

No. 646,992.

Patented Apr. 10, 1900.

C. H. HUTCHINS, Dec'd.
W. D. THOMPSON, Administrator.
DOUBLE ROOF FOR CARS.

(No Model.)

(Application filed Aug. 28, 1899.)

2 Sheets—Sheet 1.

FIG. 1.

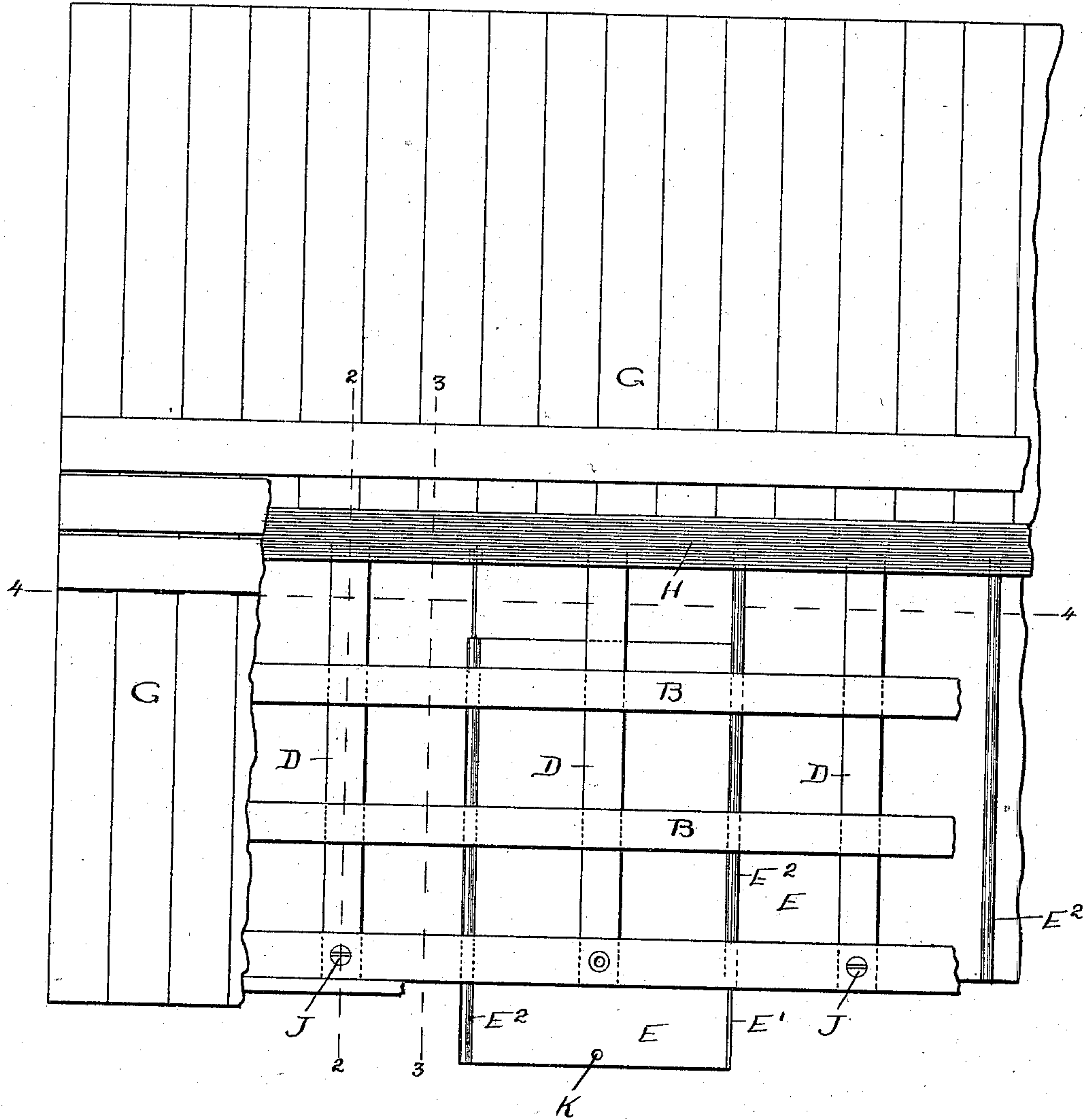
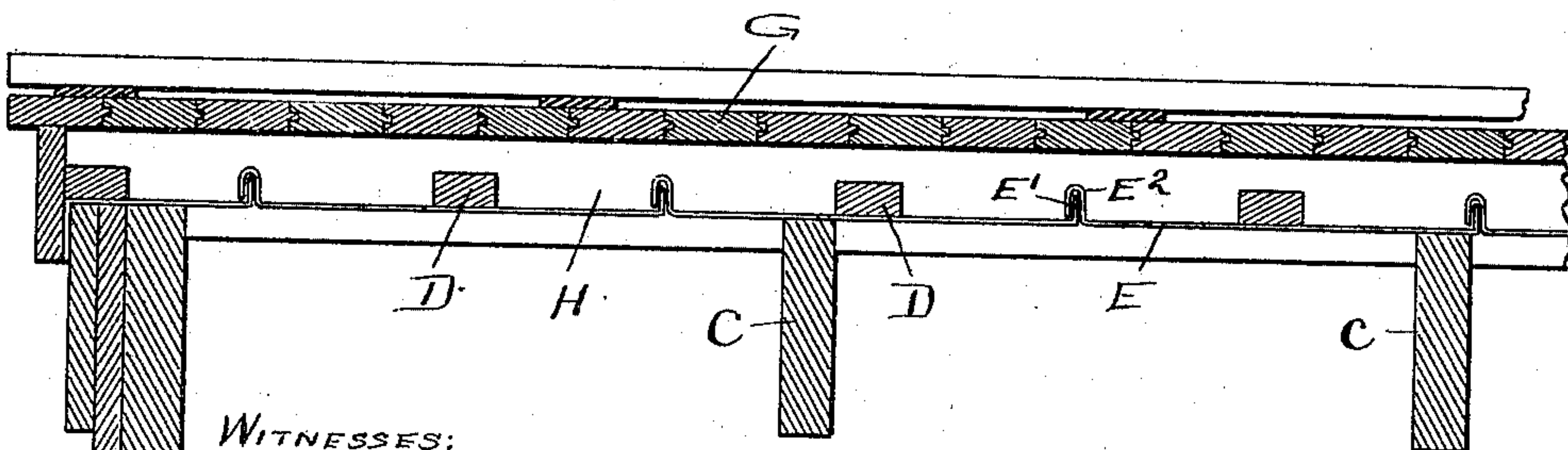


FIG. 4.



WITNESSES:

Lew. L. Lewis
H. M. Munday

INVENTOR:
CHARLES H. HUTCHINS

By Munday, Swartz & Adcock.
HIS ATTORNEYS.

No. 646,992.

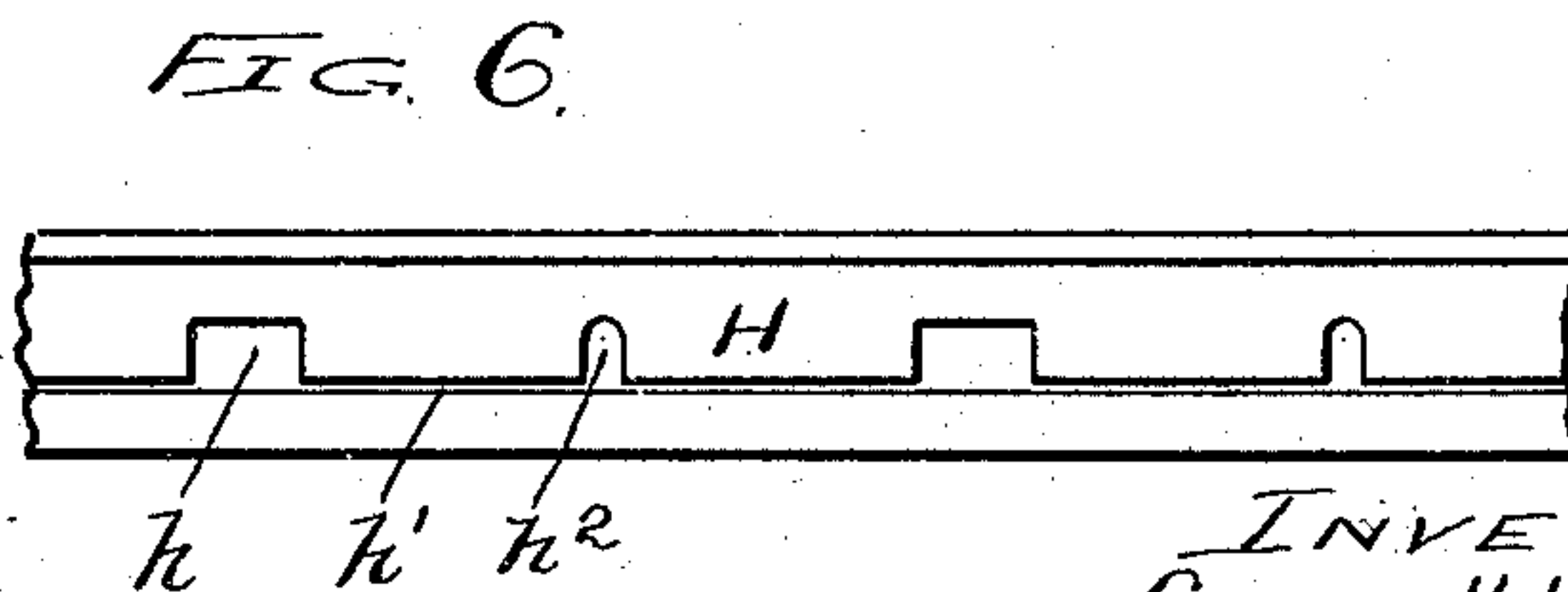
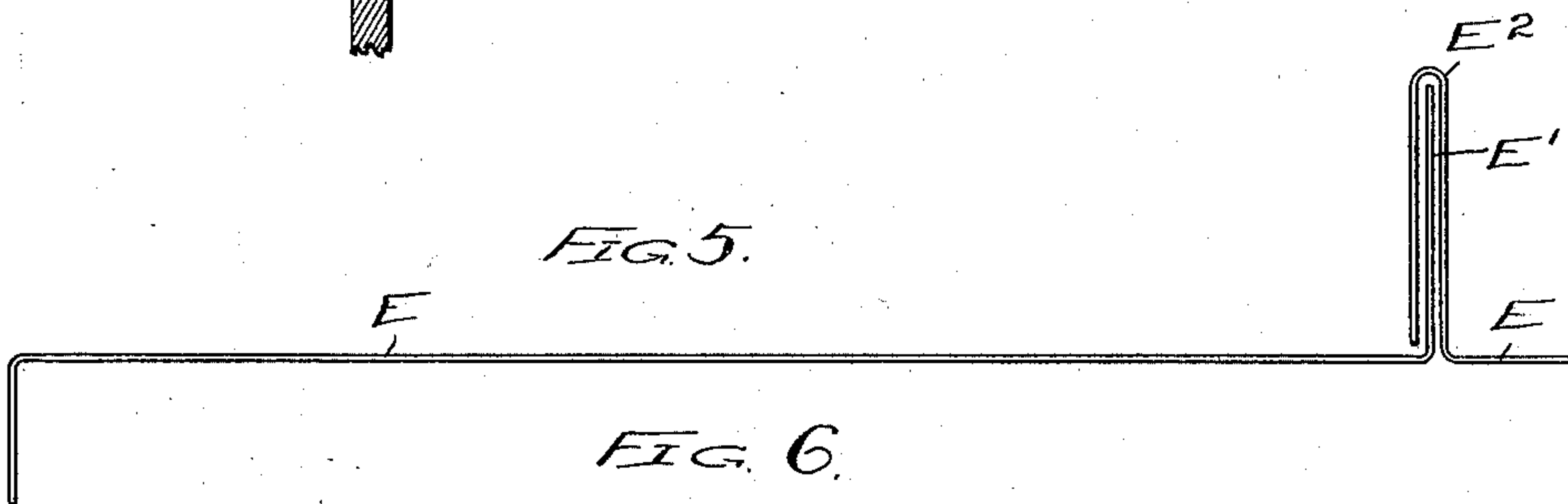
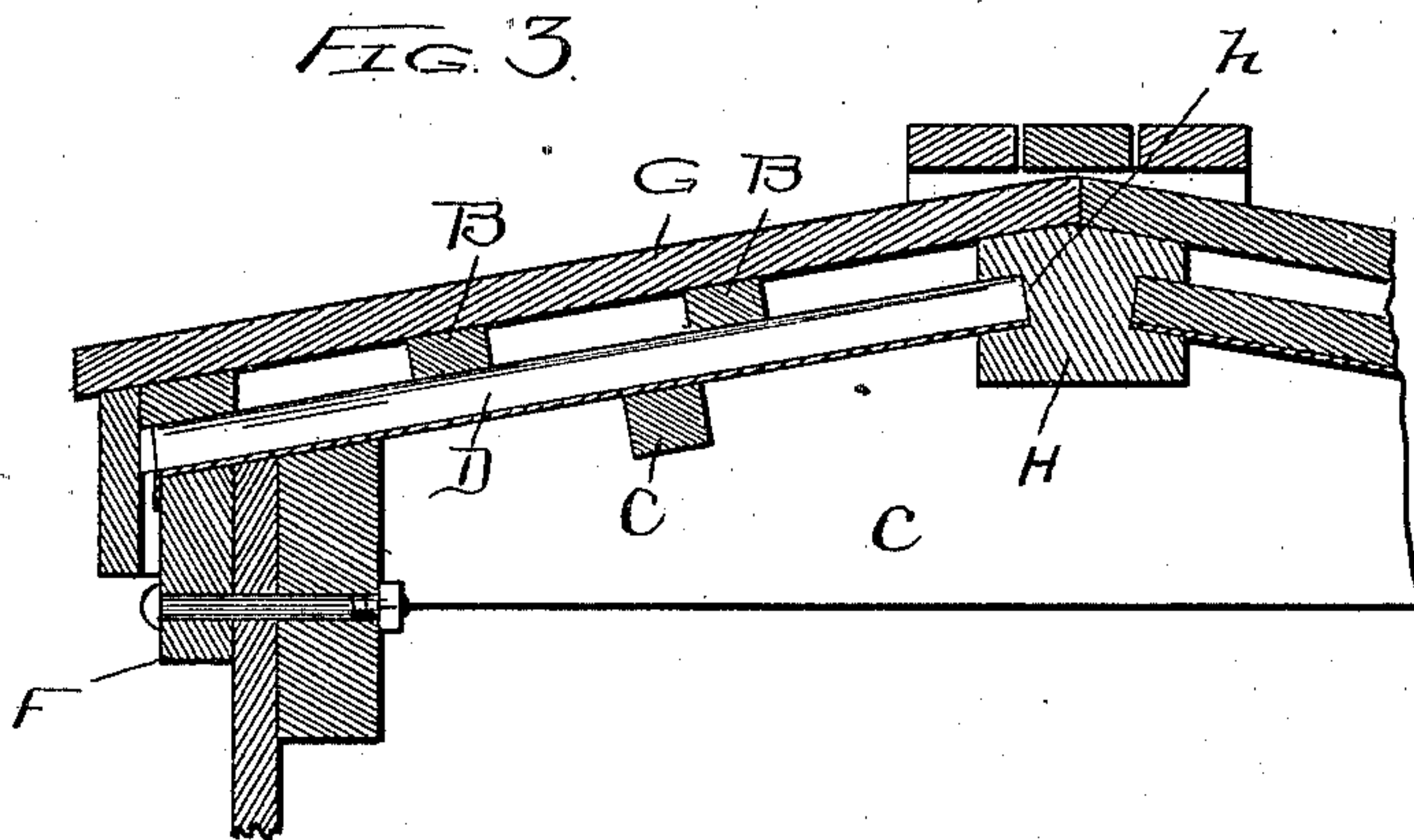
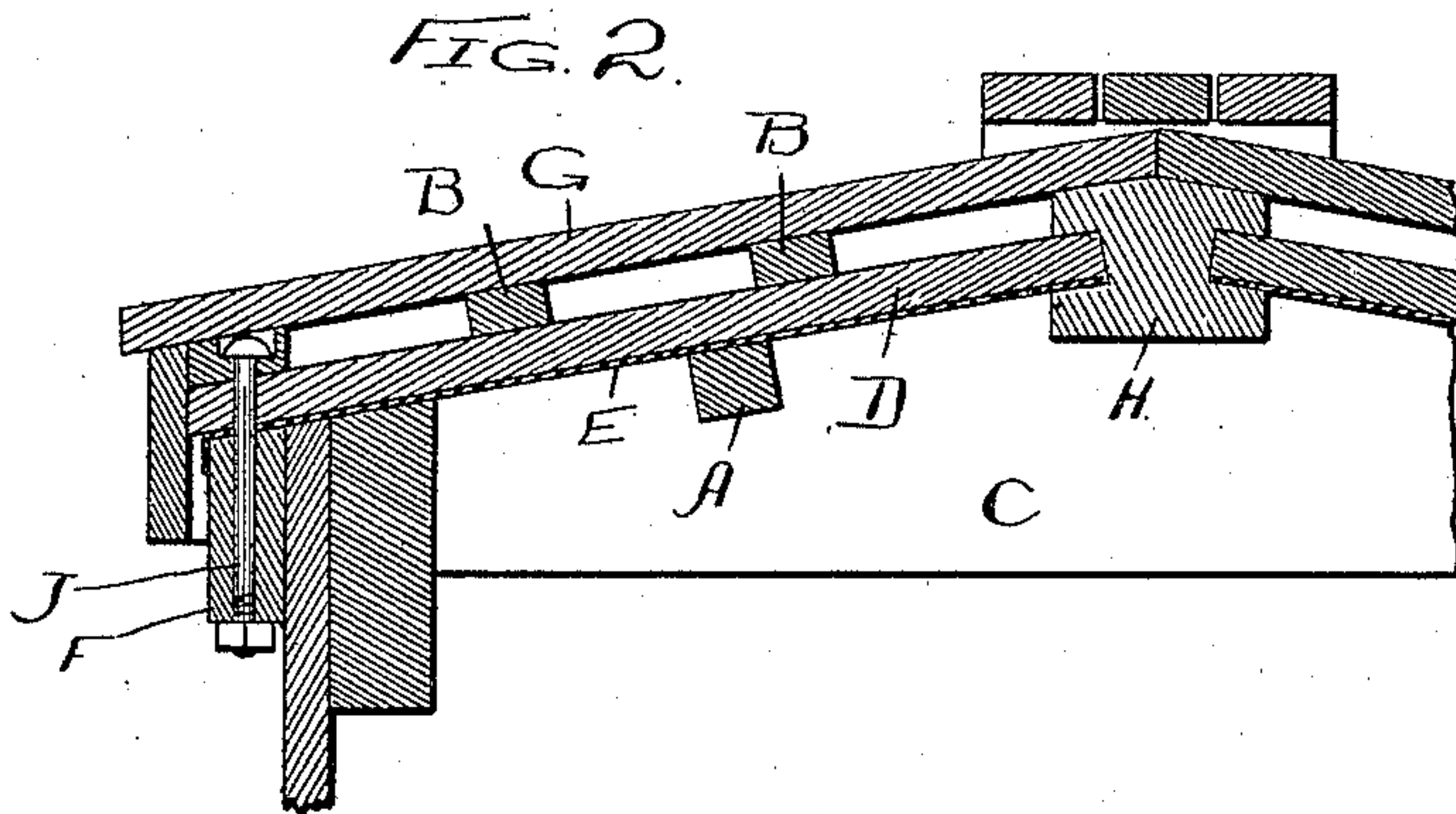
Patented Apr. 10, 1900.

C. H. HUTCHINS, Dec'd.
W. D. THOMPSON, Administrator.
DOUBLE ROOF FOR CARS.

(Application filed Aug. 28, 1899.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:
Lew. C. Curtis
H. W. Munday

INVENTOR:
CHARLES H. HUTCHINS
BY Munday, Swarts & Adcock.
HIS ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES H. HUTCHINS, OF DETROIT, MICHIGAN; WILLIAM D. THOMPSON,
ADMINISTRATOR OF SAID HUTCHINS, DECEASED, ASSIGNOR TO THE
C. B. HUTCHINS & SONS, OF SAME PLACE.

DOUBLE ROOF FOR CARS.

SPECIFICATION forming part of Letters Patent No. 646,992, dated April 10, 1900.

Application filed August 28, 1899. Serial No. 728,653. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HUTCHINS, a citizen of the United States, residing in Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Double Roofs for Cars, of which the following is a specification.

My invention relates to the construction of double roofs for railroad-cars; and it consists in a main roof-frame comprising carlines and purlins, a plate, and facia, all properly framed and secured together, a super roof-frame comprising carlines and purlins, a continuous sheet-metal roof comprising a series of independently-removable sheets or plates extending from the ridge to the eaves between said main roof-frame and said super roof-frame, the side edges of the adjacent metal plates being joined together by loose high-standing joints consisting in a high upright flange on the edge of one plate and a high upright inverted-U-shaped fold on the meeting edge of the adjacent sheet or plate and a solid ridge-purlin common to both the main and the super frames and receiving the upper ends of said metal sheets.

In the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of my improved roof. Fig. 2 is a vertical section of same on line 2 2 of Fig. 1. Fig. 3 is a similar section on line 3 3 of Fig. 1. Fig. 4 is a longitudinal vertical section on line 4 4 of Fig. 1. Fig. 5 is an enlarged view of the construction of the joints of the metal plates, and Fig. 6 is a side view of the ridge-purlin.

In said drawings, A A are the purlins of the main frame.

B B are the purlins of the superframe.

C C are the carlines of the main frame.

D D are the carlines of the superframe.

E E are the metal sheets joined together at

their meeting edges by a joint consisting of a high upright flange E' and a high inverted-U fold E².

F is the facia.

G is the exterior board roofing or sheathing.

H is the solid ridge-purlin, made, preferably, of a single beam of wood as to length and cut with the mortises *h* to receive the ends of the carlines and with slots *h'* and mortises *h*² to receive the upper end of the metal sheets with their joints.

J is a bolt which passes down through a hole K in the lower edge of the sheets and which secures the frames together at the eaves, holding the metal sheets loosely and so that said sheets may be removed by removing the bolt.

This construction is such, as will be seen, that the roof as a whole is capable of enduring and giving to severe diagonal strains and shocks without injury and is cheap, easy to build, and handy to repair.

Having thus described my invention, I claim—

The double car-roof, consisting of a main frame comprising carlines and purlins, a superframe, an interposed sheet-metal roof comprising a series of sheets or plates extending from the ridge to the eaves between the main and super frames and having their edges joined together by high-standing joints made of a flange on one edge and a high inverted-U-shaped fold on the other edge, and the solid ridge-purlin common to the main frame and the superframe, mortised and grooved to receive the carlines and the sheets and the joints of the latter, substantially as specified.

CHARLES H. HUTCHINS.

Witnesses:

GRACE J. JONES,

WILLIAM D. THOMPSON.