

No. 607,846.

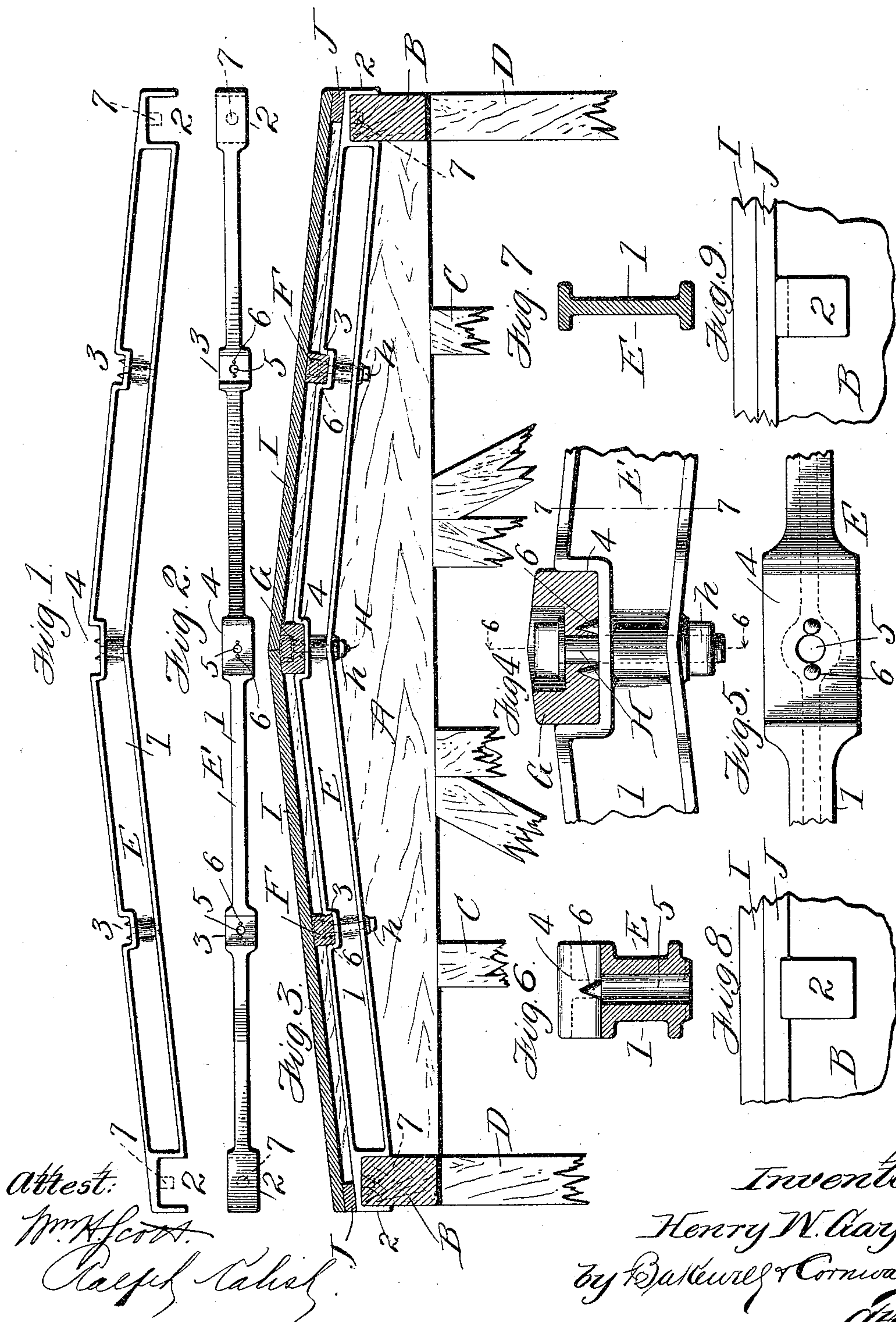
Patented July 26, 1898.

H. W. GAYS.
CARLINE.

(Application filed Jan. 17, 1898.)

(No Model.)

2 Sheets—Sheet 1.



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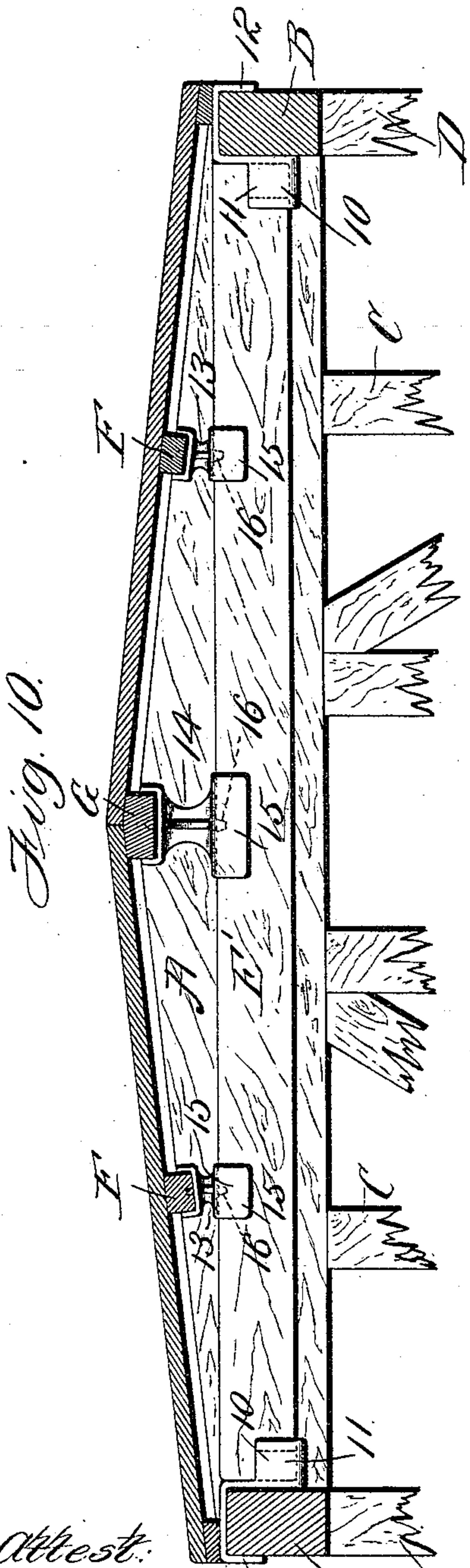
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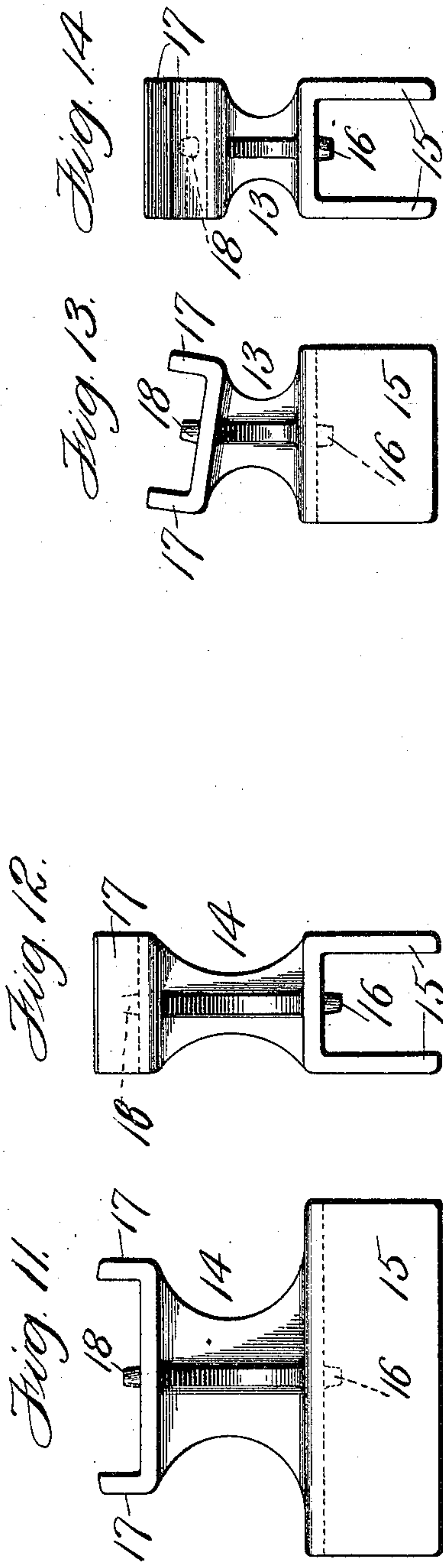
(No Model.)

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Attest:

Springfield ¹² B D
 Ralph Cahoon.



Inventor

Henry W. Gays.
by Dr Kewell Cornwall
attys

UNITED STATES PATENT OFFICE.

HENRY W. GAYS, OF ST. LOUIS, MISSOURI.

CARLINE.

SPECIFICATION forming part of Letters Patent No. 607,846, dated July 26, 1898.

Application filed January 17, 1898. Serial No. 666,867. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. GAYS, a citizen of the United States, residing in the city of St. Louis, State of Missouri, have invented
5 a certain new and useful Improvement in Carlines, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had
10 to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevational view of my improved carline. Fig. 2 is a plan view of the same. Fig. 3 is a vertical sectional view of the
15 skeleton framing of a car, showing the application of my improved carline. Fig. 4 is an enlarged detail front elevational view of the central portion of my improved carline, together with a section of the ridge-pole. Fig.
20 5 is an enlarged detail plan view of the same, the ridge-pole not being shown. Fig. 6 is an enlarged vertical sectional view on line 6 6, Fig. 4. Fig. 7 is an enlarged vertical sectional view on line 7 7, Fig. 4. Fig. 8 is an enlarged
25 detail view of one end of my improved carline, showing the nailing-strip mortised to receive the same. Fig. 9 is a similar view showing the side plate mortised for the same purpose. Fig. 10 is a vertical sectional view of
30 the skeleton framing of a car, showing a modified construction of my improved carline. Fig. 11 is an enlarged detail front view of the ridge-pole bracket or support. Fig. 12 is an end elevational view of the same. Fig. 13 is
35 an enlarged detail front view of the purlin bracket or support. Fig. 14 is an end elevational view of the same. Fig. 15 is an enlarged detail side elevational view of the carline hanger or support, and Fig. 16 is an end
40 view of the same.

This invention relates to a new and useful improvement in carlines, the object being to provide a carline which will be light, strong, durable, and effective, as well as simple in
45 construction, also saving the laborious work of mortising and dispensing with the necessity of the assistance of a skilled mechanic.

The special features of this invention reside in the novel construction of the carline,
50 as will hereinafter be described, and afterward pointed out in the claims.

In the drawings I have shown a portion of

the skeleton framing of a car in connection with which my improved carline is illustrated; but it will be obvious that there are other uses
55 to which my invention could be put without in the least departing from the principle of the same.

Referring to the drawings, A indicates the end plate, B the side plates, C the end posts, 60 and D the side posts, all of said parts being common and well known in car construction.

E indicates my improved carline as an entirety, which, as shown in detail in all the figures with the exception of Fig. 3, comprises a
65 body 1, preferably of the shape of an I-beam in cross-section, as is illustrated more fully in Fig. 7, hangers 2 2, arranged on each side or end of the carline and preferably of an inverted-U or stirrup shape, said hangers being
70 adapted to overlap and rest upon the side plates B, pockets 3 3, preferably in and somewhat below the upper face of the carline E and adapted to receive purlins F, and a pocket 4, located in and somewhat below the
75 upper face of the carline E and midway its length, which pocket is adapted to receive the ridge-pole G.

The carline E is preferably reinforced or widened at the pockets 2, 3 3, and 4, as is clearly
80 shown in Figs. 2 and 5. This reinforcement is to provide a wide and substantial bearing for their respective timbers, while the intermediate portions of the carline may be quite narrow and light and still be of ample strength. 85
Another object of this reinforcement is to provide a suitable amount of "stock" around bolt-holes 5, which perforate the carline in pockets 3 and 4. The pockets 3 and 4 are
90 preferably provided with one or more sharp-pointed lugs or projections 6, rising from the bottom thereof and adapted to lock or detain the purlins and the ridge-pole after the same have been firmly driven down in position.

H indicates a bolt which passes through the
95 purlins and ridge-pole and through the holes 5 in the carline E, firmly securing said purlins and ridge-pole to said carline. To one end of this bolt H a nut h may be secured, and, if desired, a jam-nut may be added. 100
This, however, is optional.

After the carlines E are placed upon the side plates B and the purlins F and ridge-pole G are secured thereto in the manner above

stated, said carlines and ridge-pole being also secured to the end plates A, the skeleton frame of the car is then ready to receive the roofing I in the ordinary manner.

5 I prefer to arrange a nailing-strip J on the side plates B, to which the roof may be secured, and, if desired, I may notch these nailing-strips to receive the ends of the carlines to hold said carlines in position against
10 longitudinal movement, as shown in Fig. 8, or I may notch the side plates B, as shown in Fig. 9, for the same purpose, or I may provide dowels 7 to fit in shallow bores in the side plates B, as shown in dotted lines.

15 From the above it will be seen that a most rigid construction results from the use of my improved carlines and the rods or truss-rods which are commonly used in construction with wooden carlines are entirely dispensed
20 with.

In Figs. 10, 11, 12, 13, and 14 I have illustrated a modified construction of my improved carline in which the carline proper, E', is simply a beam extending from one side
25 plate to the other and rests in suitable hangers 10 10, supported by said side plates. These hangers 10 10 consist of pockets 11, adapted to receive and support one end of the carline and at the same time, by means of inverted-U
30 or stirrup shaped portions 12 12, are adapted to overlap and rest upon the side plates in a similar manner and for the purpose described and illustrated in the preferred construction of my improved carline. In this latter con-
35 struction I substitute for the purlin pockets 3 3 and the ridge-pole pocket 4 suitable brackets or supports 13 13, adapted to receive said purlins, and a bracket 14, adapted to receive said ridge-pole. These brackets 13 13
40 and 14 are substantially of the same construction and are placed in their proper and respective positions on the carline E'.

The lower portions or bases of the pockets 13 13 and 14 are provided with depending
45 flanges 15 15, adapted to overlap the sides of the carline, thereby providing a substantial bearing and support for the same against any end thrust of their respective purlins or ridge-pole, and to prevent any lateral move-
50 ment of the brackets 13 13 and 14 suitable dowels 16, depending from the base of said brackets and preferably between the flanges 15 15, engage suitable holes in the top of the carline. The upper portion of these brack-
55 ets 13 13 and 14, upon which rest the carlines and ridge-pole, is provided with suitable flanges 17 17, arranged at right angles to the flanges 15 15. Flanges 17 17 engage and overlap the sides of the said purlins and ridge-
60 pole, thereby forming a substantial support against any side thrust of carline, and to prevent any end thrust of the purlins suitable dowels 18 rise from the top portion, preferably between the flanges 17 17, and engage
65 suitable holes bored into the lower face of the purlin.

The upper portions of the brackets 13 13

and 14, which receive the purlins and ridge-pole, and the lower portions, which engage the carlines, are preferably separated by webs 19, 70 which may be made to suit any style of car, pitch of roof, or depth of carline, as is obvious.

The only material difference between the purlin-bracket and the ridge-pole bracket resides in the construction of the upper por- 75 tion—i. e., the upper portion of the purlin-bracket is made preferably on a slant or incline of a corresponding pitch to the inclination of the roof, as is fully illustrated in Figs. 10, 13, and 14. 80

In Figs. 15 and 16 I have shown the idea of using an ordinary I-beam in the construction of a carline E', in which case the hangers 10 10 may be riveted or otherwise secured to the beam and the carline then supported as be- 85 fore described. It will be readily understood that the brackets 13 13 and 14, with slight changes in the lower portion, may be suitably attached to said I-beam carline E', and thus produce a strong, durable, and effective 90 carline.

In the drawings I have shown my improved carlines designed for a freight-car; but I do not wish to be understood as limiting myself to this construction, as the same is fully ap- 95 plicable to a crowned or flat roof or any other analogous structure.

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my carline can be made 100 and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Pat- 105 ent, is—

1. A carline consisting of a body having hangers adapted to engage side plates, said carline being, also, provided with recesses or pockets on its upper face for receiving the 110 purlins and ridge-pole, substantially as described.

2. A carline provided with inverted-U-shaped hangers on its ends adapted to engage the side plates, and recesses or pockets in its 115 upper face adapted to receive their respective timbers, the carline being perforated in line with said pockets for receiving a bolt, substantially as described.

3. A carline provided with hangers and 120 pockets suitably reinforced, said carline being, also, provided with lugs, or projections, which are arranged in said pockets for holding, or locking, suitable timbers in position, substantially as described. 125

4. A carline which is substantially I-shaped in cross-section throughout its length, said carline having hangers on its ends to engage the side plates, and recesses or pockets in its upper face to receive the purlins and ridge- 130 pole, substantially as described.

5. In combination with the side plates of a car, of a carline which is substantially I-shaped in cross-section throughout its length,

inverted-U-shaped hangers formed on the ends of said carline for engaging the side plates, means for locking said hangers to the side plates, purlins and ridge-pole, and means
5 for locking said purlins and ridge-pole to the carline, substantially as described.

6. A carline consisting of a body provided with hangers adapted to engage side plates, said carline being, also, provided with brackets or supports, said brackets or supports being adapted to receive the purlins and ridge-pole, substantially as described.
10

7. A carline provided with inverted-U-shaped hangers on its ends adapted to engage
15 the side plates, and brackets resting on, or secured to, the upper face of said carline, said brackets being provided with flanges for embracing the purlins or ridge-pole, and flanges

for embracing the carline, substantially as described.

8. A carline provided with hangers, brackets for the purlins and ridge-pole, said brackets being provided with flanges for embracing said purlins or ridge-pole, and flanges for embracing the carline, and dowels for engaging said purlins or ridge-pole, and dowels for engaging said carline, substantially as described.
20 25

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, 30
this 8th day of January, 1898.

HENRY W. GAYS.

Witnesses:

F. R. CORNWALL,
HUGH K. WAGNER.

DISCLAIMER.

607,846.—*Henry W. Gays*, St. Louis, Mo. CARLINE. Patent dated July 26, 1898.

Disclaimer filed December 2, 1908, by the *Chicago-Cleveland Car-Roofing Company*, assignee.

Enters its disclaimer—

“To that part of the specification and claims of said Letters Patent which is identified as follows, to wit:

“Fig. 10 is a vertical sectional view of the skeleton framing of a car, showing a modified construction of my improved carline. Fig. 11 is an enlarged detail front view of the ridge-pole bracket or support. Fig. 12 is an end elevational view of the same. Fig. 13 is an enlarged detail front view of the purlin bracket or support. Fig. 14 is an end elevational view of the same. Fig. 15 is an enlarged detail side elevational view of the carline hanger or support, and Fig. 16 is an end view of the same.

* * * * *

“In Figs. 10, 11, 12, 13, and 14 I have illustrated a modified construction of my improved carline in which the carline proper, E', is simply a beam extending from one side plate to the other and rests in suitable hangers 10 10, supported by said side plates. These hangers 10 10 consist of pockets 11, adapted to receive and support one end of the carline and at the same time, by means of inverted-U or stirrup shaped portions 12 12, are adapted to overlap and rest upon the side plates in a similar manner and for the purpose described and illustrated in the preferred construction of my improved carline. In this latter construction I substitute for the purlin-pockets 3 3 and the ridge-pole pocket 4 suitable brackets or supports 13 13, adapted to receive said purlins and a bracket 14, adapted to receive said ridge-pole. These brackets 13 13 and 14 are substantially of the same construction and are placed in their proper and respective positions on the carline E'.

“The lower portions or bases of the pockets 13 13 and 14 are provided with depending flanges 15 15, adapted to overlap the sides of the carline, thereby providing a substantial bearing and support for the same against any end thrust of their respective purlins or ridge-pole, and to prevent any lateral movement of the brackets 13 13 and 14 suitable dowels 16, depending from the base of said brackets and preferably between the flanges 15 15, engage suitable holes in the top of the carline. The upper portion of these brackets 13 13 and 14, upon which rest the carlines and ridge-pole, is provided with suitable flanges 17 17, arranged at right angles to the flanges 15 15. Flanges 17 17 engage and overlap the sides of the said purlins and ridge-pole, thereby forming a substantial support against any side thrust of carline, and to prevent any end thrust of the purlins suitable dowels 18 rise from the top portion, preferably between the flanges 17 17, and engage suitable holes bored into the lower face of the purlin.

“The upper portions of the brackets 13 13 and 14, which receive the purlins and ridge-pole, and the lower portions, which engage the carlines, are preferably separated by webs 19, which may be made to suit any style of car, pitch of roof, or depth of carline, as is obvious.

“The only material difference between the purlin-bracket and the ridge-pole bracket resides in the construction of the upper portion—i. e., the upper portion of the purlin-bracket is made preferably on a slant or incline of a corresponding pitch to the inclination of the roof, as is fully illustrated in Figs. 10, 13 and 14.

“In Figs. 15 and 16 I have shown the idea of using an ordinary I-beam in the construction of a carline E', in which case the hangers 10 10 may be riveted or otherwise secured to the beam and the carline then supported as before described. It will be readily understood that the brackets 13 13 and 14, with slight changes in the lower portion, may be suitably attached to said I-beam carline E', and thus produce a strong, durable, and effective carline.

* * * * *

“6. A carline consisting of a body provided with hangers adapted to engage side plates, said carline being, also, provided with brackets or supports, said brackets or supports being adapted to receive the purlins and ridge-pole, substantially as described.

“7. A carline provided with inverted-U-shaped hangers on its ends adapted to engage the side plates, and brackets resting on, or secured to, the upper face of said carline, said brackets being provided with flanges for embracing the purlins or ridge-pole, and flanges for embracing the carline, substantially as described.

“8. A carline provided with hangers, brackets for the purlins and ridge-pole, said brackets being provided with flanges for embracing said purlins or ridge-pole, and flanges for embracing the carline, and dowels for engaging said purlins or ridge-pole, and dowels for engaging said carline, substantially as described.” [Official Gazette, December 15, 1908.]