

P. Crosby,
Reciprocating Sarr Mill.
N^o 41,908. Patented Mar. 15, 1864.

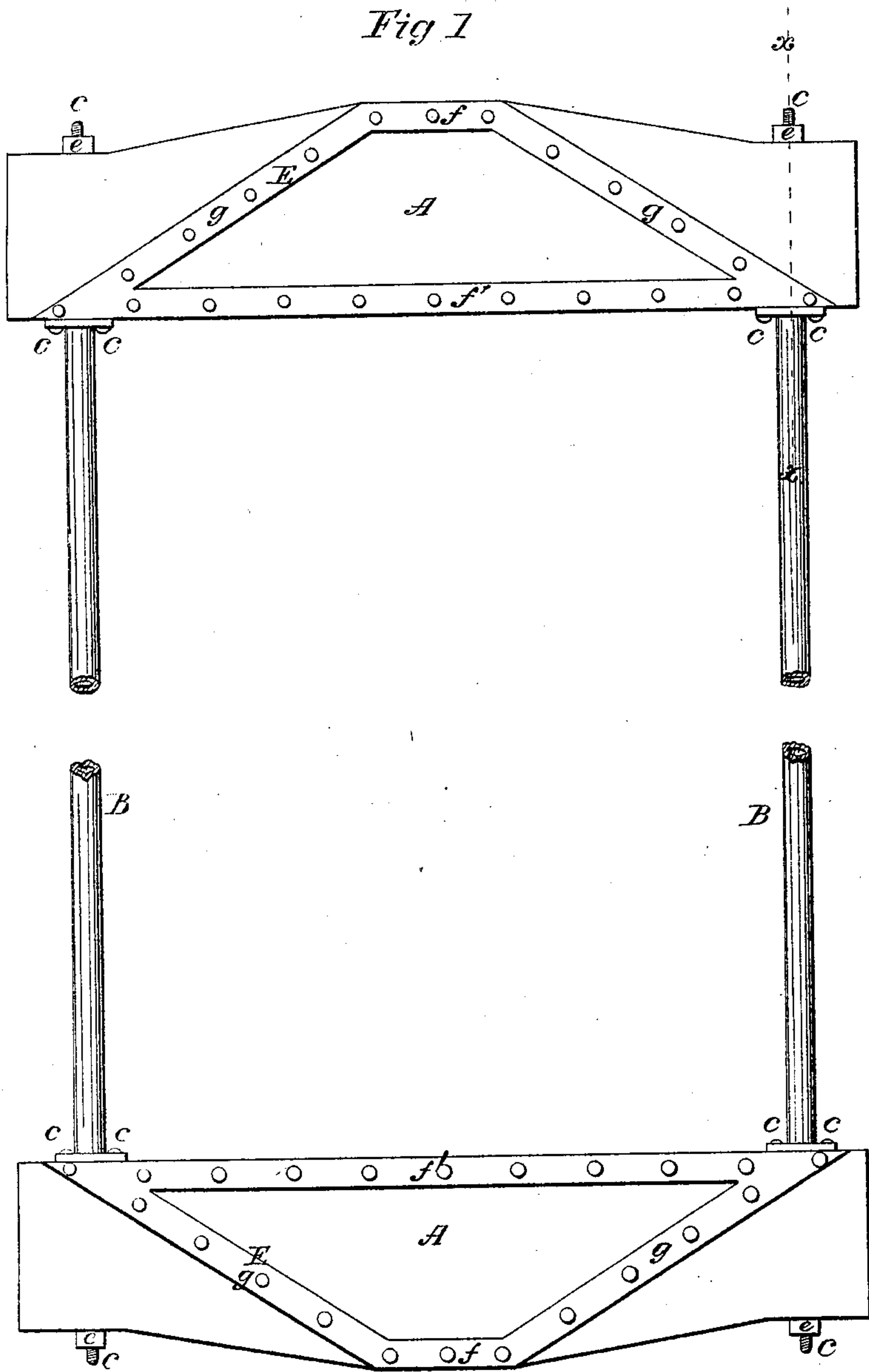


Fig 2

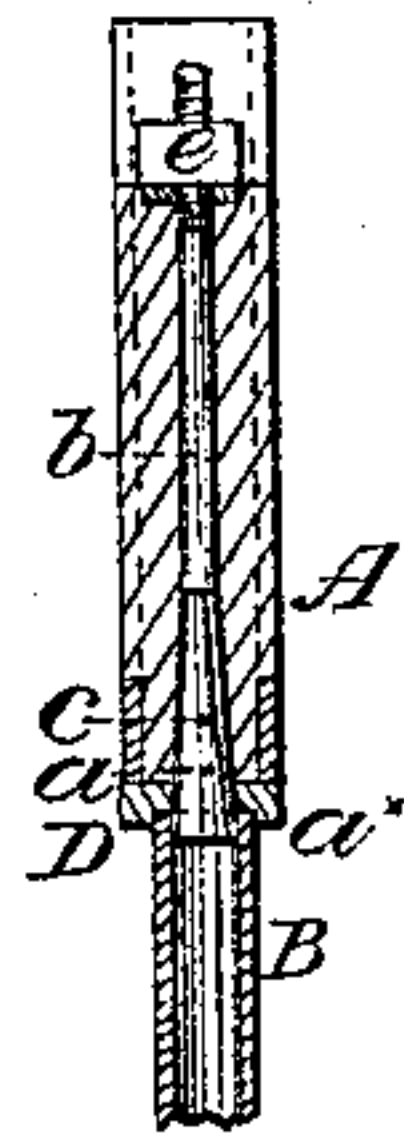
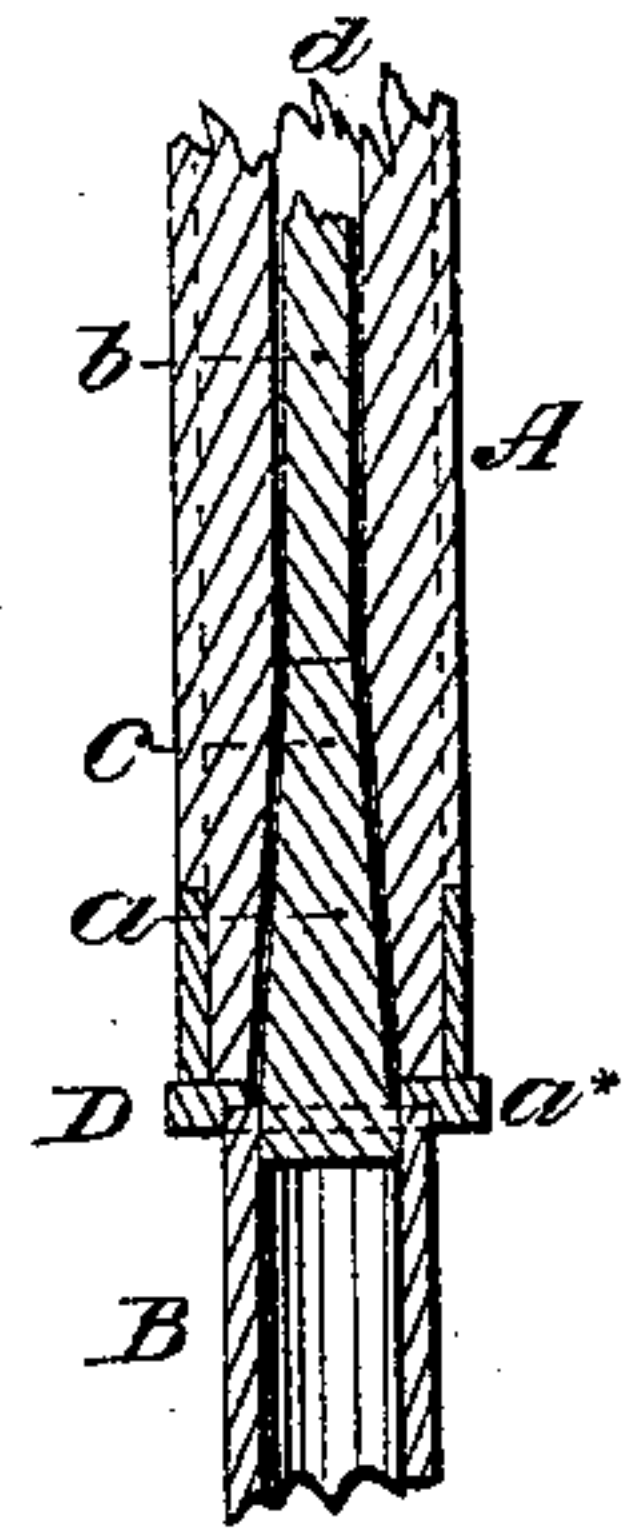


Fig 3



Witnesses:
J. W. Coombs
Henry Morley

Inventor:
Pearson Crosby

UNITED STATES PATENT OFFICE.

PEARSON CROSBY, OF NEW YORK, N. Y.

IMPROVEMENT IN SAW-MILLS.

Specification forming part of Letters Patent No. 41,908, dated March 15, 1864.

To all whom it may concern:

Be it known that I, PEARSON CROSBY, of the city, county, and State of New York, have invented a new and useful improvement in the construction of gates or sashes for reciprocating saws; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front or back view of my invention; Figs. 2 and 3, a section of the same taken in the line *x x*, Fig. 1, Fig. 3 being an enlarged section.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improved mode of securing tubular side pieces to the cross-heads of the gate or sash, as hereinafter fully shown and described, whereby a very firm and durable connection of the above-named parts is obtained, and consequently a light and durable gate or sash.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A A represent the two cross-heads of a saw gate or sash, and B B the two tubular side pieces of the gate or sash. These side pieces, B B, are constructed of metal, iron of course, being the metal designed to be used, and the cross-heads A may be of either iron or wood, wood being represented in the drawings. The tubes B have each a metal rod, C, secured in their ends. These rods at their inner ends are of such a diameter as to fit snugly in the ends of the tubes B; but they extend only a short distance in the tubes, and are secured therein by welding.

The rods C are drawn out so as to be considerably smaller in diameter at their ends beyond the tubes, and so as to leave their inner parts of conical form, as shown at *a*, the outer parts, *b*, being of cylindrical form, as shown clearly in Figs. 2 and 3, and the ends of the tubes B are fitted in recesses *a^x* made in metal plates D, which are secured by screws or bolts *e* to the inner edges of the cross-heads A A, the rods C passing through said plates.

(See Figs. 2 and 3.) The plate D form substantial bearing-surfaces for the ends of the tubes B, and they also prevent any lateral movement of the tubes. The rods C pass up through holes *d* in the cross-heads A A, and they have screw-threads cut on their outer ends to receive nuts *e*. By this arrangement the tubes B B will be firmly secured to the cross-heads A A, and without having rods pass entirely through the tubes B, as has been formerly practiced, and which add greatly to the weight of the tubes, rendering them almost as heavy as solid iron bars.

To each side of each cross-head A there is firmly screwed or bolted an iron truss, E, the form of which is clearly shown in Fig. 1. These trusses E are composed each of two parallel bars, *f f'*, one of which, *f*, is at the outer edge of the cross-heads and much shorter than the other, *f'*, which is at the inner edge of the cross-heads, and extends nearly their whole length. These bars *f f'* are connected at their ends by diagonal bars *g*, which serve as braces, and in connection with the parallel bars *f f'* effectually prevent the cross-heads A A from springing under the tension of the saws when the same are strained. These trusses E may be "let in" the sides of the cross-heads so that their external surfaces will be "flush" with the sides of the cross heads.

By this mode of constructing the saw gate or sash a very strong, durable, economical, and light one is obtained.

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

The method of connecting or securing the tubular side pieces, B B, to the cross-heads A A, to wit: having rods C welded into the ends of the tubular side pieces to serve as screw-bolts for the same, which pass through the cross-heads, and either with or without the plates D or other equivalent bearings at the inner edges of the cross-heads, substantially as herein set forth.

PEARSON CROSBY.

Witnesses:

THOS. S. J. DOUGLAS,
GEO. W. REED.