

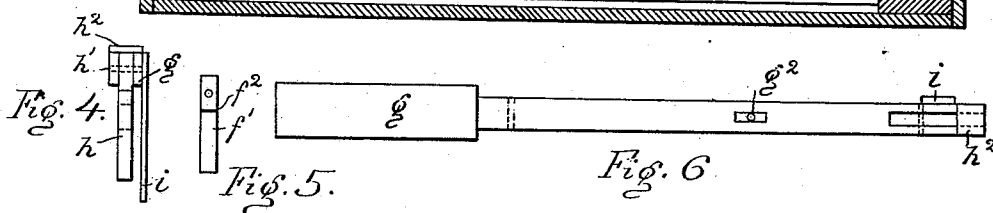
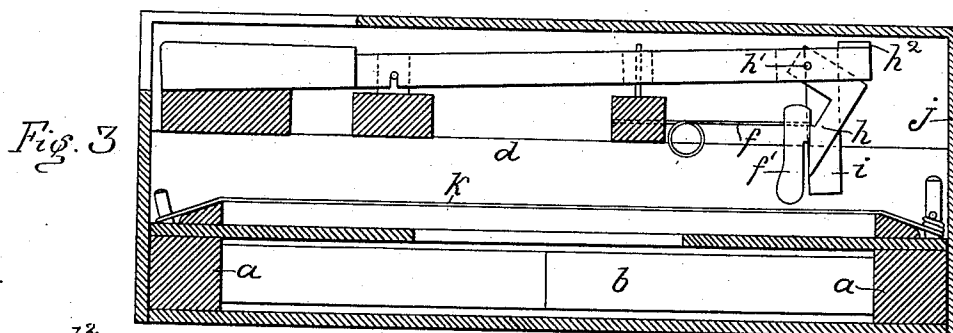
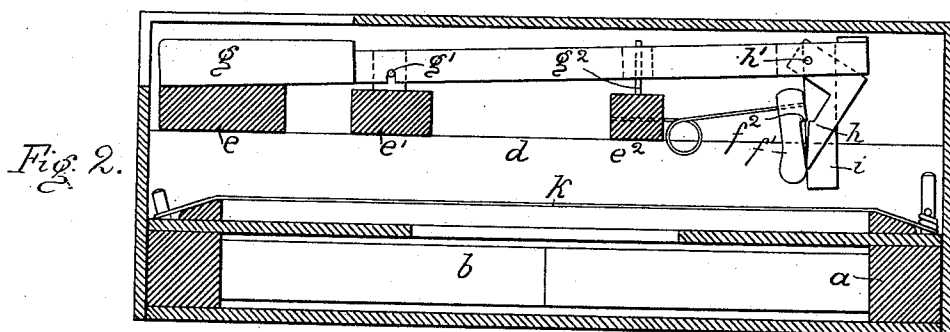
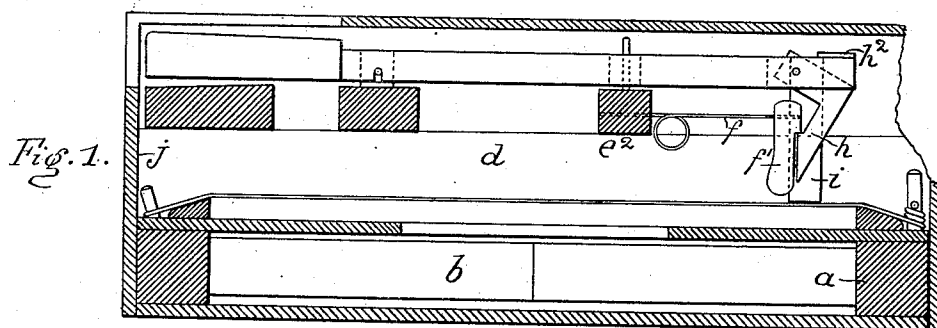
(No Model.)

A. J. OSSWALD.
PIANETTE.

3 Sheets—Sheet 1.

No. 468,606.

Patented Feb. 9, 1892.



Witnesses
Charles Kelley
Walter Wagner.

Inventor
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By his Attorney
Wm. Zimmerman

(No Model.)

3 Sheets—Sheet 2.

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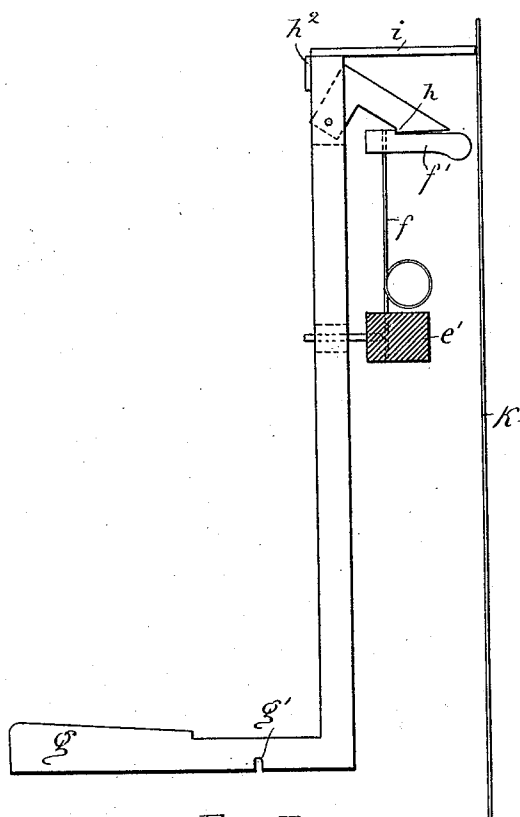


Fig. 7.

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3 Sheets—Sheet 3.

PIANETTE.

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Fig. 8.

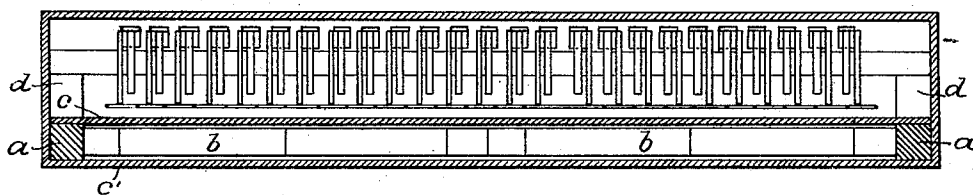
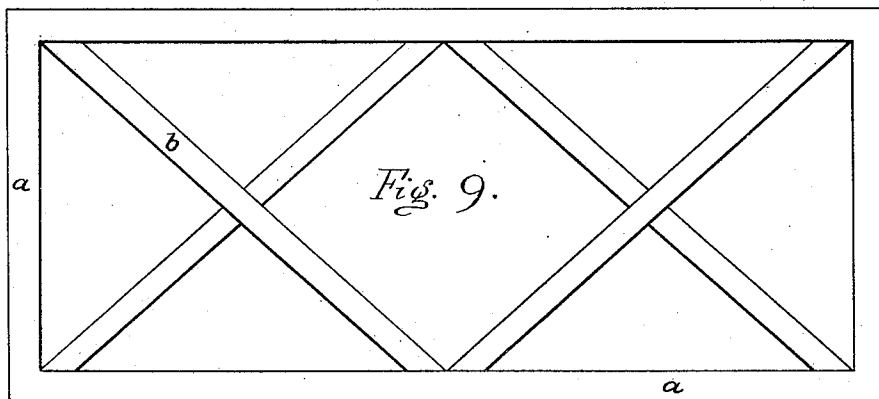
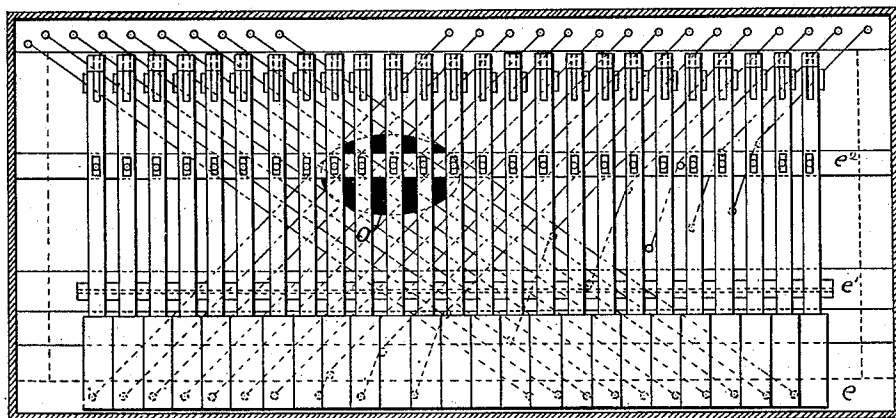


Fig. 10.

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UNITED STATES PATENT OFFICE.

ALFRED J. OSSWALD, OF CHICAGO, ILLINOIS.

PIANETTE.

SPECIFICATION forming part of Letters Patent No. 468,606, dated February 9, 1892.

Application filed January 3, 1891. Serial No. 376,678. (No model.)

To all whom it may concern:

Be it known that I, ALFRED J. OSSWALD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pianettes, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 shows a transverse vertical section of my new musical instrument or pianette with all the parts in their places and at rest. Fig. 2 shows the same view with the key depressed and the hammer raised and released just ready to strike. Fig. 3 shows the same view and all the parts in the same position as in Fig. 2, except the hammer at rest after it has struck the string. Fig. 4 shows the key with its hook and damper as seen when looking on its rear or farther end. Fig. 5 shows a hammer as seen when looking at it from its rear or farther side. Fig. 6 shows a key with its several parts in plan view. Fig. 7 shows a single string and action for an upright instrument after the construction of an upright piano, all the other figures showing a horizontal or box instrument. A part of the key is shown broken away. Fig. 8 shows my instrument in plan, it being cut by a horizontal plane above the keys, the strings shown under the keys being shown in broken lines and between them in full lines. Fig. 9 shows the interior bracing of the resonance-chamber. Fig. 10 shows a sectional view of the instrument as seen from the rear when cut by a vertical plane just beyond the rear end of the keys.

Like letters refer to like parts.

The object of my invention is to produce an instrument having the tone or quality of sound of a zither, but which is to be played like a piano and be like it in every other important feature, giving a large volume of sound, but be of far greater simplicity of construction and far less in cost and size than a piano; and to attain said desirable ends I construct my new and improved instrument, which may most appropriately be called a "pianette," in substantially the following manner, namely:

I make a frame *a*, of wood, of suitable size and brace it with braces *b*, preferably crossed, as here shown, and of a width or height so as to

leave a free space between them and the top and bottom boards *c* and *c'*. This said construction is to give strength to the box and resonance and force to the tones of the strings, which are stretched as closely as possible to said box, and which is provided with an opening *o* for the purpose of emitting and still further strengthening the volume of sound. The said strings are, with the exception of the higher treble strings, secured to the frame of said resonance-chamber. The latter strings are secured at one end to the board *c* both for the purpose of increasing the volume of sound of said strings through the vibration of said board and so as to keep them in place with the other strings, keys, and dampers. This part of the construction of my pianette is somewhat after that of the zither, and will hence necessarily give the same quality of tone as that instrument. Blocks *d* are laid across the ends of said box, upon which rest the ends of longitudinal bars *e e' e''*, of which the former acts as a check to the downward movement of the keys. The bar *e'* supports the fulcrum of the keys, while the bar *e''* holds the hammer-handle *f* or springs on the outer end of which the hammer *f'* is held. An action is applied to the strings from the top when they are horizontal and to their front when they are vertical, as shown in the latter case in Fig. 7. The resonance-chamber is not shown in the latter case, but would be located, relative to the action, in precisely the same place as shown in the other figures.

To make the action as simple and practical as possible, I make the hammer-handles of spring-wire, which may have a coil of one or more turns near the bar *e''*, as shown, and fasten them into said bar *e''*, and to the outer end of said handle I fasten a hammer *f'*, provided with a notch or shoulder *f''* on its outer face. The keys *g* are fulcrumed on the bar *e'* on fulcrums *g'*, and guided at some point distant from the fulcrum, as near their outer ends, by a stud *g''* in the bar *e''*, which plays freely in a slot through the key, and the key rests directly on said bar *e''*. Said guide *g'* may, however, be arranged in any other suitable place and varied in construction according to well-known principles. The outer end of the key is slotted and receives in such slot a hook *h*, having a shank formed into an

angle, practically a right angle, which said hook is hung near the upper or outer end of said shank on a pin h' , passing through it and the key, and upon which it plays freely in said slot. Across the upper and outer end of said slot in the key is secured a stop h^2 to arrest the motion of the hook, and on one side of the key is attached a damper i , which said damper may also be attached to the end of the key and be of any desired width sufficient to rest on the string struck by its hammer, and in that case the stop h^2 across the top of the key may also be dispensed with, as the said damper will then perform both offices. In Fig. 7 the damper is shown on the end of the key, together with the stop h^2 , the latter in said construction being, as stated, unnecessary in that particular construction.

The instrument is inclosed in a suitable case j , with lid, &c., similar in style to the well-known horizontal or box and upright cases for pianos.

The strings of the instrument are here shown crossed, which is the preferred construction for horizontal instruments, about one-half of them running diagonally across the instrument in one direction and the other half in the opposite direction, as is shown in the drawings, and at an angle of about forty-five degrees to the keys. By means of this arrangement of the strings the structure upon which the strings are stretched becomes rigidly braced. This practically constitutes all the necessary description of my new and improved pianette to enable others skilled in like arts to make and use it.

The operation, also, is fairly understood; but it may be further said that by pressing upon the keys the handle f of the hammer bends as the outer end of the key rises, and at the same time the lower end of the hammer is thrown outward, it turning on a much shorter radius than that of the key. The points of the hammer and hook thus come into contact, while the parts above them separate, as clearly shown in Fig. 2, until the hook h is released from the shoulder f^2 , when the hammer will strike its string. The vibration of the hammer is checked by the face of the hook, which rests against the rear face of the hammer, as shown in Fig. 3, so that the hammer never strikes more than one blow on the string. With the action and other parts thus arranged and the keys arranged as on a piano

and like instruments this instrument can be played as any other like keyed instrument, and, while its quality of tone is like that of the zither, it approximates in volume to that of the piano, while in size and weight it remains so diminutive that it may readily be carried about with one hand by an appropriately-placed handle. It may be further observed that by this arrangement of the several parts, and particularly the action, the minimum of space is required both for the height as well as the width of the case or box instrument, all of which is also true of the upright instrument, although its relative dimensions do not become so compact in the upright form.

What I claim is—

1. In a pianette, the combination, with a spring-actuated hammer, of a key provided with a damper, and means to catch, lift, and release said hammer, substantially as specified.

2. In a pianette, the combination, with the strings, of a spring-actuated and shouldered hammer, and key provided with a hook adapted to actuate said hammer, substantially as specified.

3. In a pianette, the combination, with a shouldered and spring-actuated hammer, of a key provided with a jointed hook adapted to actuate said hammer, substantially as specified.

4. In a pianette, the combination, with a string, of a spring-actuated and shouldered hammer, and a key provided with a damper, and a pivoted hook adapted to actuate said hammer, substantially as specified.

5. In a pianette, the combination, with a resonance-chamber having strings attached thereto, of hammers and keys to vibrate said strings, all of said parts being within the area of said resonance-chamber, substantially as specified.

6. In a pianette, the combination, with a resonance-chamber and crossed vibrating strings fixed thereon, of an action set at an angle substantially dividing the angle made by said crossed strings, wherein the key and hammer are in a plane parallel to the plane of the damper, which is attached to the side of the key, substantially as specified.

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