

(No Model.)

W. P. APPELYARD.
CONSTRUCTION OF RAILWAY CARS.

No. 585,073

Patented June 22, 1897.

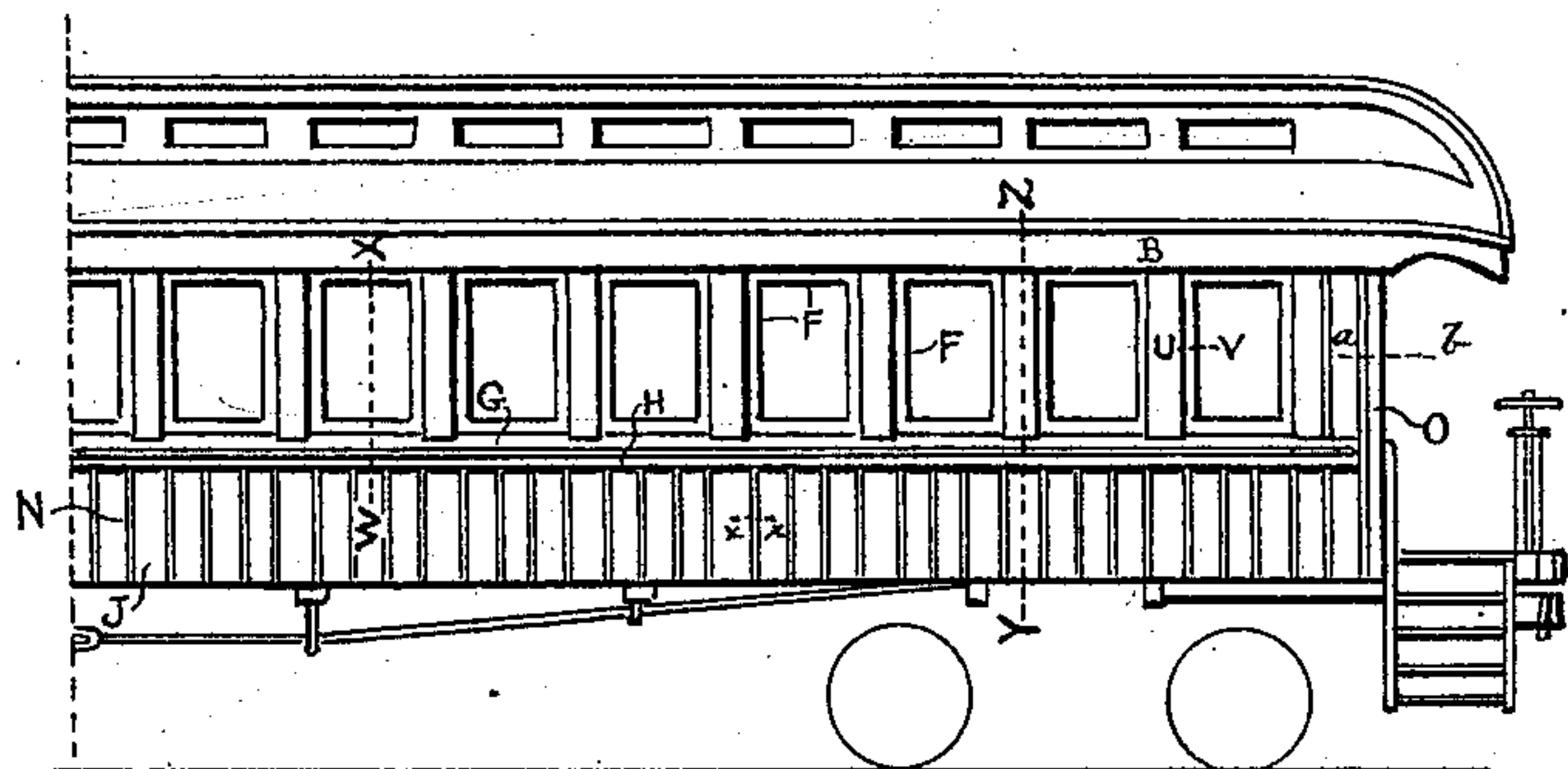


FIG. 1

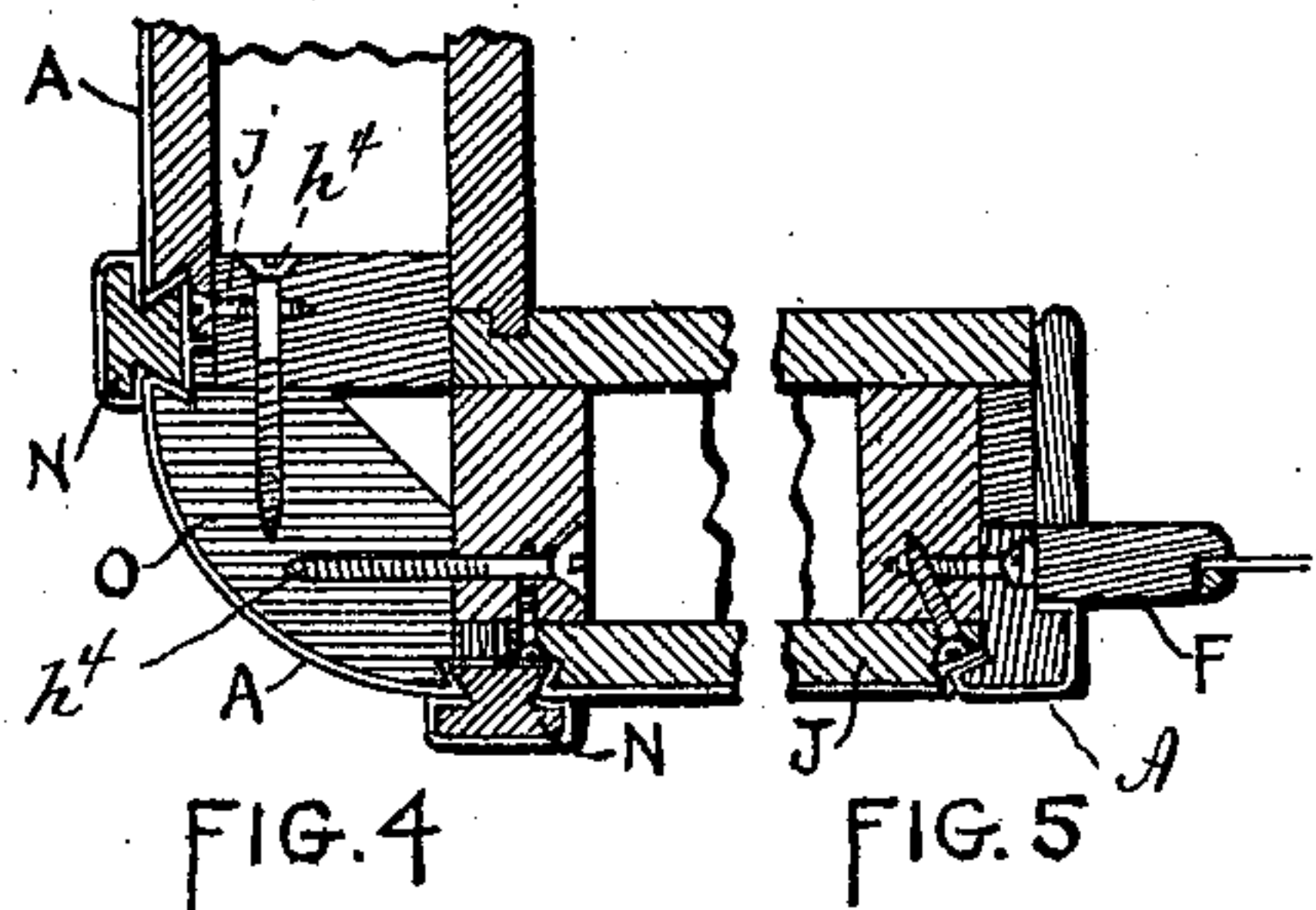


FIG. 4

FIG. 5

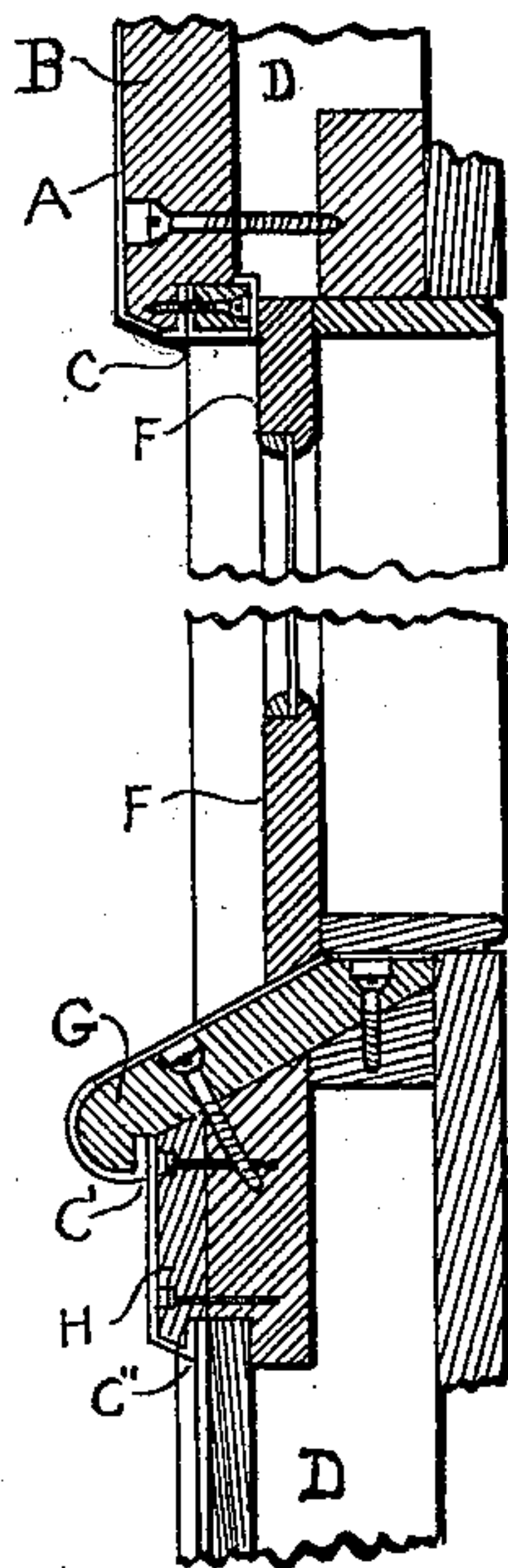


FIG. 3

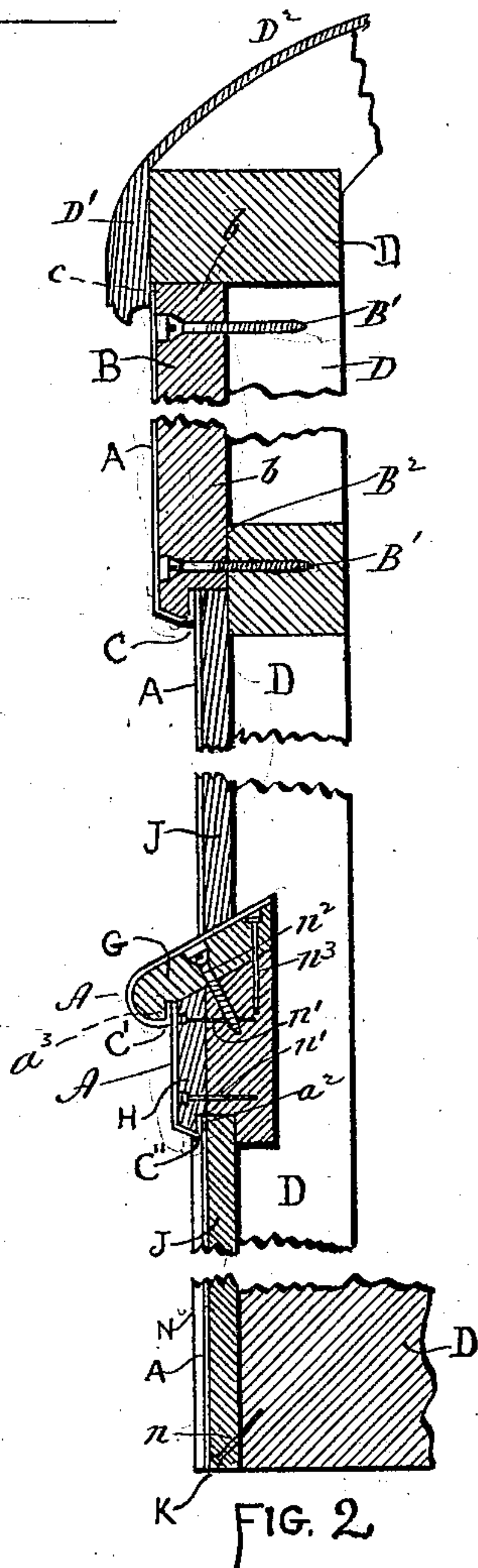


FIG. 2

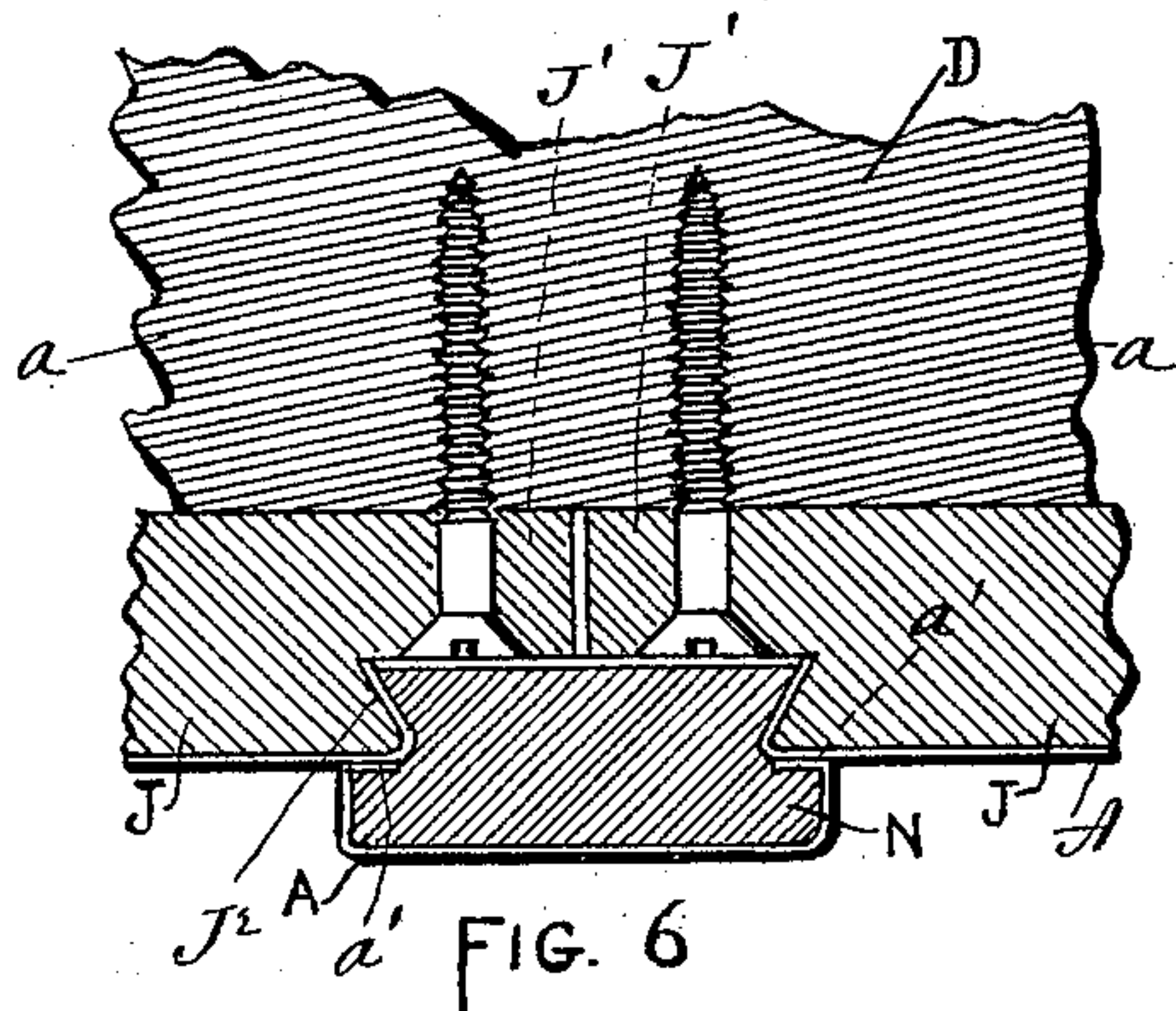


FIG. 6

WITNESSES:

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CONSTRUCTION OF RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 585,073, dated June 22, 1897.

Application filed October 27, 1896. Serial No. 610,172. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. APLEYARD, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in the Construction of Railway-Cars; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in side elevation of a part of a railway-car constructed in accordance with my invention; Fig. 2, a section on line *y z*; Fig. 3, a section on line *w x*; Fig. 4, a section on line *a b*; Fig. 5, a section on line *u v*; Fig. 6, a section on line *x x*. The sectional figures are on a larger scale than that shown in Fig. 1.

Heretofore railway-cars have been covered on the exterior with wooden members coated with surfacing compounds, paint, and varnish to form a smooth impervious finish for the protection of the car. High-grade lumber, with costly hand and machine labor, has been employed to obtain a suitable surface to receive the paint and varnish. The holes through the face of the woodwork by the setting of nails and screws have necessarily been filled with putty or plugs, which in time shrink and leave unsightly blemishes in the finish and allowing water to find its way into the wood. This method of treating the exteriors of railway-cars has consumed much time and has proven highly expensive and perishable, entailing heavy expenditures in repairing and maintaining them.

The object of my invention is to provide a railway-car the external finish of which shall be comparatively imperishable and easy of application and maintenance, as well as impervious to the weather and climatic changes, making unnecessary the frequent shopping of the car for varnish and other repairs to the exterior finish.

With these ends in view my invention consists of a railway-car constructed with an exterior coating of metal-faced wooden members, combined and applied in such a manner as to make the metal facing the completed external finish of the car and in such

way that each member and its metal facing shall engage, overlap, or intersect with its adjoining members and their metal facings.

For the purposes of illustration I have shown my invention as applied to a car of ordinary construction, to which, however, my invention is obviously not limited. I would therefore have it understood at the outset that I consider myself in no wise limited to following the construction chosen for the disclosure of my invention.

For convenience of description I will describe the construction of the car from the bottom upward.

The lower portion of the car is formed by a band of sheathing composed of vertically-arranged members *J*, the joints between which are covered by battens *N*. The edges of the sheathing members are formed with flanges *J'*, which for convenience I shall call "fastening-flanges." The edges of the members are also undercut, as at *J²*, for the interlocking of the sheet-metal plates *A*, by means of which their exposed surfaces are covered and protected, the edges of the plates being turned inward into the flanges, whereby the plates are held in place without other aid during the handling of the sheathing members and their assemblance. The fastening-flanges are entirely unprotected primarily, and designedly so, so as to permit screws *a a* to be passed through them into the main framework *D* of the car, to which the sheathing members are thus rigidly secured. After the sheathing members have been secured in place the battens *N* are applied to cover the joints between the adjacent edges of the fastening-flanges. The said battens *N* are formed upon their inner faces with wood dovetails adapted in width to fill the spaces between the rabbets of the adjacent members and to entirely cover the fastening-flanges, as clearly shown in Fig. 6.

The exposed surfaces of the battens are covered and protected by sheet-metal plates *A*, the edges of which are turned inward toward the bases of their dovetails. The battens are applied by being inserted from the lower ends of the sheathing members and then driven into place, the inwardly-turned edges of the metal plates of the battens engaging with the main outer surfaces of the plates of the sheath-

ing members to form the joints $a' a'$, the battens being secured in place by the use of nails n , screws, or equivalents therefor, as shown in Fig. 2. The belt-rail II is located just above the sheathing and overlaps the upper ends of the sheathing members, forming a joint C'' thereof. The lower edge of this rail is rabbeted for the reception of the retaining-flange a^2 of the sheet-metal plate A, by which it is surfaced. This rail is secured in place by nails or screws $n' n'$, which enter the framework of the car. After it has been secured in place the upper edge of the plate A is overlapped by the inclined sash-rest G, forming a joint C' , the sash-rest being secured in place by nails or screws n^2 . This sash-rest is covered and protected by a sheet-metal plate A, the lower edge of which is rabbeted for the reception of the retaining-flange a^3 of the metal.

The lower edges of the window-casings J rest upon the metal surfacing of the sash-rest G, holding the said metal surface over the retaining nails and screws. The window-casing is covered by the metal plates A and is overlapped by the lower edge of the sign-board or letter-rail B, which is secured to the main framework of the car by screws $B' B'$ and which is covered and protected by a metal plate A, the lower edge of which is turned inward to form a retaining-flange, which forms a joint C with the upper edge of the metal surface A of the window-casings J.

The upper edge of the plate covering the letter-board is overlapped by a molding D' , located at the edge of the crowning-roof D^2 of the car.

The corner-sections O of the car are covered with metal plates A in substantially the same way as are the sheathing-strips J, the said corner-strips being held in position by screws h^4 , entering from the inside of the frame.

When thus assembled, the metal surface of the car may form the completed finish of the exterior, without paint or varnish, and by reason of the smooth metallic surface, which may be obtained with ordinary care, a high degree of finish is possible.

It will be seen that with metal-surfaced sections, as herein described, the use of a less expensive grade of lumber for the members

forming the outer finish of railway-cars may be employed and a surface provided which is hard, smooth, and comparatively imperishable. Consequently great reduction in the labor and time consumed in car construction and repairs is effected, thus increasing the service of the car.

Another advantage is that in repairs to the exterior finish to railway-cars the saving effected by using the metal facing a second time is very great, while if too much damaged for use it has value as a salable article of old metal as compared with the total loss of all material where cars are painted and varnished. It also serves as a protection against fire. These advantages materially lessen the difficulty and expense of operating and maintaining railway equipments.

I am aware that lumber has been covered with sheet metal, such, for instance, as shown in Patent No. 514,233, granted September 27, 1893, to C. D. Kubach. I therefore do not wish to be understood as claiming such as my invention; but,

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

1. In a railway-car the combination with the sheathing, sash-rests, window-casings and letter-rails, of metal coverings applied thereto, substantially as described.

2. In a railway-car the combination with the sheathing, sash-rests, window-casings and letter-rail, of metal coverings applied thereto, and the adjacent edges of said sections overlapping each other, substantially as described.

3. In a railway-car, the combination with the sheathing, sash-rests, window-casings and letter-rail, of metal coverings applied thereto and so as to cover the exposed portions of each section, the covered edge of each section overlapping the covered edge of the adjacent section, substantially as described.

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

WM. P. APLEYARD.

Witnesses:

LILLIAN D. KELSEY,
FRED C. EARLE.