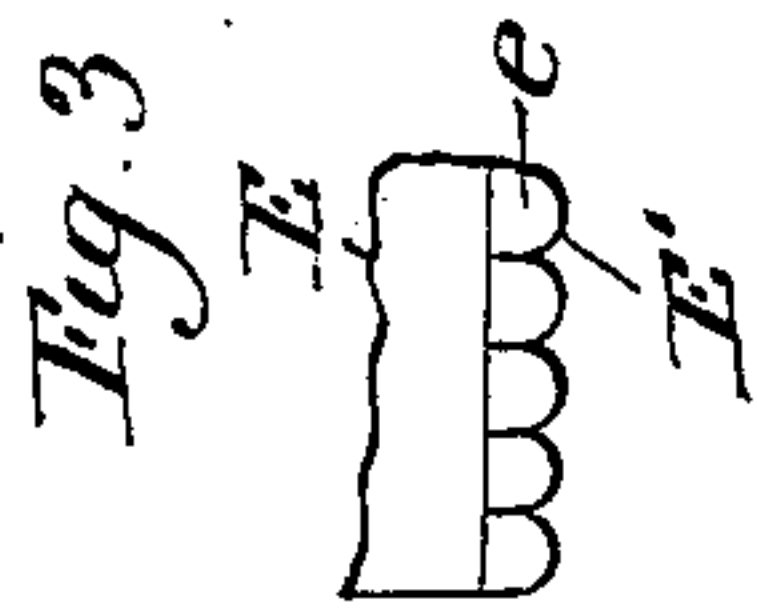
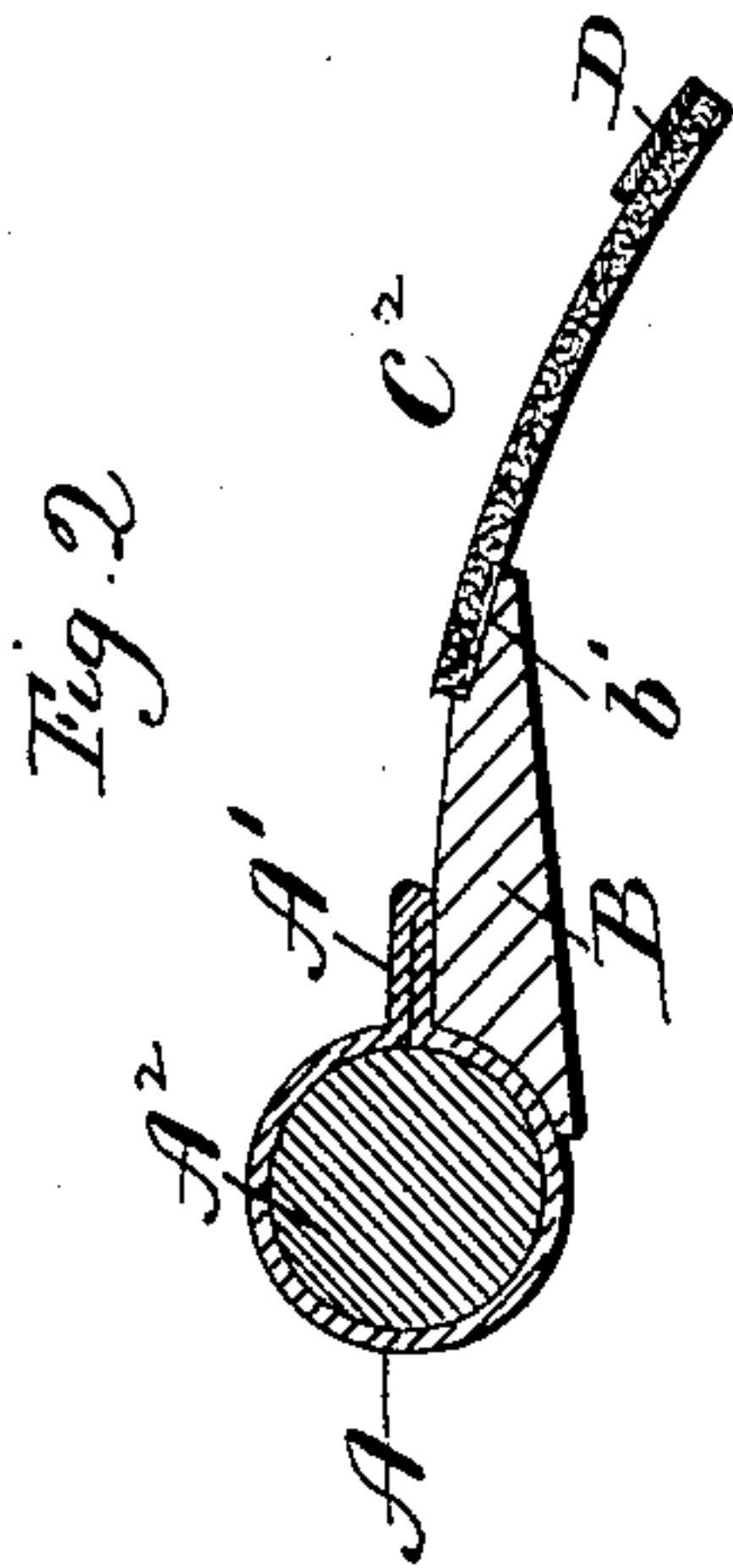


W. A. BEIN.
DAMPER FOR PIANOS.

Patented May 12, 1896.



Witness,
J. H. Sherrin,
Lillian D. Kealey.

William A. Brew-
 Inventor.
 By attys Earle Seymour

UNITED STATES PATENT OFFICE.

WILLIAM A. BEIN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
B. SHONINGER COMPANY, OF SAME PLACE.

DAMPER FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 560,152, dated May 12, 1896.

Application filed November 5, 1895. Serial No. 568,020. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. BEIN, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Dampers for Pianos; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of
10 the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a detached view, in inside elevation, of a damping device constructed in accordance with my invention; Fig. 2, an enlarged view thereof in transverse section; Fig.
15 3, a broken view showing a modified form which the treble portion or portions of the felt strip may assume.

My invention relates to an improvement
20 upon the damper for pianos for which United States Patent No. 542,132 was granted July 2, 1895, upon my application, to The B. Shoninger Company, the object of this present invention being to improve the damper disclosed in the said patent by modifying it so
25 as to combine with its damping action an effect which may be utilized musically if desired.

With these ends in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention, as herein shown, I employ a sheet-metal lip-tube A, having a lip A' extending throughout its length,
35 which provides for the attachment, by screws b, of a wooden felt bar B, the outer edge of which is longitudinally rabbeted, as at b', to receive the upper edge of the felt muffler-strip, which consists, as herein shown, of two
40 bass sections C and C' and two treble sections C² and C³, these several sections constituting the felt strip. The ends of the lip-tube A receive wooden plugs A², one of which
45 is shown in Fig. 2, the said plugs reinforcing the tube for the attachment of the arms A³ A³, by means of which the device is pivotally connected with the inner faces of the ends of the piano-case. These two arms A³ A³ are
50 alike except for the provision of one of them with a coupling-arm A⁴, through which the

muffler-stick, which is not shown, acts for the operation of the device in the manner set forth in my prior patent. The lower edges of the bass sections C and C' of the felt strip 55 are made continuous, those portions of the strip being designed to have full muffling or damping action; but the sections C² and C³ of the said strip are divided into a series of fingers C⁴, of which there is one for each string, 60 whether the same be a simple or a compound string, and the string-face of the lower end of each finger is hardened, while the opposite or hammer face is untouched, and therefore composed of soft felt. The hardened face may be 65 hardened either by the application of small squares D of paper or other suitable material or by applying a coating to the said edge of shellac or other substance which hardens when dry. As shown in Fig. 1, the fingers are made 70 by forming transverse slits in the portions C² and C³ of the muffler-strip. If desired, however, they may be made as shown in Fig. 3, in which the strip E is fashioned upon its edge to form scallops E', the string-faces e of which 75 are hardened. If desired, the fingers might be made independent of each other, though that construction will probably be less convenient than either of the constructions shown.

In the use of a damper constructed in accordance with my invention the bass portion 80 or portions of the felt muffler-strip have a marked muffling action, the same as provided for in my prior patent referred to, but the muffling action of the treble section or sections is modified, so that although it is markedly 85 muffled it has yet more differentiation of tone than when the treble portion or portions of the muffler-strip are continuous. This modified tone in the treble combines with the 90 muffled tones of the bass in the production of effects which may be utilized in the performance of some compositions with pleasing effect, the tone of the piano being reduced from its grand orchestral tone to a tone re- 95 sembling that of some light stringed instrument.

It is apparent that in carrying out my invention some changes in the construction set forth may be resorted to, and I would there- 100 fore have it understood that I do not limit myself to the exact form shown, but hold my-

self at liberty to make such alterations as fairly fall within the spirit and scope of my invention.

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

1. A damper having its felt strip composed of one or more continuous bass portions and one or more treble portions, the latter being divided into fingers having hardened string-faces and soft hammer-faces, substantially as described.

2. In a piano-damper, the combination with a long, sheet-metal lip-tube having a depending lip extending throughout its length, of a wooden felt bar secured by its upper edge to

the lip of the said tube, and having its opposite edge longitudinally rabbeted, and a felt muffler-strip secured to the felt bar by the insertion of its upper edge into the rabbet thereof, and comprising one or more continuous bass portions and one or more treble portions, the latter being divided into fingers having hardened string-faces and soft hammer-faces.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WM. A. BEIN.

Witnesses:

FRED. C. EARLE,
GEO. D. SEYMOUR.