

(No Model.)

G. H. WARING.
Fish Plate.

No. 239,898.

Patented April 5, 1881.

fig. 1.

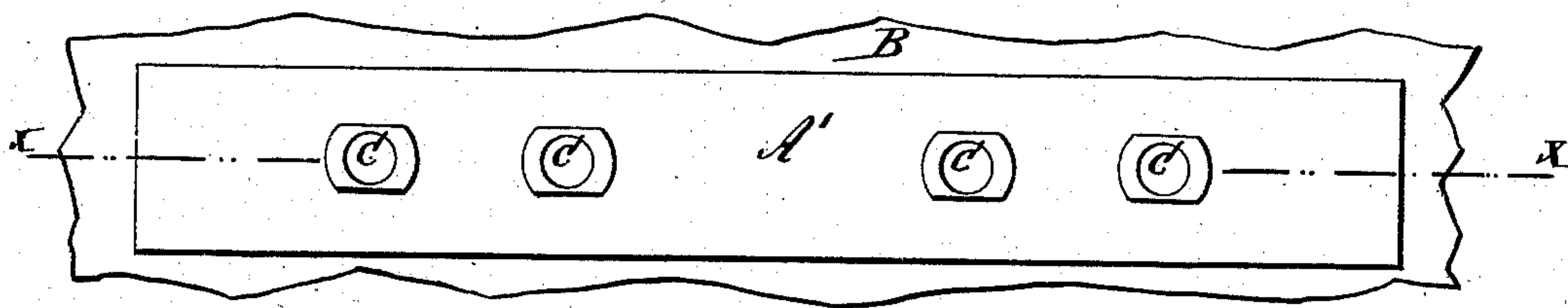


fig. 2.

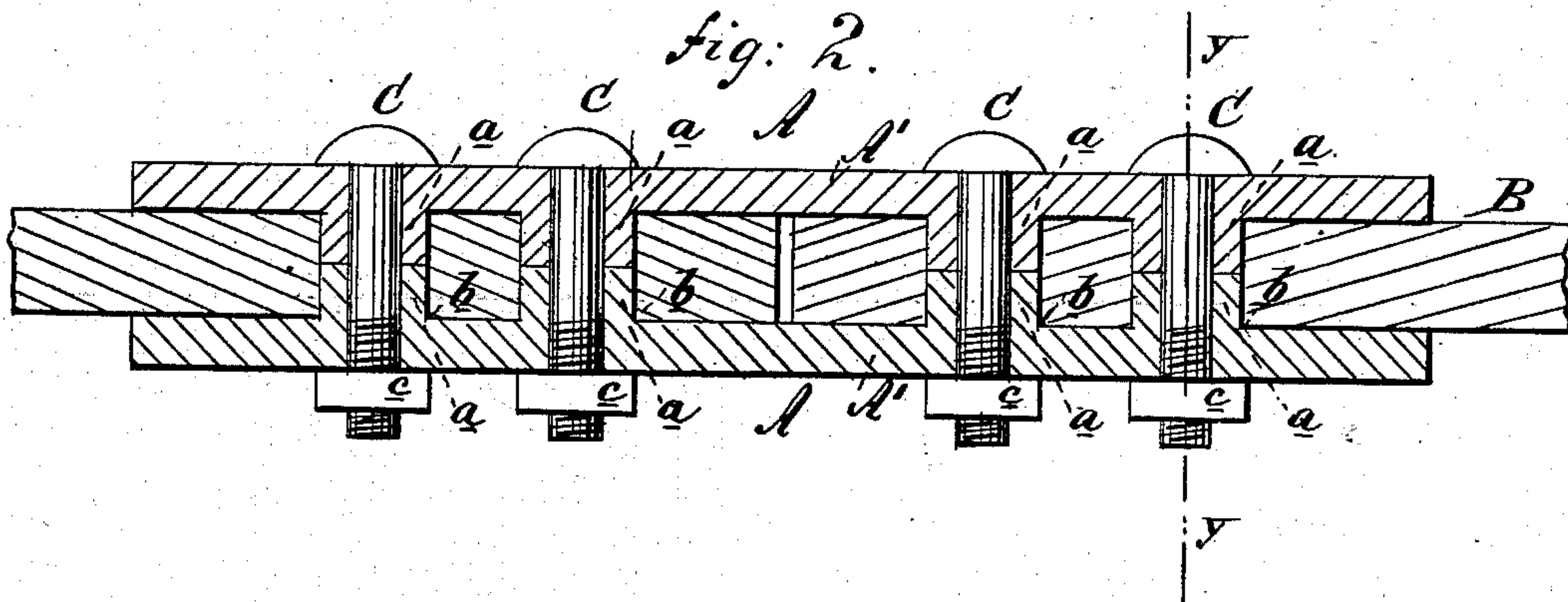
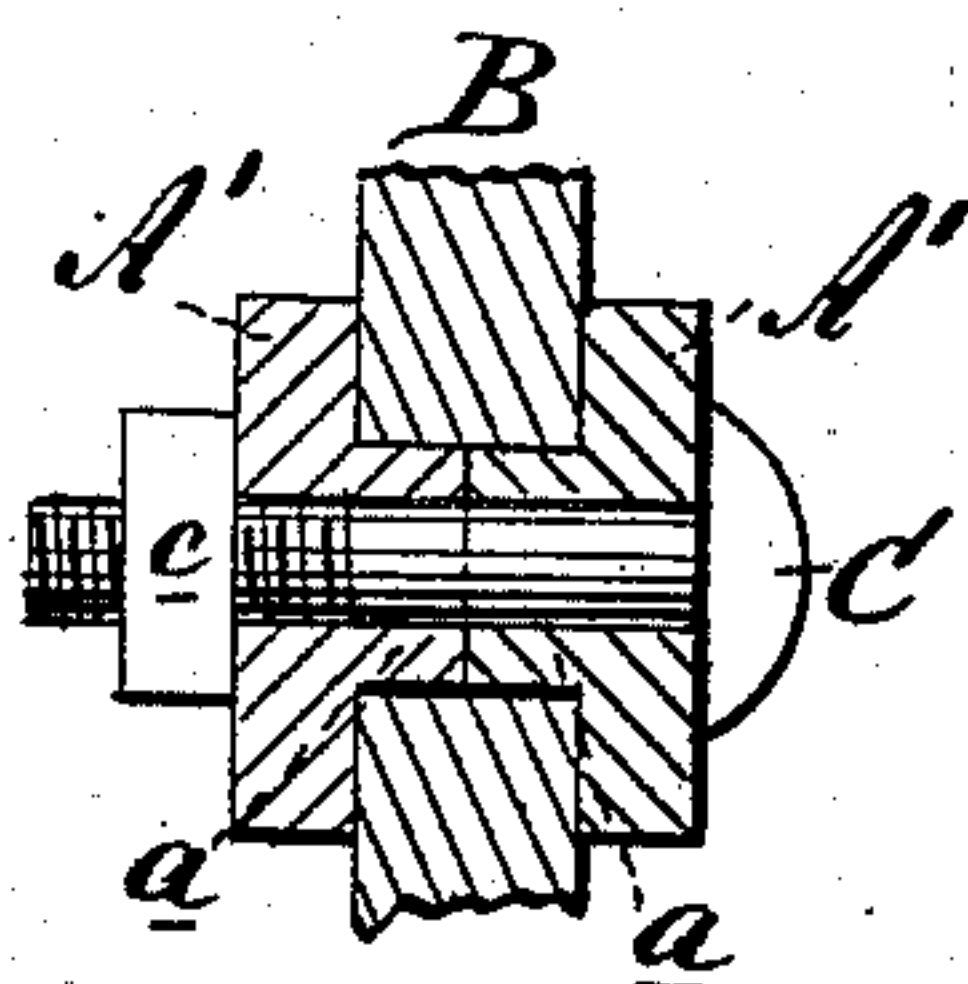


fig. 3.



WITNESSES:

A. Schehl.
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UNITED STATES PATENT OFFICE.

GEORGE H. WARING, OF INDIANTOWN, NEW BRUNSWICK, CANADA, AS-
SIGNOR TO HIMSELF AND CHARLES MILLER, OF SAME PLACE.

FISH-PLATE.

SPECIFICATION forming part of Letters Patent No. 239,898, dated April 5, 1881.

Application filed October 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. WARING, of Indiantown, New Brunswick, Canada, have invented a new and Improved Fish-Plate, of which the following is a specification.

The object of this invention is to provide an improved fish-plate for use on railroads, whereby the ends of the rails will be more securely held and the transverse strain upon the holding bolts entirely avoided.

The invention consists of a fish-plate having around its bolt-holes projecting thimbles whose length is equal to half the thickness of a rail-web, so that when two plates are applied to opposite sides of a rail the thimbles entering the corresponding holes in the web will meet in the center thereof; and it consists, further, of a combination of the plates and thimbles with the rail-web.

Figure 1 represents a side elevation of a fish-plate fastened to a rail-web. Fig. 2 is a longitudinal section of the same on line *xx*, Fig. 1. Fig. 3 is a transverse section of the same on line *yy*, Fig. 2.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a fish-plate, consisting of a flat plate, A', provided on one face with projecting thimbles *a a*, of such an external diameter as to fit into the corresponding holes, *b*, made through the rail-webs B, so

that when the said rail-webs B contract or expand said thimbles *a a* support all the strain. Said thimbles *a a* are half as long as the thickness of the web B, so that when two fish-plates, A A, are fitted upon rails as shown, their thimbles *a a* meet in the centers of the holes *b b*. The bolts C C are then inserted through the thimbles *a a*, and held in place by nuts *c c*, as shown.

It will be seen the bolts C C are entirely protected from lateral strain, because of being incased in the thimbles *a a*. Hence said bolts C C will not readily become loose, and will last much longer, and are more easily inserted and removed.

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

1. A fish-plate constructed substantially as herein shown and described, consisting of plate A', provided with thimbles *a a*, as set forth, whereby the fish-plate bolts are protected from lateral strain, as set forth.

2. The combination, with the rail-web B, of the fish-plates A', thimbles *a a*, and nuts and bolts C *c*, substantially as herein shown and described.

GEORGE HART WARING.

Witnesses:

HARRY TAPLEY,

C. BOWPER PIDGEON.