

981,826.

Fig-3-

Fig-1-

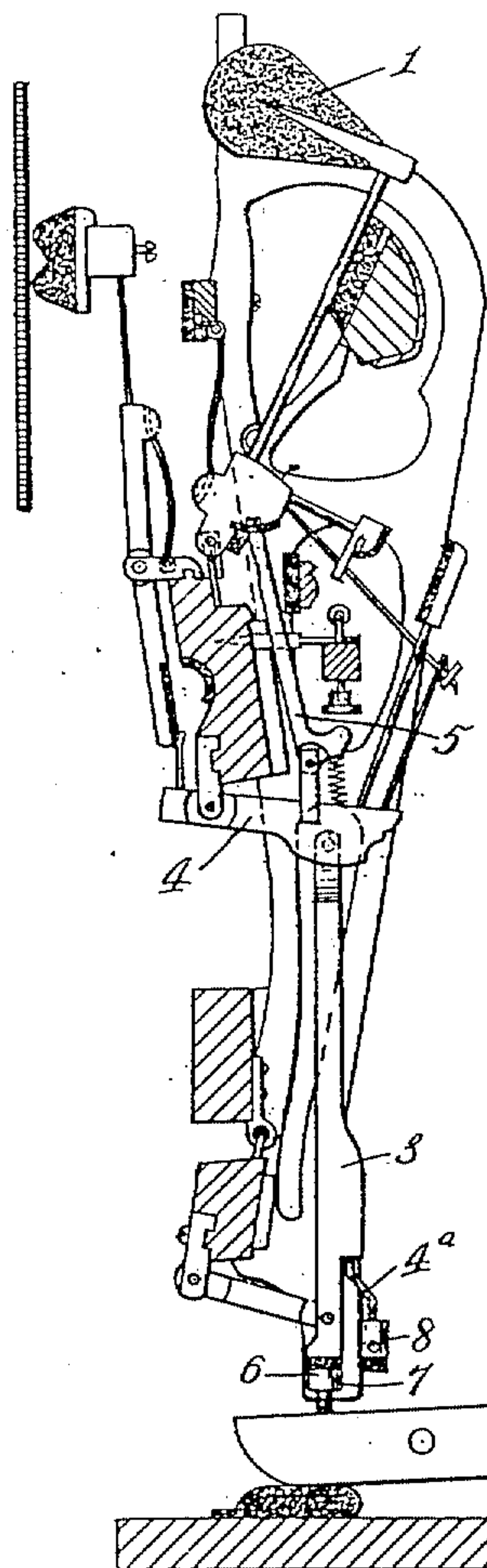


Fig-2-

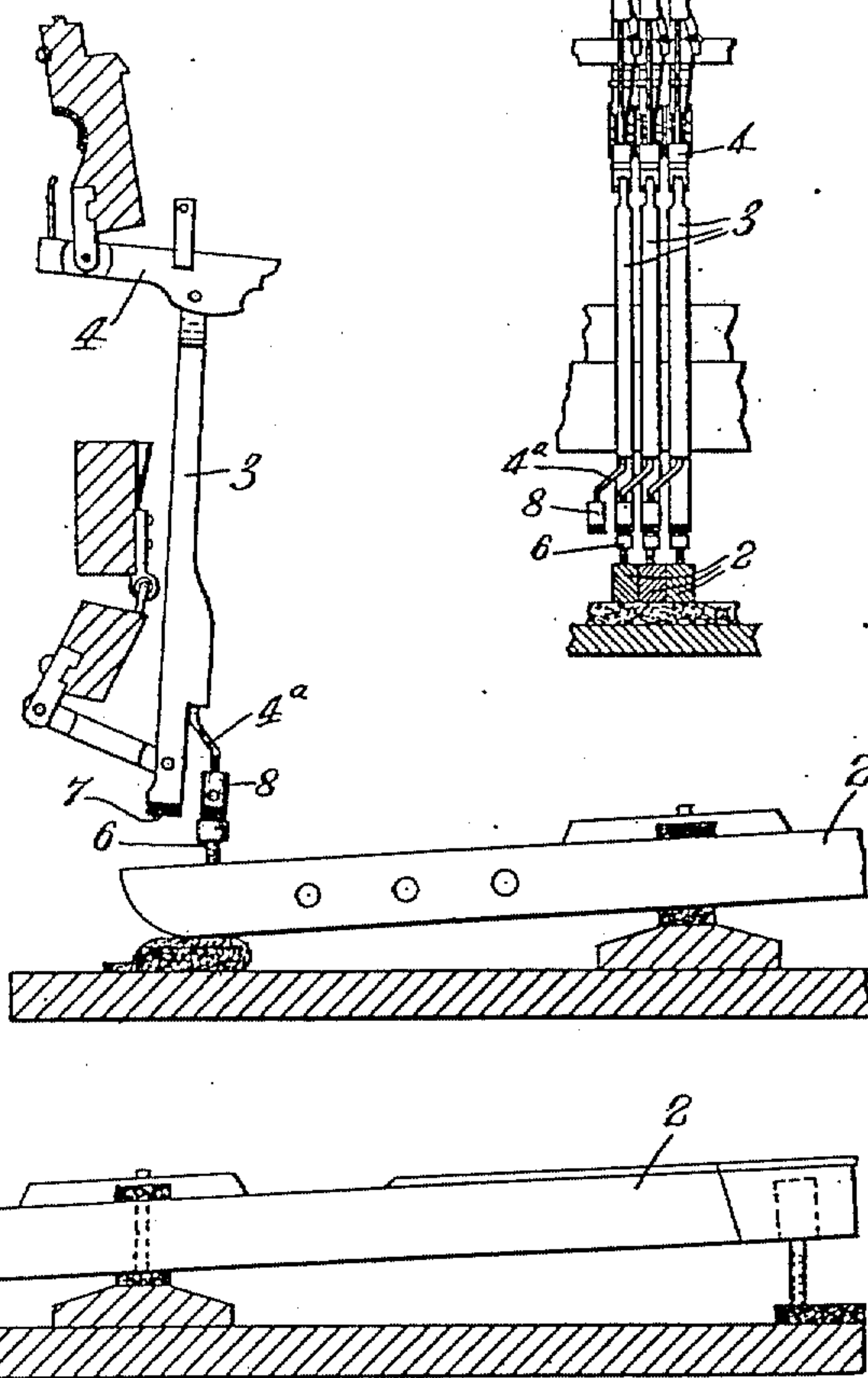
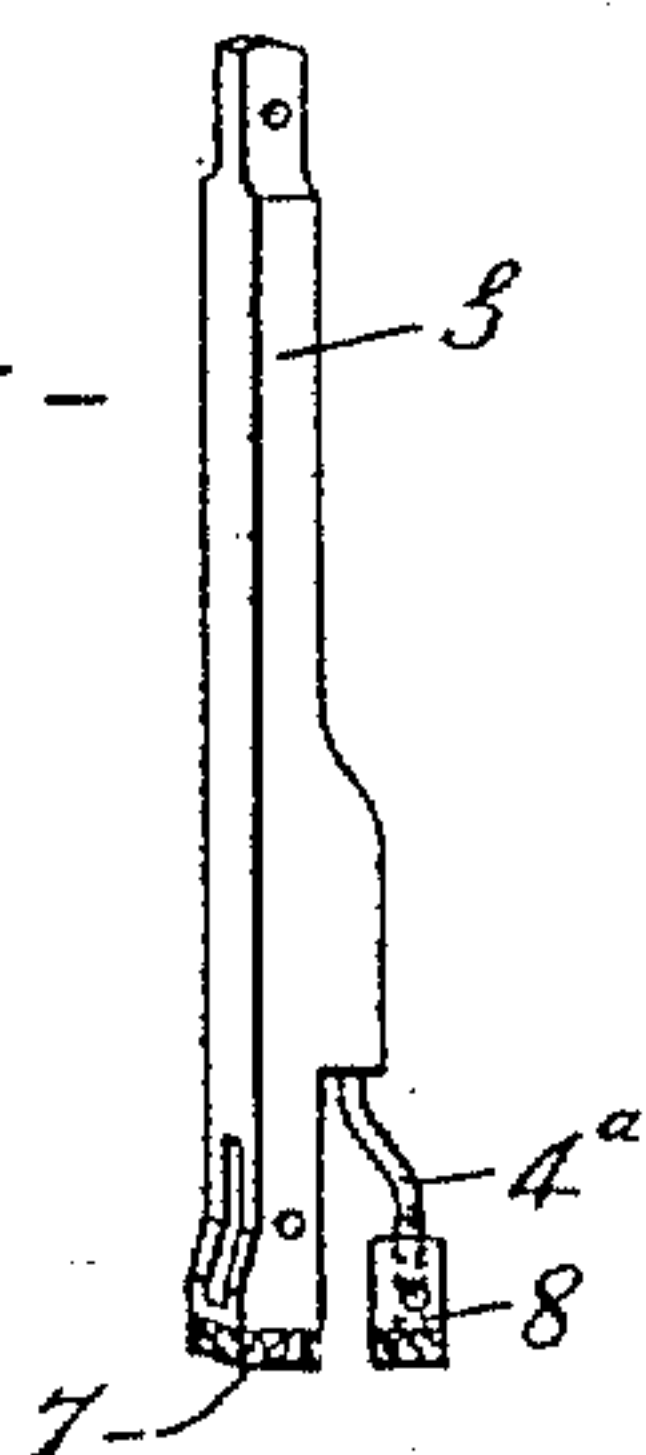


Fig 4.



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UNITED STATES PATENT OFFICE.

WILLIAM C. VOUGH, OF WATERLOO, NEW YORK, ASSIGNOR TO VOUGH PIANO COMPANY, OF WATERLOO, NEW YORK, A CORPORATION OF NEW YORK.

TRANSPOSING MEANS FOR PIANO-ACTIONS.

981,826.

Specification of Letters Patent.

Patented Jan. 17, 1911.

Application filed May 17, 1909. Serial No. 496,480.

To all whom it may concern:

Be it known that I, WILLIAM C. VOUGH, of the city of Waterloo, in the county of Seneca and State of New York, have invented a certain new and useful Transposing Means for Piano-Actions, of which the following is a specification.

My invention has for its object the production of transposing means for piano actions by which the keys of the piano, in order to change the pitch, are caused to coact with actions other than those with which they normally coact; and it consists in the combinations and constructions hereinafter set forth and claimed.

In describing this invention reference is had to the accompanying drawing in which like characters designate corresponding parts in all the views.

Figure 1 is a side elevation of my piano-action, the parts thereof being shown in their positions assumed when the pitch is normal, and contiguous parts of a piano being shown in section. Fig. 2 is a view of parts seen in Fig. 1, showing the shiftable parts of this piano-action in their positions assumed when the pitch is raised. Fig. 3 is a front elevation, partly in section, of a number of units of my piano-action, contiguous parts of the piano being also shown. Fig. 4 is a detail view, partly in section, of the abstract or sticker.

1 are hammers, and 2 are keys corresponding in number to the hammers.

3, 4 and 5 are power-transmitting elements of a piano-action unit, said elements being here shown as the abstract or sticker, the wippen and the jack, respectively.

Each key is provided with an adjustable part as a capstan screw 6 for normally engaging, in the ordinary manner, a face 7 at the lower end of the corresponding element or abstract 3, and each abstract 3 is formed with a branch member 4^a having its end offset from said abstract and overhanging the key of the next unit, this branch being provided with a member 8 adjustable lengthwise thereof toward and from the key of the next unit, the adjustable member 8 being normally out of engagement with the adjustable part or capstan screw 6 of the key of the next unit. The lower ends of the abstracts are shiftable lengthwise of the keys for carrying their engaging faces 7 out of their normal position and carrying the members 8

into engagement with the capstan screws 6 of the keys of the next units. The branches 4^a of the abstracts are usually formed of wire and the ends thereof are preferably threaded; and the adjustable members 8 are here shown as buttons or nuts, turning on the threaded ends of said branches.

As will be understood by those skilled in the art, the capstan screw 6 of each key is adjusted to most efficiently operate the corresponding unit of the piano-action and the capstan screws of the various keys have different adjustments, so that when the pitch of the piano is changed by shifting the members 8 into engagement with the capstan screws 6 of the keys of the next piano-action units, such capstan screws 6 may not be properly adjusted to the piano-action units which they are now in position to operate. Therefore in order to bring about a most efficient coöperation of the capstan screws 6 with two or more units, the adjustable members 8, which are movable into engagement with such capstan screws 6, are capable of a lengthwise adjustment. Thus the capstan screws 6 can be adjusted to operate the piano-actions which they are normally designed to operate, and the members 8 may be adjusted to the capstan screws of the keys which they engage when the pitch is changed.

What I claim is:—

1. In a piano action, a plurality of hammers, a key for actuating the hammers singly, the key having an adjustable part and power-transmitting elements connected respectively to the hammers, one of said elements having an engaging face for normally coacting with the adjustable part of the key, and the other of said elements being provided with a branch member and a member carried by the branch member for engaging the adjustable part of the key, the last-mentioned member being normally out of engagement with said adjustable part of the key, and one of said members being adjustable relatively to the adjustable part of the key in a direction lengthwise of the branch member, and said elements being shiftable relatively to the key for carrying said face out of its normal position and for carrying the branch member into position to coact with said adjustable part of the key, substantially as and for the purpose specified.

2. In a piano action, a plurality of units

each including a hammer, a key and power-transmitting means between the hammer and the key, each key having an adjustable part, and the power-transmitting means of each unit comprising an element having a face for normally engaging said part of the corresponding key, and each of said elements being provided with a branch member overhanging the key of the next piano action unit, and a member carried by the branch member for engaging the adjustable part of the key of the next piano action unit, and being normally out of engagement therewith, one of said members being adjustable, relatively to the adjustable part of the next key in a direction lengthwise of the branch member and said elements being shiftable relatively to the keys for carrying the engaging faces of said elements out of their normal positions, and for carrying the branch members into position to coact with the adjustable parts of the keys of the next piano action units, substantially as and for the purpose described.

3. In a piano action, a plurality of units each including a hammer, a key, and power-transmitting means between the hammer and the key, each key having an adjustable part and the power-transmitting means of each unit comprising an element having a face for normally engaging said part of the corresponding key, and each of said elements being provided with a branch overhanging the key of the next piano action unit, and a member carried by the branch for engaging the adjustable part of the key of the next piano action unit and being normally out of engagement therewith, said member being adjustable lengthwise of the branch and said elements being shiftable relatively to the keys for carrying the engaging faces of said elements out of their normal positions and for carrying the branch members into position to coact with the adjustable parts of the keys of the next piano action units, substantially as and for the purpose set forth.

4. In a piano-action, a plurality of hammers, a key for actuating the hammers singly, the key having an adjustable part, and power-transmitting elements connected, respectively, to the hammers, one of said elements having an engaging face for normally coacting with the adjustable part of the key, and the other of said elements being provided with a branch formed of wire and having a threaded end, and a member for engaging the adjustable part of the key, turning on the threaded end of said branch, said member being normally out of engagement with said adjustable part of the key, and said elements being shiftable relatively

to the key for carrying said face out of its normal position and for carrying said member into engagement with said part, substantially as and for the purpose set forth.

5. A piano-action comprising a plurality of units, each including a hammer, a key, and power-transmitting means between the hammer and the key, each key having an adjustable part, and the power-transmitting means of each unit comprising an element having a face for normally engaging the adjustable part of the corresponding key, each of said elements being provided with a branch formed of wire and having its end overhanging the key of the next piano-action unit and provided with a member for engaging the adjustable part of said key, said member being adjustable toward and from said key and being normally out of position to engage the adjustable part thereof, and said elements being shiftable relatively to the keys for carrying the engaging faces of said elements out of their normal positions and for carrying said members into engagement with the adjustable parts of the keys of the next piano-action units, substantially as and for the purpose described.

6. A piano-action comprising a plurality of units, each including a hammer, a key, and power-transmitting means between the hammer and the key, each key having a capstan screw, and the power-transmitting means of each unit comprising an element having a face for normally engaging the capstan screw of the corresponding key, each of said elements being provided with a branch formed of wire and having its end threaded and overhanging the key of the next piano-action unit, the branch being provided with a nut turning on the threaded end thereof for engaging the capstan screw of the key of said next piano-action unit, and being normally out of engagement therewith, and said elements being shiftable lengthwise of the keys for carrying the engaging faces of said elements out of their normal positions and for carrying their nuts into engagement with the capstan screws of the keys of the next piano-action units, substantially as and for the purpose specified.

In testimony whereof, I have hereunto signed my name in the presence of two attesting witnesses, at Waterloo, in the county of Seneca, in the State of New York, this 21st day of April, 1909.

WILLIAM C. VOUGH.

Witnesses:

CILAS. G. REID,
JOHN E. BECKER.