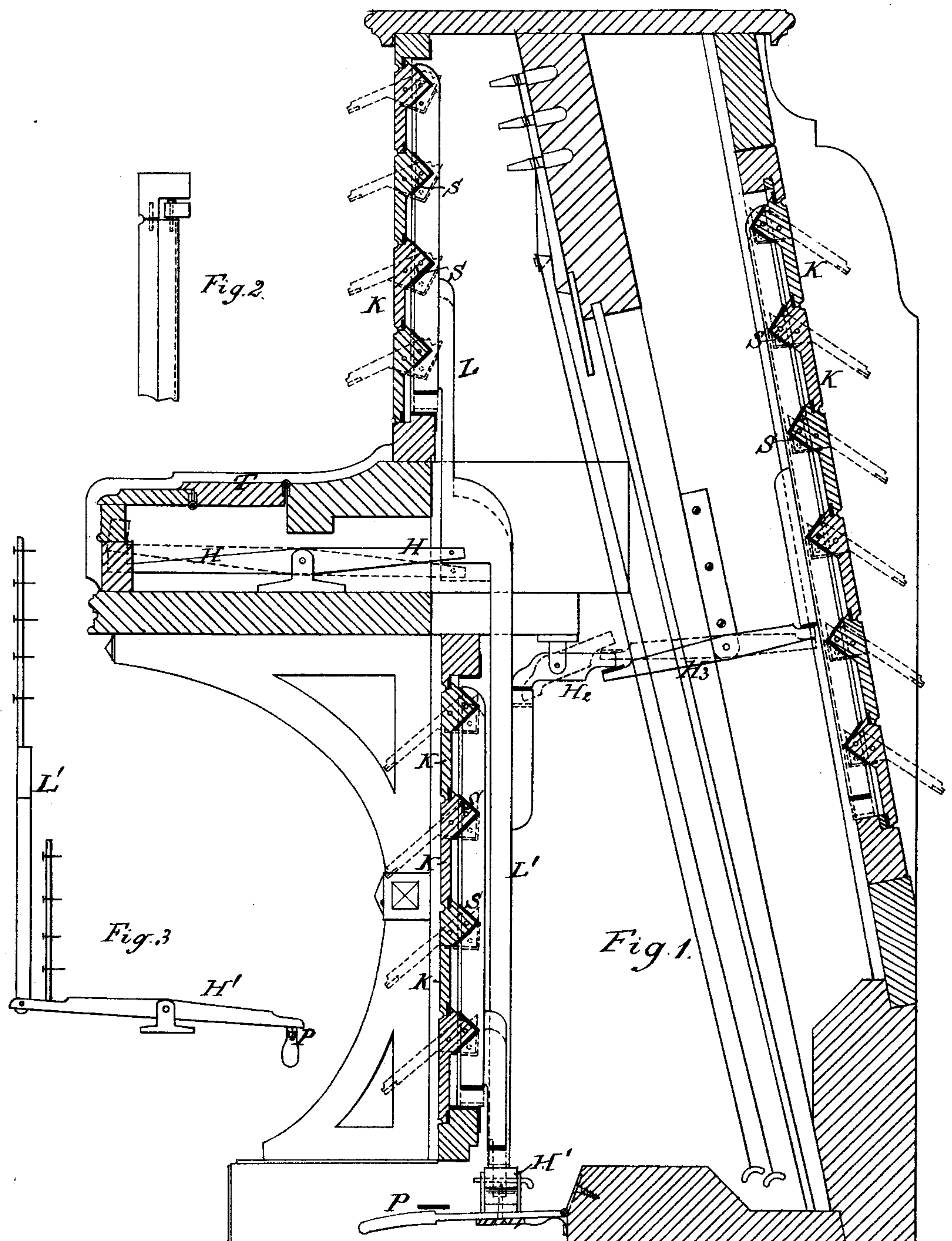


(No Model.)

F. SCHAAF.
PIANO.

No. 407,695.

Patented July 23, 1889.



Witnesses:
Governance.
Wm. Deane.

Ferdinand Schaaf,
By L. Deane
his Attorney.

UNITED STATES PATENT OFFICE.

FERDINAND SCHAAF, OF FRANKFORT-ON-THE-MAIN, GERMANY.

PIANO.

SPECIFICATION forming part of Letters Patent No. 407,695, dated July 23, 1889.

Application filed June 1, 1888. Serial No. 275,193. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND SCHAAF, residing at Frankfort-on-the-Main, German Empire, have invented certain new and useful Improvements in Pianos, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention has for its purpose to make a piano, which, with the exterior of an upright piano, unites the advantages of a grand piano.

In the accompanying drawings, Figure 1 is a vertical central section of the device. Fig. 2 is a detail to show how parts A and B are pivoted. Fig. 3 is a detail showing the connection of the pedal with the automatic mechanism.

To obtain the full and free sound of a grand piano, keys or flaps are applied by which the whole instrument is automatically opened as soon as the key-lid is unlocked. For this purpose the instrument is provided on its front and back sides with flaps K, extending in a horizontal direction over the whole length of the piano, Fig. 1.

The flaps are made of fine wooden bands, and are strengthened by metallic bars. They turn round an axis A, Fig. 2. A second axis B is joined with vertical rods L L'. The weight of these bars effects an overweight of the flaps on one side and therefore an opening of them.

The automatic action of the flaps is obtained in the following manner: A lever II is situated on the side of the keys of the instrument, and is joined on one end to the rods L L', while the other end is pressed down by the key-lid T as soon as the instrument is closed. The rod L' is also in connection with the lever II' of the pedal P, Fig. 3.

As soon as the key-lid T is closed, the rods L L' will be lifted and consequently the flaps K are closed. The same will be obtained by a pressure upon the lever II' during the playing. The closing of the flaps by the pedal effects a damping of the sound. By this operation of the flaps during the playing on the piano they can be made to vary the effect of the sound in a very considerable degree and so add very much to the effect of the sounds. If the instrument is closed by the key-lid T, the pedal P remains in its position retained by a spring.

To make the sound of the piano still more resemble the sound of a grand piano, if the instrument is placed near a wall the back of it is inclined so that between the upper part of the instrument and the wall, an open space is formed, which allows the free extension of the sound. This inclined back of the piano is also provided with flaps, which are closed simultaneously with the flaps of the front side by means of the levers II² and II³.

I claim—

An upright piano with inclined back provided with long horizontal flaps K on its front and back sides, in combination with the vertical rods L L', and the levers II II' II² II³, which are opened by the weight of the rods and automatically closed by the shutting of the key-lid T and a pressure upon the pedal P.

In testimony whereof I affix my signature in presence of two witnesses.

FERDINAND SCHAAF.

In presence of—

ALVESTO S. HOGUE,
JEAN GRUND.