

No. 629,726.

Patented July 25, 1899.

D. STITZER.
PORTABLE STALL.

(Application filed May 16, 1898.)

(No Model.)

2 Sheets—Sheet 1.

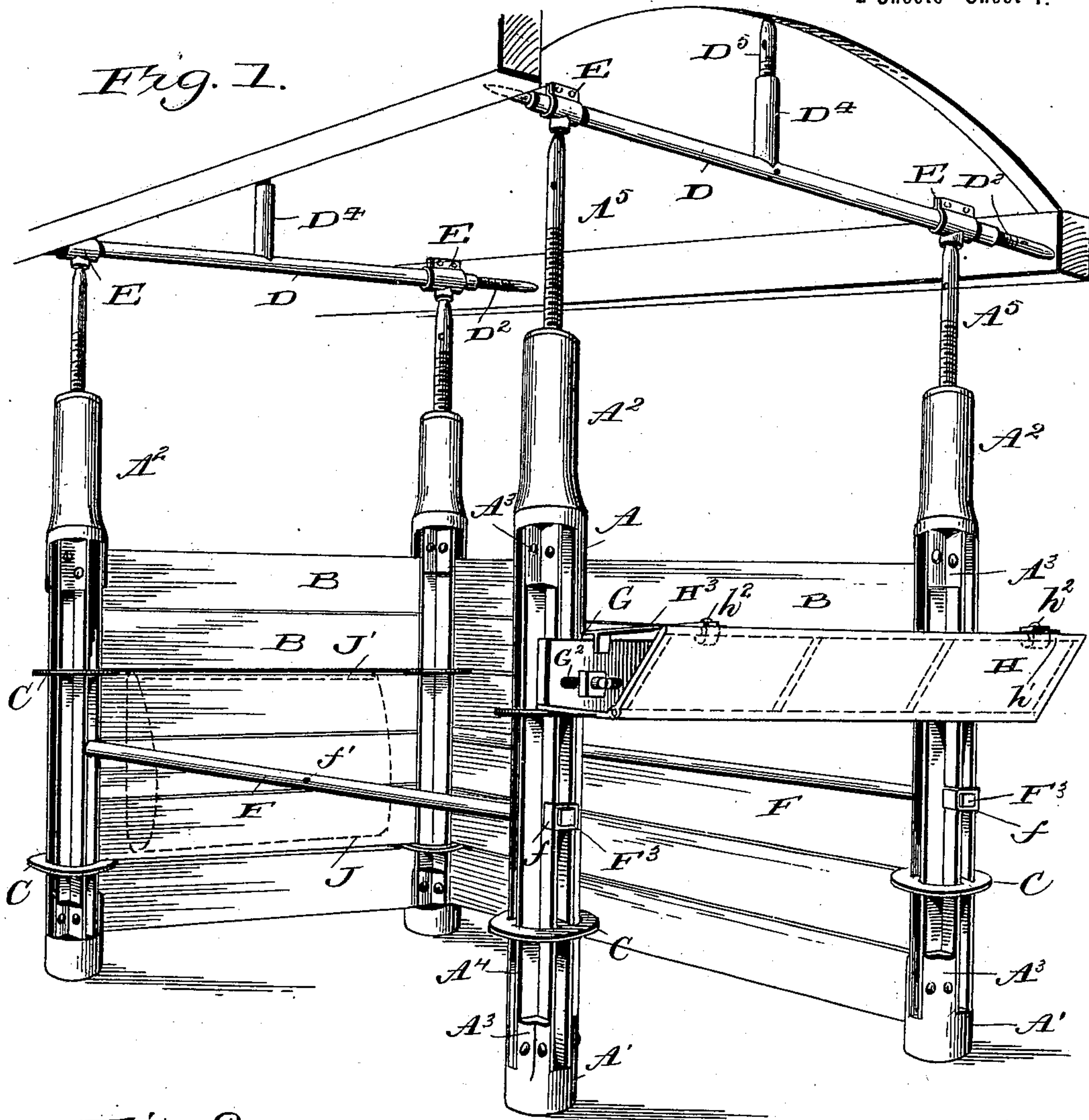


Fig. 2.

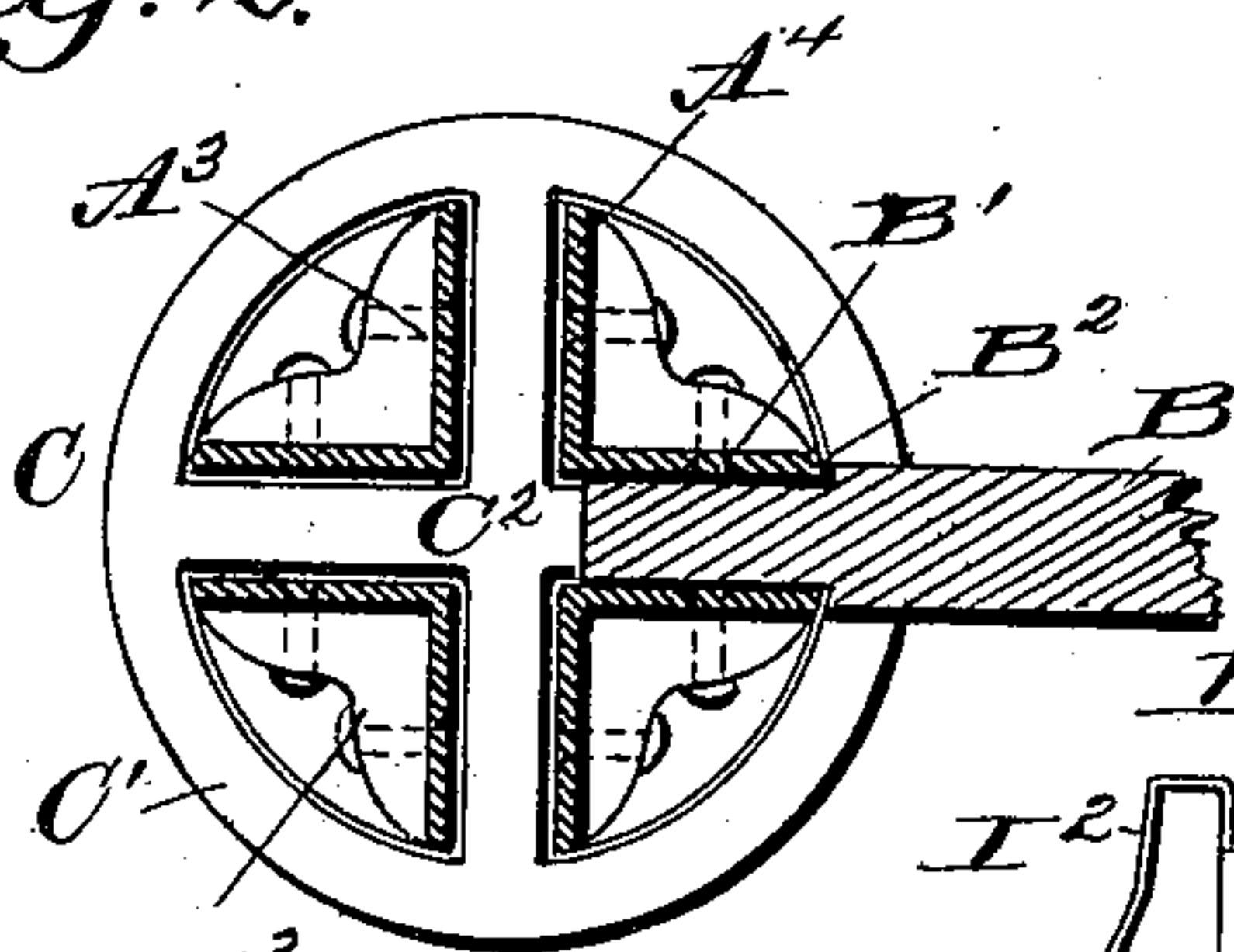
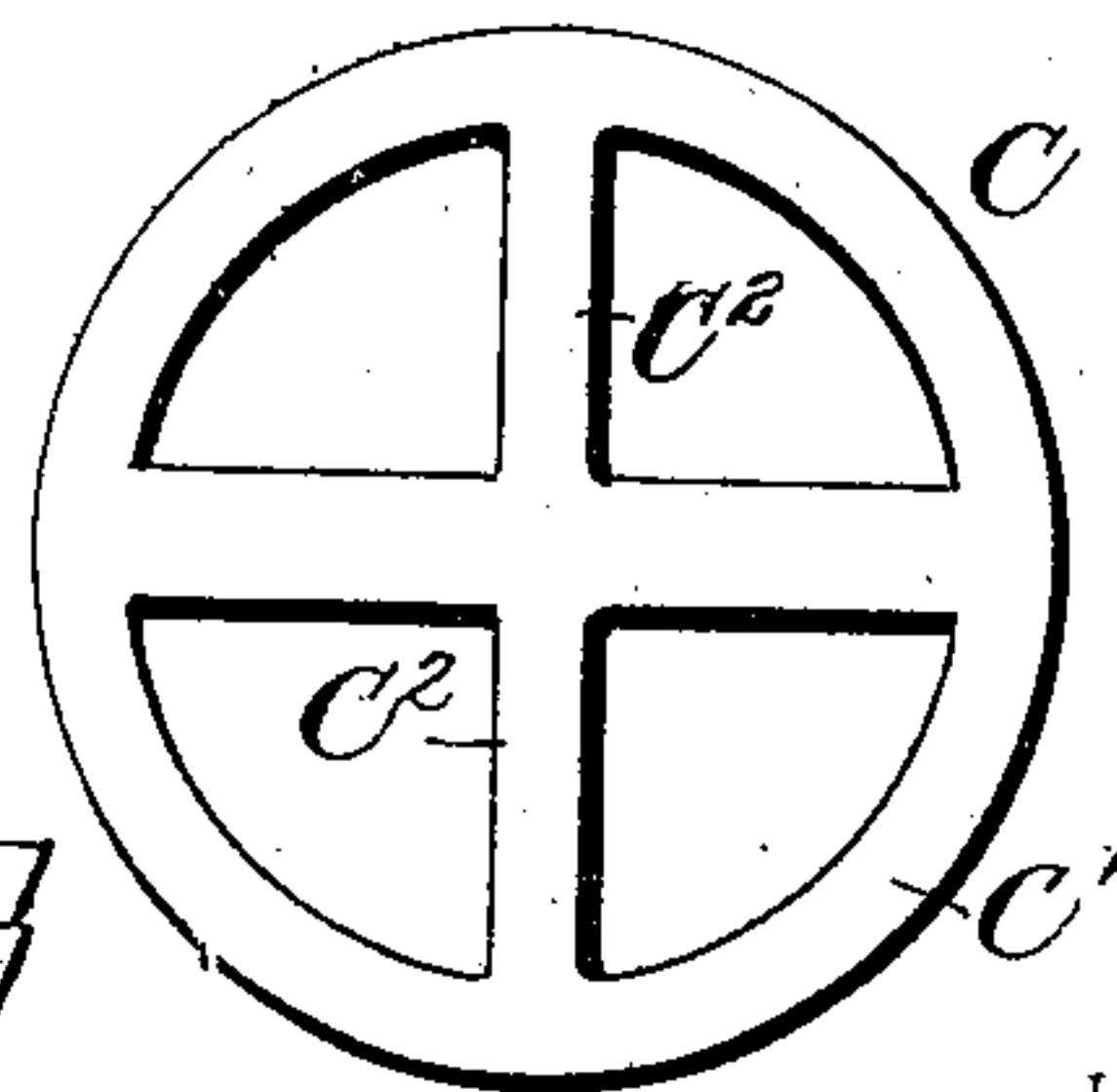


Fig. 3.



Witnesses

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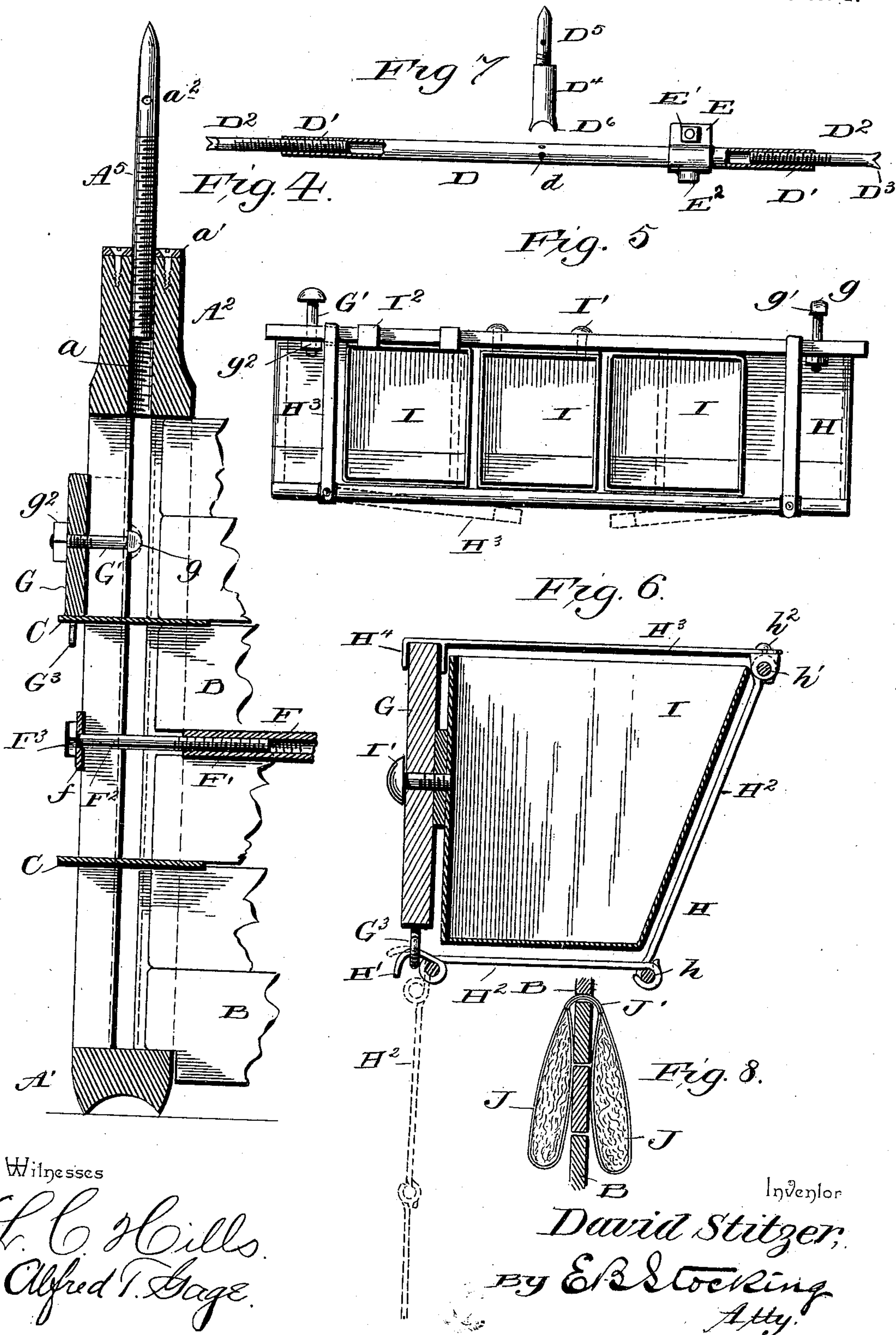
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Witnesses

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UNITED STATES PATENT OFFICE.

DAVID STITZER, OF LOUISVILLE, KENTUCKY.

PORTABLE STALL.

SPECIFICATION forming part of Letters Patent No. 629,726, dated July 25, 1899.

Application filed May 16, 1898. Serial No. 680,876. (No model.)

To all whom it may concern:

Be it known that I, DAVID STITZER, a citizen of the United States, residing at Louisville, in the county of Jefferson, State of Kentucky, have invented certain new and useful Improvements in Portable Stalls, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to portable stalls, and particularly to a stall adapted for location within a railway-car for use in the transportation of live stock.

The invention has for its object to improve the construction of posts used for supporting the sides and ends of the stall and also the means by which these posts are supported from the car structure.

The invention has as a further object to provide a construction of feed-trough formed in connection with the front of the stall, so that the same may be folded into position for use as a trough or unfolded to form a front to the stall.

A further object is to provide an improved construction of feed-box which can be applied to the front of the stall either in connection with the trough or when the same is not used.

Other objects and advantages of the invention will hereinafter appear in the following description and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 represents a perspective of the stall with one side removed. Fig. 2 is a horizontal section through one of the posts. Fig. 3 is a plan view of a holding-plate used in connection with the posts. Fig. 4 is a vertical cross-section through one of the posts. Fig. 5 is a plan view of the front cross-piece of the stall with the manger attached thereto. Fig. 6 is a central vertical section, on an enlarged scale, through Fig. 5. Fig. 7 is a detail view of the truss-brace used in connection with the posts. Fig. 8 is a detail of an improved form of pad used in connection with the stall, and Fig. 9 is a detail side elevation of a feed box or trough.

Like letters of reference indicate like parts throughout the several figures of the drawings.

The letter A designates a post, four of which are illustrated in the accompanying draw-

ings. This post is composed of the base A¹ and cap A², each of which is provided with angular extensions A³, having their apices toward a common center and to which angularly-disposed bars A⁴ are respectively connected by any desired means. These bars have been shown as substantially L-shaped in cross-section, and four of the same are used, as shown in Fig. 2, so that the spaces between the inner faces of the bars are substantially parallel, so as to provide extended bearings for the ends of the boards or slats B, which constitute the sides and one end of the stall. Each end of these slats is reduced in diameter, as at B¹, so as to provide a shoulder B², which will abut against the angle-irons of the post when pressure is exerted longitudinally of the slats or boards. The length of these posts and the pressure applied thereto in affixing the posts to the car are such that there is liable to be a slight springing or movement of the angle-irons relative to each other, so as to destroy the parallel relative position of the bars. To prevent this, a holding-plate C is applied to the bars, and it consists of a peripheral ring C¹ and spacing cross-bars C². It will be seen that this ring C¹ prevents any outward expansion or movement of the angle-bars, while the ribs C² prevent any collapsing or inward movement of the bars, thus maintaining the bars in such a fixed relative relation as to always provide the proper space for the reception of the boards or other devices applied to the posts. It is obvious that any number of these plates may be used and that the same are capable of vertical movement upon the bars to the position most desired. The cap A² of each post is provided with an interior screw-threaded aperture a and cap-plate a¹. Into this aperture a threaded standard A⁵ is applied. This standard is provided with an aperture a², into which a suitable tool may be introduced, so that the standard may be adjusted to come in contact with a rigid support, and thereby support the post in position. It will be observed that by threading the standard into the cap of a post an extended bearing is secured upon a number of threads of the standard, which is a material advantage over the threading only through the top plate of the post. The use of the angle-bars to constitute the post pro-

vides a post light in weight, of convenient shape, and provided with firm slots or openings of equal width and uniform depth to provide the end surface-support for the boards
 5 of the stall and obviates the necessity of grooving or slotting wooden posts or hollow metallic posts as have heretofore been used. This shape of post also permits the boarding up of the partition to within a few inches of
 10 the top of the post, thus dispensing with the necessity of a screen or shield and giving greater security to confine a horse should it be inclined to attempt to get over the partition or in any other way interfere with a horse
 15 confined in an adjacent stall. The holding-plate also prevents any outward or inward movement of the angle-bars, so that the same are always maintained in a fixed relation to each other.

20 It is frequently desirable to erect a series of stalls side by side extending the width or length of a car, and it will be obvious that to construct an adjacent stall it is only necessary to apply two additional posts and one
 25 additional end and side partition, which will fit into the posts already erected for the first stall. In transporting live stock it is desirable that the stall shall fit so closely about the animal as to prevent any bruising or injury
 30 in the movement of the train, which would be liable to occur with the stall of larger size than necessary to accommodate the animal. To accomplish this, means are provided by which the width and length of the stall can be
 35 adjusted and which means will extend from side to side of the car and are capable of receiving several posts when a series of stalls is erected adjacent to each other. This supporting means is composed of a truss-bar D,
 40 which extends from one portion of a car to another—for instance, as illustrated, from side to side—and is provided at each end with an oppositely-threaded interior D', into which fit threaded bolts D², provided at their ends
 45 with holding-jaws D³ to prevent the rotation of the bolts when the truss-bar D is rotated to feed the bolts in opposite directions and bring the same into contact with the sides of the car. This truss-bar is provided with any
 50 suitable means for effecting this rotation—for instance, a series of apertures *d*, into which a tool may be inserted to rotate the bar. The length of this truss-bar is such that the central portion is liable to bend or buckle, and to provide against this a separable brace
 55 D⁴, provided with an adjusting-bolt D⁵ at its upper end and a segmental seat D⁶ at its lower end, is applied, which seat will rest upon the surface of the truss-bar D and the adjusting-bolt forced into contact with the dome of the
 60 car to firmly hold the truss-bar against any bending or buckling movement. The truss-bar is also provided with adjustable sockets E, which are clamped to said bar by any desired means—for instance, a bolt E', passing
 65 through the lips of the socket, and which sockets are provided upon one face with a

seat E², adapted to receive and retain the upper end of the standards A⁵, extending from the posts. It will be obvious that by the adjustment of the sockets the position of the bearing upon the truss-rod D may be altered to effect a variation in the width of the stall or for the purpose of removing the posts of the stall while the truss-bar remains in position.

70 For the purpose of drawing the opposite posts into intimate contact with the shoulders B² of the side boards B, I have provided an adjusting-sleeve F, oppositely threaded at each end, as at F', similarly to the brace-rod
 80 D heretofore described. Into each end of this sleeve clamping-bolts F² are applied, which are provided with heads F³, adapted to rest in contact with a plate *f*, fitted over the angle-irons upon the outer faces of the opposite posts. This sleeve F may be rotated by any suitable means—for instance, an aperture
 85 *f'*, into which a tool may be inserted—and upon the rotation of the sleeve the oppositely-threaded ends will draw the clamping-bolts F² toward each other, and thus form a perfectly firm structure.

The parts heretofore described constitute the sides and one end of the stall, into which a horse is backed, so that its head is at the open
 95 end of the stall. For the purpose of confining the animal within the stall a front cross-bar G is provided and attached to the post by means of bolts G' or any suitable devices. When such bolts are used, the same are provided with heads *g*, having opposite flat faces
 100 *g'*, which permit the bolts to be passed into the space between the angle-bars and there engaged with the bars by a quarter-turn of the bolt. The outer ends of these bolts pass
 105 through a slot G², provided in the cross-piece G, and a suitable clamping-nut *g*² is applied to affix the bar to the front of the stall. A folding manger H is removably supported by the lower portion of this cross-piece G—for
 110 instance, by means of eyes G³, extending from the cross-piece, and hooks H', engaging said eyes. When the manger is not in use, the same will extend downward in the plane of the cross-piece G, and thus constitute
 115 a front for the stall. (See Fig. 6.) The manger may, however, be folded into position for use and is shown in the drawings as formed of a series of metallic bars or ribs H², upon which a fabric covering is applied, as shown
 120 in Fig. 1. These bars H² are pivoted together at *h*, and at the upper end of the lowermost bar a retaining-hook H³ is pivoted, as at *h'*. The free end of this hook is provided with extensions H⁴, which fit upon opposite sides
 125 of the upper edge of the front piece G, and thus retain the manger in its folded position upon the board. The opposite end of the retaining-hook H³ is pivotally mounted upon the pivoting-socket *h'*, as shown at *h*², where-
 130 by the hooks may be swung into a position parallel with the outer edge of the manger when the parts are unfolded. (See dotted lines in Fig. 5.) It will be observed that this

structure of manger requires only a bottom and front portion, as the front bar G of the stall forms the back of the manger, and when the latter is unfolded the manger constitutes
 5 a front to the stall. It is always in position for use and can be readily folded when desired and at other times packed or retained in a flat position to prevent injury to the
 10 same in transportation or use. This manger is particularly intended for use in feeding hay or similar feed, and if water or other liquid is to be used I provide a metallic feed-box I. Several forms of this box have been
 15 illustrated in Fig. 5. The box at the right is simply seated within the trough, while the adjacent box is secured by means of a bolt I', passing through the cross-piece G and into the back of the box. The preferred form of box, however, is illustrated at the left of Fig.
 20 5 and in detail in Fig. 9. This box is supported from the upper edge of the cross-piece G by means of spring-clips I², which are attached to the metallic box I by any suitable means—for instance, a band I³, surrounding
 25 the box. This box can be applied or removed when desired and used with or without the manger.

It has been found desirable in stalls of this character to provide a suitable form of pad
 30 to prevent injury to the animal by coming into contact with the sides and end of the stall. An improved form of pad is illustrated in detail by Fig. 8, wherein the pad J is provided with a reduced portion J', which passes
 35 between the edges of adjacent boards B and is thus held in position. If two stalls are erected adjacent to each other, the pad will be provided with padded portions J at each end and the central reduced portion J' will
 40 rest upon the side boards, as shown in Figs. 1 and 8.

The structure of brace-rod D permits the use of a post of uniform length in connection with a car having a narrow dome-opening,
 45 as is the case with baggage or express cars, and the opposite bolts and adjustable sockets permit the location of the parts within domes of different widths, as will be obvious from the foregoing description.

50 It will be seen that the detail improvements embodied in this invention provide a stall very simple in construction and adapted for ready application to a car of any structure, whereby live stock may be transported with-
 55 out danger of injury, and if the car is to be used for other merchandise the parts can be taken down and packed within a small compass for reshipment or transportation.

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

1. A post comprising base and cap portions each provided with spaced angular extensions having their apices toward a common center,
 65 and angularly-disposed irons secured to said extensions and having their apices toward said

common center, whereby parallel walled recesses are formed for the reception of boards or rails; substantially as specified.

2. The combination with a post comprising 70 base and cap portions each provided with spaced angular extensions having their apices toward a common center and angularly-disposed irons secured to said extensions and having their apices toward said center, of a
 75 spacing-ring having diametrical bars arranged within the spaces of the post; substantially as specified.

3. In a portable stall, the combination of posts composed of base and cap portions each 80 provided with spaced angular extensions having apices toward a common center and angle-irons each having its apex toward a central point and mounted upon said extensions to produce recesses having parallel continuous
 85 walls, and boards fitting between said angle-irons and extending from post to post; substantially as specified.

4. In a portable stall, the combination of posts composed of base and cap portions each 90 provided with spaced angular extensions having their apices toward a common center, angle-irons each having its apex toward a central point and mounted upon said extensions to produce recesses having parallel continuous
 95 walls, boards fitting between said angle-irons and extending from post to post; and a movable retaining-plate composed of a peripheral ring and diametrical cross-bars to space and retain said angle-irons in their relative posi- 100
 tions; substantially as specified.

5. In a portable stall, the combination with posts, composed of angle-irons each having its apex toward a central point to produce longitudinal recesses, boards extending be- 105
 tween said posts and fitting within said recesses, adjustable standards carried by the upper ends of said posts, a horizontal truss-rod upon which said standards bear, adjust- 110
 able sockets for the ends of the standards, and a vertical brace separably supported from said truss-rod to permit rotation of the rod; substantially as specified.

6. In a portable stall, the combination with posts longitudinal recesses, boards extending 115
 between said posts and fitting within said recesses, adjustable standards carried by the upper ends of said posts, a horizontal truss-rod upon which said standards bear, and ad- 120
 justable sockets located upon said truss-rod, and clamps upon said sockets to hold the same in their adjusted positions; substantially as specified.

7. In a portable stall, the combination with posts provided with longitudinal recesses, 125
 boards extending between said posts and fitting within said recesses, adjustable standards carried by the upper ends of said posts, a horizontal tubular truss-rod upon which said standards bear, adjustable sockets upon said 130
 rods for the standards, oppositely-threaded bolts threaded into the ends of said truss-rod,

and means to effect the rotation of said rod, and to retain said bolts against rotation; substantially as specified.

8. In a portable stall, the combination with
5 posts provided with longitudinal recesses, boards extending between said posts and fitting within said recesses, adjustable standards carried by the upper ends of said posts, a horizontal truss-rod upon which said stand-
10 ards bear, oppositely-threaded bolts carried by the ends of said truss-rod and provided with means at their outer end to prevent rotation thereof, sockets carried by said truss-rod and provided with a seat and an adjust-
15 ing-bolt, a brace provided with a segmental seat, and an adjusting-bolt threaded into said brace; substantially as specified.

9. In a portable stall, the combination with
20 posts provided with longitudinal recesses, of boards having shoulders at their opposite ends and a reduced portion to enter said recesses, an adjusting-sleeve located between said posts and interiorly oppositely threaded at its ends, bolts extending through an angle-plate em-
25 bracing said posts and threaded into the opposite ends of said sleeve, and means on said

sleeve to receive an adjusting-tool; substantially as specified.

10. In a portable stall, the combination with
posts and boards supported thereby, of a cross- 30 piece supported by said boards, a manger formed of pivoted sections, a pivoting-socket carried by the outer section of said manger, and hooks pivoted to said socket and adapted to swing longitudinally and transversely of
35 said manger; substantially as specified.

11. In a portable stall, the combination with
posts and boards extending between the same, of a cross-bar removably secured to said posts by headed bolts, a manger removably pivoted 40 to the lower portion of said cross-bar and composed of a sectional pivoted frame, a fabric covering for said frame, and hooks carried by the outer section of said frame and adapted to engage the upper edge of said cross-bar; 45 substantially as specified.

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

DAVID STITZER.

Witnesses:

JAS. E. BUCKNER,

OSCAR TURNER.