No. 801,640. PATENTED OCT. 10, 1905.

C. P. BLINN.

PIANOFORTE AGRAFFE.

APPLICATION FILED JUNE 19, 1905.

Fig. 1.

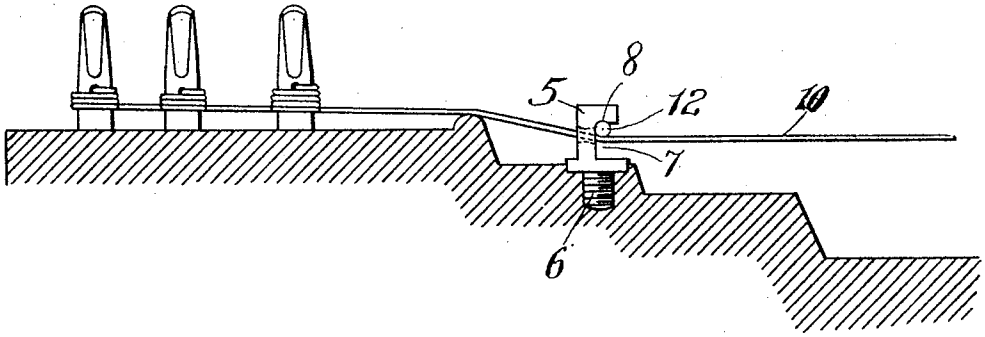



Fig. 3.

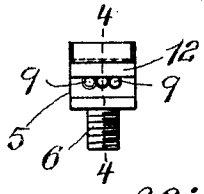



Fig. 2.

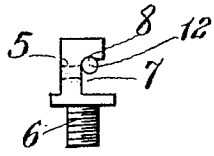
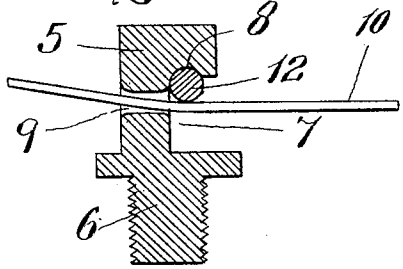



Fig. 4.




Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES P. BLINN, OF BOSTON, MASSACHUSETTS.

## PIANOFORTE-AGRAFFE.

No. 801,640. Specification of Letters Patent. Patented Oct. 10, 1905.

Application filed June 19, 1905. Serial No. 265,923.

*To all whom it may concern:*

Be it known that I, CHARLES P. BLINN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pianoforte-Agraffes, of which the following is a specification.

This invention has for its object to provide a pianoforte-agraffe adapted to support the string or strings engaged with it without liability of being indented by the said string or strings.

Ordinarily a pianoforte-agraffe, which is usually made of brass, is formed so that the string bears with considerable force against the metal of the agraffe, the result being that the agraffe is so indented by the vibrations of the string that an objectionable buzzing sound occurs at the agraffe when the string is vibrating. Moreover, the tension of the string is decreased by the indentation of the agraffe, so that it is thrown out of tune.

I overcome the above-recited objections by the improvement which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation showing my improved agraffe and a sectional view of a portion of the frame of a pianoforte. Figs. 2 and 3 represent elevations of the agraffe removed from the frame. Fig. 4 represents an enlarged section on line 4 4 of Fig. 3.

The same reference characters indicate the same parts in all the figures.

My improved agraffe comprises the body portion 5, having a screw-threaded shank 6 to engage a threaded socket formed for its reception in the frame of the pianoforte. In one side of the body of the agraffe is formed a recess 7, extending across the body, the upper portion of the agraffe projecting over the recess and being provided with a seat 8, which overhangs the recess 7.

The agraffe is provided with one or more string-orifices 9, three being shown in the present case. These orifices extend from the surface of the agraffe which forms the inner end of the recess 7 to the opposite side of the agraffe, as shown in Fig. 4. Each orifice 9 is made of considerably greater diameter than the string 10, which passes through the orifice.

12 represents a rest, which is a short piece of hard metal, preferably iron or steel, and is formed to closely fit the seat 8. The rest 12 is preferably of cylindrical form, and its diameter is such that a string bearing against its under side will be supported entirely by the rest and will exert no appreciable pressure upon the wall of the orifice 9 through which it passes. Preferably the string will be entirely out of contact with the wall of the orifice; but whether this is the case or not the support afforded by the rest will prevent the string from exerting sufficient pressure on the portion of the agraffe through which it passes to cause indentation of the relatively soft metal of the agraffe by the vibrations of the string, the agraffe being ordinarily made of brass.

The rest 12 is detachable from the agraffe and is held in the position shown in the drawings by the tension of the string, which presses the agraffe against the seat 8.

The described improvement prevents any liability of wear or indentation of the agraffe tending to vary the tension and tune of the string or cause a buzzing sound where the string passes through the agraffe.

It will be seen that the rest presents a smooth rounded surface of hard metal to the string which permits the string to render or move endwise more freely on the agraffe in turning than would be the case if the bearing of the string were on the brass body of the agraffe. Hence the turning of the string is effected more easily and satisfactorily than when the ordinary agraffe is employed. Moreover, when two or more strings are passed through each agraffe the rest insures a uniform height of the strings, whereas in the ordinary agraffe there is liable to be a slight variation in the height of the strings owing to the difficulty of drilling two or more holes at exactly the same height. Uniformity in the height of the strings is very desirable, as a slight variation will cause a correspond-

ing variation in the effect of the blows of the hammers on the strings.

I claim—

A pianoforte-agraffe having a recess in one side, the upper end of the recess forming a seat overhanging the recess, a string-aperture extending through the agraffe from the inner side of the recess and a rest formed as a separate piece held against the seat by the string tension, and preventing indenting contact between the string and the body of the agraffe.

In testimony whereof I have affixed my signature in presence of two witnesses.

CHARLES P. BLINN.

Witnesses:
C. F. BROWN,
E. BATCHELDER.