

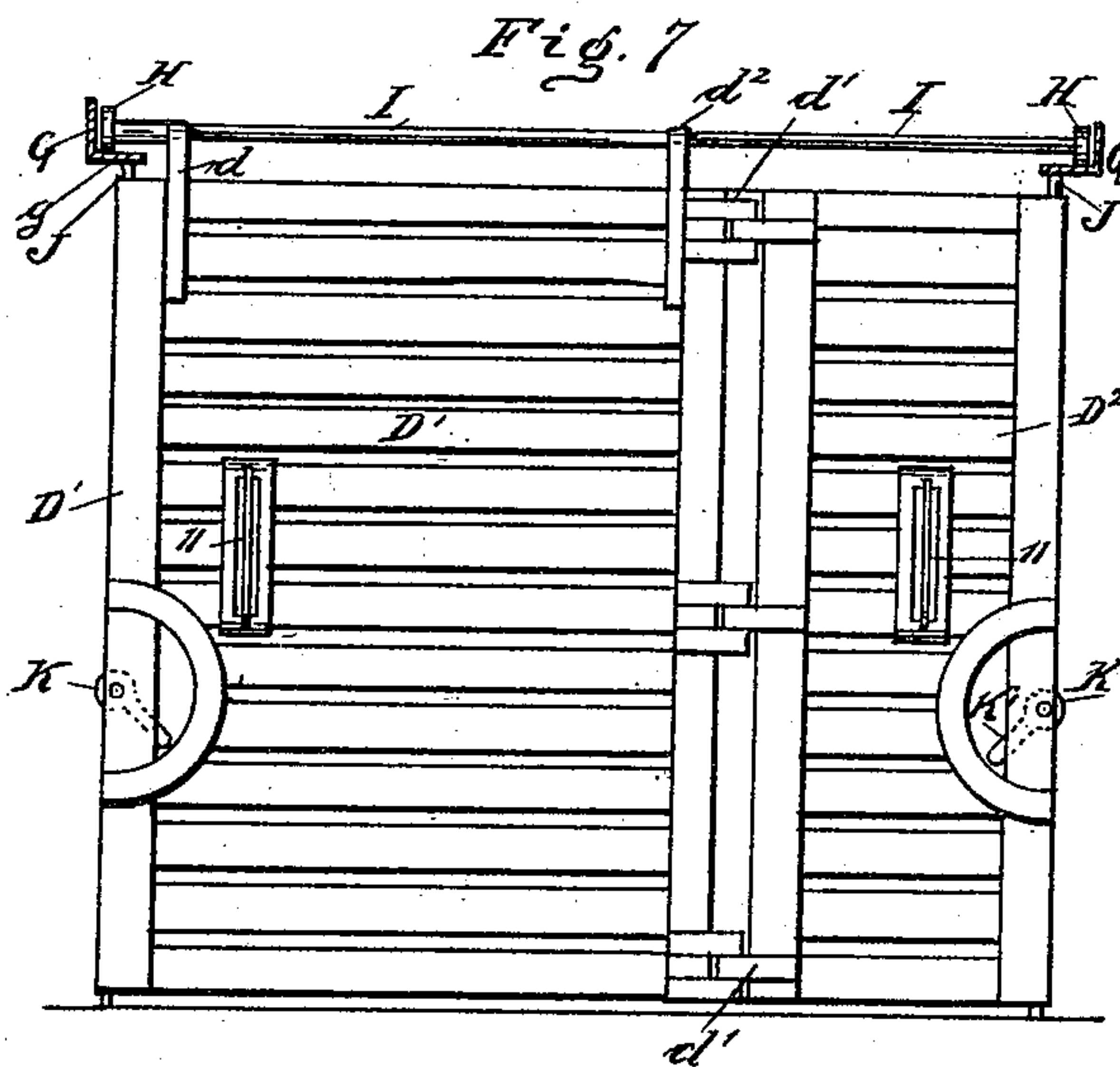
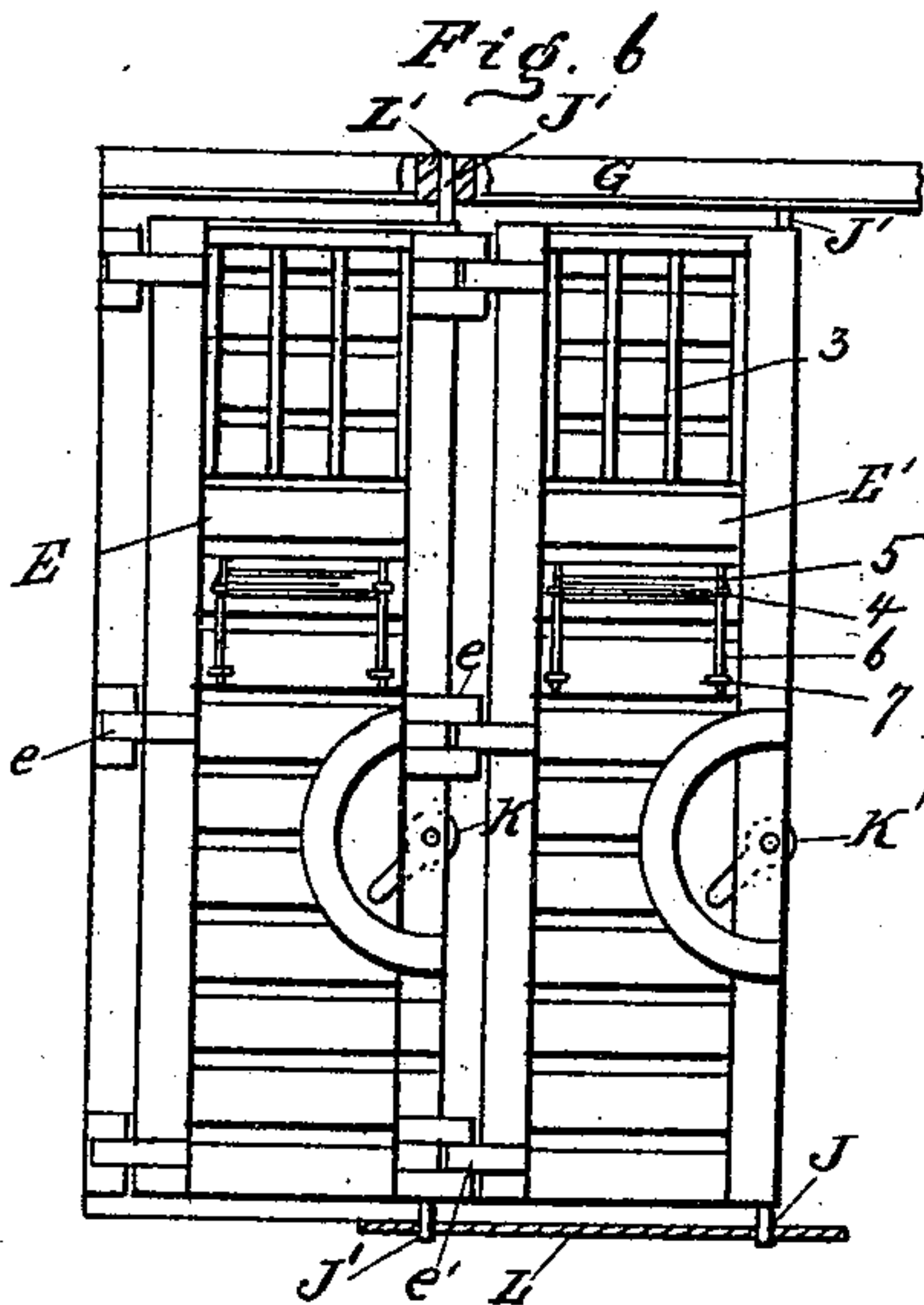
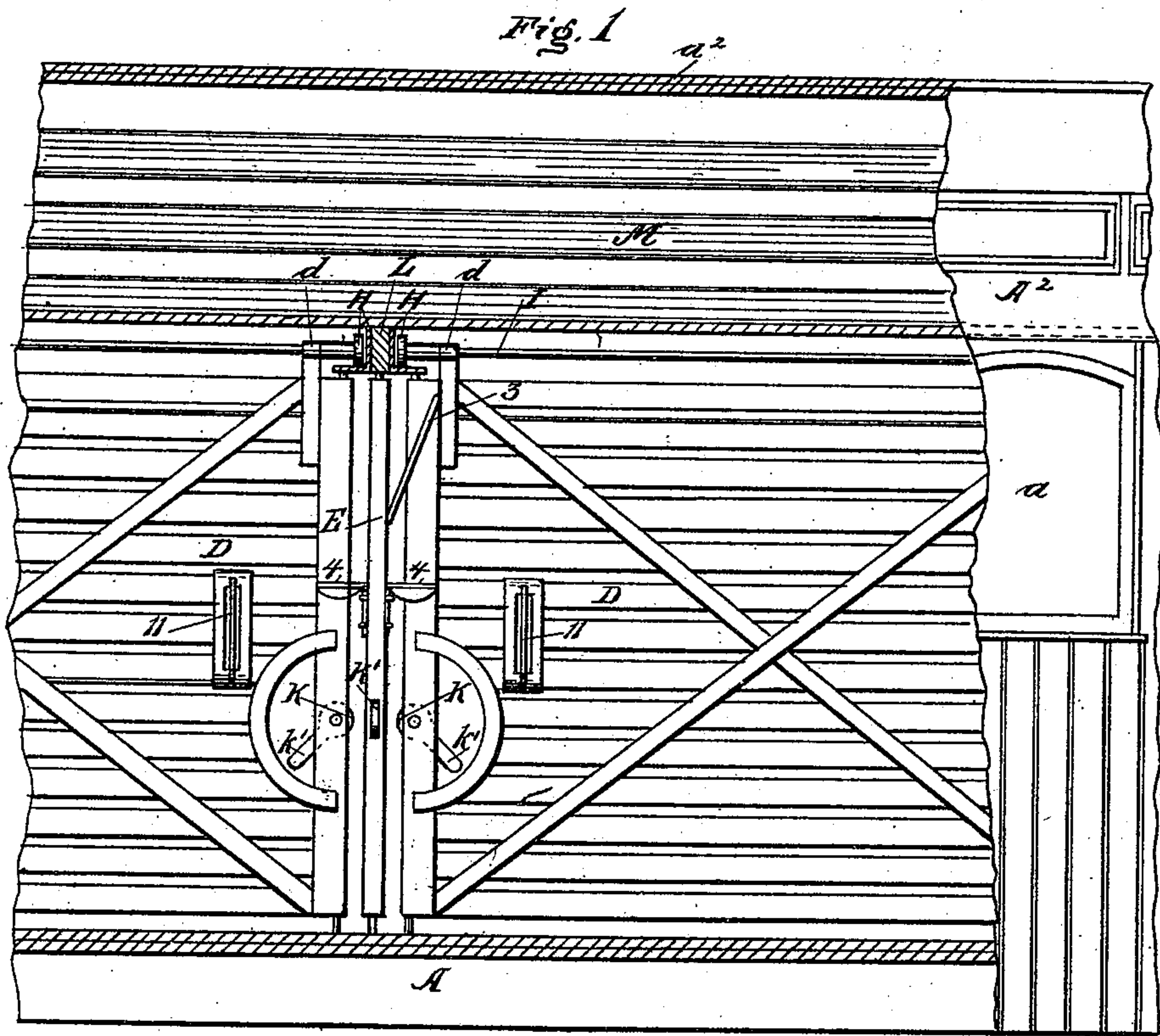
(No Model.)

4 Sheets—Sheet 1.

W. A. CASWELL.
RAILWAY CAR FOR TRANSPORTING HORSES.

No. 491,936.

Patented Feb. 14, 1893.



Witnesses:
H. M. Munday
Sew. E. Curtis

Inventor.
William A. Caswell
by Munday, Evans & Adcock
his attys.

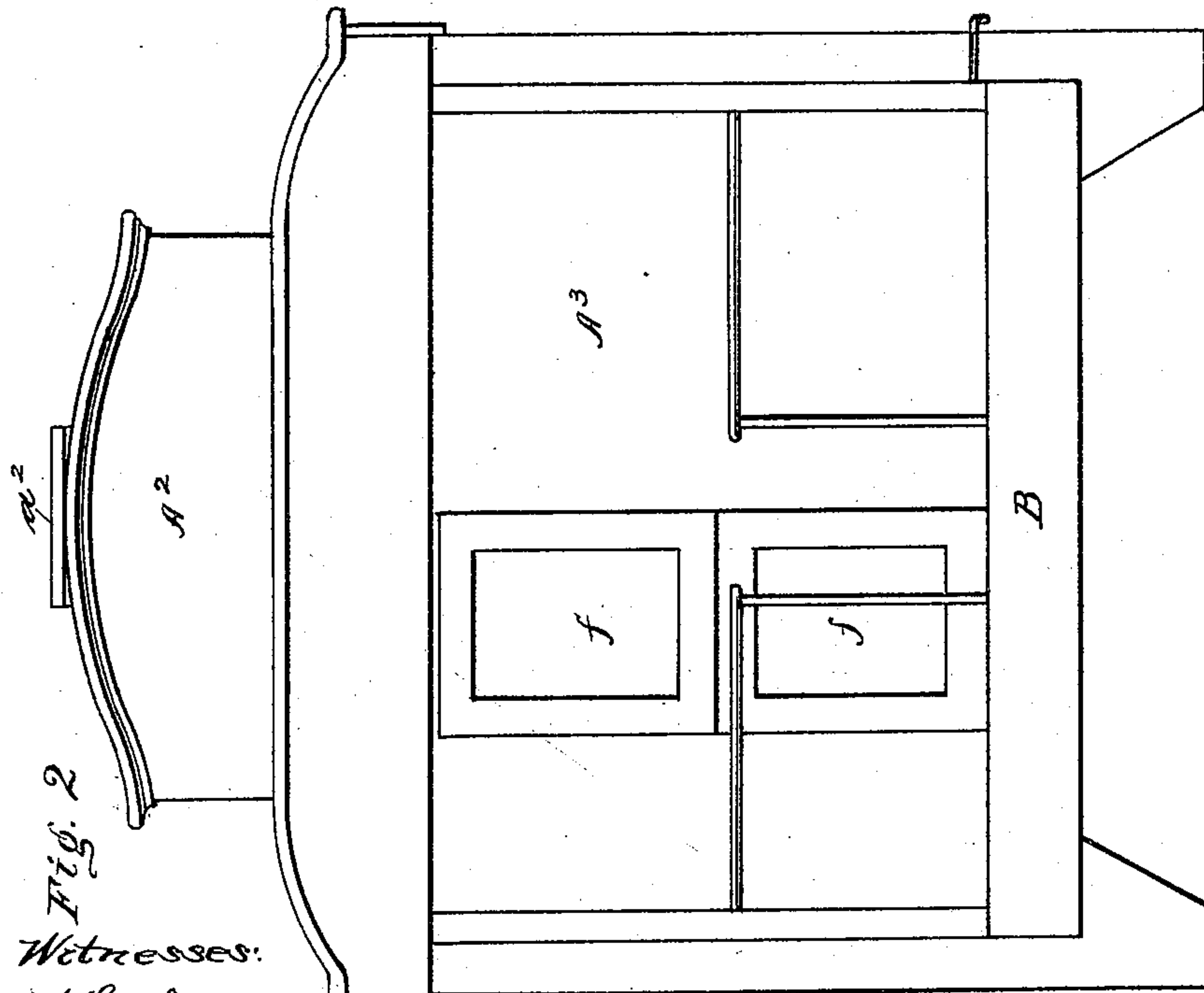
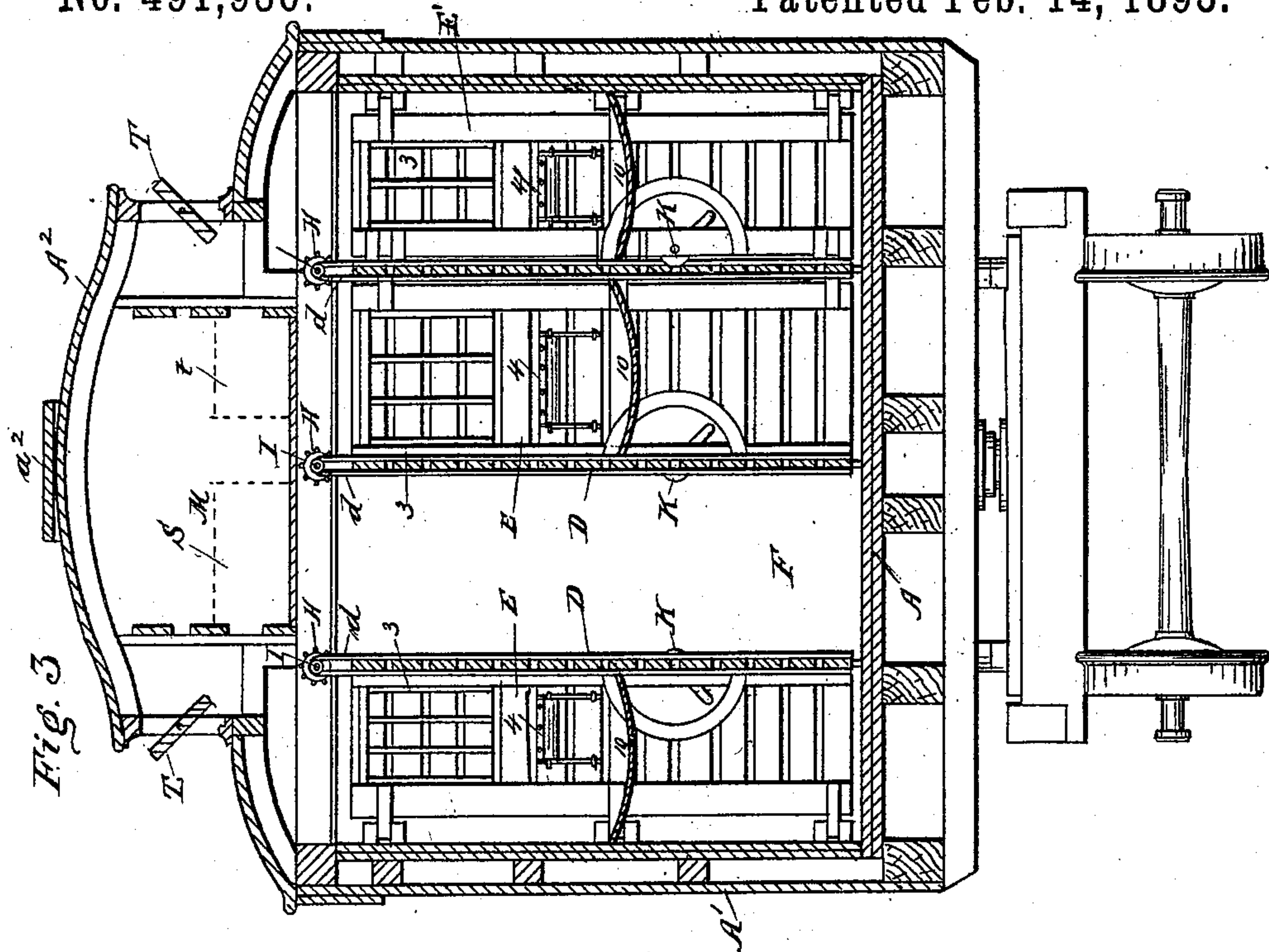
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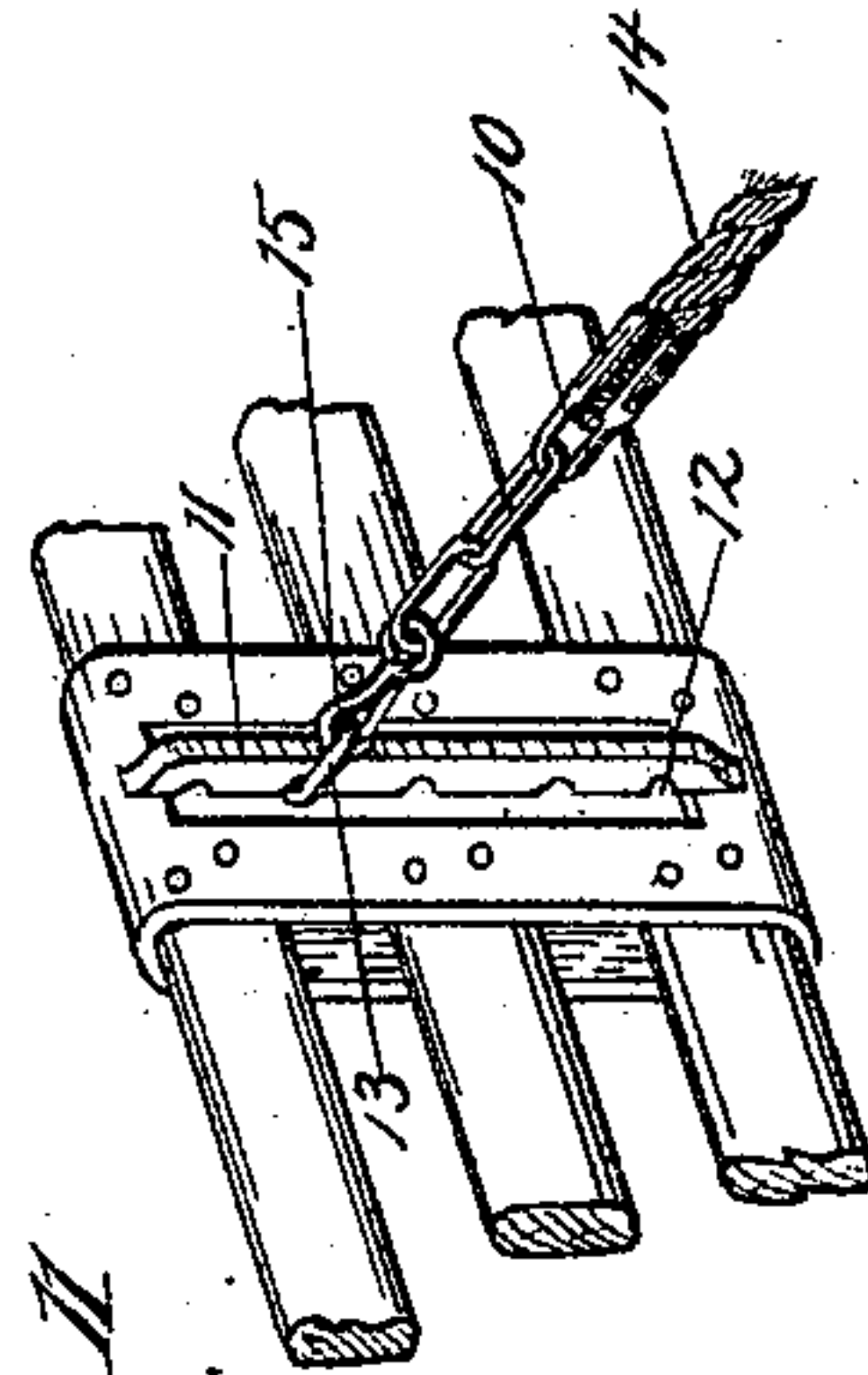
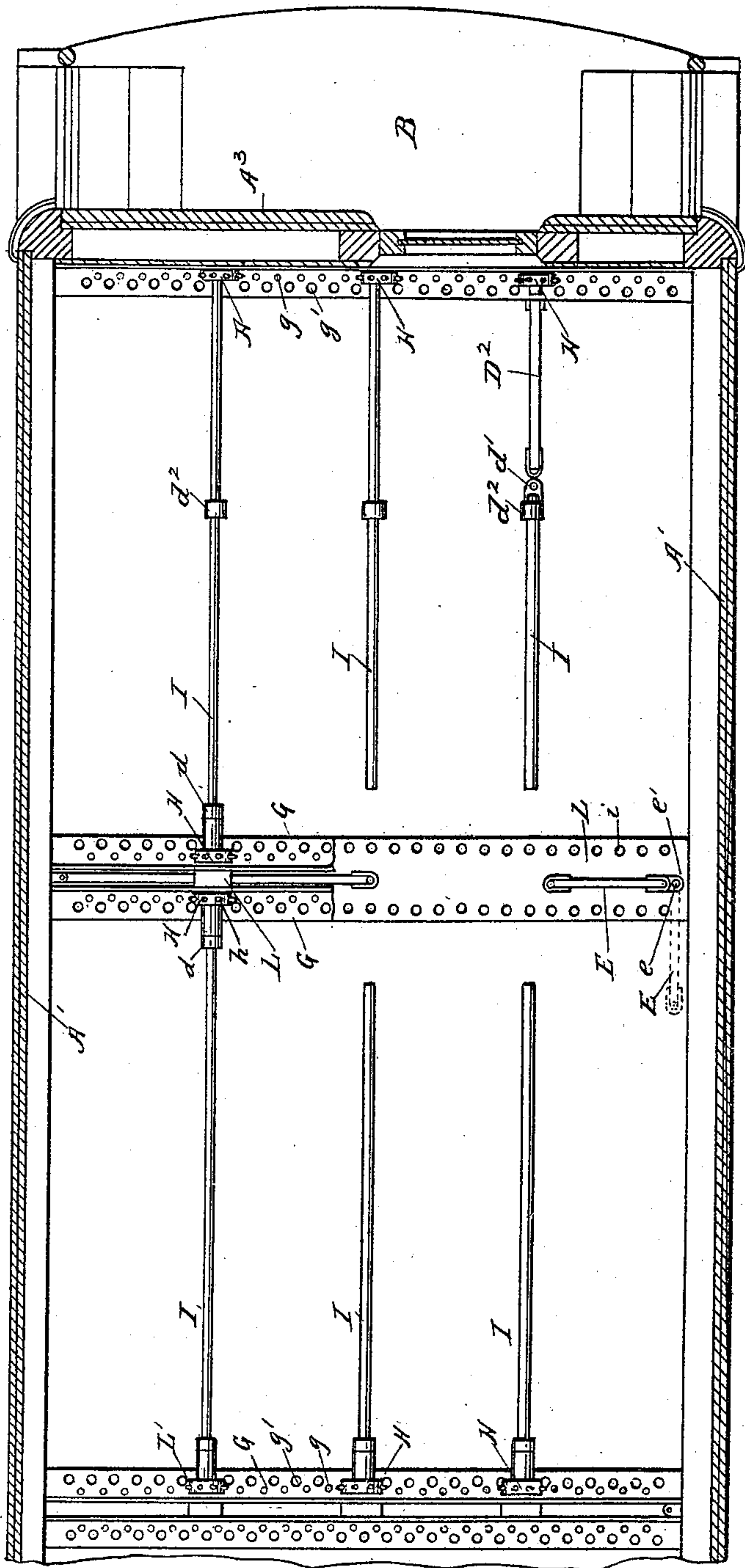


Fig. 11

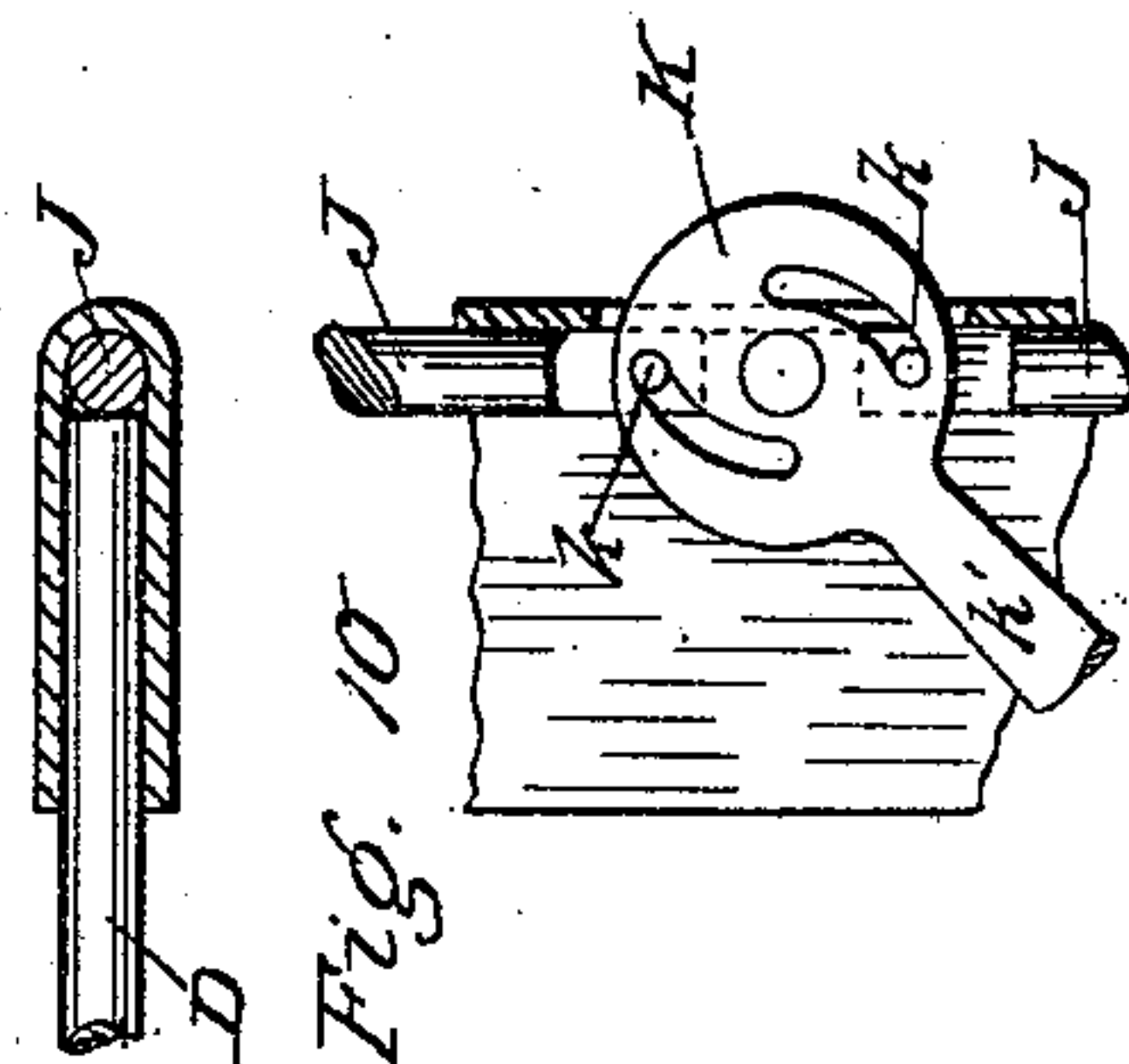


Fig. 10



Fig. 9

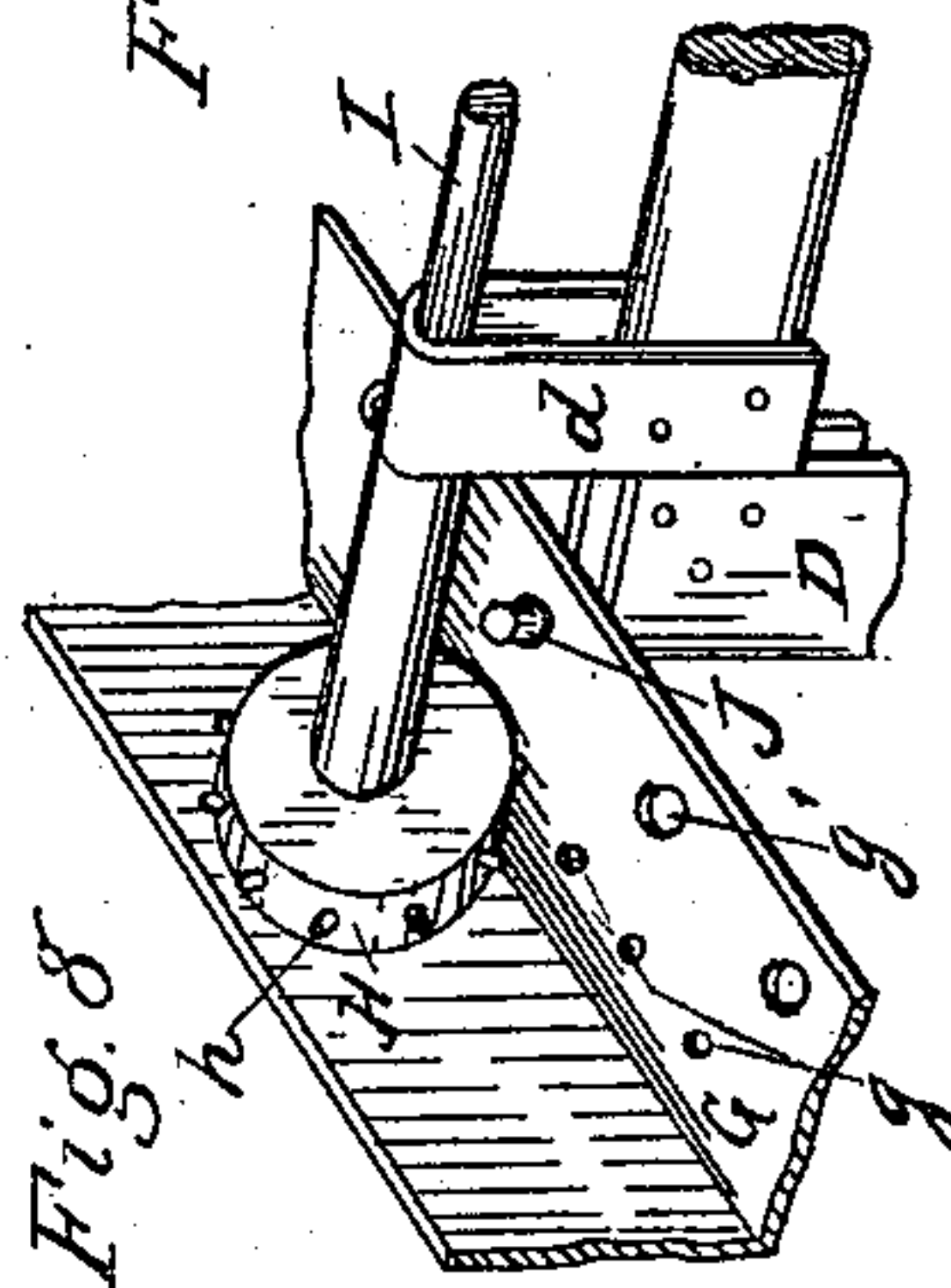


Fig. 8

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Fig. 4.

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(No Model.)

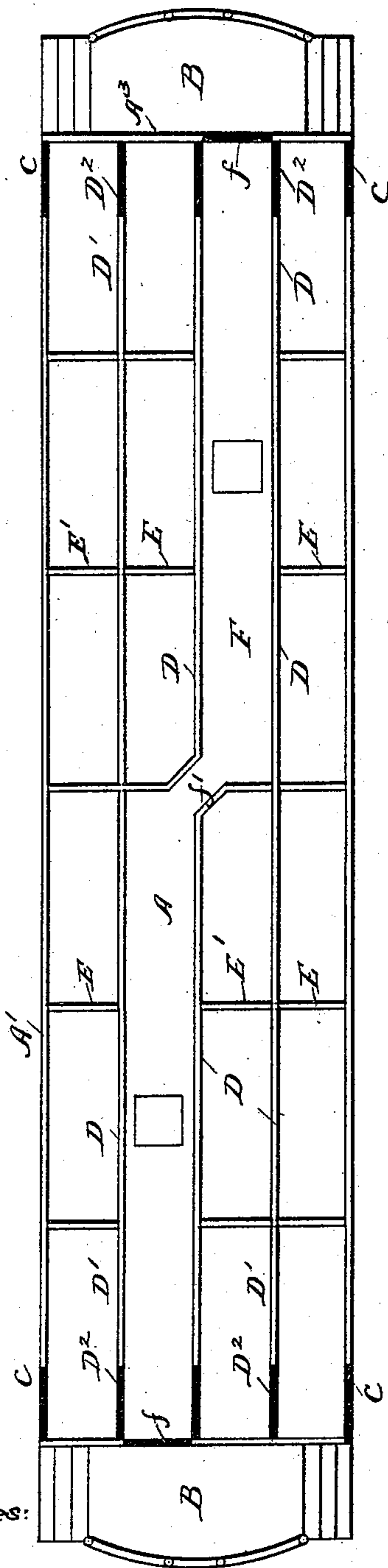
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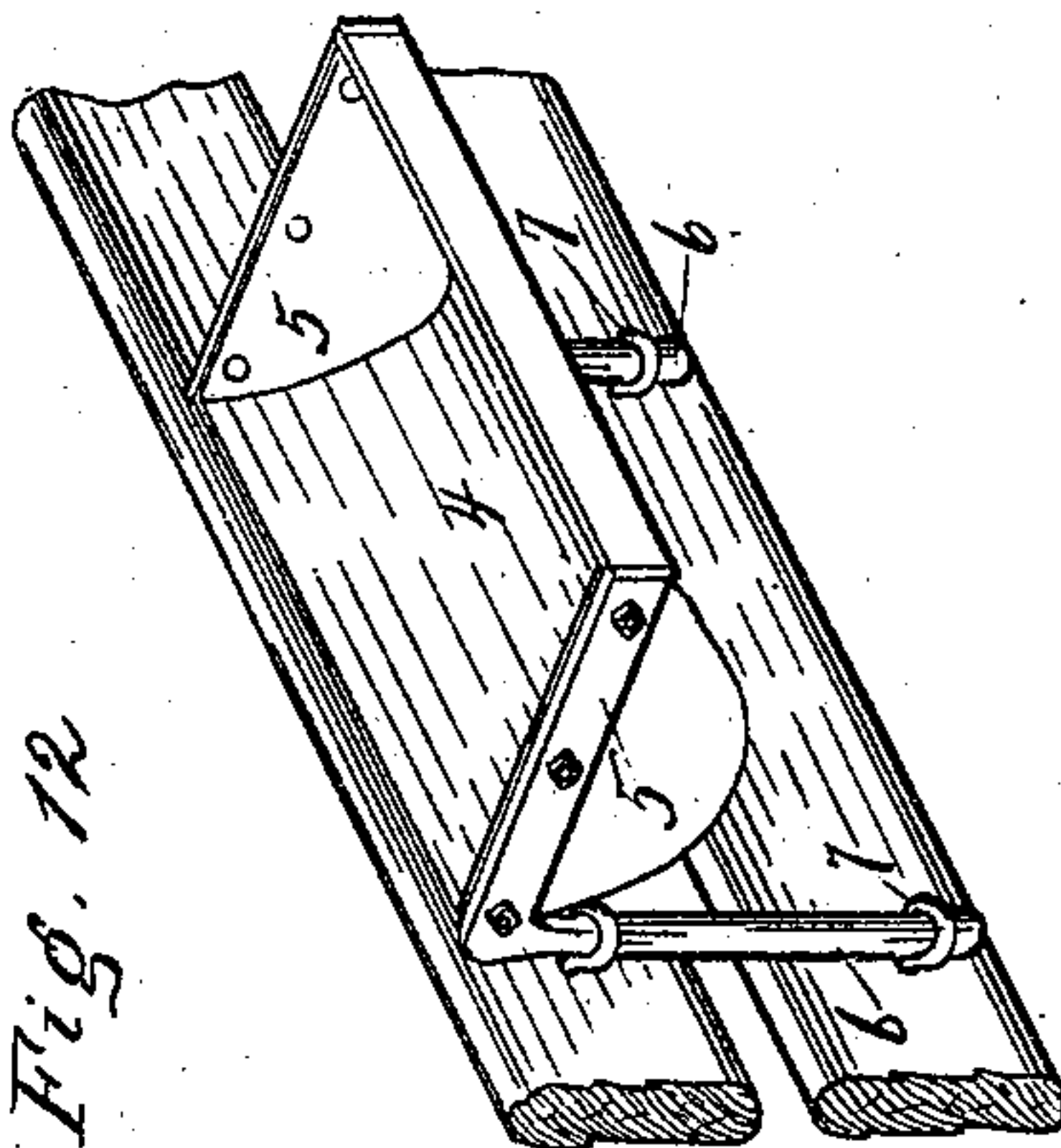
Fig. 5



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Fig. 12



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UNITED STATES PATENT OFFICE.

WILLIAM A. CASWELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO MOSES H. NABER, OF SAME PLACE.

RAILWAY-CAR FOR TRANSPORTING HORSES.

SPECIFICATION forming part of Letters Patent No. 491,936, dated February 14, 1893.

Application filed September 3, 1891. Serial No. 404,585. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. CASWELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Stock-Cars, of which the following is a specification.

This invention relates to the construction of a car adapted to the carrying of horses.

My aim in the invention has been to produce a car in which the horses may always ride facing the direction in which the car is moving, and also in which the horses may be led into their stalls, carried therein, and led out of the car head foremost and without any backing into or out of the stalls. I have also endeavored to adapt the stalls to the carrying of the horse head foremost, no matter in which direction the journey is being taken.

My invention further relates to the construction of the movable portions forming the stalls, and the mode of supporting, locking and moving them. I also provide in combination with the movable partitions movable end gates adapted to close the ends of the stalls so as to prevent any kicking of one horse by another. These end gates are also made to support and carry feed holding racks, troughs &c. The nature of all these improvements, as well as other features of my invention, are fully set forth in the description given below and pointed out in the claims. They are also illustrated in the accompanying drawings forming a part of this specification, and in which similar letters of reference indicate like parts.

In the drawings, Figure 1 is a side elevation of a portion of my improved car, partly in section; Fig. 2 is an end view; Fig. 3 is a transverse vertical section; Fig. 4 is a partial horizontal section taken in a plane above the top gate ways, the view being partly broken away; Fig. 5 is a diagram showing the arrangement of the stalls, aisles, &c., in the car; Fig. 6 is an elevation of the end gates with the locking devices partly in section; Fig. 7 is an elevation of the partitions used at the end of the car; Fig. 8 is a perspective of one of the supporting beams and the roller traveling thereon and carrying the partitions; Figs. 9 and 10 are a section and partial elevation,

respectively, of that portion of the partitions and end gates carrying the locking bars; Fig. 11 is a perspective showing the manner of supporting the breast chain, and Fig. 12 is a perspective of one of the feed troughs.

In the drawings A represents the floor, A' the side walls, and A² the roof of the car. End platforms B, such as are customary with passenger cars are, preferably, employed. The entrance through which the horses are taken in and out are shown at C, and are located at the ends of the car, and preferably one at each side of each end, so that the car may be loaded or unloaded from which ever side may be most convenient. *a* represents the windows.

All the stalls are arranged longitudinally of the car. This I prefer as it is more desirable that the animals stand in line with the car than across it, as they are better able when thus positioned to brace themselves against the jars and shocks incident to railroad travel. The stalls are formed of movable partitions D, and end gates E, and are arranged as shown in the diagram at Fig. 5, so as to leave a continuous aisle F extending from end to end of the car. Opposite the ends of this aisle are doors *f* opening onto the platforms B. The partitions D and gates E are all adapted to be moved out of position and against the side walls of the car, and in practice are so moved with a few exceptions when the car is to be loaded. The partitions D are supported from over head beams G, preferably formed of angle iron. The horizontal portion of such beams forms a way for rollers H secured on the ends of shafts I. There is one pair of beams for each series of partitions, and they extend across the car at a distance corresponding to the length of the partitions, and the shaft I extends from one of said beams to its mate beam. The partitions are hung from the shaft I by straps *d*. The rollers H are provided with teeth *h*, and the horizontal portion of beams G is provided with perforations *g* into which said teeth will enter when the rollers rotate in the movement of the partition. By means of the intermeshing of these teeth and openings, the rollers being fast upon the shaft, a parallel movement of the partition is insured and it is rendered im-

possible in the various changes of position for it to get out of line with the sides of the car. To move the partition it is only necessary to press against it, and this pressure may be exerted at the ends as well as the center, without destroying its parallelism with the sides. The partitions may all be moved to the side of the car when other freight is to be transported, and they may be positioned according to the size of the horse, forming either a wide or a narrow stall as required, and box stalls may also be formed in the car if they are desired. For locking the partitions I provide them at either end with vertical shooting bolts J, those at each end being operated by a rotatable slotted cam K, the same moving the bolts through the medium of pins *k* which project into the slots of the cam. The cam K may have an operating arm *k'* projecting from its periphery, and it is let into the body of the partition so that it cannot be operated except by the attendant. These bolts J enter perforations *g'* in the beams G, and like perforations *i* in floor plates L extending transversely of the car. The perforations *g'* and *i* are sufficiently numerous to enable the partitions to be positioned wherever desired, and by reason of the parallel movement of the partitions, already referred to, the bolts at both ends will always find entrance in the locking openings above and below.

The partitions employed at the ends of the cars, namely those marked D' and D² are jointed as at *d'* so as to permit the putting in or taking out of the horses at one of the doors at the same end of the car at which said partitions are located without backing them into or out of the stalls. The parts D² of these end partitions are supported upon the other portion of the partitions by hinges, as shown, but the hinged portion is not connected to the carrying shaft I, as will be understood from Fig. 7 so that such shaft will not interfere with the opening of the hinged portion. These end partitions also move upon the beams G in the same manner as the others and are locked in the same manner. It is desirable of course that there be no yielding at the joint between the two parts when the partition is in use, and hence I support the part D' by a strap *d*² located adjacent to the joint with the hinged part D². The partitions are arranged in the car so as to form a double series upon one side of the aisle and a single series upon the other side of the aisle in one half of the car, and in the other half of the car the same arrangement is preserved except that the double and single series are upon the other sides of the aisle. The aisle F in the two halves of the car is joined at the center by a diagonal passage *f'*.

All the stalls are closed at both ends either by the end gates E or by the end walls A³ of the car. The end gates are all movable and are hinged to the side walls as shown at *e* so they may be swung from positions transverse of the car into position along the side walls, as

shown in broken lines at Fig. 4. The gates employed upon the sides of the car having the double series of stalls are made in two parts E and E', the latter being hinged to the former, as shown at *e'*. At their swinging sides all the gates, both E and E' are provided with locking bolts J' similar to those used with the partitions and operated by similar cams K' intended to enter registering openings in the floor plate L and the overhead block or beam L'. These end gates are entirely independent of the partitions and act as ends to the stalls whether the partitions are positioned to form wide or narrow stalls.

In order that the animals may always ride facing the direction in which the journey is being taken I provide feed holding devices at each end of all the stalls. These feed holding devices consist of the hay racks 3 and the feed troughs 4. They are supported upon the end gates and upon the end walls of the car. They are made collapsible so that when not in use they may be folded up flat against their gates, &c. The racks are hinged at the lower ends in the ordinary manner and swung at the upper ends. The body of the troughs 4 are made of canvas and secured to the swinging metal arms 5 so that by swinging said arms toward each other the canvas will fold in against the support. The arms 5 have vertical pivots 6 supported in eyes 7 secured to the end gates or car ends. As the gates are alike upon both sides, I have not deemed it necessary to give detail views of both sides thereof. I also provide each of the stalls with chains extending transversely of the same, one to serve as a breast chain and extended across the front of the stall, and the other adapted to prevent kicking and extended across the rear of the stall and opposite the horse's hamstring. These chains are adapted to either use, and are shown at 10. They are adjustably secured to the partitions and side walls by means of metal loops 11 having interior notches 12 and provided with a link 13 adapted to be inserted in such one of the notches as will bring the chain to the position desired, the lower notches serving when the chain is to be used to prevent kicking and the upper notches when the chain is employed as a breast guard. The chain is covered, as shown at 14, to prevent injury to the horse and may be detachably secured to the eyes 13 by means of a snap hook 15.

In the deck A² of the car, which is constructed much like the deck of an ordinary passenger car, is formed a longitudinal passage or chute M adapted to the storing of feed and also to serve as a means of getting at the animals, especially such as are not readily accessible from the aisles. All the animals may be fed from this passage M. Appropriate openings may be provided in the sides or floor of the passage M to give opportunity for access to the horses, and inasmuch as the car may sometimes be used in freight trains I provide upon the deck A² a plank walk *a*² for the use

of the brakemen in passing over the car. The passage M extends from end to end of the car and access may be had to it through suitable entrances, as for instance the trap doors, such as are indicated at S from the aisle of the car. This continuous passage is especially desirable when the car is attached to a passenger train and the aisle is obstructed, as may sometimes be the case, as it permits the brakeman to go to the rear end of the car in the performance of his duties. The passage M also affords opportunity for the regulating of the deck transoms T and may be occupied by the attendants as a place for sleeping. The doors indicated at t are intended merely for feeding the stock. The dome deck which I employ enables me to give this passage M a considerable height so that it is not a difficult matter for a person to traverse it. Under ordinary circumstances the aisle will afford every needed facility for caring for the stock, but in case it is desired to carry in the car a greater number of animals than there are stalls, the aisle may be utilized and horses be tied therein. In this way some six additional horses can be carried if desired. When the aisle is thus used, reliance in feeding them, if the journey is so long as to require the stock being fed *en route*, is upon the overhead passage M. An open aisle is especially to be desired in all cases where it is possible however, both for the convenience of the trainmen and for use in caring for the stock. It will be observed that I have not only aimed to design my car so the stock may be

perfectly and easily cared for, but that I have also endeavored to adapt the car to use on passenger trains, so that the time consumed in the journeys may be lessened and the ill effects to the stock attending the journeys be reduced correspondingly.

I claim—

1. In a stock car the combination, with the body thereof, of a series of transversely movable longitudinal partitions adapted to form the sides of longitudinal stalls, having an entrance or exit at each end, and a series of transverse end gates hinged and adapted to fold parallel with the side of the car, substantially as set forth.

2. The combination, with the body of the car, of a series of transversely movable longitudinal partitions adapted to form the sides of longitudinal stalls having an entrance or exit at each end, and a series of transverse end gates hinged and supported independently of the longitudinal partitions, substantially as set forth.

3. The combination with the body of a stock car, of a series of transversely movable longitudinal partitions adapted to form the sides of longitudinal stalls having an entrance or exit, at each end, a series of transverse hinged and folding end gates, and feed holders carried by said gates, substantially as set forth.

WILLIAM A. CASWELL.

Witnesses:

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EMMA HACK.