(No Model.)

R. DUANE.

STRIP OR PIECE FOR BUILDING TOY GIRDERS, BRIDGES, &c.

No. 413,651. Patented Oct. 29, 1889.

Fig. 1.

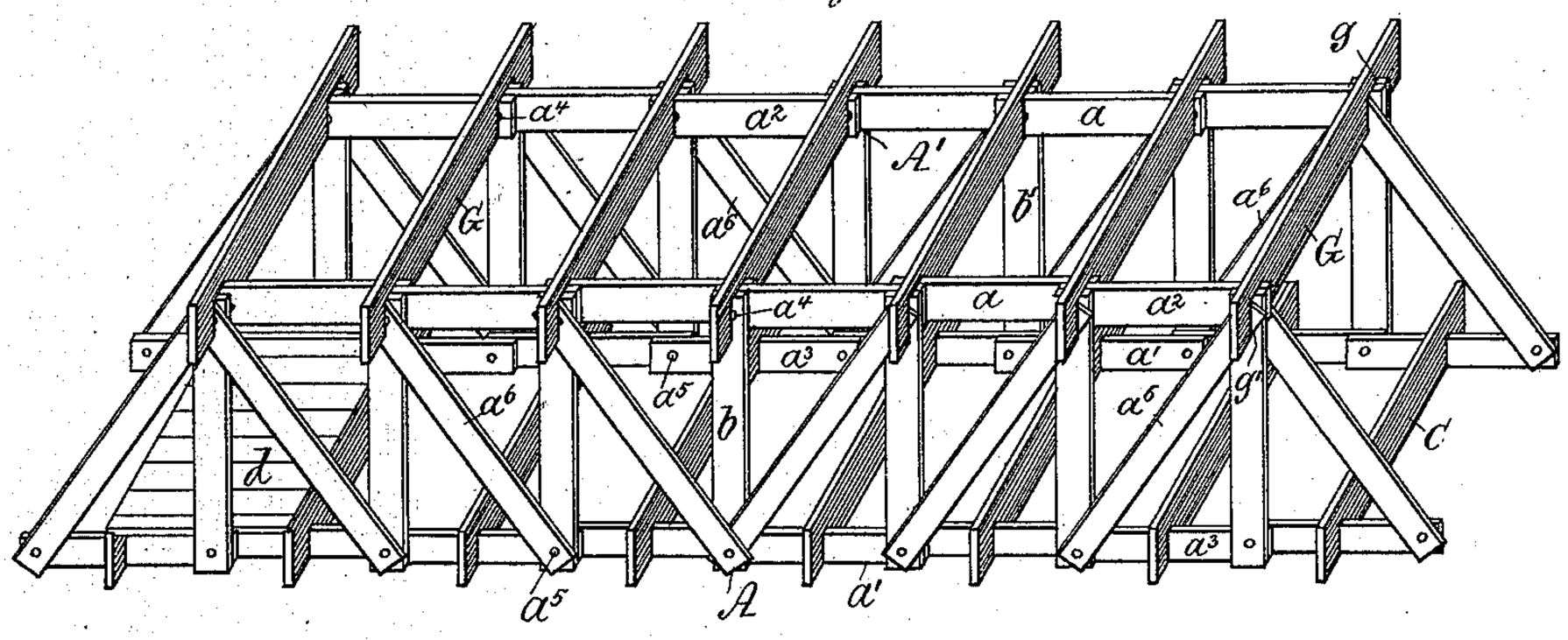


Fig. 2.

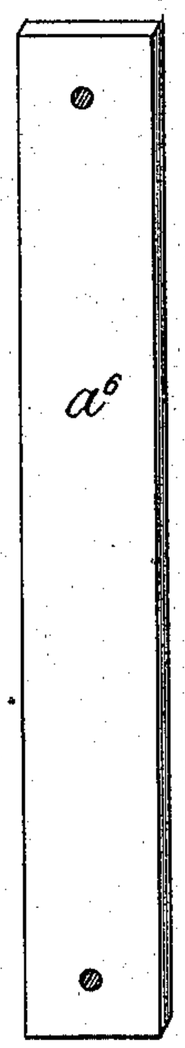


Fig. 3

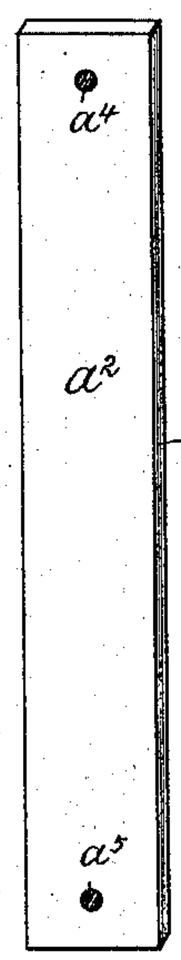


Fig. 4.

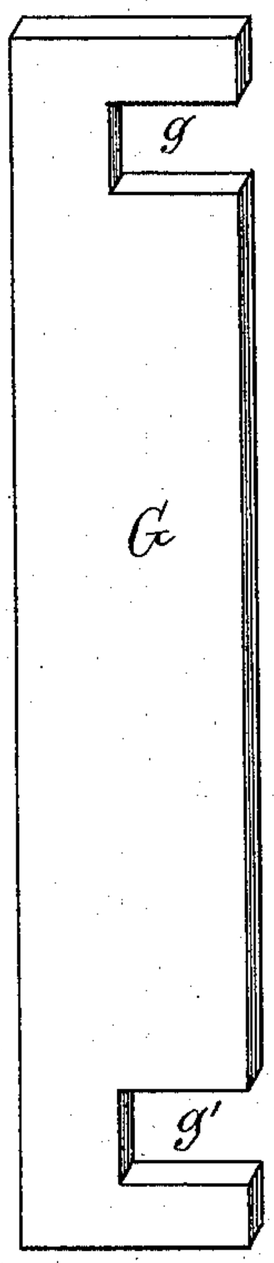


Fig. 5.

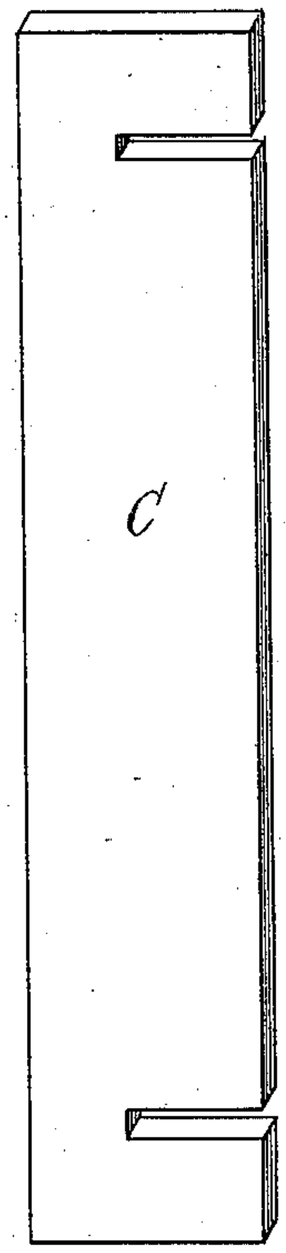
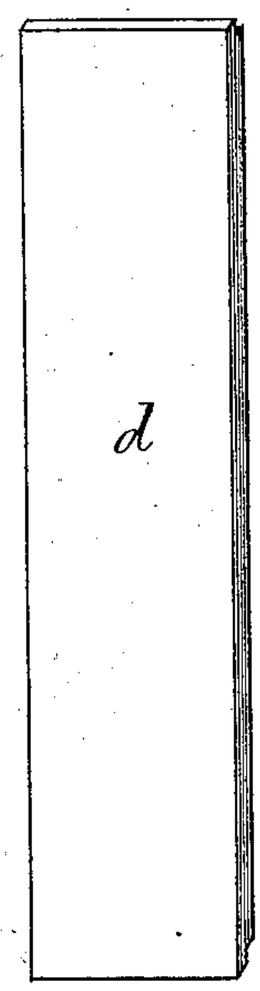


Fig. 6.



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Att'y.

UNITED STATES PATENT OFFICE.

RUSSELL DUANE, OF PHILADELPHIA, PENNSYLVANIA.

STRIP OR PIECE FOR BUILDING TOY GIRDERS, BRIDGES, &c.

SPECIFICATION forming part of Letters Patent No. 413,651, dated October 29, 1889.

Application filed June 28, 1889. Serial No. 315,900. (No model.)

To all whom it may concern:

Be it known that I, RUSSELL DUANE, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Strips or Pieces for Building Toy Girders, Bridges, &c., of which the following is a specification, reference being had to the accompanying drawings, forming part hereof, and in which—

Figure 1 is a perspective view of a trestle-bridge composed of a series of strips or pieces of different configurations, forming the trusses thereof, suitably pinned to each other and tenoned together, and as so arranged and combined embodying the principal characteristic features of my invention. Figs. 2 and 3 are respectively front elevations, on a larger scale, of the strips or pieces which form the tie-pieces pinned to the upper and lower chords constituting the trusses of the bridge. Fig. 4 is a similar view of one of the tenoned spanning-pieces. Fig. 5 is a similar view of the cross-ties tenoned to the lower longitudinal chords of the trusses, and Fig. 6 is a similar view of one of the recessed floor strips or pieces of the bridge.

The principal object of my invention is to provide strips or pieces so constructed as that when combined a girder or bridge may be readily formed, and the said invention designed not only to afford amusement to the young, but more particularly to enable them to become instructed to a greater or less extent in the art of building girders, bridges, &c., by their becoming familiarized with the names of the various parts, as well as with their functions as performed in such structure or superstructures.

My invention consists of the parts or pieces constructed, arranged, and combined substantially in the manner hereinafter described, and specifically pointed out in the claims.

Referring to the accompanying drawings for a further description of my invention, A and A′ are two trusses composed of the upper and lower chords a and a', made up of two series of detachable strips or pieces a^2 and a^3, pinned at a^4 and a^5 to each other, and struts b and b', constructed, preferably, of the same length as the detachable chord-pieces a^2 and a^3, and the tie-pieces a^6, made of the same or of a greater length. These trusses A and A′ may be made of any preferred length and the several parts composing the same arranged and combined substantially in the manner illustrated in Fig. 1 when used to form a trestle-bridge.

C represents one of the tenoned or slotted cross-ties fitted onto the respective girders A and A′ at suitable distances apart, and onto which are mounted floor-strips d, Fig. 6, provided, preferably, with recessed extremities.

The object of forming the recesses in the extremities of the floor-strips d is to enable them to be readily fitted to the ties C with one portion of the end of each strip or piece resting snugly up against the side of the tie C and with the projecting portion thereof resting on the upper edge of each tie.

G represents one of the transverse spanning strips or pieces with slots g and g' cut therein, as shown in Fig. 4. These transverse spanning strips or pieces G are fitted onto the respective chords a, struts b and b', and diagonally-disposed tie-pieces a^6, as shown in Fig. 1, and are intended to prevent undue sidewise movement of the structure.

It will be seen that by removing the transverse lower truss-chord ties C and upper truss-chord spanning-pieces G one of the trusses may be used advantageously as a girder for toy-house building and other similar purposes.

It will be obvious that as to minor details slight modifications may be made without departing from the spirit of the invention, and hence I reserve to myself the right to modify the same in the more extended practice thereof.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described toy, consisting of the longitudinal strips, the vertical struts, the tie-pieces diagonally disposed and said strips or pieces pinned to each other, the slotted spanning-strips, and the transverse tie-pieces, all arranged substantially as shown, and for the purposes set forth.

2. The herein-described toy, consisting of the longitudinal truss-chord strips or pieces, struts, and diagonally-disposed tie-pieces pinned to each other, the slotted spanning-strips, the slotted transverse tie-pieces, and the recessed floor-strips, all arranged substantially as shown, and for the purposes set forth.

In witness whereof I have hereunto set my signature in the presence of two subscribing witnesses.

RUSSELL DUANE.

Witnesses:
THOMAS M. SMITH,
HERMANN BORMANN.