

(No Model.)

W. H. DUTTON.

UPRIGHT PIANO.

No. 384,242.

Patented June 12, 1888.

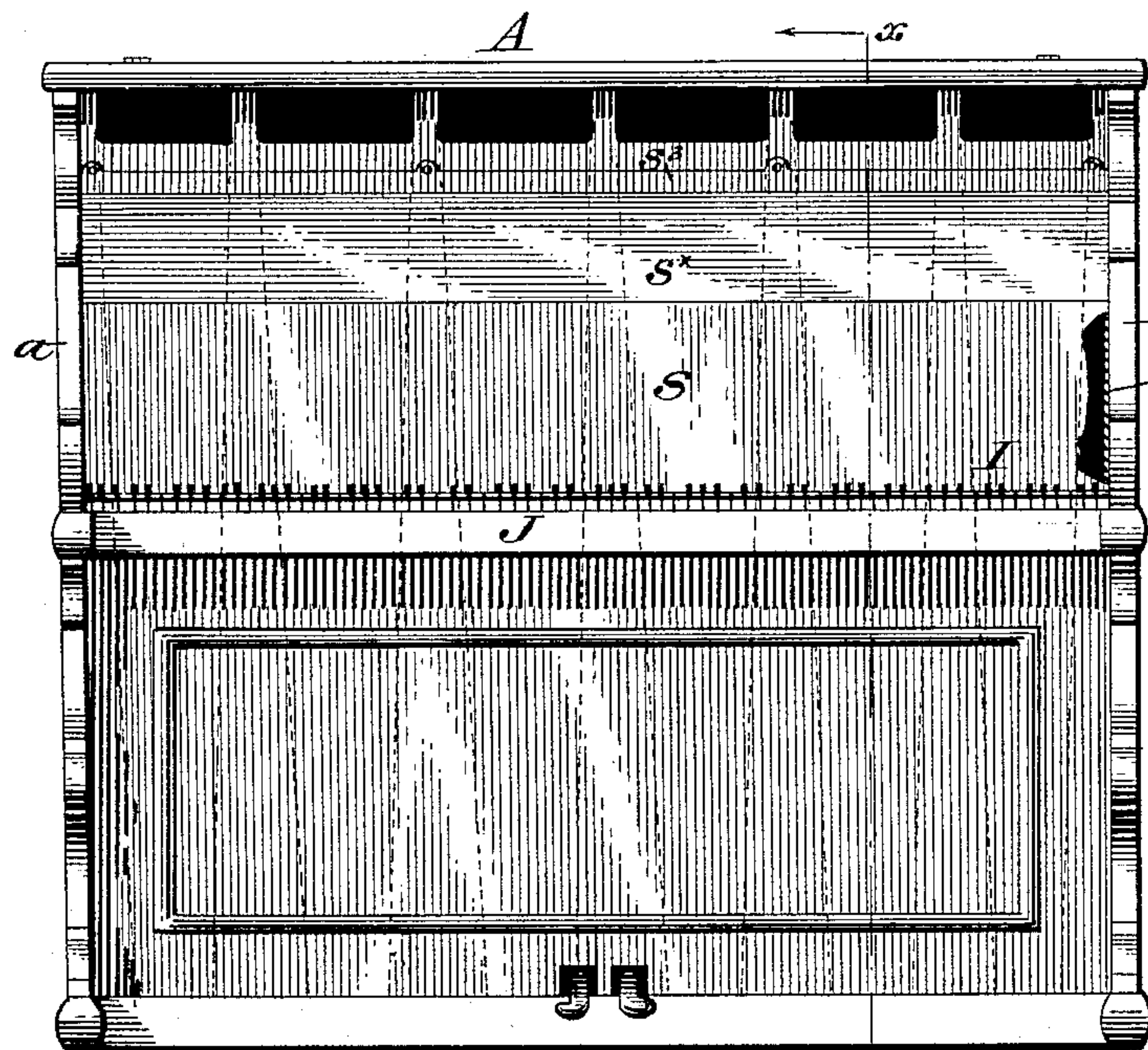


Fig. 1.

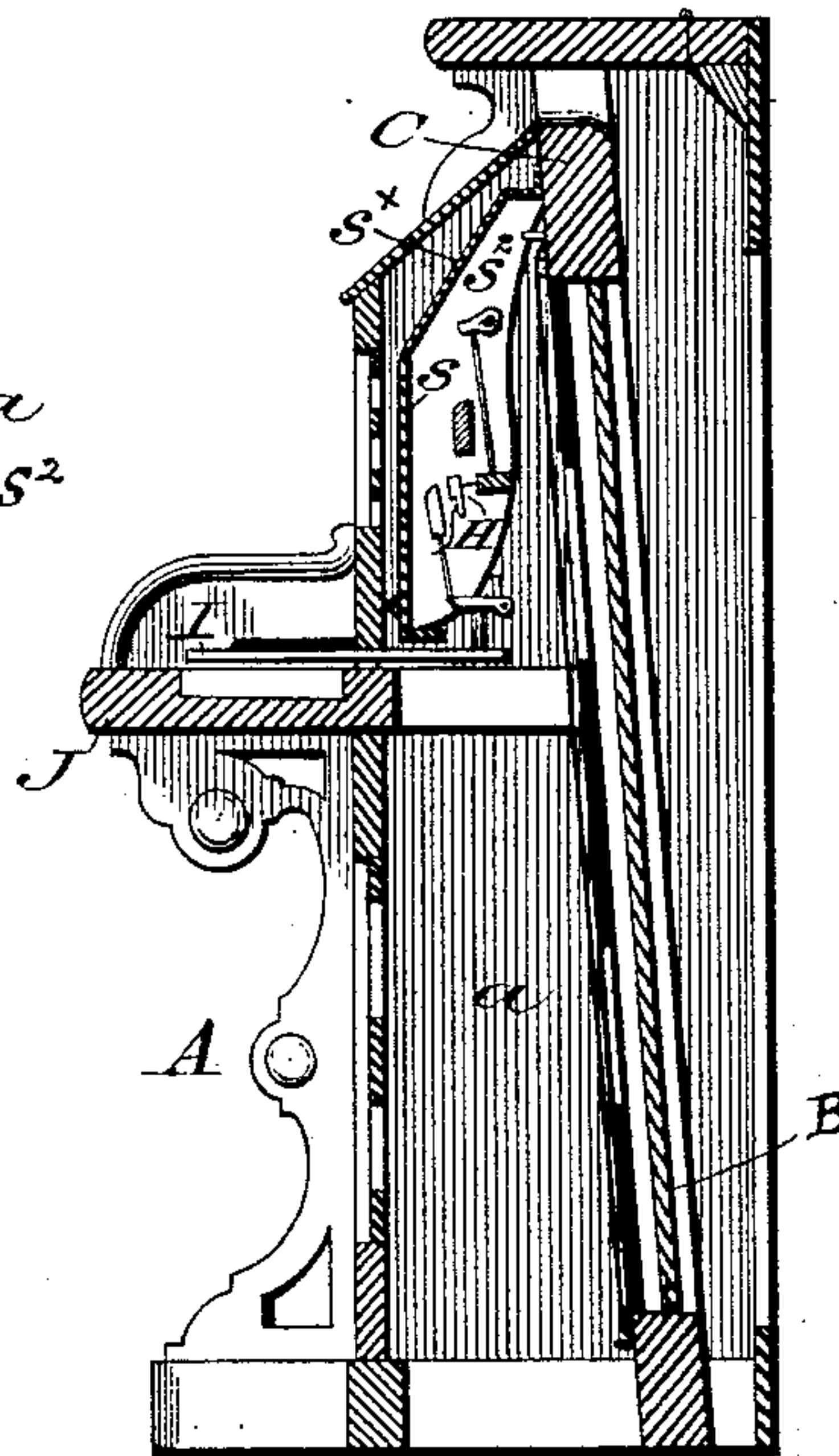


Fig. 2.

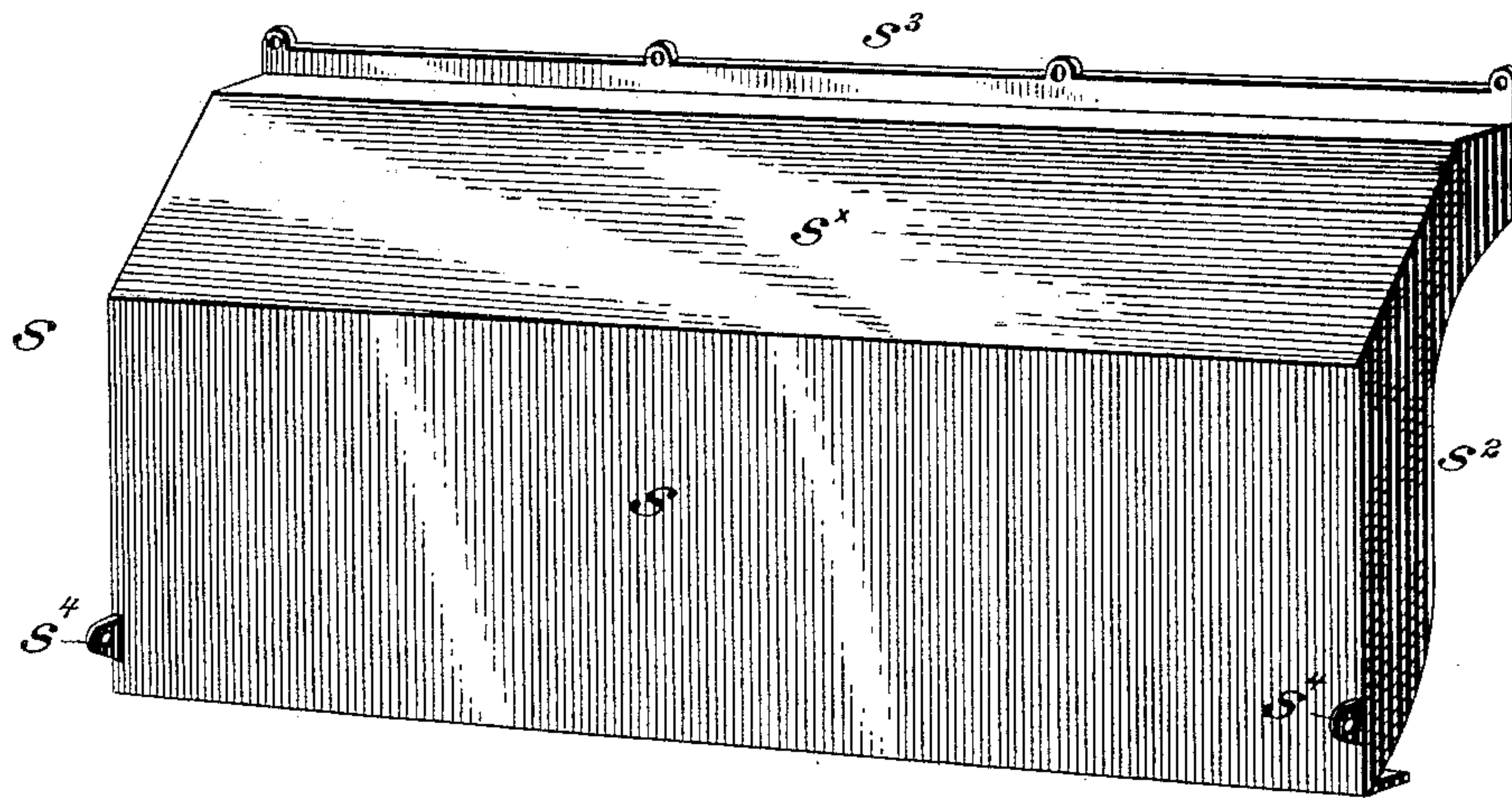


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM H. DUTTON, OF PHILADELPHIA, PENNSYLVANIA.

UPRIGHT PIANO.

SPECIFICATION forming part of Letters Patent No. 384,242, dated June 12, 1888.

Application filed March 12, 1887. Renewed February 20, 1888. Serial No. 264,624. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DUTTON, a citizen of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented certain Improvements in Upright Pianos, of which the following is a specification.

My invention is applicable in general to that class of pianos which are technically known as "uprights," and in which the sounding-board proper occupies a vertical or approximately vertical plane.

My invention is, however, especially applicable in connection with an upright piano invented by me, the upper portion or head of the framework of which is of skeleton or box-like structure, in order to render said head of said framework a musically vibratory framing, and to cause said head to embody tone conductors opening through the top of the instrument,—application for patent for which was filed October 9, 1886.

My invention is also applicable in connection with an upright piano invented by me, which is provided with an imperforate lid or cover, and the top portion or head of the framework of which is, beneath said cover, provided with channels or tone conductors having forwardly facing mouths,—application for patent for which was executed by me, and filed, as Serial No. 230,580, contemporaneously with this application.

My invention is further applicable in connection with a certain upright piano invented by me, the front of the casing of which is paneled to contain adjustable reverberating slats, and also provided with a sounding deflector above the slats,—application for patent for which was executed by me, and filed, as Serial No. 230,581 contemporaneously with this application.

The object of my present invention is the improvement of a musical quality and tone of upright pianos in general, by the provision of a supplemental or front sounding board in the form of a sounding dome adapted to incase the action and to transmit and magnify the musical tone from the vibration of the strings clarified, or filtered, so to speak, from the sounds arising from the friction and percussion of the action and the imperfect tones due to dust or action-noise.

The foregoing objects I attain by a construction a good form of a convenient embodiment of which is represented in the accompanying drawings and described in this specification, the particular subject matter claimed as novel being hereinafter definitely specified.

In the accompanying drawings, Figure 1 is a front elevation of an upright piano embodying my improvements, the sounding deflector and usual upper front panel being removed to expose the sounding dome which constitutes the subject matter of this application, and said dome being partly broken at the right side to exhibit its construction. The piano represented is one embodying the improvements set forth in my application for patent filed contemporaneously with this as Serial No. 230,580 and hereinbefore referred to. Fig. 2 is a transverse sectional elevation of the piano of Fig. 1, in the plane of the dotted line $x x$ of said figure, Fig. 3 is a view in perspective of the sounding dome removed from the instrument.

Referring to my aforesaid application for a more particular explanation of the construction of that particular upright instrument to which my present invention is, in the aforesaid drawings, shown applied, and confining this specification to a description of only such parts of the aforesaid piano as are common to other instruments to which my present invention is equally applicable,—A is the casing, which may be of any usual or preferred character, and a are the sides thereof.

B is the main sounding board, which occupies a plane slightly inclined from the vertical, is stepped or fastened at its base in any usual manner, and, as to its upper portion, is connected to the pin block C which constitutes an integral portion and the front face of the head or upper portion of the framework of the instrument.

H is the key action, which may be of any preferred character; I are the keys; and J the key bottom upon which the keys are mounted.

S is the sounding dome, which in its application to an upright piano constitutes the subject matter of this invention. This dome is composed of such thin wood as sounding boards are usually made of, and is preferably of the form represented in the drawings, that is to say having a front wall s , a beveled roof s^x , and cheek or side pieces s^y which, being con-

nected with both, serve to retain the relative angular position of the wall and roof.

Form, however, is not of the essence of this invention, and the only requirement of the dome, so far as its form is concerned, is that it should incase the action and extend from the pin block as the point of its upper attachment completely or practically across the breadth of the framework, from side to side of the casing, and down close to the keys. The mode of attachment is likewise immaterial, but the attachment must be of such character that the dome, although capable of removal, is yet, while attached, a permanent fixture within the instrument, having such connection with the pin block and sides of the casing as to readily receive and transmit the vibrations of the pin block, sides of the casing, and instrument as an entirety. To the foregoing end I prefer to provide the roof or upper portion of the dome with a single flange s^3 , or with a series of flanges, conforming to the plane of the front face of the pin block, and to provide other flanges s^4 at the sides, through holes in which, by the aid of wooden thumb screws, the desired attachment may be effectuated.

Buttons may be employed as a substitute for the thumb screws, and other and entirely different means for effecting retention may, of course, be resorted to.

Such being a description of my invention, it is only necessary to add that the dome serves to transmit and magnify the vibrations it receives from the members with which it is connected; and that, being to the front of the instrument and close to the player, it supplements the action of the main sounding board, augmenting the volume of tone and distributing it, so to speak, throughout the apartment.

It is perhaps well for me to explain that, in the application of this invention to a piano of the character described in my application for patent filed October 9, 1886, the sounding dome is employed as a substitute for the muffling or sound deadening dome or tone chest described in said application, which is, of course, omitted when the sounding dome is employed. It is proper also for me to explain that this sounding dome is to be contradistinguished from the aforesaid muffling dome or tone chest, in that this sounding dome is composed, as stated, of such thin wood as sounding boards are usually made of, while the muffling dome is, as stated in my foregoing application, formed of any sound-deadening material, or covered, lined, or felted with cloth or leather, so as to render it impervious to sound.

Having thus described my invention, I claim:

1. In combination with the casing of an upright piano, and with the action contained in said casing, a sounding dome of thin sounding board wood applied in front of and inclosing the action, substantially as and for the purposes set forth.

2. In an upright piano, the sounding board in front of the action, formed as a dome and secured to the pin block at its upper portion and to the sides of the casing at its sides, substantially as set forth.

In testimony whereof I have hereunto signed my name this 3d day of March, 1887.

W. H. DUTTON.

In presence of—

J. BONSALE TAYLOR,
WM. C. STRAWBRIDGE.