D. W. MORRISON.

ROOF TRUSS.

APPLICATION FILED SEPT. 30, 1908.

915,461. Patented Mar. 16, 1909.

Fig. 1.

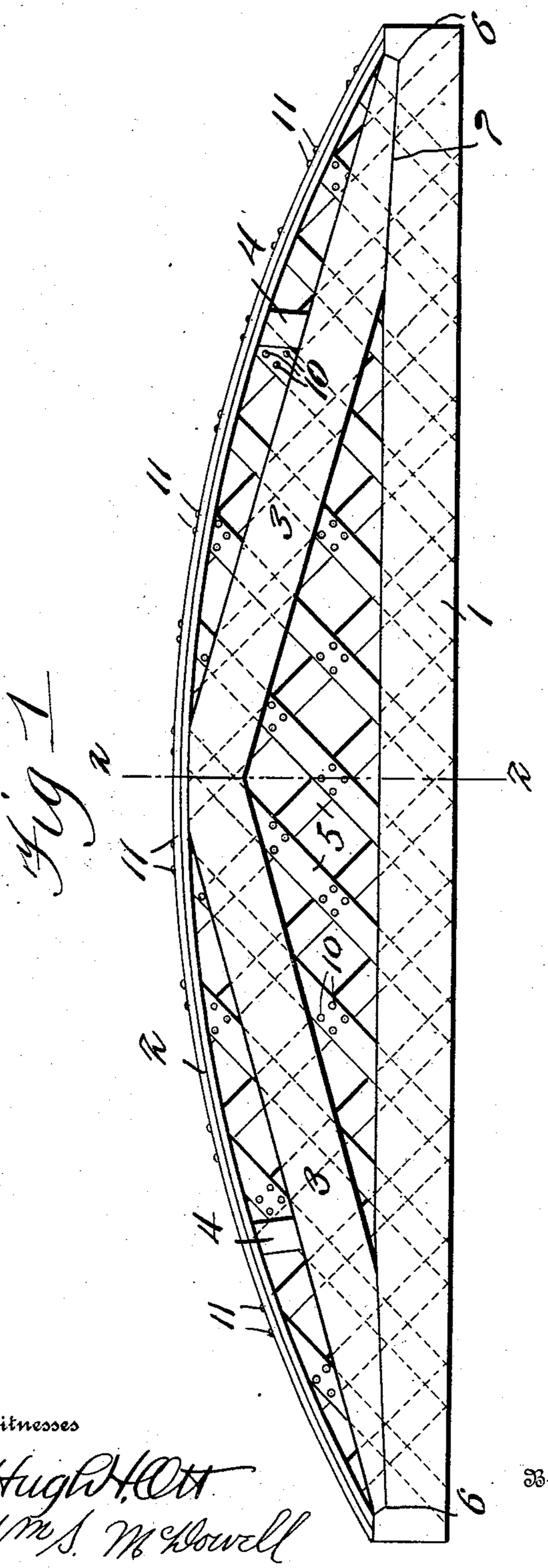


Fig. 3.

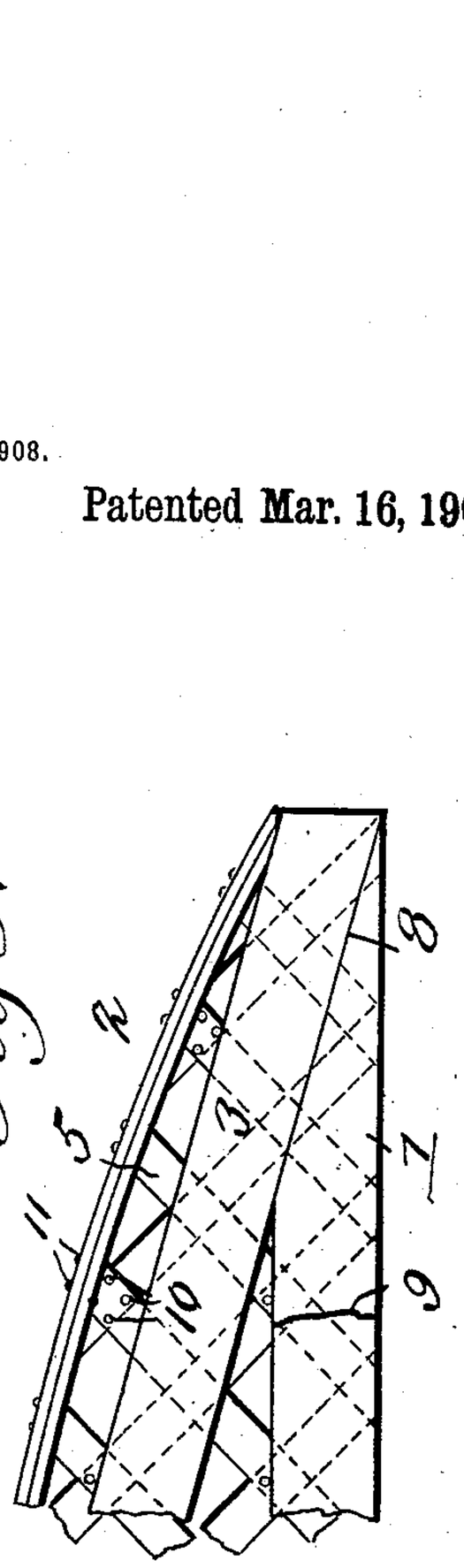
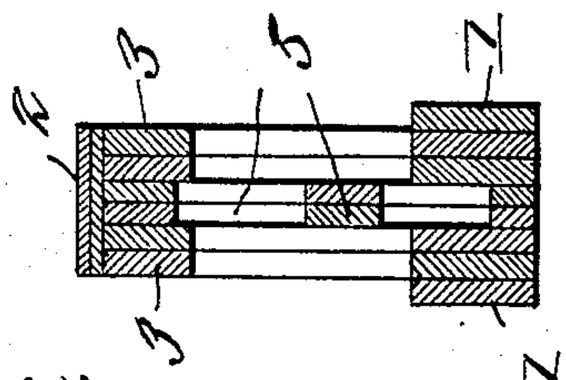


Fig. 2.



Witnesses

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ROOF-TRUSS.

No. 915,461. Specification of Letters Patent. Patented March 16, 1909.

Application filed September 30, 1908. Serial No. 455,575.

To all whom it may concern:

Be it known that I, DENNIS W. MORRISON, a citizen of the United States, residing at Indiana Harbor, in the county of Lake and State of Indiana, have invented new and useful Improvements in Roof-Trusses, of which the following is a specification.

This invention relates to roof trusses, the object of the invention being to provide a truss for the purpose stated adapted particularly for arched roofs having large spans, the truss hereinafter described being found in practice to be particularly strong and durable while at the same time capable of easy initial construction, thus producing an economical as well as an effective truss for the purpose set forth.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts as hereinafter more fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a side elevation of a roof truss embodying the present invention. Fig. 2 is a vertical cross section through the same on the line 2—2 of Fig. 1. Fig. 3 is a side elevation of one end of the truss, looking toward the opposite side of Fig. 1.

The improved truss of this invention embodies essentially a tension member 1, an arch or bow member 2, reversely inclined main rafter braces 3, struts 4 and slatted work 5. The tension member 1 is of laminated form or made up of several parallel strips as shown in cross sectional view of Fig. 2, said strips extending horizontally side-by-side and being secured together in a manner which will hereinafter appear.

In connection with two of the tension strips, I preferably employ four sets of reversely inclined main rafter braces 3 two sets at each side of the center as clearly shown in Figs. 1 and 2, the said braces being arranged in the same planes with their respective tension member 1. One of the tension members 1 is notched or cut away as shown at 6 in Fig. 1, while the corresponding end of the respective rafter brace 3 is correspondingly tapered along its lower edge as shown at 7 adapting such end of the brace to fit into the notched portion of the corresponding tension member, forming a scarfed joint. The adjacently lying rafter braces 3 are not pointed like the one just described but are left intact or whole as shown in Fig. 3, so as to overlap the joint formed by scarfing the members above described, while the corresponding tension member 1 is beveled off as shown at 8 to underlie and come in contact with the lower side of the overlying brace as clearly shown in Fig. 3. In this way, a break joint construction is obtained which adds materially to the strength and sustaining power of the truss as a whole.

The oppositely extending members of each pair of main rafter braces are reversely inclined as shown in Fig. 1 while the arch or bow member 2, which may consist of two or more flat strips with joints well lapped of any suitable width, is sprung over the central point of the truss, resting upon the meeting ends of the rafter braces 3 while the opposite ends of said bow or arch rest upon the ends of the rafter members 1 as clearly illustrated in Figs. 1 and 3.

In order to preserve the proper curvature of the bow or arch 2, struts 4 are placed beneath the arch 2 at suitable intervals, said struts resting on the upper edges of the braces 3 and being held in place by nails or other fasteners. At each side, an additional tension strip 1 extends the entire length of the truss in line with and to one side of the other tension members 1 as best illustrated in Figs. 2 and 3 in which latter figure said last-named tension member is shown as broken away from the point 9. Between the tension members and braces are located the slats 5 which are set at reverse inclinations to form a sort of lattice work, giving an ornamental finish to the truss and also imparting much additional strength thereto. At the points where said slats cross each other they are secured together by nails or fasteners 10 and such fasteners may also be driven entirely through the slats and the tension and brace members 1 and 3 respectively as clearly indicated in Figs. 1 and 3. Nails or like fasteners are also driven through the bow or arch members 2 into the ends of the slats as indicated at 11.

I claim:—

1. A truss for the purpose specified, comprising a laminated tension member, reversely inclined braces, certain of which have a scarfed joint connection with the respective tension members, a bow or arch supported centrally by the braces and terminally supported by the tension members, struts interposed between the braces and said bow or arch, and cross slats secured together and

fastened to the tension and brace members, substantially as described.

2. A roof truss comprising a laminated tension member, laminated braces embodying reversely inclined members certain of which have a scarfed joint connection with the ends of the tension member and certain others of which overlap such scarfed joint, a bow or arch supported centrally by the braces and supported terminally by the tension member, struts interposed between the braces and said bow or arch, and cross slats arranged in inclined series and secured together and also fastened to the tension member and braces, substantially as described.

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

DENNIS W. MORRISON.

Witnesses:
W. C. GREENWALD,
ROBT. H. ANSLEY.