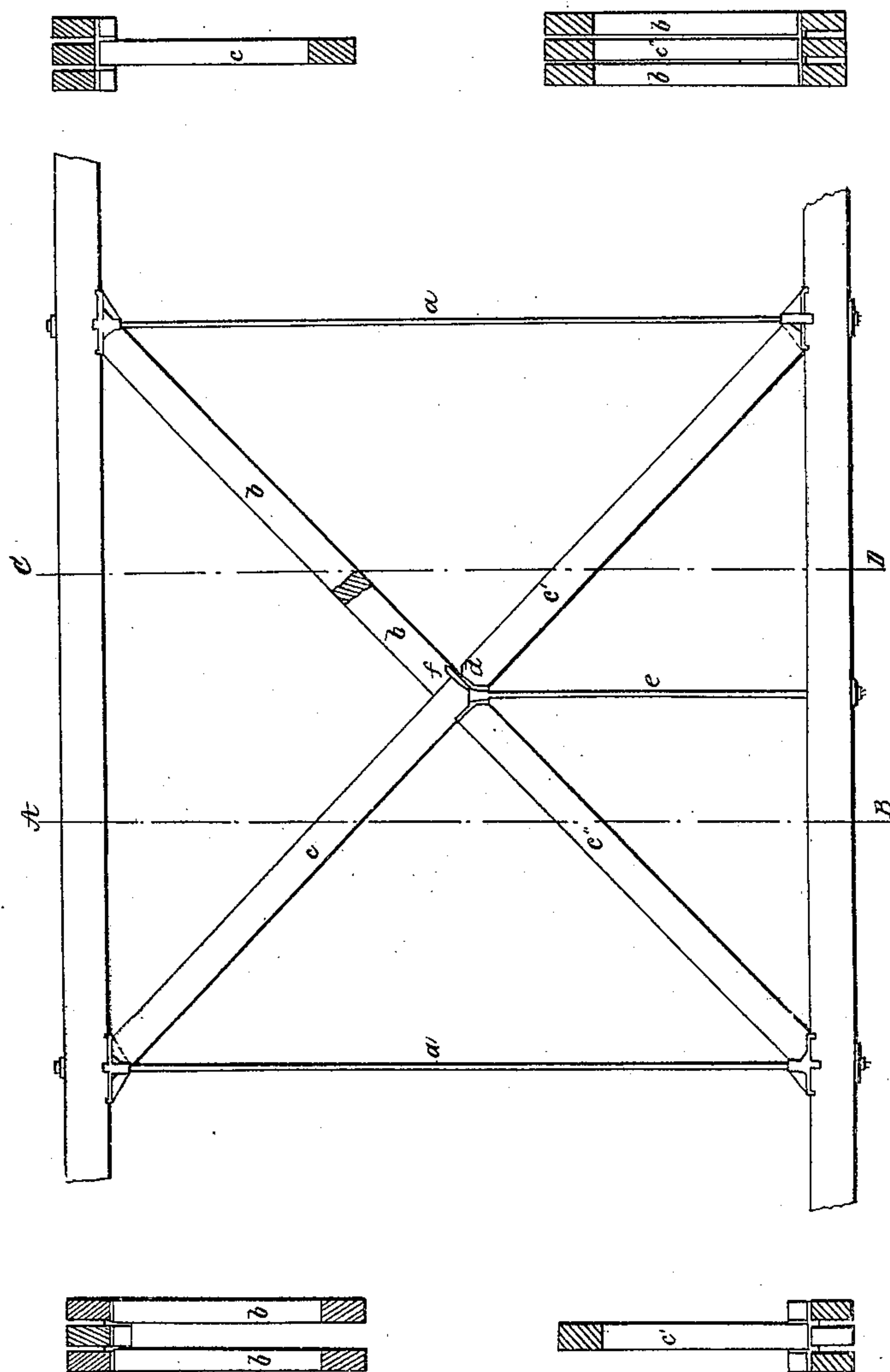
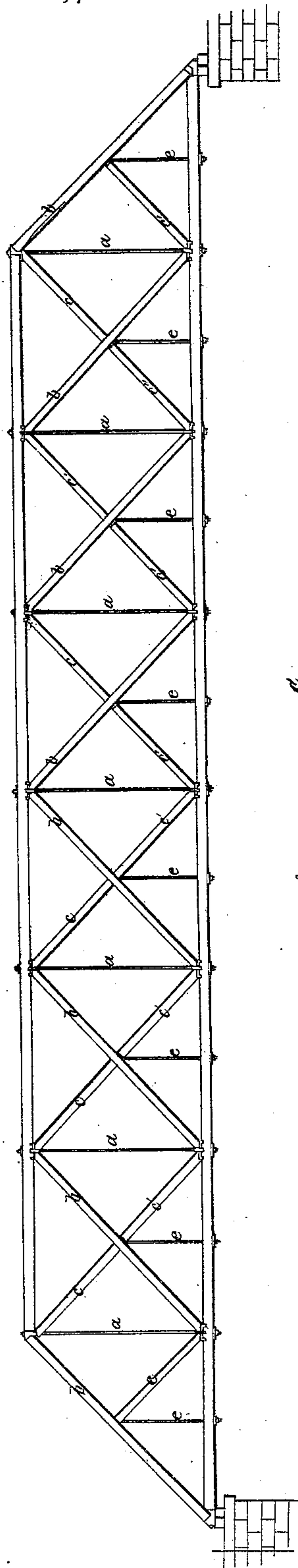


*A. Fink.*  
*Truss Bridge.*

*N<sup>o</sup> 16,728.*

*Patented Mar. 3, 1857.*



*Inventor,*  
*Albert Fink*

# UNITED STATES PATENT OFFICE.

ALBERT FINK, OF PARKERSBURG, VIRGINIA.

## BRIDGE-TRUSS.

Specification of Letters Patent No. 16,728, dated March 3, 1857.

*To all whom it may concern:*

Be it known that I, ALBERT FINK, of Parkersburg, county of Wood, State of Virginia, have invented a new and useful Improvement in Wooden Bridge-Trusses; and I do hereby declare the following is a full and exact description thereof, reference being had to the accompanying drawing and the letters of reference marked thereon.

10 My improvement consists in the use of an auxiliary truss,  $c' c'' e$  between the main supports  $a a a$  . . . of a truss, commonly known under the name of Howe's truss.

15 The object of this improvement is to save material and in the same time to obtain greater strength by placing the braces of the truss, in or near an angle of  $45^\circ$ , which is the most effective angle in which bridge  
20 braces can act.

In trusses of the usual mode of construction, the braces have to act in a angle approaching nearly the vertical—in order to support the chords or floor of bridge at  
25 points sufficiently close together, and a greater number of braces and suspension rods are thus necessary than are required in a truss of this improved construction.

The auxiliary truss consists partly of the  
30 lower piece  $c'$  of the counter brace  $c c'$ , and

partly of a piece  $c''$  which is placed in the middle space between two main braces  $b b$  . . . These two braces  $c'$  and  $c''$  meet in a shoe casting  $d$ , to which the suspension rod  $e$  is attached. A key  $f$  can be inserted by  
35 means of which the length of counterbrace can be adjusted.

I do not confine myself to the particular form of the shoe casting  $d$ , or the mode of connecting the suspension rod with the  
40 same. This may be varied according to circumstances to carry out the object in view, viz: the support of either the upper or lower chord of truss.

I do not claim as my invention the general arrangement of the parts  $C, C$  . . .  $c c$  . . .  $a a$  . . . or any of the details of their construction with each other, but

What I do claim as my invention and wish to secure by Letters Patent is:  
50

The use of an auxiliary truss, which is to consist of the lower part  $c'$  of the counterbrace  $c c'$ , and of a piece  $c''$  placed between the two main braces  $b b$ , independent of these braces, substantially as herein  
55 set forth.

ALBERT FINK.

Witnesses:

GEO. C. McCALL,  
SAM. O. A. BURCHE.