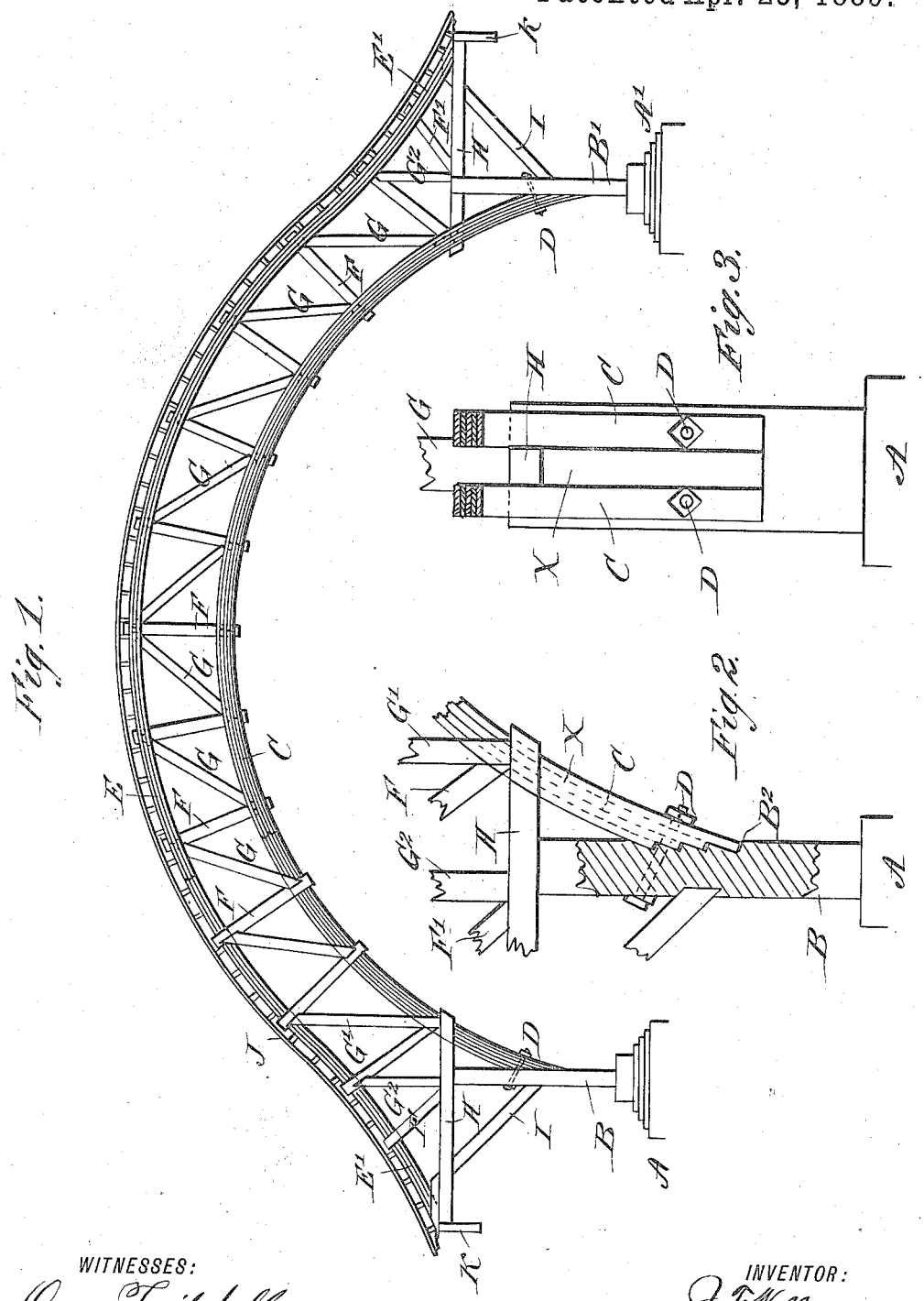
(No Model.)

J. T. WELLS.

TRUSS FOR BUILDINGS OR BRIDGES.

No. 401,870. Patented Apr. 23, 1889.



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JOHN TALCOTT WELLS, OF SCOTTSVILLE, NEW YORK.

TRUSS FOR BUILDINGS OR BRIDGES.

SPECIFICATION forming part of Letters Patent No. 401,870, dated April 23, 1889.

Application filed September 20, 1888. Serial No. 285,858. (No model.)

To all whom it may concern:

Be it known that I, JOHN TALCOTT WELLS, of Scottsville, in the county of Monroe and State of New York, have invented a new and Improved Truss for Buildings or Bridges, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved truss for buildings combining simplicity with great strength, and at the same time dispensing with metallic braces, thus making it a very cheap structure.

The invention consists of two parallel arches formed of bent boards or any material used in building and connected with each other by posts and braces.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement with parts broken out. Fig. 2 is an enlarged side elevation, partly in section, of the truss-supports, and Fig. 3 is an end elevation of the same.

The piers A and A′ support the posts B and B′, and are provided on their inner sides with steps B^2, into which fit the lower ends of the inner arch, C, made of any desired number of boards fastened together with spikes, nails, or other means. The ends of the last boards form steps, as shown in Fig. 2, fitting into the steps B^2 of the posts B and B′, respectively. The ends of the arch C are secured in place on the posts B and B′ by bolts D, passing through the said posts and the arch C. Parallel with the arch C is placed a second arch, E, made likewise of bent boards or any other material, and connected with the inner arch, C, by posts F, placed radially in the arches C and E, and fastened in the same by spikes or other means. The lower ends, E′, of the outer arch, E, are slightly curved outward, as is plainly shown in Fig. 1.

Suitable braces, G, are placed between the posts F and the arches C and E. The last posts, F′, do not extend to the inner arch, C, but rest on top of the horizontal beams H, supported on top of the respective post B or B′. The last braces, G′ and G^2, on each end of the arches C and E also rest with their lower ends on the horizontal beams H. Each of the latter is supported near its outer end by a brace, I, resting at its lower end on the outside of the respective post B or B′, and on its inner end by the plank X, fitted into the posts B or B′, and filling the space between the foot of the arches C C. The top of the outer arch, E, is covered with a roofing, J, of any suitable construction.

In erecting a building I prefer to build a truss with two inner and two outer arches, C C and E E, placed alongside of each other, as shown in Fig. 3, so that the posts F and the braces G, as well as the beams H, project between the two arches, and are secured to the same by spikes before mentioned. A truss thus constructed forms one section of the building, and as many sections may be employed as desired, being placed suitable distances apart, and the roofing J stretching from one section to the other. Ornamental side pieces, K, may be secured under the ends of the roof J, as shown in Fig. 1. Thus it will be seen that a building may be formed by a number of trusses constructed as above described, said building being very strong, simple in construction, and not requiring any metallic braces or rods in order to strengthen it. The truss A is balanced in such a manner that all side push on the foot of the posts B and B′ is reduced to a minimum. The beams H act as levers, being held down by the outer arch, E, while the boards I will hold the foot of the posts B B′ against the foot of the arches C, thereby taking any outward push off from the said posts.

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

1. The combination, with an inner arch and main posts supporting the same, of an outer arch held concentric to the inner arch and curved outwardly at its lower ends, radial posts secured to the said two arches, and braces held between the said radial posts and arches, substantially as shown and described.

2. The combination, with main posts and

horizontal beams supported on the said posts, of an inner arch secured with its ends on the said posts, and an outer arch held concentric to the inner arch and fastened to the same by radial posts, the ends of the said outer arch being supported on the said horizontal beams, and the vertical bars G' G^2 extending from the upper faces of the inner ends of the horizontal beams and fastened to the lower faces of the radial posts at their upper ends, substantially as shown and described.

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Witnesses:
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