

C. W. BREWER.  
Agraffe for Pianofortes.

No. 215,089.

Patented May 6, 1879.

Fig. 1.

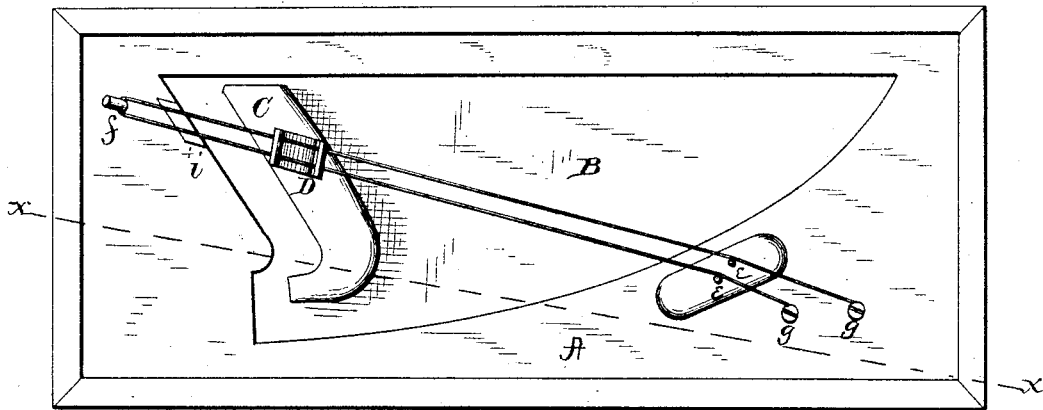


Fig. 2.

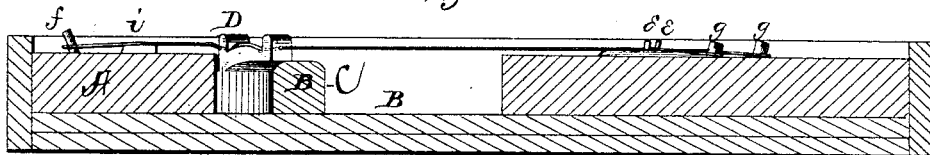
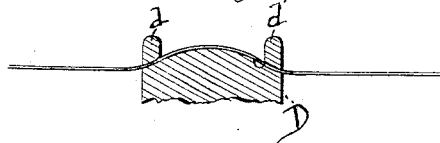


Fig. 3.



Witnesses.  
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Inventor.  
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# UNITED STATES PATENT OFFICE.

CHARLES W. BREWER, OF RACINE, WISCONSIN.

## IMPROVEMENT IN AGRAFFES FOR PIANO-FORTES.

Specification forming part of Letters Patent No. **215,089**, dated May 6, 1879; application filed November 18, 1878.

*To all whom it may concern:*

Be it known that I, CHARLES W. BREWER, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Piano-Forte String-Bridges; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an agraffe, or string-holding device, which is located upon the string-bridge of a piano-forte, in order to obtain a straight direct draft of the strings, and thereby lessen the intense downward pressure upon the sounding-board produced by the numerous strings, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a plan view of the string-frame, showing the location of my invention, with a suitable number of strings to illustrate its purpose. Fig. 2 is a vertical longitudinal section thereof through the line *xx*, and Fig. 3 a similar section of the agraffe detached.

A represents the ordinary frame, to which the strings of a piano are fastened, provided, as usual, with the hitch-pins *f*, pins *e e*, and tightening-screws or wrist-pins *g*. B is the sounding-board, upon which rests the bridge C, forming the foundation for the agraffe D, which is, indeed, but a finishing or auxiliary part of the string-bridge proper.

This agraffe D consists of a body having its upper face made rounding or convex, with upwardly-extending portions *d d'*, through which

are holes for the passage of the wires, starting at the angular junction of the convex surface and their inner walls, terminating at points somewhat below the said corners, and in the same horizontal plane as the other resting-places of the strings or wires.

It will be obvious that the strings, with this arrangement, have a direct straight draft from the raised portion *i* to the pins *ee*—that is, have no lateral deviation from a right line between these points—and thus allow of being put under an increased tension without imparting any twisting tendency or downward pressure to the string-bridge, which so often causes destruction to the sounding-board. This agraffe also performs that very important function of keeping the strings in place upon the bridge when undergoing extreme vibration occasioned by repeated strokes of the hammers, which, coming from below, lifts them off, causing an unpleasant jingling in the instrument.

This device may be constructed of wood, or may be cast of metal, either separate from the string-bridge or in one piece, but preferably separate.

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

An agraffe having a central convex surface and end projections, with string-passages arranged in a plane slightly below the plane of the studs and turning-screws, whereby the sounding-board is relieved from strain and has a free vibration, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of October, 1878.

CHARLES WILLIAM BREWER.

Witnesses:

ALANSON TILER,  
A. G. KNIGHT.