

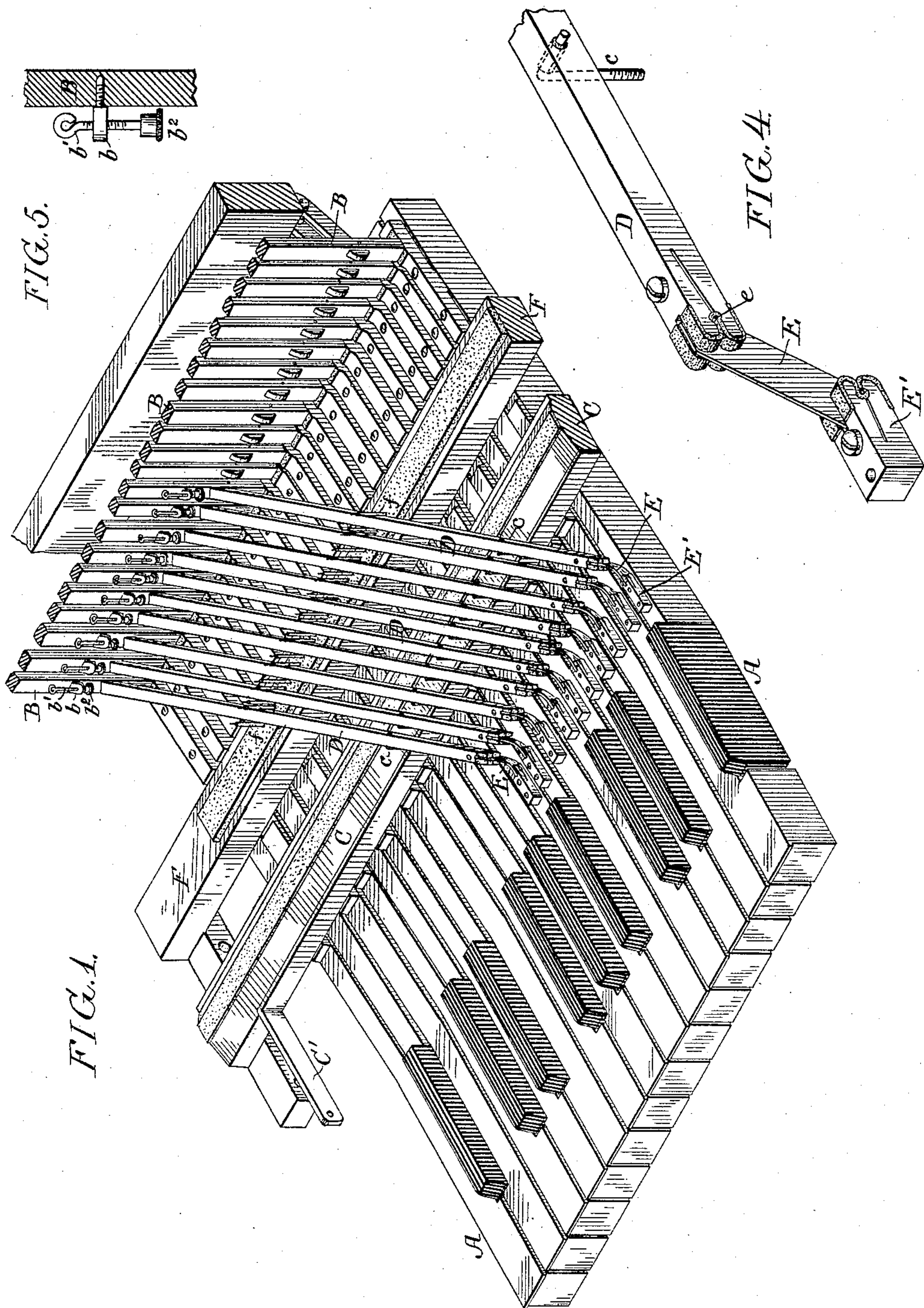
(No Model.)

2 Sheets—Sheet 1.

P. WUEST, Jr.
PIANO KEY COUPLER.

No. 486,317.

Patented Nov. 15, 1892.



Witnesses:
R. Schlicher
Alex. Barkoff

Inventor:
Philip Wuest, Jr.
by his Attorneys
Howson & Howson

(No Model.)

2 Sheets—Sheet 2.

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FIG. 3.

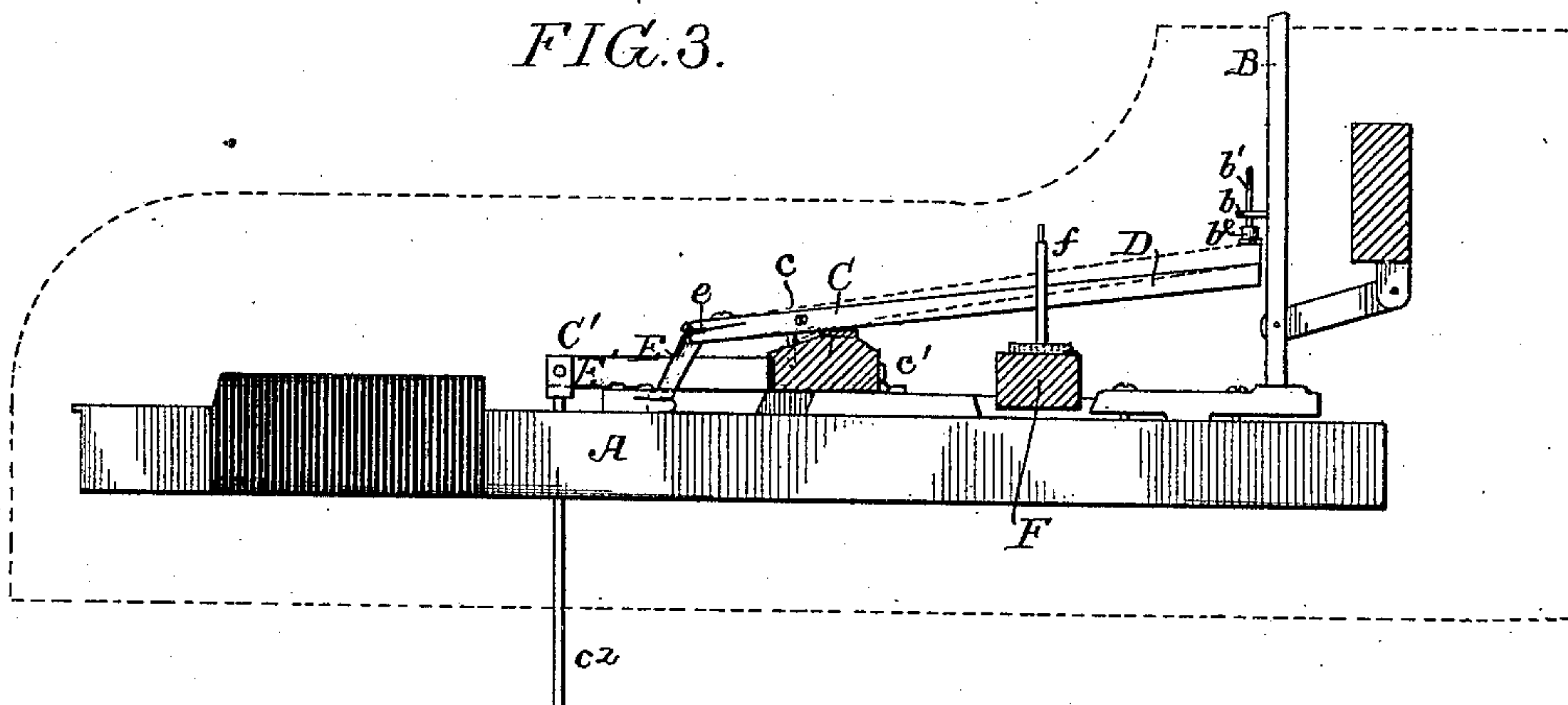
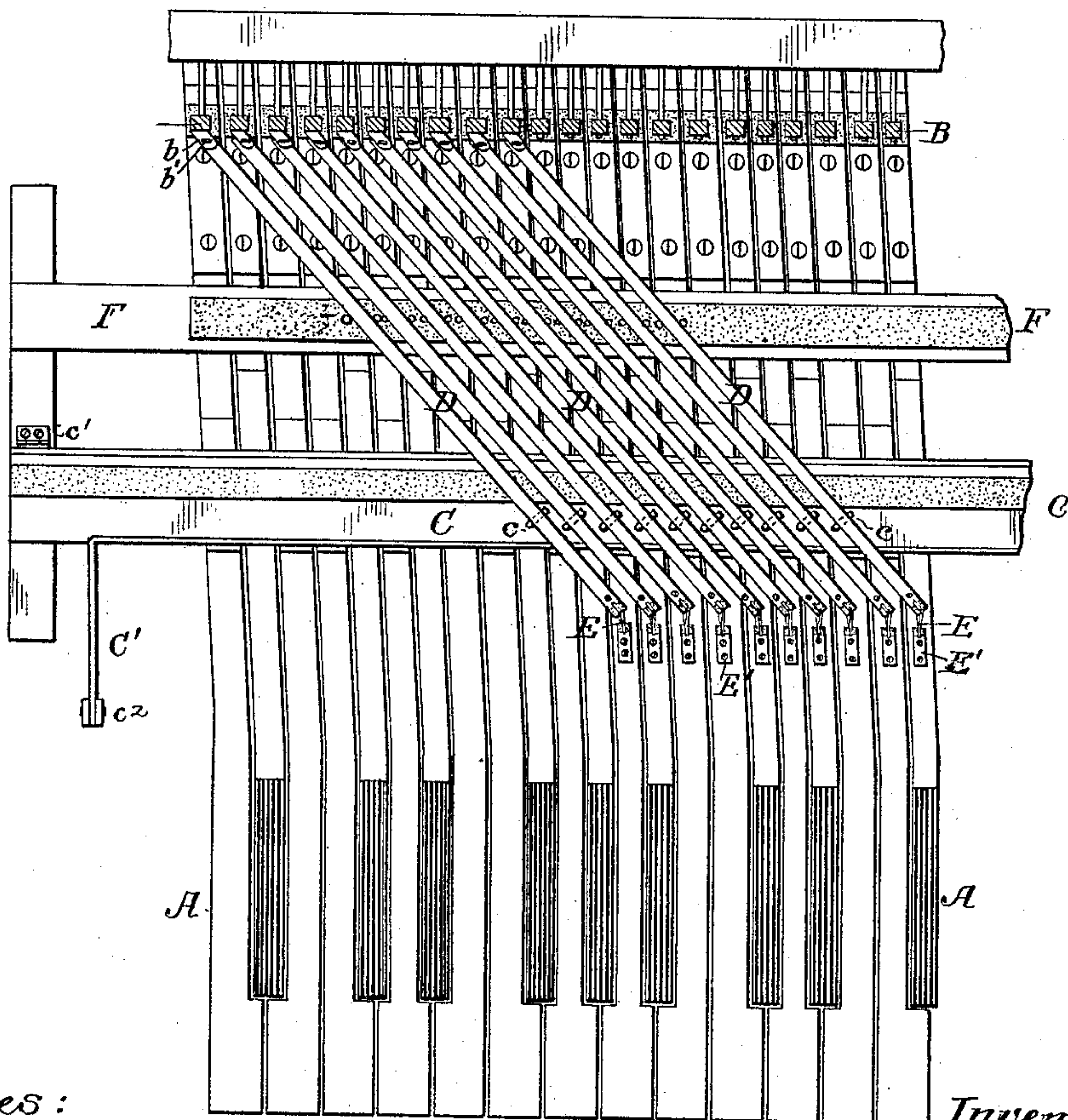


FIG. 2.



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UNITED STATES PATENT OFFICE.

PHILIP WUEST, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO CHRISTOPHER J. HEPPE AND FLORENCE J. HEPPE, OF SAME PLACE.

PIANO-KEY COUPLER.

SPECIFICATION forming part of Letters Patent No. 486,317, dated November 15, 1892.

Application filed June 4 1892. Serial No. 435,501. (No model.)

To all whom it may concern:

Be it known that I, PHILIP WUEST, Jr., a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improved Piano-Key Coupler, of which the following is a specification.

The object of my invention is to construct a piano-key coupler which will be simple in construction, effective in its action, and which will only couple a single octave. The mechanism is applicable to any of the ordinary pianos, but is especially applicable to upright pianos, the devices being placed above the keys, which makes it readily accessible at all times, and it is so constructed that it can be placed in an ordinary piano without dismantling the same, as fully described hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of sufficient of a keyboard of a piano to illustrate my improved coupler. Fig. 2 is a plan view. Fig. 3 is a sectional view, and Figs. 4 and 5 are views of details of the invention.

A are the keys of the piano, of the ordinary form, pivoted in the usual manner, and extending to a point under the vertical rods B of the piano-action. This action is of any of the ordinary constructions. I would state here that the vertical movement of any of the rods B will cause the hammers to strike their respective strings.

Resting on the cross-bar C, preferably extending the full length of the piano, is a series of coupling-levers D, mounted directly over the keys, and each coupling-lever is connected to its respective key through the medium of a link E. This link is hung to a pin e, which is mounted in the split end of the lever D, the upper end of the link resting in a slot in the end of the lever. The split portion is preferably bushed with felt or other suitable material, so that the pin, while it may have free action, is mounted in a noiseless bearing. The lower end of the link is secured to a bracket E' in substantially the same manner, the said bracket being secured to the key, as clearly shown in the drawings.

Each lever is mounted on a pivot-pin c on the bar C. These pivot-pins are L-shaped and have screw-threaded tangs, which are screwed into the bar, the pivot portion of each

pin being turned to the proper angle for its lever. The levers D are also guided by pins f on the bar F, so as to keep the levers in their respective positions, but to allow them to freely rock. The levers are arranged at an angle, as shown, and extend to the upright rods B of the octave next below or next above, and on each vertical rod is mounted a bracket b, (shown in Fig. 5,) provided with a regulating-screw b', having in the present instance at its lower end a felt button b², against which the end of the lever may strike, thus making the action noiseless, and the screw can be so adjusted as to enable the operator to give the proper touch to the coupled hammer. The bar C is pivoted at c' to the frame of the piano or to a bracket on each side of the piano and is provided with an arm C', which is connected to a bar c², attached to a pedal or knee lever. The bar C is so arranged that when it is in its normal position the outer ends of the coupling-levers D are sufficiently below the regulating-screws on the rods B as to prevent them coming in contact therewith when any of the keys are depressed, so that the coupling is thrown out of action; but when it is required that the coupling be thrown into action the pedal or knee lever is simply moved, throwing the bar up and carrying with it the outer ends of the levers, raising them to a position directly under their respective screws and in such position that when the operator strikes a key the coupling-lever of that key will also lift one of the bars B and throw the hammer of that bar so as to strike its string, which will be one octave below or above the key struck by the performer, so that two strings will be struck simultaneously; but it will be noticed that the device is so arranged that only two keys will be coupled and not the whole series below or above the key depressed by the performer, as is the case with most couplers now in common use. It will be noticed that each coupling-lever is entirely independent of the rod or key upon which it operates. Therefore when thrown into position to operate it simply acts upon that one rod of the piano-action.

I have shown in the drawings a number of bass-keys coupled; but I prefer to couple the bass-keys with the action of the octave below and the treble-keys with the action of the oc-

tave above; but it will be understood that the coupling may be made in any manner to suit a performer or a piano manufacturer.

I claim as my invention—

5 1. The combination, in a piano-key coupler, of the piano-action having upright bars and keys acting upon said bars independently of the coupler with coupling-levers mounted above the keys, the outer end of each lever being
10 ing connected to a key and the inner end of each lever being situated directly under one of the upright bars or a projection thereon, but independent of the keys, so that the coupling-levers will be only acted upon by the keys to
15 which they are attached and not by the key under the coupled bar, substantially as described.

2. The combination, in a piano-key coupler, of the piano-action having vertical bars acting upon the hammers, keys acting upon the
20 bars independent of the coupler, coupling-levers mounted directly above the keys, the outer ends of the levers being coupled to their respective keys by links and the inner ends
25 of the levers being situated in such relation to the vertical rods that when raised they will act upon the same, the inner ends of the keys being independent of the coupler-levers, and a shifter-bar situated under all the levers, with
30 mechanism for shifting this bar, so as to raise or lower the coupling-lever, substantially as specified.

3. The combination, in a piano-key coupler, of the keys, the piano-action having vertical
35 rods, the supporting-bar extending across the piano, coupling-levers supported by said bar, pins keeping the said bars in proper position,

links connecting the levers to the keys, and brackets on the vertical rods, situated directly above the levers, with screws for regulating
40 the throw of the vertical rods when acted upon by the levers, substantially as specified.

4. The combination, in a piano-key coupler, of the keys, the coupling-levers, piano-key action, and links connecting the keys of the coupling-levers, said links resting in slots in the
45 ends of the levers and having pins resting in transverse split bearings, so as to give free but positive movement to the parts, substantially as specified.

5. The combination, in a piano-key coupler, of the keys, the transverse supporting-bar, coupling-levers, links attached to the coupling-levers, brackets secured to the keys to which the links are pivoted, piano-key action
55 having vertical bars, brackets on said bars, and screws carried by said brackets, having buttons situated directly above the ends of the coupling-levers, with mechanism for throwing the coupling-levers into and out of action, 60 substantially as specified.

6. The combination, in a piano-key coupler, of the keys and action, a transverse supporting-bar, coupling-lever, and L-shaped pivot-pins for said lever, said pins having screw-
65 threaded tangs, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PHILIP WUEST, JR.

Witnesses.

HENRY HOWSON,
WILLIAM D. CONNER.