrally together and each part hinged to one of said berth-supports, and horizontal ways longitudinally placed in the car, upon which said berth supports slide toward and from each other, as set forth.

4. In combination, two parallel upright berth-supports, brackets secured thereto carrying rollers, a horizontal guide rod with which said rollers engage, and a berth or berths made in two parts hinged centrally together and to the two berth-supports, as set forth.

5. A sleeping-car provided with longitudinal horizontal guide-rods and with a series of parallel vertical berth-supports which slide horizontally upon said guide-rods, as set forth.

6. A sleeping-car having berth-supports carrying rollers, and longitudinal guide-rods upon which said rollers engage to permit the longitudinal sliding of the berth-supports, as set forth.

7. A sleeping-car having vertical parallel longitudinally-sliding berth-supports, and lockers wherein they may be stowed away, as set forth.

8. A sleeping car having longitudinally-sliding berth-supports carrying folding berths, and lockers in the ends of the car, wherein said supports and berths may be stowed, as set forth.

9. A sleeping-car having berth-supports, lockers in the ends of the cars, wherein said berth-supports may be stowed, and longitudinal guide-rods extending from end to end of the car into said lockers, whereby said berth-supports may slide into and out of said lockers, as set forth.

10. A sleeping-car having two series of parallel vertical berth-supports on each side, two lockers, one at each end of said side, and guideways and rollers, whereby one series or half the berths on said side may slide into and be stowed away in each of said lockers, as set forth.

11. A sleeping car having two series of berth-supports on each side thereof, two lockers on each side, and guide-rods located horizontally and longitudinally on each side, whereby one series or half the berths and supports on each side may slide into one of said four lockers, as set forth.

12. A sleeping-car having vertical parallel berth-supports, two adjacent ones of each of which carry the berths of one section, provided with two berths, an upper and lower one, the former having a central loose hinge, whereby the two parts may separate and be folded into the supports while apart, as set forth.

13. The combination, with a berth-support and a horizontal longitudinal guide-rod, of a bracket attached to the berth-support and carrying two grooved rollers which embrace and move on said guide-rod, as set forth.

14. In combination, in a car, a horizontal guide-rod, a berth-support, a bracket attached thereto, and two grooved rolls to embrace the guide-rod and bear thereon with a spring-pressure, as set forth.

15. In combination, in a car, a horizontal longitudinal guide-rod, a berth-support, a bracket secured thereto, and two grooved rollers carried by said bracket, one of which is adjustable toward and from the guide-rod and has a securing device, substantially as described.

16. In combination, in a car, a horizontal guide-rod, a berth-support, a bracket secured thereto, an upper grooved roll pivoted or journaled in said bracket, and a lower grooved roll journaled in a spring-pressed bearing mounted in an arm of said bracket, as set forth.

17. In combination, two berth-supports, an upper and a lower berth, each composed of two parts centrally hinged together and hinged to said berth-supports, and a rod connecting the two berths to cause them to fold simultaneously, as set forth.

18. In combination, in a car, parallel vertical berth-supports carrying grooved rollers, and longitudinal horizontal guide-rods above



and below said berth-supports, with which rods said rollers engage, whereby the said supports may slide longitudinally of the car, as set forth.

5 19. In combination, in a car, longitudinal guide-rods N and P, berth-supports J, brackets secured thereto, and double-grooved rollers which clasp and roll on said rods, as set forth.

10 20. In combination, in a car, longitudinal rods N, P, and Q, and berth-supports J, having rollers to engage and move on said rods, as set forth.

15 21. In combination, in a car, longitudinal rods N, P, Q' and R' above and below, and berth-supports J, carrying rollers to engage and move on said rods, as set forth.

20 22. In combination, in a car, horizontal longitudinal guide-rods, vertical parallel berth-supports having rollers which engage and move on said rods, and catches on said berth-supports which engage with fastenings in the sides of the car for securing said berth-supports in position, as set forth.

25 23. In combination, in a car, horizontal longitudinal guide-rods, vertical parallel berth-supports carrying rollers which engage and

move on said rods, and spring-catches whereby said berth-supports may be secured together, as set forth.

24. A sleeping-car having longitudinal 30 guide-rods, vertical parallel berth-supports carrying rollers which engage and move on said rods, and catches for securing the berth-supports to the sides and floor of the car, as set forth.

35 25. In combination, the guide-rods, the sliding berth-supports, the lockers, and the pivoted links whereby the end berth-supports are prevented from moving out of the lockers, as set forth.

40 26. In combination, the horizontal guide-rod, the vertical berth-supports sliding thereon, and a clamping mechanism engaging said rod, whereby the berth-supports are held at any desired point on the rod, as set forth.

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

WILLIAM J. BRASHEARS.

Witnesses:

SHIPLEY BRASHEARS,  
JOHN J. W. WILSON.