

C. F. T. STEINWAY.  
Piano-Forte Agraffe.

No. 204,109.

Patented May 21, 1878.

Fig. 1.

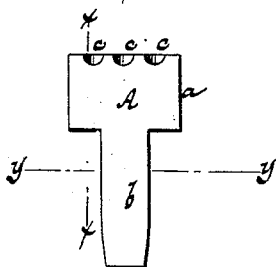


Fig. 2.

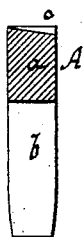


Fig. 3.



Witnesses  
Otto Schupland.  
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by  
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his attys

# UNITED STATES PATENT OFFICE.

CHRISTIAN F. T. STEINWAY, OF NEW YORK, N. Y.

## IMPROVEMENT IN PIANO-FORTE AGRAFFES.

Specification forming part of Letters Patent No. **204,109**, dated May 21, 1878; application filed March 1, 1878.

*To all whom it may concern:*

Be it known that I, CHRISTIAN FRIEDRICH THEODOR STEINWAY, of the city, county, and State of New York, have invented a new and useful Improvement in Agraffes for Piano-Fortes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a face view of one of my agraffes on an enlarged scale. Fig. 2 is a vertical section in the plane  $xx$ , Fig. 1. Fig. 3 is a horizontal section in the plane  $yy$ , Fig. 1.

Similar letters indicate corresponding parts.

This invention consists in an agraffe for piano-fortes cast or stamped out with a square stem, slightly tapering at its point, and with notches for retaining the strings in its face, so that by driving the square stems down into round holes bored for their reception in the agraffe-bar the agraffes are readily and firmly secured in the required position, and by the notches in their faces the strings are prevented from sliding laterally.

Agraffes for piano-fortes are usually made with round stems, which are provided with screw-threads, and secured in holes in the agraffe-bar, which have to be tapped for their reception. Furthermore, the agraffes are frequently provided with holes through which the strings pass, and the several operations requisite for preparing and inserting the agraffes require much time, and the manufacture of such agraffes is rendered very expensive. These disadvantages are obviated by my invention.

In the drawings, the letter A designates my agraffe, which is either cast or stamped out of metal, and which is provided with a flat head,  $a$ , and with a stem,  $b$ , the cross-section of which is square, as shown in Fig. 3, and which is slightly tapering at its end. The head is provided, in its top edge, with notches  $c$ , which are intended to retain the strings at the proper distance from each other.

In order to secure one of my agraffes in the agraffe-bar, I drill a hole in said agraffe-bar just large enough to receive the tapering end of the stem  $b$ , and then I place this end into said hole, and by one or more blows the agraffe is driven down, so that it is firmly retained in position. By this arrangement the labor of tapping the holes in the agraffe-bar is saved, and the agraffes can be cast or stamped ready for use, so that no further labor is required for their preparation.

What I claim as new, and desire to secure by Letters Patent, is—

An agraffe for piano-fortes cast or stamped out, provided with a flat notched head, and with a square stem slightly tapering at its point, substantially as shown and described.

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

C. F. THEODOR STEINWAY. [L. s.]

Witnesses:

W. HAUFF,  
E. F. KASTENHUBER.