

(No Model.)

P. J. DUGGAN.
AGRAFFE FOR PIANOS.

No. 491,877.

Patented Feb. 14, 1893.

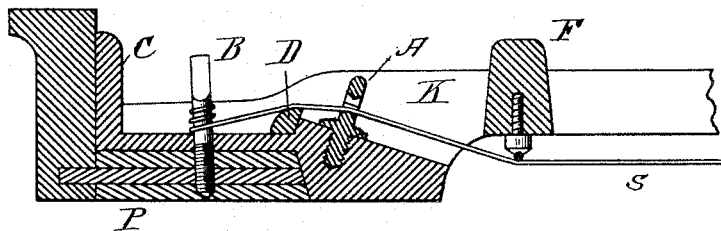


Fig. 1.

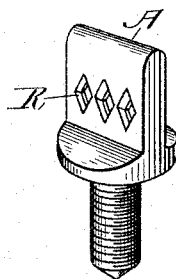


Fig. 2.

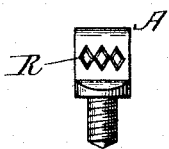


Fig. 3.

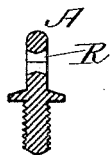


Fig. 4.

WITNESSES:

Frank G. Parker.
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PHILIP J. DUGGAN, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO PETER KRUMSCHIED, OF SAME PLACE.

AGRAFFE FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 491,877, dated February 14, 1893.

Application filed May 27, 1892. Serial No. 434,680. (No model.)

To all whom it may concern:

Be it known that I, PHILIP J. DUGGAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Agraffes for Pianos, of which the following, taken in connection with the accompanying drawings, is a specification.

The agraffe as usually made for pianos has round holes for the strings to pass through, and as these holes must necessarily be somewhat larger than the strings, a certain amount of vibration takes place in the hole itself, that is, the string in its vibration comes in contact with all points of the interior surface of the hole, striking with rapidity on to the interior surface of the hole, thus causing the peculiar disturbing sound termed "sandy."

The object of my invention is to so form the holes in the agraffe that the strings will not be allowed to vibrate about the interior surface of the holes. This object I attain by the device shown in the accompanying drawings, in which—

Figure 1 shows in cross-section a part of a piano plate and devices for connecting and holding the strings. Fig. 2 shows in perspective one of my improved agraffes, enlarged. Fig. 3 is a side elevation of one of my agraffes. Fig. 4 is a cross-vertical section through one of the agraffes.

In Fig. 1, I have shown in section the various parts of a piano forte that are more immediately connected with the agraffe; the object of this drawing is to illustrate the use and position of the agraffe in relation to the other parts.

In the drawings, C represents the metal plate or frame to which the strings are attached, K representing one of the bars of the plate.

B is a wrest pin, and P the wrest plank into which the pin is inserted.

D represents a felt cushion upon which the strings S rest.

The capodastro bar is represented by F.

The agraffe is shown in section at A.

The agraffe as improved by me, is shown in Figs. 2, 3 and 4; this agraffe in outward shape and style of construction is in no respect novel; the new feature of this agraffe is entirely in the shape of the string-holes R, that is, they are made diamond shape, as shown, and have beveled edges. The utility of this shape consists in the fact that the wire will always have two points of contact, so that its vibration, that is, its moving about inside of the hole, will be checked, and there will be none of that disagreeable "sandy" sound common to the round-holed agraffe.

I claim.

In a piano forte, an agraffe having diamond shaped beveled edged string holes, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 17th day of May, A. D. 1892.

PHILIP J. DUGGAN.

Witnesses:

FRANK G. PARKER,
WILLIAM EDSON.