

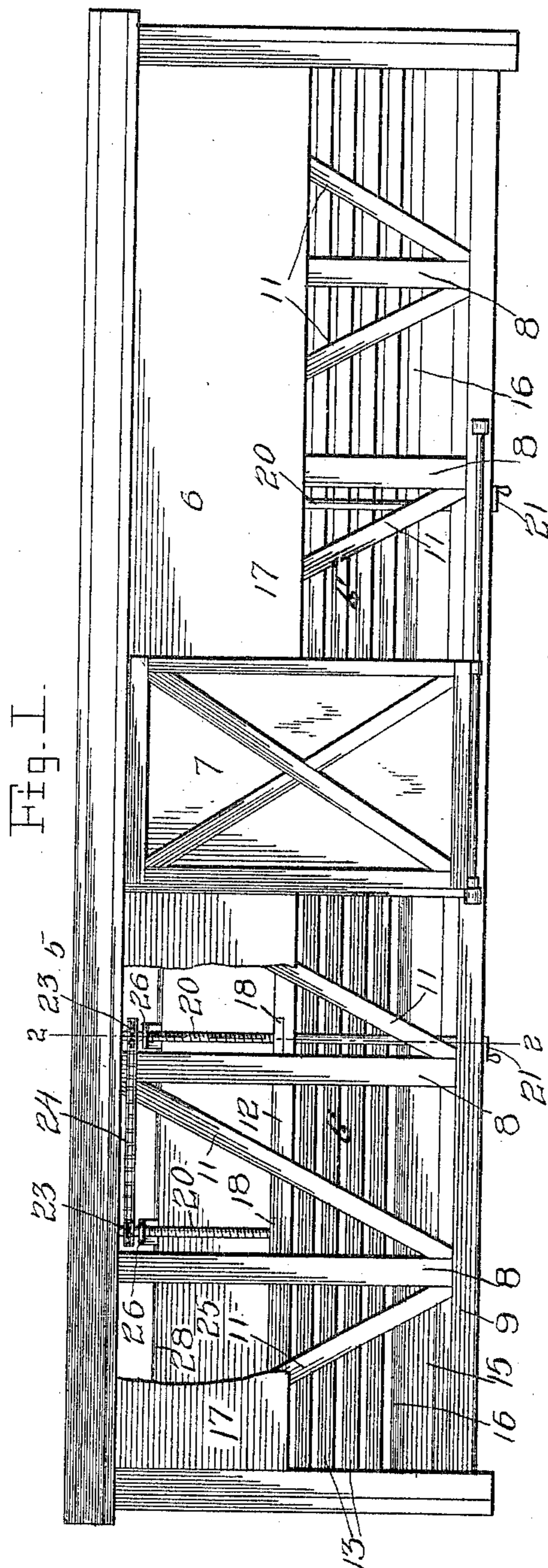
No. 821,464.

PATENTED MAY 22, 1906.

J. K. COTHERN.
CONVERTIBLE CAR.

APPLICATION FILED JUNE 26, 1905.

3 SHEETS—SHEET 1.



Witnesses
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Inventor
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By

Handwritten signature of the attorney

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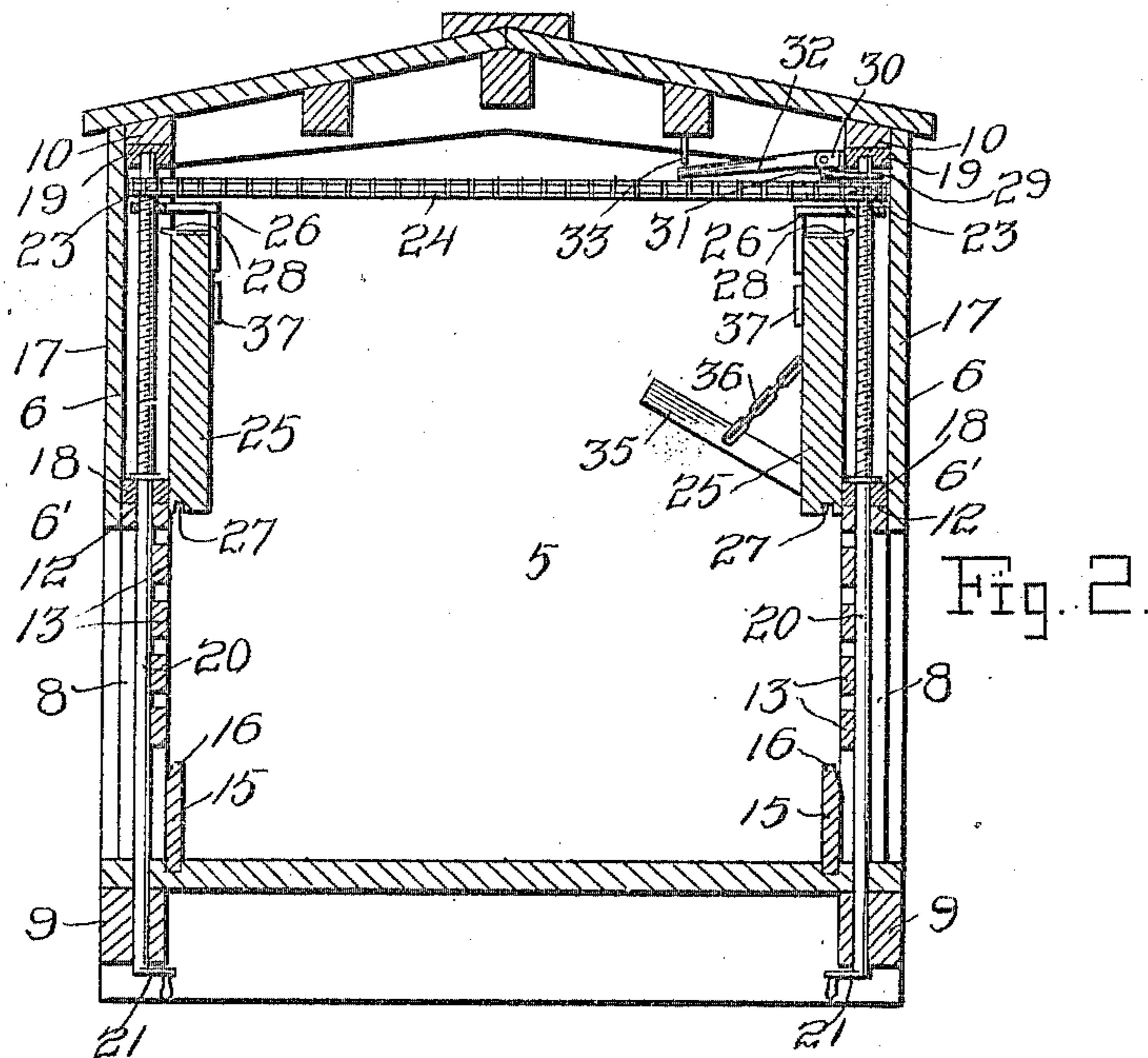


Fig. 2.

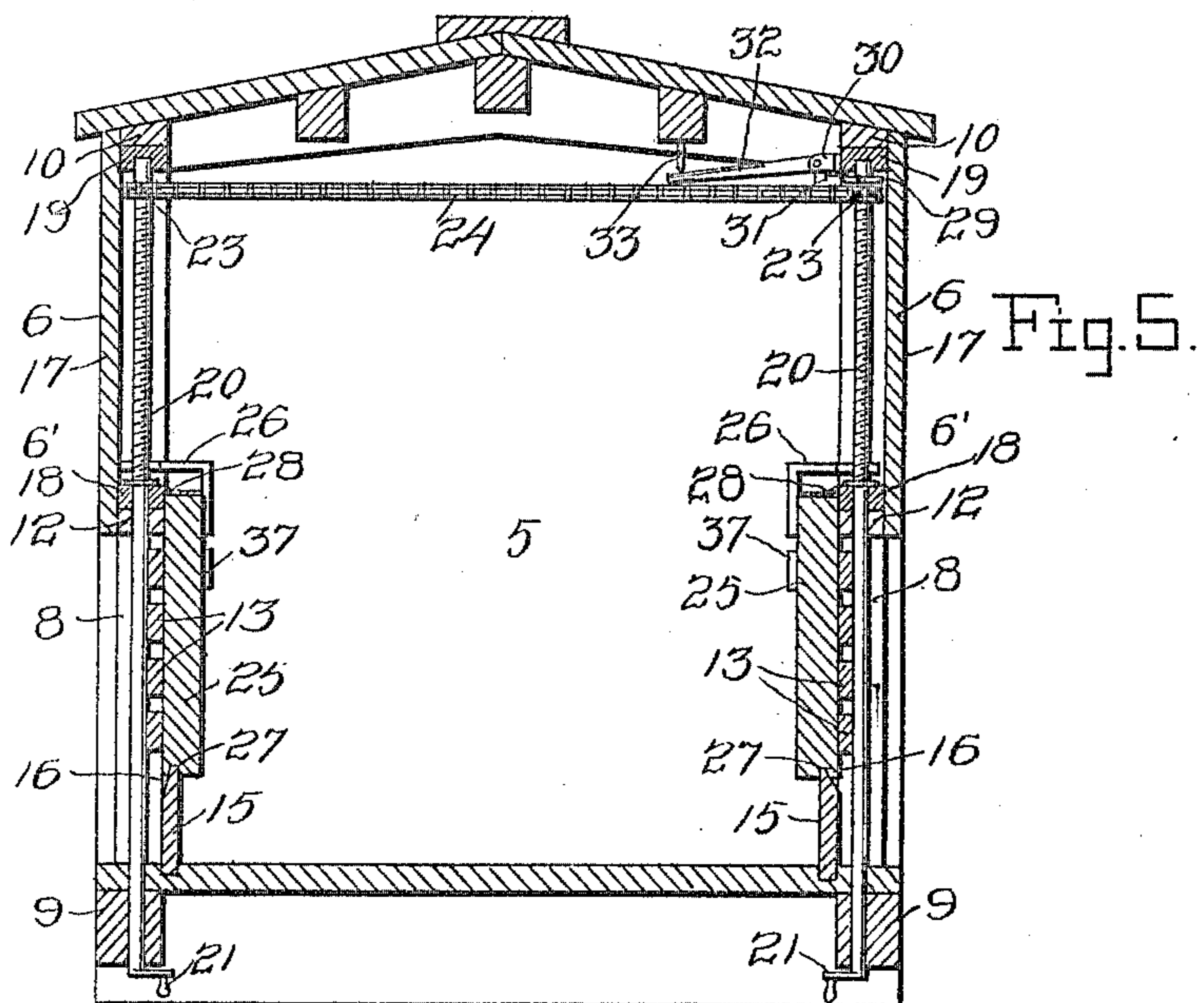


Fig. 5.

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3 SHEETS—SHEET 3.

Fig. 3.

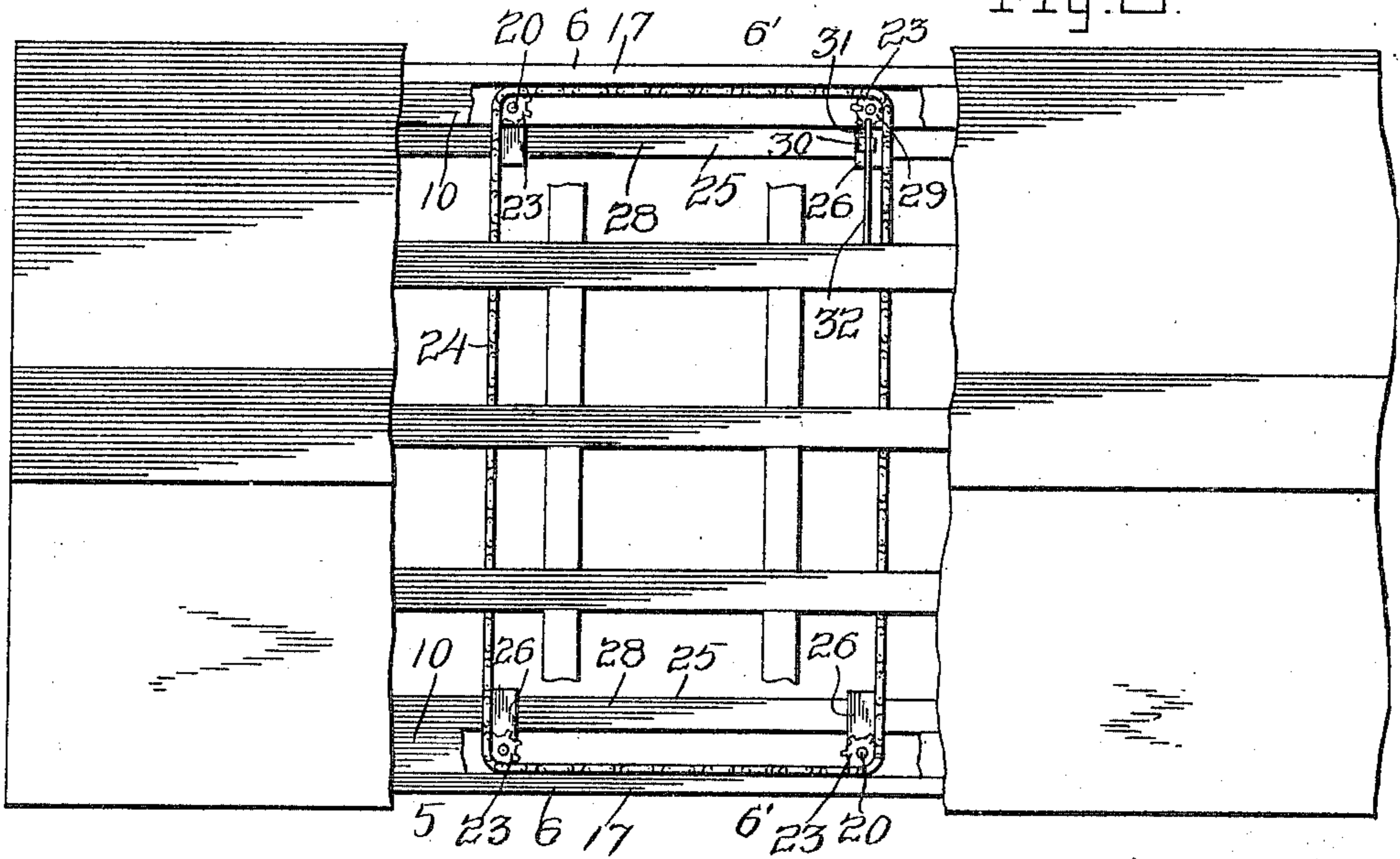
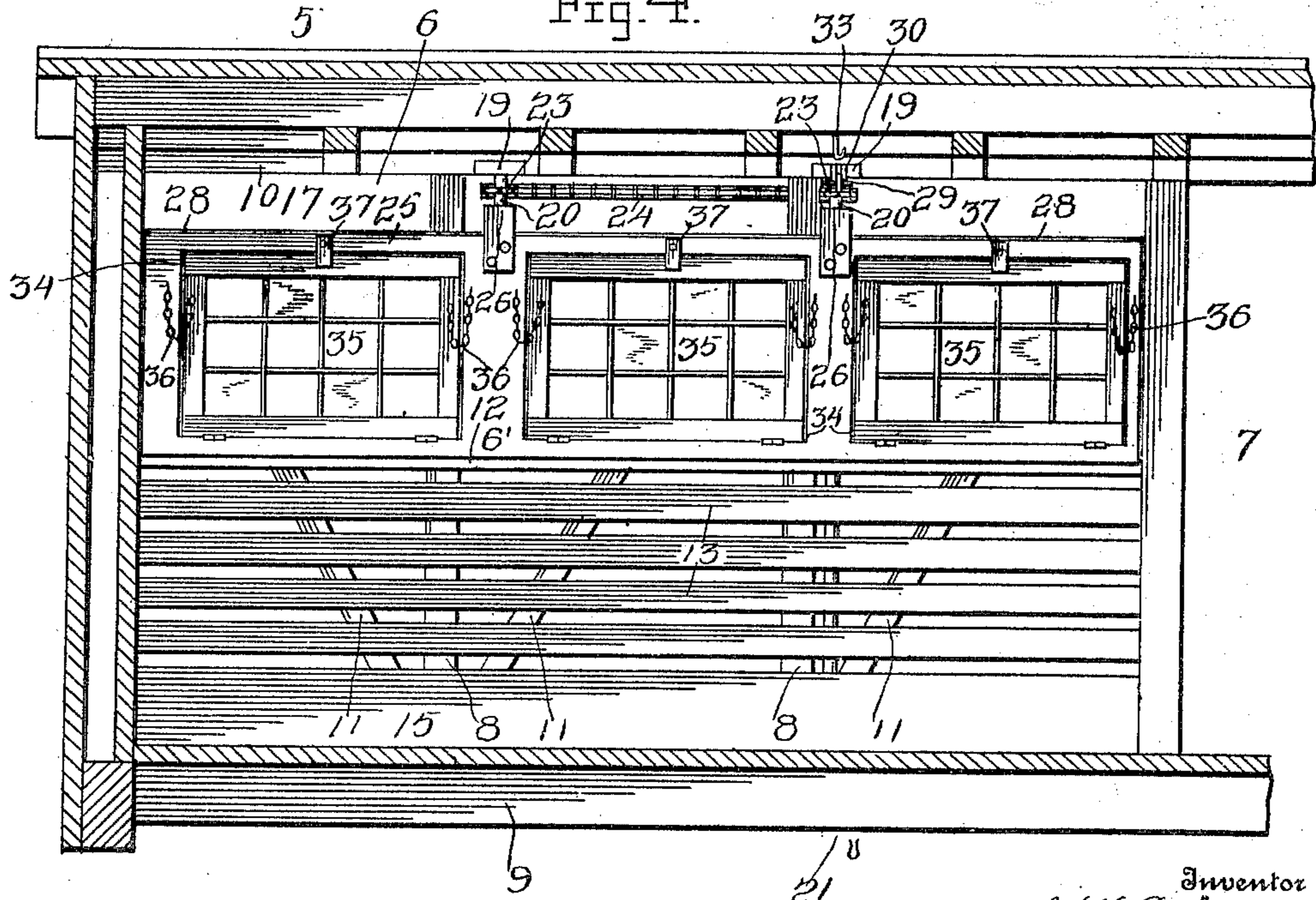


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN K. COTHERN, OF BOWIE, TEXAS.

CONVERTIBLE CAR.

No. 821,464.

Specification of Letters Patent.

Patented May 22, 1906

Application filed June 26, 1905. Serial No. 267,032.

To all whom it may concern:

Be it known that I, JOHN K. COTHERN, a citizen of the United States, residing at Bowie, in the county of Montague, State of Texas, have invented certain new and useful Improvements in Convertible 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.

This invention relates to railroad rolling-stock, and more particularly to freight-cars, and has for its object to provide a freight-car which may be converted into a cattle-car or box-car, as desired, another object being to provide a car so arranged that the change may be quickly and easily made.

Another object is to provide a car having the above-mentioned features which when used as a box-car will be tight at all points to prevent the leakage of grain or similar matter from the car.

Other objects and advantages will be apparent from the following description.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the present car, the upper portion of the wall thereof being broken away to illustrate the means for moving the supplemental walls. Fig. 2 is a transverse section on line 2 2 of Fig. 1, the jack-screws being shown in elevation and showing the latch. Fig. 3 is a view of the portion of the car lying at one side of the doors, the roof being removed and illustrating the jack-screws and chain in top plan. Fig. 4 is an elevation of the interior face of one of the walls of the car with the supplemental wall raised. Fig. 5 is a view similar to Fig. 2, showing the supplemental wall in the opposite position.

Referring now to the drawings, the present car includes a body portion 5, having side walls 6, provided with doors 7, intermediate of their ends. Each wall includes portions 6', lying at the opposite sides of its door, and these several portions 6' are identical in construction.

Each of the portions 6' includes uprights 8, which are secured at their bottoms to the sills 9 of the car and at their tops to longitudinally-extending beams 10, and disposed diagonally between the uprights there are braces 11. A longitudinally-extending horizontal member 12 intersects the uprights 8

at their centers, and this member 12 is composed of a plurality of sections disposed between the uprights and the braces. Longitudinally-extending slats 13 are secured to the inner faces of the uprights and braces below the member 12, the lowermost slat being spaced considerably from the floor 14 of the car, and disposed upon this floor in a plane inwardly of that occupied by the slats there is a longitudinally-extending vertically-disposed board 15, the upper portions of the outer surface of which are slanted inwardly to form a somewhat sharpened upper edge 16. Secured to the member 12 and the top beam 10, at the outer surfaces thereof, there are sheathing-boards 17, which are also secured to the upper portions of the uprights and the braces.

A pair of bearing-blocks 18 are mounted upon the member 12 in spaced relation, and coinciding bearings 19 are formed in the beam 10 thereabove, jack-screws 20 being revolvably mounted in these pairs of bearings, and one of these jack-screws extends downwardly through the member 12 and through the corresponding sill 9 of the car and has a crank 21 at its lower end, by means of which it may be revolved. As stated above, both sides of the car at each end are constructed as just described, so that there are four jack-screws at each end of the car, these screws registering in pairs transversely of the car, and the several screws of each group are provided with sprocket-wheels 23 at their upper ends, with which is engaged an endless chain 24 for simultaneous rotation of all of the jack-screws of each group.

Supplemental walls 25 are provided and have ears 26, provided with threaded perforations in which the jack-screws are engaged, it being understood that one of these walls is provided for each end of each wall of the car and the supplemental walls are thus arranged for movement vertically when the jack-screws are revolved to lie at times below and at times above the members 12. When the supplemental walls lie below the members 12 and are at the limits of their downward movement, the boards 16 lie with their upper portions in longitudinally-extending recesses 27, formed in the lower edges of the walls, thus forming a tight joint. Strips of rubber or other suitable material 28 are secured to the upper edges of the supplemental walls 25 and extend beyond the outer surfaces thereof, and when these walls are at the downward limit of their movement these

strips engage the members 12 to prevent the leakage of grain and similar matter between the supplemental walls and the members.

A latch mechanism is provided for each group of jack-screws to hold these screws against movement, and thus prevent raising or lowering of the supplemental walls. This latch consists of a notched disk 29, which is carried by one of the jack-screws adjacent to its upper end, and pivoted in a suitable bracket 30, adjacent to this disk, there is a dog 31, movable into and out of engagement with the notches of the disk. An arm 32 is connected with the dog and is arranged for movement vertically to move the dog into and out of operative position, a hook 33 being secured to the top of the car and adapted for the reception of the arm 32 to hold this arm raised and with the dog out of operative position. When the arm is disengaged from the hook, the dog is held by gravity in engagement with the notched disk to hold the latter against rotation.

The supplemental walls 25 are provided with recesses 34 in their inner surfaces, and pivoted to the supplemental walls for movement into and out of these recesses are food-receiving gratings 35, these gratings being pivoted at their lower edges and having chains 36, arranged to hold them in outwardly-slanted position and in position to receive food. Turn-buttons 37 are provided and are arranged for operation to hold the gratings in the recesses.

It will be understood that when the car is to be used as a box-car the supplemental walls are lowered to cover the slatted portions of the walls 6 and that when the car is to be used for the shipment of cattle the jack-screws are operated to raise the supplemental walls above the members 12, the gratings 35

having been previously moved into operative position.

What is claimed is—

1. The combination with a wall for cars having an open portion, of a closure for the open portion arranged for movement into and out of operative position, a jack-screw revolubly mounted in the wall, means for revolving the jack-screw, an ear carried by the closure and having a threaded perforation therein in which the jack-screw is engaged, said closure being arranged for movement into and out of operative position through rotation of the jack-screw, a notched disk carried by the jack-screw and a dog movable into and out of engagement with the notched disk to hold the jack-screw against rotation.

2. In a car, the combination with a wall including a lower open portion and an upper closed portion, of jack-screws mounted in the wall, a supplemental wall, ears carried by the supplemental wall and having threaded perforations in which the jack-screws are engaged, connections between the jack-screws for simultaneous operation thereof, a notched disk carried by one of the jack-screws, a dog pivoted for vertical movement into and out of engagement with the notches of the disk to hold the screws against movement, said dog being arranged to lie normally in operative position under the action of gravity, a rod connected with the dog, and a hook arranged for the reception of the rod to hold it with the dog in inoperative position.

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

JOHN K. COTHERN.

Witnesses:

M. H. McKEE,
R. P. HELCHER.