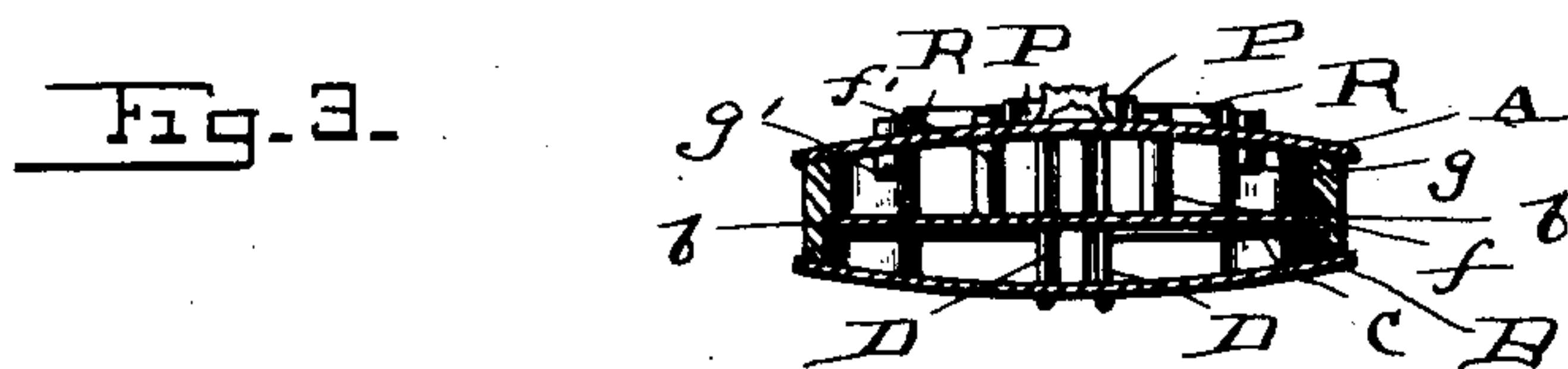
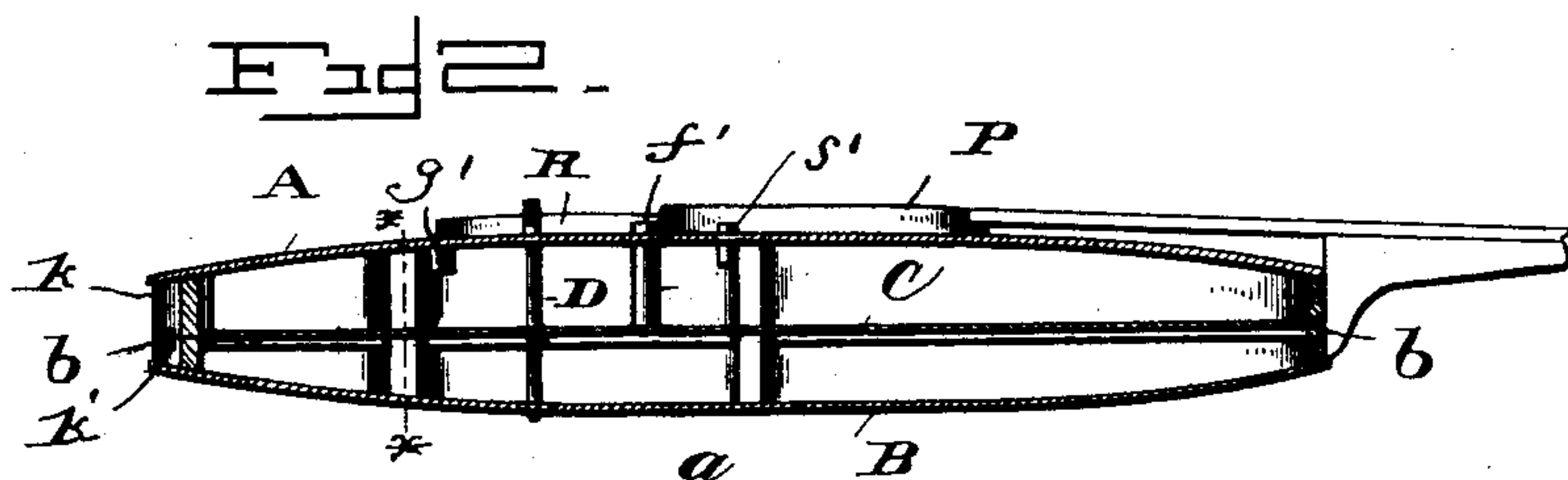
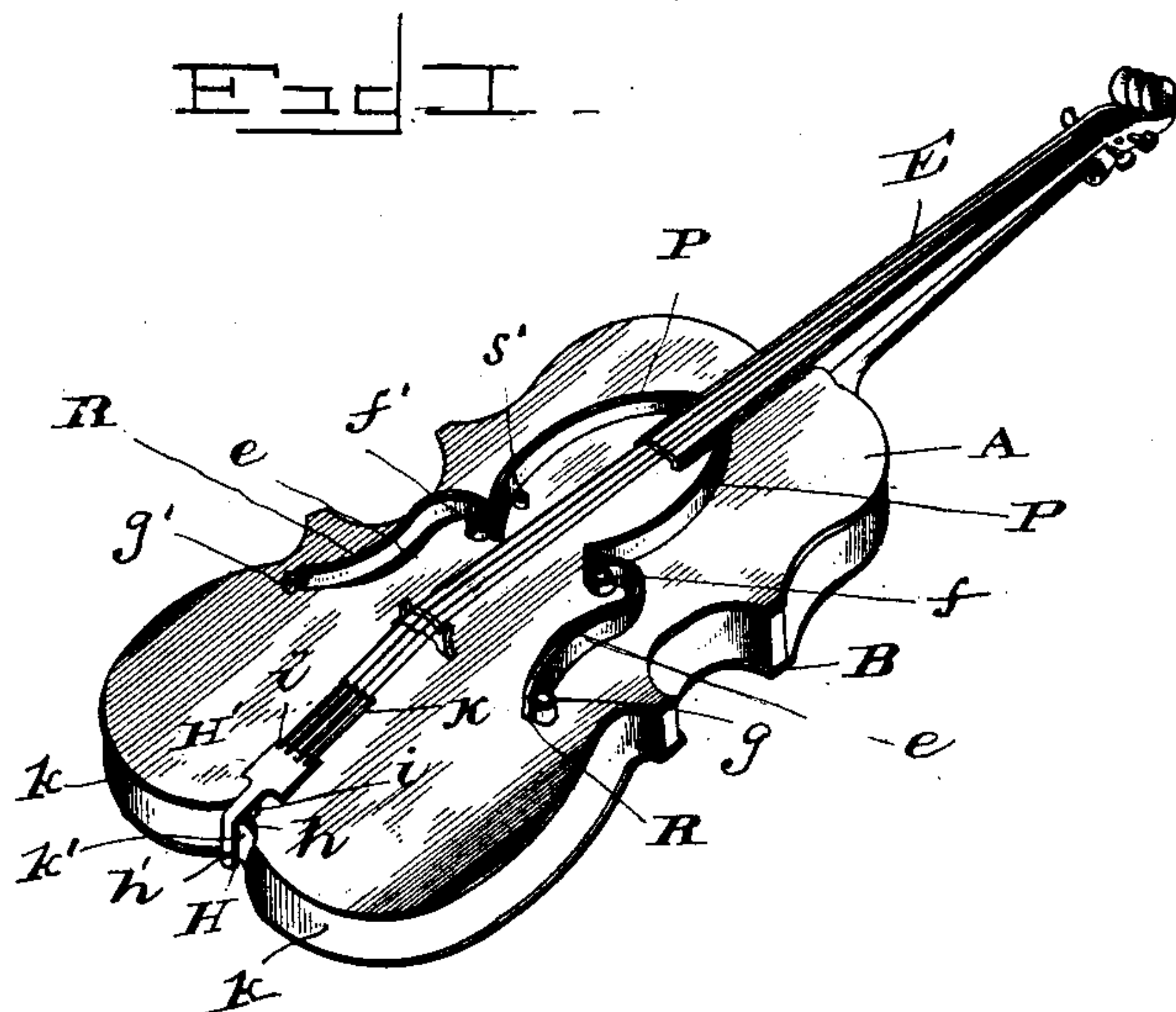


(No Model.)

D. F. BURGNER.
VIOLIN.

No. 483,897.

Patented Oct. 4, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

DANIEL F. BURGNER, OF HORSE CREEK, TENNESSEE.

VIOLIN.

SPECIFICATION forming part of Letters Patent No. 483,897, dated October 4, 1892.

Application filed December 28, 1891. Serial No. 416,326. (No model.)

To all whom it may concern:

Be it known that I, DANIEL F. BURGNER, a citizen of the United States, and a resident of Horse Creek, in the county of Green, and State of Tennessee, have invented certain new and useful Improvements in Violins; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a perspective view. Fig. 2 is a vertical longitudinal section. Fig. 3 is a vertical transverse section on the line $x x$, Fig. 2.

This invention has relation to certain new and useful improvements in violins, violas, violoncellos, and musical instruments of like character, the object being not only to improve the construction in a mechanical sense, but to enhance the power of the instrument and give greater roundness and fullness to its tone without destroying any of its special and peculiar properties.

With this object in view the invention consists in the novel construction and combination of parts, as hereinafter described, and pointed out in the claims.

Referring to the accompanying drawings, the letter A designates the face or front of a violin, and B the back. About midway between the face and back of the case the interior sound-chamber is divided into two parts by means of a longitudinal horizontal partition-board or diaphragm C. This board or diaphragm is made of any material suitable for the purpose, is of the same shape as the violin, and of such superficial area that it will fit closely therein with its edges in contact with the sides. It is usually held in place by the thin purflings or strips a , secured with glue, and by the notches b in the marginal edges thereof, which fit in close contact with vertical ribs c from around the interior of the instrument on the sides and ends. The strips a may be let in grooves in the diaphragm, as shown, holding the parts securely together. It is important, also, that these parts should be fitted together as accurately as possible, inasmuch

as the resonant capacity of the instrument depends largely upon the tightness of the joints.

D D are the sound-posts, which connect the face and back of the case, passing through the partition or diaphragm. It will be noticed that I employ two of these posts instead of a single one, as is common in instruments of this kind, as I have found that the capacity of a single post for transmitting vibration is limited and that the tone will be greatly improved by the use of two, one a little to each side of the center. The double posts also form a greater support for the case.

ff' and gg' designate, respectively, two pairs of small tubes which project through beyond the outer surface of the front or face A. The tubes ff' are shown as located a short distance to the rear of the termination of the string-board B between the usual sound-ports ee . These tubes also project slightly through the diaphragm C into the chamber below. The tubes gg' are shown as located to the rear of the sound-ports ee , one at either side, and open into the chamber above the diaphragm C. These tubes not only serve to strengthen and support the case and prevent its splitting, but are also found to produce a fuller or more resonant sound and to enhance the timbre of the instrument. A third pair of tubes ss' may be also employed in front of the tubes ff' , opening into the upper portion of the said chamber in the same manner as the tubes gg' .

P P designate two thin strips vertically disposed on the upper surface of the sound-board or face A, extending from the sides of the string-board, shortly to the rear of the forward end, to the tubes ff' . These strips are bowed or curved around the tubes ss' , terminating inside the tubes ff' .

R R are two similar strips, the forward ends of which adjoin the rear portions of the strips P P and which are located along the outer edges of the sound-ports ee , terminating at the forward ends inside the tubes gg' at the rear of the bridge. These strips serve as sound-accumulators and have a beneficial effect on the tone of the instrument.

The rear end of the case is of double convex form, as shown at kk , the convex portions being separated from each other in

the center by the concavity k' . This construction, while not in any way interfering with the quality of the instrument, renders it capable of being much easier held while in use than those of the ordinary form.

H designates the tail-piece or apron, which preferably consists of the angular contracted arm h , secured to the case at h' by a small pin and resting on a projection i . The broad portion H' , at the forward end of which the strings are attached, stands upwardly at an angle to and out of contact with the face A and is provided with a series of perforations i' , to which the strings may be either directly secured in the usual manner or, as shown, by means of small metallic hooks k , to which the strings are connected and which are adapted to engage said perforations.

Having described this invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A violin or like instrument having an interior horizontal longitudinal partition or diaphragm held therein by means of notched edges engaging ribs on the case and by strips or purflings, substantially as specified.

2. A violin or like instrument having an interior horizontal longitudinal partition or diaphragm, double sounding-posts passing through said diaphragm, and a number of hollow tubes projecting through its face or front and communicating with the interior, substantially as specified.

3. A violin or like instrument having hollow tubes communicating with the interior and projecting through the front or face, substantially as specified.

4. A violin or like instrument having a series of hollow tubes projecting through its face or front, in combination with an interior central horizontal longitudinal partition or diaphragm, substantially as specified.

5. A violin or like instrument having a series of hollow tubes projecting through its face or front and communicating with the interior thereof, in combination with an interior central horizontal longitudinal partition or diaphragm, a number of said tubes projecting through said diaphragm, substantially as specified.

6. A violin or like instrument having a double convex rear end, substantially as specified.

7. A violin or like instrument having a concavity in its rear end, substantially as specified.

8. The tail-piece or apron for violins or like instruments, comprising the angular arm secured to the rear end of the case, its forward end standing at an angle to the face of the instrument, said arm resting on a projection i of the case, substantially as specified.

9. A tail-piece or apron for violins or like instruments, comprising an angular arm secured to the rear end of the case, its forward end standing at an angle to the face of the instrument, said arm resting on a projection i of the case, said forward end having a series of perforations therein designed to be engaged by hooks on the strings, substantially as specified.

10. A violin having on a face or sound-board a series of vertically-disposed accumulator-strips, substantially as specified.

11. A violin having on its face or sound-board a series of vertically-disposed accumulator-strips extending from the string-board to ports at the rear of the bridge, substantially as specified.

12. A violin or like instrument having, in combination with its sounding-posts, a number of hollow tubes projecting into its interior, substantially as specified.

13. A violin or like instrument having a number of hollow tubes projecting through its face or front and terminating in its interior, substantially as specified.

14. A violin having an interior longitudinal partition or diaphragm dividing its interior into two chambers, sounding-posts passing through said diaphragm, a number of hollow tubes projecting through the face or front into the interior chambers, and curved strips secured to its face, substantially as specified.

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

DANIEL F. BURGNER.

Witnesses:

J. H. PAINTER,

G. W. REAVES.