(No Model.) 2 Sheets—Sheet 1.

F. KRAEMER.

PIANO STOOL.

No. 429,458. Patented June 3, 1890.

Fig. 1.

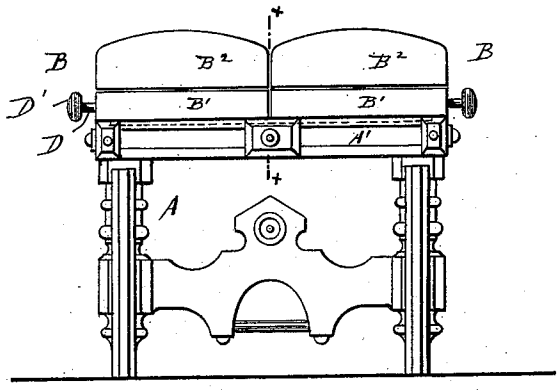


Fig. 2.

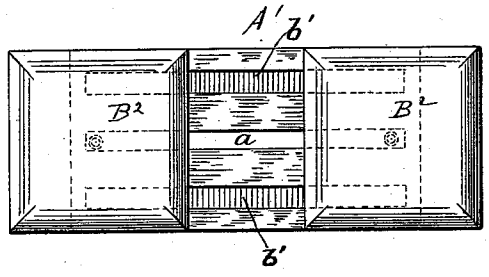
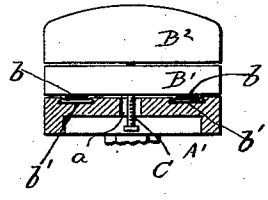


Fig. 3.



WITNESSES:

Fol. N. Rosenbaum.

M. Reinhert

INVENTOR

Felip Kraemer

BY Goepel & Taeggner

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

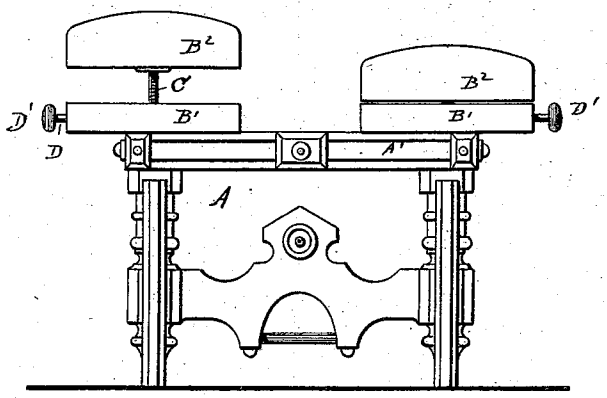


Fig. 5.

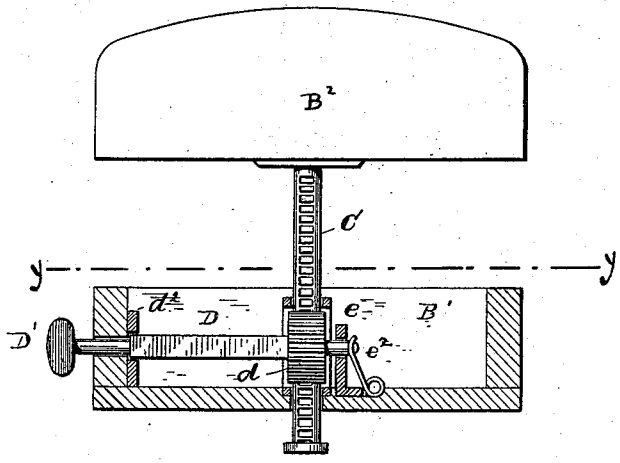
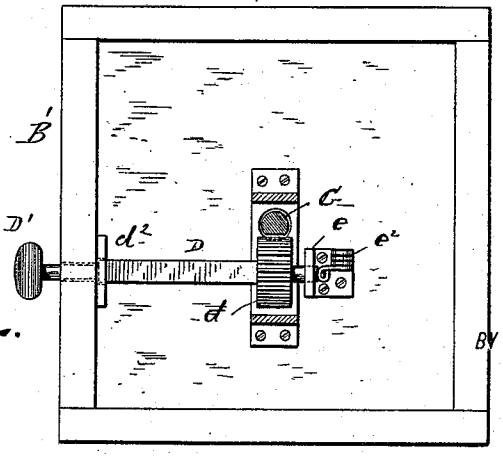


Fig. 6.



WITNESSES:

Fol. H. Rosenbaum.

H. Reinhern

INVENTOR

Felip Kraemer

BY Goepel & Maegner

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FELIX KRAEMER, OF NEW YORK, N. Y., ASSIGNOR TO THE T. F. KRAEMER & COMPANY, OF SAME PLACE.

PIANO-STOOL.

SPECIFICATION forming part of Letters Patent No. 429,458, dated June 3, 1890.

Application filed May 16, 1889. Serial No. 311,081. (No model.)

To all whom it may concern:

Be it known that I, FELIX KRAEMER, of the city, county, and State of New York, a citizen of the United States, have invented certain new and useful Improvements in Piano-Stools, of which the following is a specification.

Piano-stools with two seats, which are used by two persons for playing on the same piano—such as, for instance, a teacher and a pupil—were used heretofore, in which the seats were supported on one frame, both being vertically adjusted together by suitable mechanism. Neither one of the seats could be adjusted independently of the other, and the child could not be seated higher than the teacher, nor could the seats be moved sidewise on the frame, so as to give more room for the players.

The object of this invention is to furnish an improved double piano-stool in which both seats can be vertically adjusted together and each seat singly, and in which the seats can be laterally moved away from or toward each other; and the invention consists of a piano-stool in which two laterally guided and sliding seats are supported on a common frame. Each seat is independently adjustable in vertical direction by means of a central rack-bar, which is engaged by a pinion on a square spindle that passes through one side wall of the lower part of the seat, the inner end of the spindle being acted upon by a spring, which forces the squared portion of the spindle into a square recess of a socket-plate of the seat-frame, so as to lock the rack-bar and seat at any suitable height.

In the accompanying drawings, Figure 1 represents a front elevation of my improved double piano-stool, showing the seats in their normal position sidewise of each other. Fig. 2 is a plan of the stool with the seats moved sidewise on the supporting-frame. Fig. 3 is a vertical transverse section on line $x\ x$, Fig. 1. Fig. 4 is a front elevation showing the seats moved away from each other, one of them raised above the other. Fig. 5 is a vertical section of one of the seats drawn on a larger scale, and showing the adjusting mechanism of the seat; and Fig. 6 is a horizontal section on line $y\ y$, Fig. 5.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the supporting-frame of my improved piano-stool. On the top part A′ of the frame A are supported two seats B B, which are guided by longitudinal dovetailed cleats b in corresponding grooves b' of the top part A′, so as to be adjusted in lateral direction away from each other, as shown in Fig. 2. When the seats B B are thus supported, they are to be used for two persons—such as a teacher and his pupil—or by two persons who play duets on the piano.

When only one person desires to sit on the stool, the seats are moved toward each other until they abut, when the stool is like an ordinary piano-stool.

Each seat B is made of a lower part B′ and an upper seat part proper B^2. The latter is guided in the lower part by a central rack-bar C, which is rigidly attached to the bottom of the seat B^2, and is guided in an opening in the bottom of the lower seat-frame B′ and in a longitudinal slot a of the top A′ of the supporting-frame. The rack-bar C is engaged by a pinion d, which is attached to a spindle D, that passes through a hole in the outer side wall of the lower seat-frame B′, the outer end of which spindle is provided with a knob D′. The ends of the spindle D are rounded to turn in suitable bearings, while the intermediate part of the spindle is made square, so as to engage a socket-plate d^2, attached to the inner surface of the outer side wall of the seat-frame B′, which socket-plate is provided with a square recess to receive the square inner part of the spindle D. The opposite end of the spindle is supported in suitable bearings e and acted upon by a strong spiral spring e^2, which latter serves to keep the square part of the spindle D in the square opening of the socket-plate d^2, so as to keep thereby the spindle D, rack-bar C, and the seat B^2 in locked position. When it is desired to raise or lower the seat, the spindle D is pushed inward against the tension of the spring e^2 until the square part clears the socket-plate d^2 and permits the turning of the spindle D on its axis, so that the pinion d, which meshes with the rack

on the rack-bar C, raises or lowers thereby the seat B^2. As soon as the pressure on the knob D′ is released the spring e^2 forces the spindle lengthwise and into re-engagement with the socket-plate d^2, thus locking it and the seat in place. The pinion d has to be of sufficient width to provide for the shifting of the spindle and still remain in mesh with the rack-bar C. By the independent adjustment of each seat B either seat can be adjusted to any suitable height as required by the persons occupying the same. After use the seats are lowered by pushing the spindle inward and turning the same until the seat arrives upon the lower seat-frame B′, when the entire seat is moved inwardly on the top part A′ until the seats abut against each other.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a supporting-frame the top part or platform of which has longitudinal guide-grooves, of two laterally-sliding seats moving in said grooves and being vertically adjustable independently of each other, substantially as set forth.

2. The combination, with a supporting-frame having a top part with dovetailed guide-grooves, of two laterally-sliding seats, each seat being composed of a lower section and a vertically-adjustable seat-section, substantially as set forth.

3. The combination, with a supporting-frame having a top part with dovetailed guide-grooves, of laterally-sliding seats having cleats guided in said grooves, each seat being composed of a lower section and an upper seat-section, and means for raising or lowering the seat-section, substantially as set forth.

4. The combination, with a supporting-frame having a longitudinally-slotted top part, of two laterally-sliding seats guided by cleats in grooves of said top part, each section being formed of a lower section and an upper seat-section, rack-bars attached to the upper seat-sections, spindles provided with pinions meshing with said rack-bars, and means for locking said spindles and rack-bars after the upper seat-sections are adjusted, substantially as set forth.

5. The combination, with a supporting-frame having a longitudinally-slotted top part, of a laterally-adjustable seat, means for effecting the lateral adjustment of the seat, the seat being formed of a lower section and of a vertically-adjustable seat-section, a central rack-bar attached to said seat-section and guided in the slot of the top part, a spindle having a pinion meshing with said rack-bar, a spring pressing on the inner end of the spindle, and a socket-plate in the lower seat-section having a square recess for engaging a squared part of the spindle and locking the same in position, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FELIX KRAEMER.

Witnesses:
M. REIMHERR,
JOHN A. STRALEY.