(No Model.) 2 Sheets—Sheet 1.

S. THOMPSON & E. W. SHACKELL.

OCTAVE COUPLER FOR PIANO FORTES.

No. 455,550. Patented July 7, 1891.

FIG. 2.

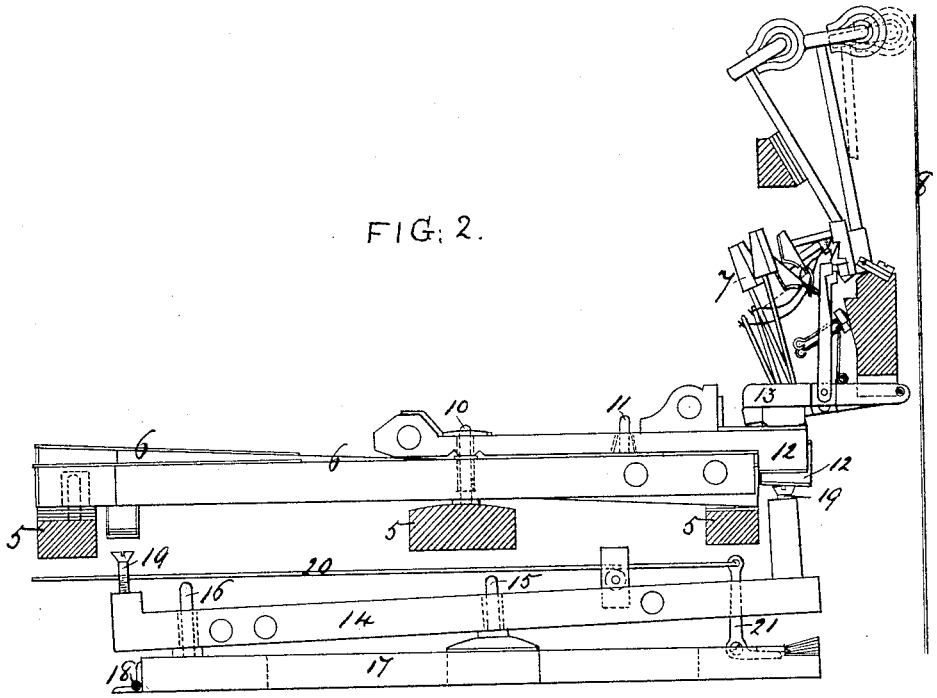
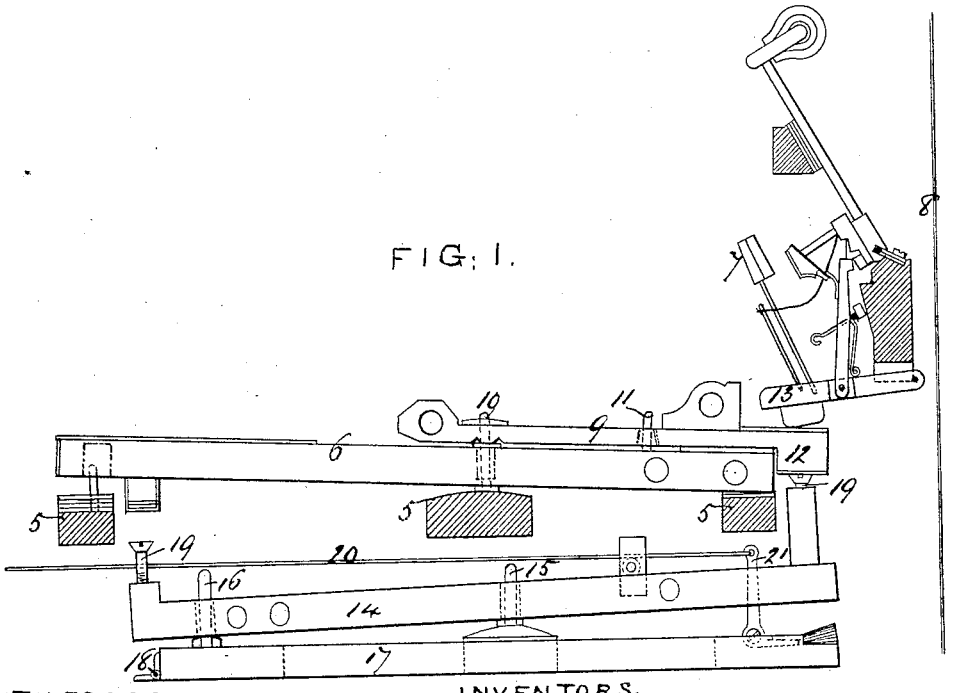


FIG. 1.



WITNESSES.
A. Rawlins
L. Keshaw.

INVENTORS.
Samuel Thompson.
Edward William Shackell.
By Charles Aubrey Day their Attorney.

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FIG. 4.

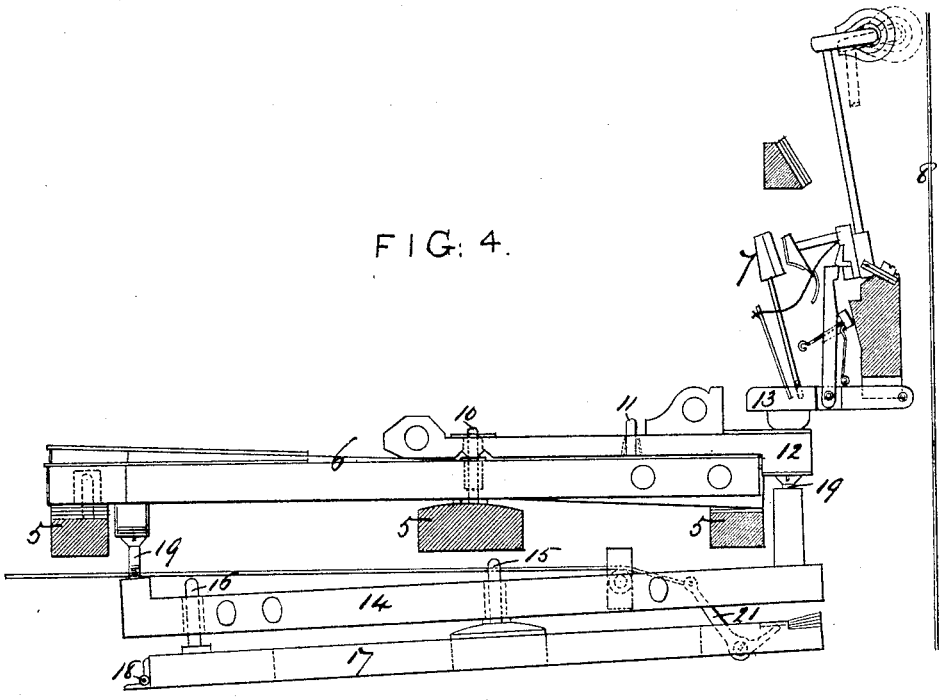
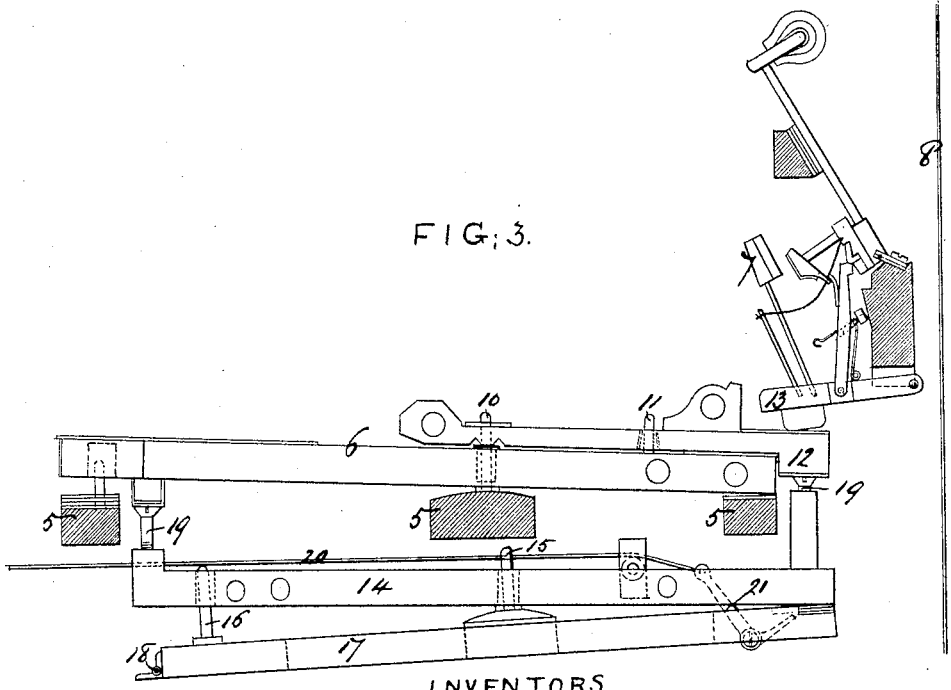


FIG. 3.



WITNESSES.
A. Rawlins
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UNITED STATES PATENT OFFICE.

SAMUEL THOMPSON, OF SWANSEA, AND EDWARD WILLIAM SHACKELL, OF CARDIFF, ASSIGNORS TO THOMPSON & SHACKELL, LIMITED, OF CARDIFF, ENGLAND.

OCTAVE-COUPLER FOR PIANO-FORTES.

SPECIFICATION forming part of Letters Patent No. 455,550, dated July 7, 1891.

Application filed January 14, 1889. Serial No. 296,362. (No model.) Patented in England June 18, 1888, No. 8,889.

To all whom it may concern:

Be it known that we, SAMUEL THOMPSON, of Swansea, Glamorganshire, Wales, and EDWARD WILLIAM SHACKELL, of Cardiff, Glamorganshire, Wales, subjects of the Queen of Great Britain and Ireland, have invented a certain Improved Octave-Coupler for Piano-Fortes, (for which we have obtained British Letters Patent No. 8,889, dated June 18, 1888,) of which the following is a specification.

This invention relates to an improved octave-coupler for piano-fortes for enabling a performer to sound octave notes at will by striking one key of the octave.

The invention is applicable both to upright and horizontal piano-fortes.

The accompanying drawings illustrate transverse sectional elevations of the key-board of an upright piano adapted with the present improvements.

In Figures 1 and 2 the improved coupler is represented as out of action, so that should the key of either note of the octave be played upon only its corresponding note will be sounded, and in Figs. 3 and 4 the coupler is represented as in action, so that should the lowest key of the octave in the treble or the highest key thereof in the bass be struck it will cause the sounding of both notes of the octave.

5 represents usual parts of the key-board.

6 represents a usual set of keys, and 7 represents a usual hopper-action, the actuation of which by the keys causes the sounding of the notes on the wires 8.

In accordance with the present improvements there is combined with each key 6 an additional half-key 9, which is centered upon the pin 10 of the key 6 and is guided by a pin 11, projecting from its top side, and is made with a part 12 overhanging the end of the key. The hopper-lever 13 rests upon the end 12 of the half-key 9, which normally acts together with the key by which it is carried as one key, so that the striking of such key simply causes the striking of the appropriate note. (*Vide* Fig. 2.)

14 represents a coupling-lever, which is centered on a pin 15 and is guided by a pin 16, rising from a frame 17, hinged at 18 to a fixed part of the key-board. The lever 14 extends from under the fore end of one key of the octave in a diagonal direction to under the rear projecting end 12 of the half-key of the octave-key. Each end of the coupling-lever 14 is provided with an upwardly-extending adjustable screw 19 or equivalent means of obtaining adjustability. The coupling-lever 14 normally occupies the position represented in Figs. 1 and 2, in which the striking of the key would not operate it, so that only the appropriate note will be struck; but when it is required to sound an octave, while only playing upon one note thereof, the coupler is raised to its operative position (*vide* Fig. 3) by causing the frame 17 to assume the position represented in such figure by a connected stop or pull 20 and bell-crank lever 21 or by an octave pedal, so that when the leading key of the octave is struck it strikes its own note through or by means of its own half-key and hopper-action, and also causes the octave note to be struck through or by means of the coupling-lever and the half-key and hopper-action of the octave-key. (*Vide* Fig. 4.) As the operating ends of the coupling-lever are so arranged in such improved arrangement as that they have a vertical movement immediately under the key and half-key, respectively, in being brought into operation they may be brought in action at any time required irrespective of whether the key is at the time depressed or in its normal position.

The herein-described improved arrangement may be applied to each pair of keys in the treble and bass, respectively, which it is desired to couple in octave, and may also be applied with equal advantage to pianos fitted with other forms of action than that represented on the accompanying drawings.

We claim—

In combination, in an octave-coupler for piano-fortes, a pair of octave-keys 6, a pair of overhanging half-keys 9, respectively mounted on such keys and centered therewith on common center pins 10, a diagonally-arranged under lever 14, formed with vertically-adjustable ends 19, respectively ar-

ranged under the fore end of the one key 6 and under the rear overhanging end of the half-key 9 of the octave-key 6, and a hinged frame 17, fitted with pins respectively centering and guiding the lever 14, and means for vertically raising the frame 17 and lever 14 into position for causing the octave to be struck by both half-keys when the one key 6 is depressed, as set forth.

In witness whereof we hereunto set our hands in presence of two witnesses.

SAMUEL THOMPSON.
EDWARD WILLIAM SHACKELL.

Witnesses:
G. C. DOWNING,
Solicitor and Notary Public, Cardiff.
WALTER SCOTT,
Solicitor, Cardiff.