

(No Model.)

2 Sheets—Sheet 1.

H. W. LIBBEY.

COMBINED SLEEPING AND PARLOR CAR.

No. 411,817.

Patented Oct. 1, 1889.

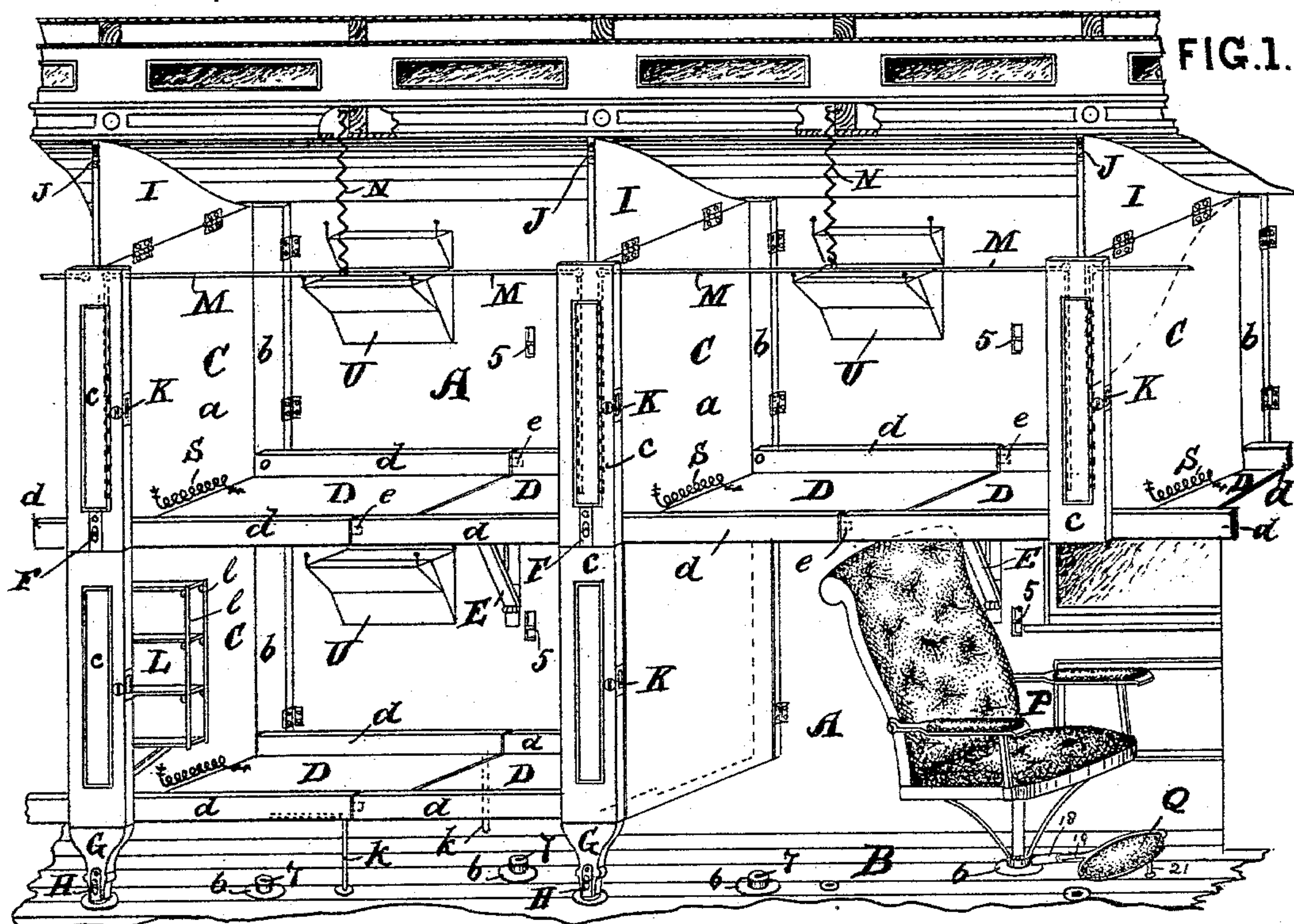
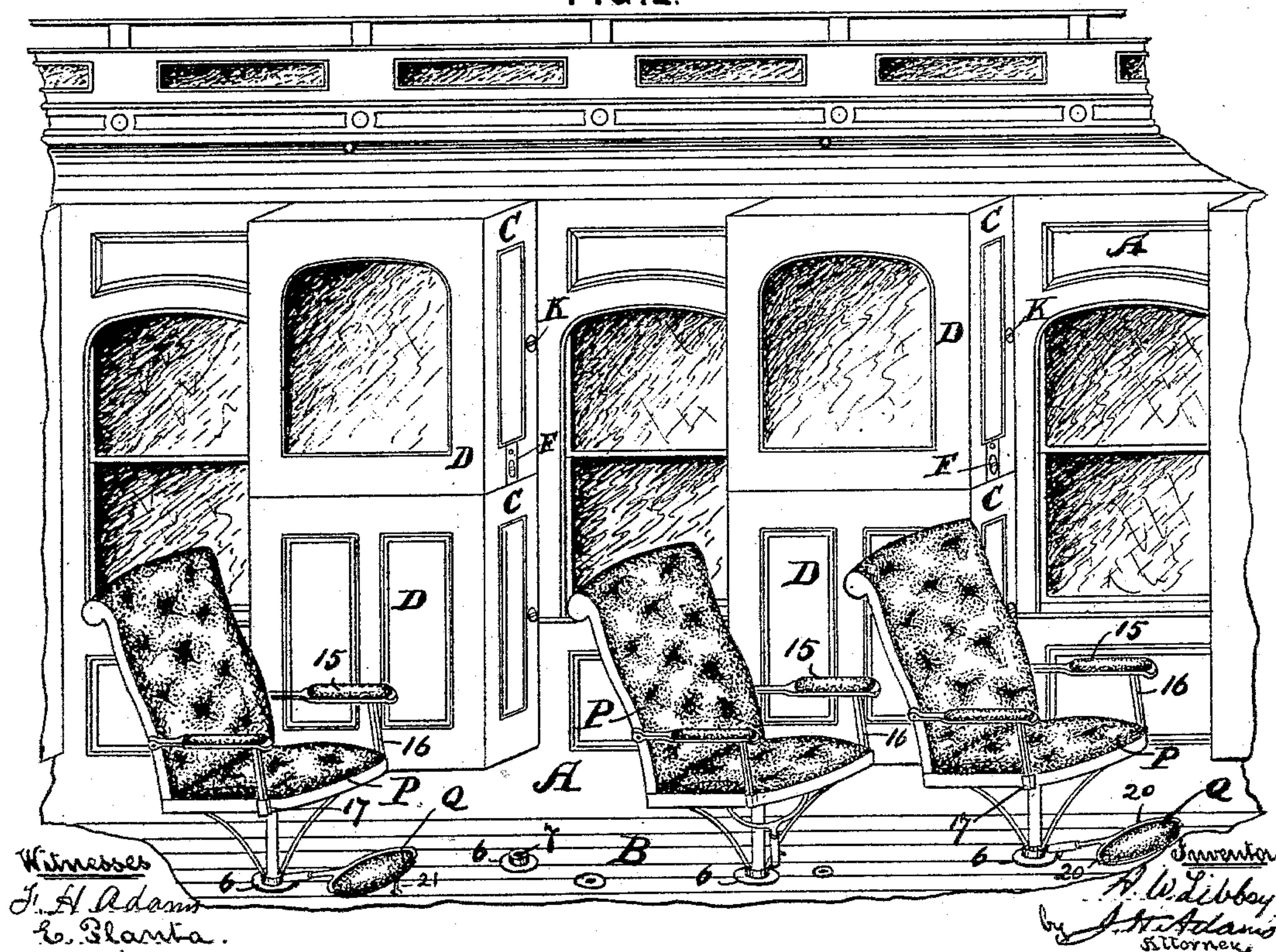


FIG. 2.



Witnesses
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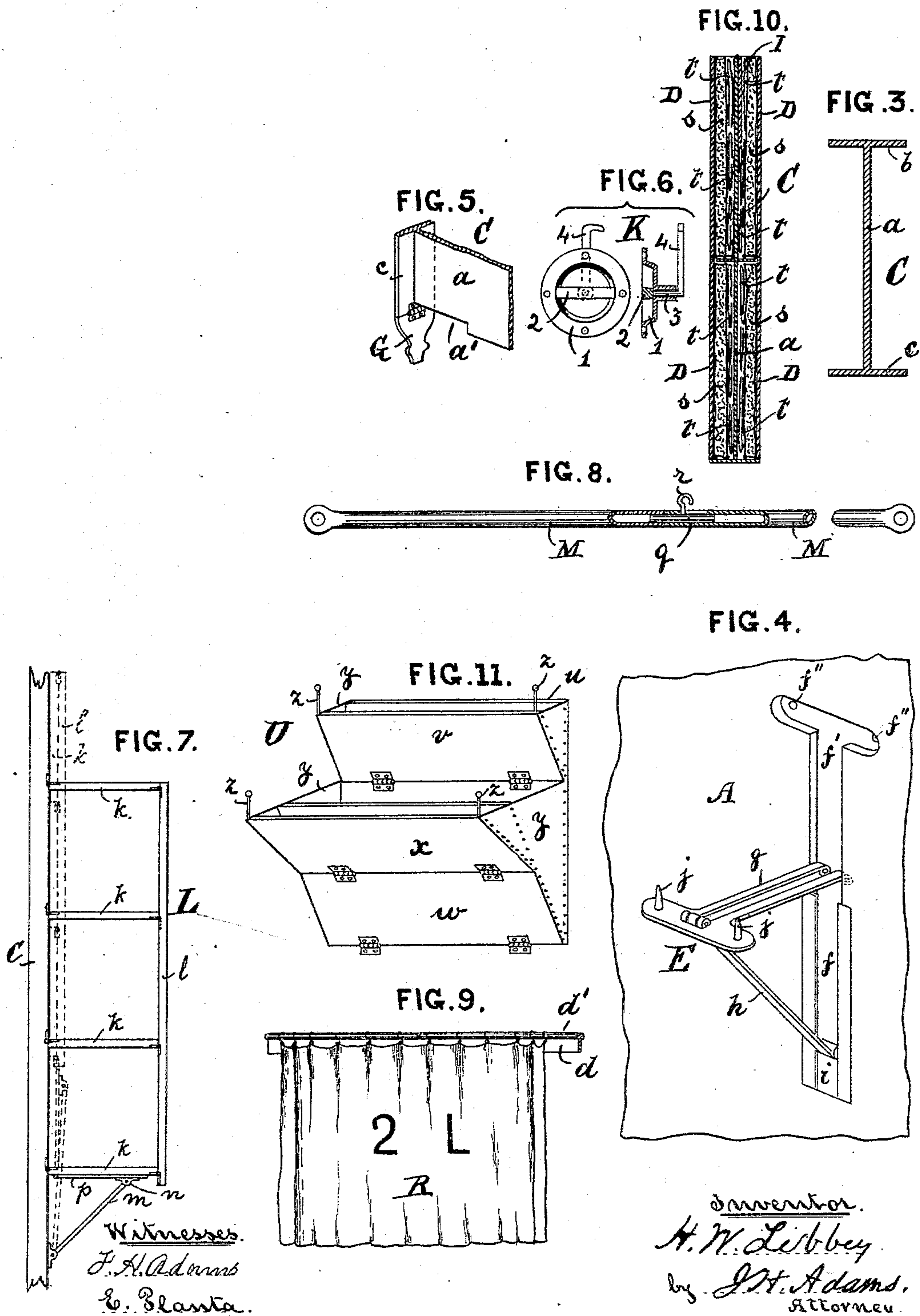
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

HOSEA W. LIBBEY, OF BOSTON, MASSACHUSETTS.

COMBINED SLEEPING AND PARLOR CAR.

SPECIFICATION forming part of Letters Patent No. 411,817, dated October 1, 1889.

Application filed November 11, 1886. Serial No. 218,575. (No model.)

To all whom it may concern:

Be it known that I, HOSEA W. LIBBEY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Combined Parlor and Sleeping Cars, of which the following is a specification.

My invention relates to improvements in parlor and sleeping cars; and the invention consists in certain details of construction hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a portion of a car embodying my invention, showing some of the berths opened out as when used as a sleeping-car. Fig. 2 is a similar view with the berths folded up as when used as a parlor-car. Figs. 3 to 11 represent detail views of various parts.

A represents the inner side of a car, and B the floor.

C C are partitions hinged to the side of the car, so that they can be opened out, as shown in Fig. 1, or closed, as shown in Fig. 2. These partitions are of an I form in cross-section (see Fig. 3)—that is, with a long central portion *a* and two end pieces *b c*—one of the end pieces *b* being hinged to the side of the car, so that when opened out that piece will be turned flush with the side of the car, while the end piece *c* will be facing the passage-way. To these two end pieces *b c* are hinged the bottoms of the berths D—one-half a bottom on each side of the central portion *a*—so that when a berth is required for use two of the portions C are opened out and the half-berth bottoms D between them are lowered, thereby forming a complete berth.

It will be seen that there are two series of the partitions C—an upper series and a lower one—either or both of which can be opened out, as desired. If only the upper series are opened out, then a clear space will be left under them from end to end of the car, and there will be no necessity of removing the chairs, or a portion of the upper and a portion of the lower berths may be opened out and some of the chairs left in position, as shown in Fig. 1.

To support and hold the berth-bottoms D

in the center where they join, I provide the ends of the side pieces *d d* of one-half of the berth-bottom with dowels *e* and the corresponding half of the side pieces with mortises to receive same, so that when the two portions of the berth-bottom are lowered the dowels will enter the mortises and prevent the bottom sagging. To further support the bottom of the upper berths in the center, I provide a folding bracket E, the construction of which will be best seen in Fig. 4. In the side A of the car I provide a recess *f*, in which is hinged a T-shaped furcated arm *g*. To the outer end of the arm *g* is hinged a bar *h*, the lower end of which is hinged to a block *i*, that is free to work up and down in the groove *f*, but has a solid bearing when at its lowest points. The outer end of the arm *g* is also provided with pins *j j*, that pass through holes in the bottom of the berth and a short distance into the mattress, thereby locking them together. When the berth is not in use, the arm *g* is folded up into the upper portion *f'* of the recess, the pins *j* entering holes *f''*. As the arm *g* is folded up, the slide *i* travels up the recess *f* and the bar *h* fits in between the forks of the arm *g*, thereby leaving the outer surface flush with the side of the car.

The bottoms of the lower berths when lowered are supported by legs or standards *k*, (see Fig. 1,) secured to one-half of the berth-bottom in such manner that when the berth-bottom is raised the leg will by its own weight fall into a recess cut in the under side of the side piece *d*, as shown in dotted lines in Fig. 1.

To assist in raising the berth-bottoms to a vertical position, I employ a coil or other spring S, one end of which is secured to the partition and the other end to the bottom of the berth.

When both the upper and lower partitions are opened out, they are locked together by means of a flush-bolt F, and are further supported by means of a folding leg G, (see Figs. 1 and 5,) hinged on the rear side of the side piece *c*, so that when not required for use it can be folded into a recess *a'*, cut in the bottom of the piece *a*, and when in use is let down and secured to the floor of the car by a flush-bolt H. To the top of the central por-

tion *a* of the upper partition is hinged a filling-in piece *I*, so as to close the space between the top of the partition *C* and the roof of the car. When in the raised position, as shown in Fig. 1, it is secured by a flush-bolt *J*, that passes into the roof of the car, and when not required for use is folded onto the portion *a*.

When the berths are folded up and the car used as a parlor-car, as shown in Fig. 2, the upper and lower partitions *C* are secured together by the flush-bolt *F*, and are held to the side of the car by a flush hook or catch *K*, shown detached at Fig. 6, and it consists of a plate 1, depressed in the center and provided with a cross-bar or handle 2, to the rear of which is secured a spindle 3, that carries the hook or catch 4, which, when the berths are shut up, passes over a pin 5 in a recess in the side of the car. (See Fig. 1.)

To one side of each of the lower partitions *C*, I secure folding steps *L*, (see Figs. 1 and 7,) so that when a person wishes to get into the upper berths the steps can be let down, and when not required for use can be shut up out of the way, as shown in dotted lines in Fig. 7. These steps consist of a number of flat boards *k*, hinged at one end to the portion *C* and at the other end to two bars *ll*. To support the steps when let down I hinge one end of a bar *m* to the partition *C*, and the other end I hinge to a sliding block *n*, that is free to travel in a guide *p* on the under side of the bottom step, thereby forming a firm support to the steps, while the bar *m* is carried out of the way when the steps are shut up. To the rear portion of the steps a piece of thin material—such as cloth—may be secured. To the rear side of the end pieces *c* of the upper partition *C* are secured rods *M M* for carrying the curtains of the upper berths. These rods are just half the length of the berth, and when not in use lie at the back of the side pieces *c*, as shown in dotted lines in Fig. 1, and when required for use are secured together by means of a bolt *q*, (see Fig. 8,) provided with a hook or ring *r*, by means of which the bolt can be pushed backward or forward.

N is a spring secured at its upper end to one of the beams of the roof and provided at its lower end with a hook or ring. The object of this spring is to assist in supporting the curtain-rods *M* in the center, and when in use its lower end is caught onto the hook *r*, and when not in use the spring is drawn up, so that only the ring on its end will be seen; or a small drum with a spring may be secured in the roof and a cord wound around it having at its lower end a ring, so that it can be drawn down, and when not in use the spring will wind the cord upon the drum.

To support the curtains for the lower berths I provide the side boards *d d* of the upper berths with a rounded metal rod *d'*, (shown in Fig. 9,) onto which rounded portion are passed hooks secured to the curtain. The curtains are each provided with a number or letter, or both, (see Fig. 9,) either woven into, worked

on, or otherwise permanently attached to them, so as to designate which berth the curtain belongs to, and also to indicate to passengers which are their respective berths.

It will be seen that by this construction of berths all parts can be folded up into the space occupied by the partition *C*, as shown in Fig. 10, which is a vertical section through the upper and lower partitions, with the berths folded up, *s* being the mattress, and *t* the bed-clothes, &c. The bottoms of the half-berths that stand toward the inside of the car when the partitions are closed are paneled or otherwise decorated to conform to the other parts of the car.

In each of the berths I place folding pockets *U*, (see Figs. 1 and 11,) which consist of a back piece *u*, to which are hinged two pieces *v w*, and to the latter piece *w* is hinged another piece *x*. To the edges of the back piece *u* and pieces *v w x* are secured pieces of flexible material *y*, that form the sides of the pockets, so that when the pockets are empty they will fold flat against the back piece *u*. At the ends of the pieces *v x*, I secure studs or standards *z*, on which a hat, bonnet, or other article can be placed.

What I claim as my invention is—

1. The combination of the partitions *C*, hinged to the side of the car, the end pieces *c* being finished to correspond with the side walls of the car, with berth-bottoms *D*, hinged to the partitions *C*, the bottom of the berths on one side being finished to correspond to the side walls of the car, so that when closed up the partition will stand longitudinally against the side of the car and occupy the space of a window and also conform to the general appearance of the walls of the car, substantially as set forth.

2. In a combined parlor and sleeping car, the partitions *C C*, divided in the center of their height, and having half-berth bottoms hinged on each side, each half of the partition being capable of being folded against the side of the car, so that either the upper or lower, or both, series can be opened out for use, substantially as shown and described.

3. The combination of the filling-in piece *I* and the partition *C*, said filling-in piece being capable of being folded upon the partition and the partition capable of being folded against the side of the car, substantially as and for the purpose described.

4. The spring *S*, in combination with the partition *C* and berth-bottom *D*, for assisting to raise the latter to a vertical position, substantially as shown and described.

5. The folding bracket *E*, consisting of a T-shaped furcated arm *g*, hinged to the side of the car in a groove *f*, a bar *h*, the upper end of which is hinged to the outer end of the arm *g* and its lower end to a block *i*, held in but free to work in the groove *f*, so that it will support the two half-berth bottoms in the center when in use, and capable of being folded flush with the side of the car when not

in use, substantially as shown and described.

5 6. The flush hook or catch K, in combination with the partitions C and side of the car A, substantially as and for the purposes set forth.

7. The folding ladder L, in combination with the partition C and berths, substantially as shown and described.

10 8. In combination with the folding ladder L, the bar *m*, slide *n*, and guides *p*, substantially as and for the purposes set forth.

15 9. The curtain-rods M, divided in the center and provided with a bolt *q*, in combination with the partitions C, substantially as shown and described.

10. The spring N, secured to the roof of the

car, in combination with the curtain-bars M, substantially as and for the purposes set forth.

11. In combination with a sleeping-car, the 20 folding pockets U, consisting of solid front pieces and flexible sides, and provided with studs or standards *z*, substantially as shown and described.

In testimony whereof I have signed my name 25 to this specification in the presence of two subscribing witnesses.

HOSEA W. LIBBEY.

Witnesses:

F. H. ADAMS,

E. PLANTA.