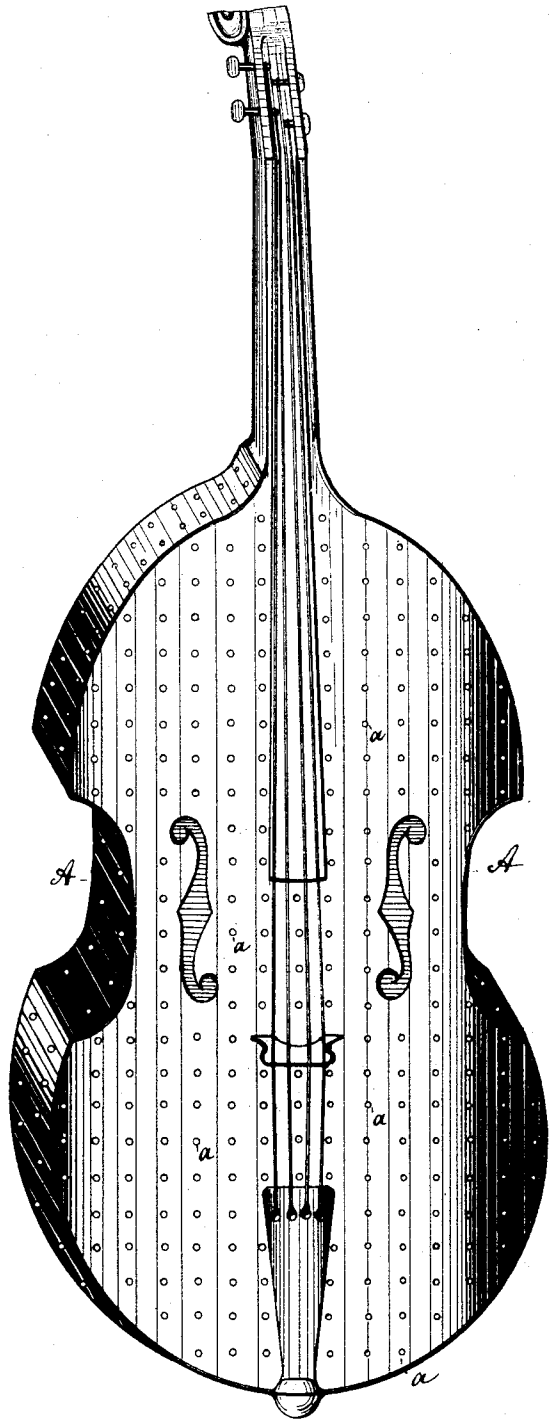
(No Model.)

H. HEYDER.

VIOLIN.

No. 446,450. Patented Feb. 17, 1891.



Witnesses:
Wm Wagner
A Joughmans

Inventor:
H. Heyder
by his attorneys
Roeder & Briesen

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

UNITED STATES PATENT OFFICE.

HERRMAN HEYDER, OF REICHTHAL, GERMANY.

VIOLIN.

SPECIFICATION forming part of Letters Patent No. 446,450, dated February 17, 1891.

Application filed October 8, 1890. Serial No. 367,414. (No model.)

To all whom it may concern:

Be it known that I, HERRMAN HEYDER, a subject of the German Emperor, residing at Reichthal, in Silesia, Germany, have invented certain new useful Improvements in Violins, of which the following is a specification.

This invention relates to an improvement in violins and similar musical instruments by means of which their sound is greatly improved.

The invention consists in the various features of improvement, more fully pointed out in the claim.

The accompanying drawing represents a perspective view of a violin constructed according to my improvement.

The letter A represents the body of a violin. Within the belly, back, and sides of this body there are formed a number of small holes *a*. These holes are bored, preferably, with a drill having a diameter of one thirty-second to one-eighth of an inch, and are placed as near together as the wood will permit. Each of the holes *a* is filled up completely with glue, so that the glue is flush with the surface of the wood. Fine holes are best filled up by passing through them a needle and a thread which has been drawn through a body of heated glue. Larger holes are filled up by spreading the glue over them. If desired, the holes may be omitted in the front or face of the violin.

By my invention the tone of the violin is greatly improved, so that the effect of the renowned Italian violins is obtained.

What I claim is—

A violin or similar musical instrument having perforations in its body and a glue filling within the perforations, substantially as specified.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 22d day of September, 1890.

HERRMAN HEYDER.

Witnesses:

GEORG KAMMERER,

WILLIAM H. MUSSELMAN.