K. V. BARNEKOV.

PIANOS.

No. 195,329. Patented Sept. 18, 1877.

Fig. 2.

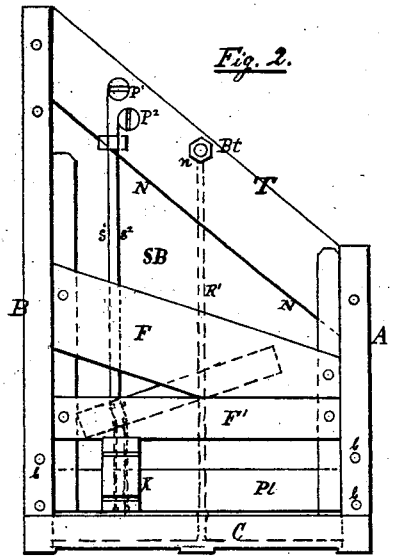


Fig. 1.

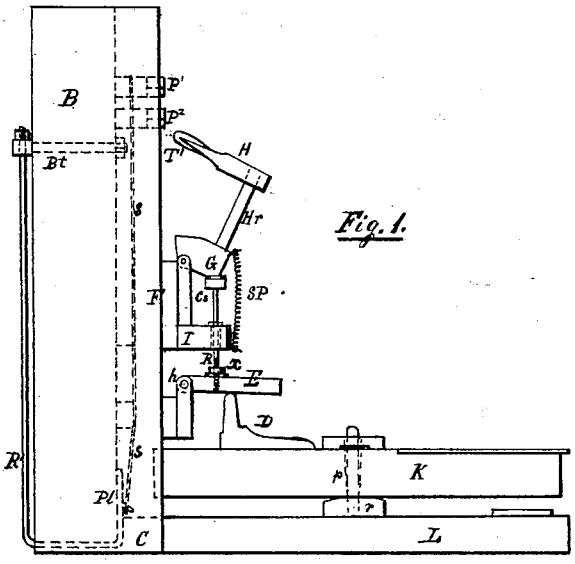


Fig. 4.

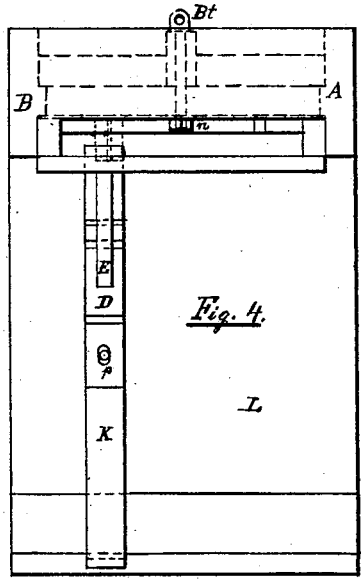
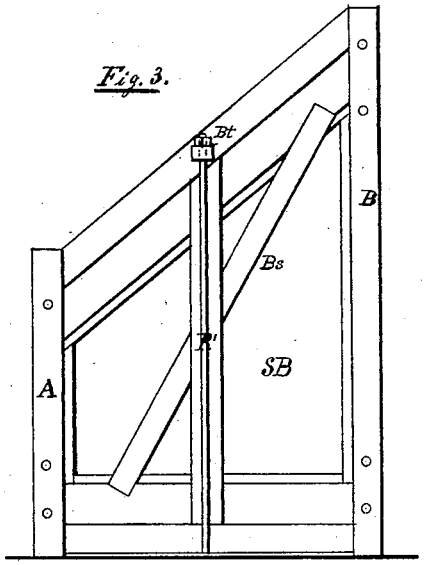


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

KIEL V. BARNEKOV, OF NEWBURG, NEW YORK.

IMPROVEMENT IN PIANOS.

Specification forming part of Letters Patent No. **195,329**, dated September 18, 1877; application filed December 6, 1876.

To all whom it may concern:

Be it known that I, KIEL V. BARNEKOV, of Newburg, in the county of Orange and State of New York, have invented a new Vertical Piano, of which the following is a specification:

The object of my invention is to construct an upright piano with as large a sounding-board as possible by making the top edge of the frame declining from the bass side to the treble, so as to get a sufficient length of frame to produce a greater length of vertical bass-strings than any other piano built at the present time. The lower ends of the strings are held by pins, which are fastened in an iron plate, which is bent around the lower edge of the frame, and is held by one or more braces or rods on the back of the frame, running up and fastened to the upper edge of the frame, so that a very solid connection is made between the strings on one side and the brace-rods on the other side of the frame, one pull balancing the other. The sounding-board now lies between these braces and strings, firmly protected by the strong frame bearing the bridge on which the strings rest. The hammers are arranged on a line declining from the left to the right hand. To avoid the sluggishness of motion of the hammers, to relieve the strings after the hammer has touched the strings, I connect to the back of the hammer an easy-working spiral spring, which will pull back easily but quickly the hammer from the strings without interfering with the movement of the hammer, but securing, each time the key may be touched slow or in quick tempo or succession, a clear tone of the string.

To describe more fully my invention, I refer to the annexed drawing, in which—

Figure 1 is a side view of the piano action and frame. Fig. 2 is a front view of the frame. Fig. 3 represents a back view of the frame. Fig. 4 is a plan of the same.

A and B are the uprights of the frame; C, the base; T, the top piece of the frame, which is built of wood, and very strongly braced by other upright and diagonal braces, as shown in Fig. 3.

N N, Fig. 2, is the top edge of the sounding-board S B. It runs parallel with the top edge T of the frame, and the sounding-board is considerably longer at the left or bass side than at the right or treble side of the piano, while other pianos only have a square sounding-board.

In this way I have a larger surface than any other upright piano, and produce, therefore, a fuller tone.

The lower ends of the strings are fastened to pins in an iron plate, P *l*, which is bent around the lower cross-beam C of the frame, and held to it by screws. The other end of the plate is held by braces and rods R′, which run up on the back of the frame through eye-bolts B *t*, which run through the upper beam T, to tie the whole frame together in a very substantial manner, in this way stiffening the frame and counterbalancing the pull of the strings at the other end of the plate.

The sounding-board S B reaches down to the upper edge of the plate P *l*, and carries the bridge over which the strings S^1 S^2 are drawn. The upper ends of the strings are wound around the pins P^1 P^2, which are fastened in the top piece or rest-plank T of the frame.

The frame F F′ carries the action, which may be like any other action used in other pianos.

K represents the keys; P^1 P^2, the pins; D, the lever-block; E, the lever, with hinge *h*. The upright rod R has thread cut on its lower end, and a nut, *x*, resting on the lever E, is there to adjust the length of the rod R to regulate the striking of the hammer by bringing the hammer nearer to or farther away from the strings. G is the butt-block; H, the hammer; S P, a small spiral spring, with one end attached to a cross-piece, I, of the frame, and with the other to the butt-block G, in such a way as to pull back the hammer lightly from the strings, and it is brought in operation as often as the key K is touched. This

produces a clear ringing tone of the string; and, even if the finger should rest on the key K, the hammer H will be pulled away from the strings by this spiral spring S P, and allow the string to vibrate freely.

What I claim as my invention, and desire to secure by Letters Patent, is—

In an upright piano, the frame, sound-board, and hammer-line, arranged to decline from the left or bass side to the right or treble side at their respective upper margins, substantially as specified.

KIEL V. BARNEKOV.

Witnesses:
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