

(No Model.)

F. J. BRAND.

REED PLATE FOR MUSICAL INSTRUMENTS.

No. 338,336.

Patented Mar. 23, 1886.

Fig. 1.

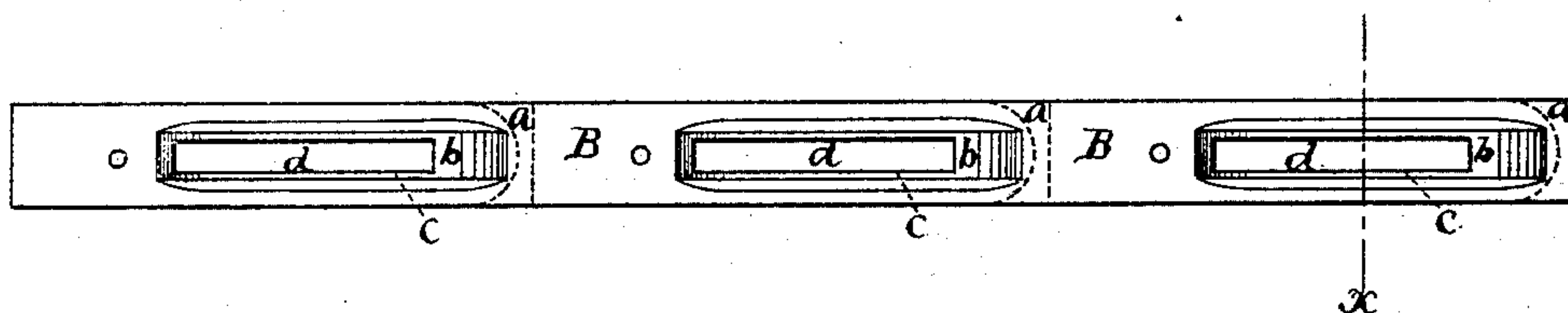


Fig. 4.

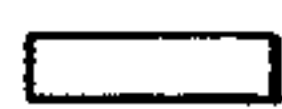


Fig. 3.

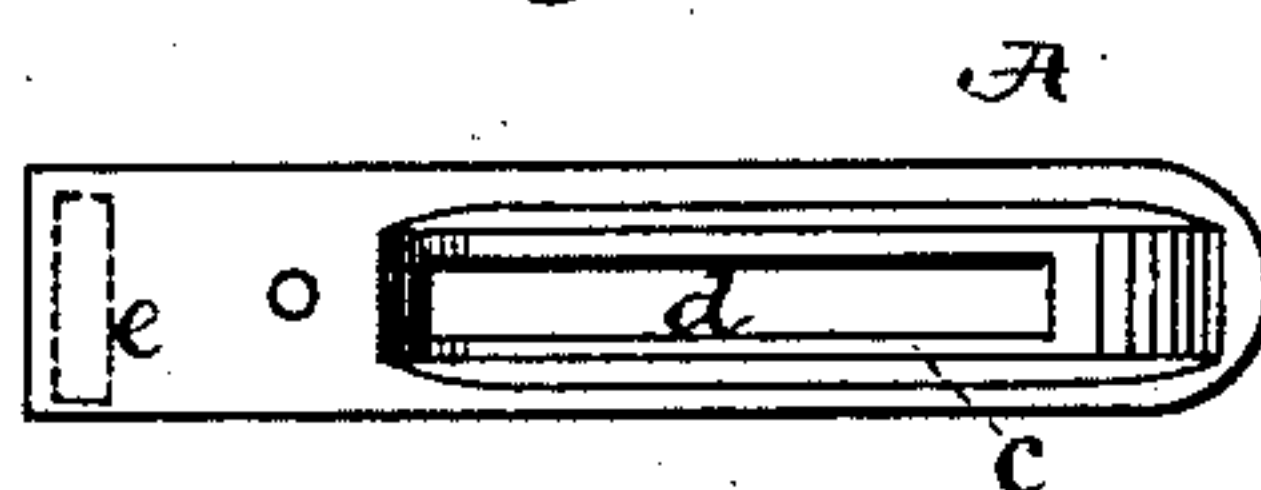


Fig. 5.

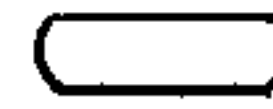


Fig. 2.

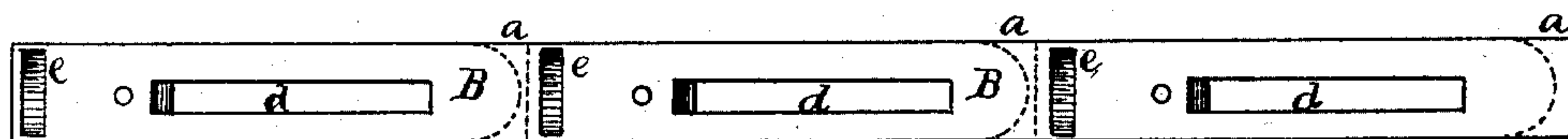


Fig. 6.



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK J. BRAND, OF SOUTHTON, CONNECTICUT.

REED-PLATE FOR MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 338,336, dated March 23, 1886.

Application filed May 27, 1885. Serial No. 166,824. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. BRAND, a citizen of the United States, residing at South-
ington, in the county of Hartford and State of
5 Connecticut, have invented certain new and
useful Improvements in Reed-Plates for Mu-
sical Instruments, of which the following is a
specification, reference being had therein to
the accompanying drawings, in which—

10 Figure 1 is a plan view of the under side of
the bar from which the reed-plates are cut,
and Fig. 2 is a view of the upper side. Fig.
3 is a view of the under side of a reed-plate.
Fig. 4 is an end view of a reed-plate with flat
15 edges, and Fig. 5 with rounded edges. Fig. 6
is a section on line *x*, Fig. 1.

Heretofore reed plates or blocks have been
made from rolled metal, and rolled metal is
liable to be uneven in thickness and hardness
20 for various reasons. Different velocities of
the rolls, soft places in the rolls, and the rolls
not being true and perfectly cylindrical pro-
duce unevenness in the rolled metal as to
thickness, while unevenness in annealing the
25 metal produces unevenness as to hardness.
Reed-plates punched from rolled metal and
finished in the usual way are subject to these
defects. Plates have also been made by roll-
ing metal into bars of the proper thickness
30 and width, and by forming the recesses or
grooves in the bars by the rolls; but by all of
the methods in which rolled metal has been
used to form plates milling of their edges or
sides is required to finish the plates.

35 The object of my invention is to remedy the
defects in the metal as far as possible and to
dispense with milling either the sides or edges
of the plates.

To this end the invention consists, partly,
40 in making the reed-plates of bars of metal
which have been drawn through a plate or die
to the requisite width and thickness, whereby
the qualities of evenness as to size and hard-
ness are imparted to the bars from which the
45 plates are formed.

The invention consists, further, in forming
the various grooves and throats in the bars
before they are cut up or separated into plates,
as is hereinafter more fully described and ex-
50 plained.

To enable others to make my improved
plates, I will give a detailed description of
their manufacture.

55 A completed reed-plate, A, is shown in Fig.
3, and it does not differ in appearance from a

reed-plate punched from rolled metal and then
finished, or from a reed-plate which has been
rolled from a bar of metal, the grooves being
formed by the rolls and the throat afterward
punched, and yet it differs from both as drawn 60
metal differs from rolled—namely, in greater
evenness as to hardness.

The under side of a bar, B, is shown in Fig.
1, from which reed-plates are formed by punch-
ing from the bar the part *a*, (indicated by 65
broken lines on two of its sides.) Grooves *b*
are formed in this side of the bar with inclined
sides and curved ends, the form of the grooves
being determined by the form of the cutter
under which the bar is moved to form the 70
grooves. The grooves extend nearly through
the bar, leaving the thin part *c*, in which the
throats *d* are punched, and are formed at regu-
lar intervals or are equidistant apart. Holes
are shown in the bars, through which rivets 75
pass to hold the reeds to the plate.

The upper side of a bar, B, is shown in Fig.
2, and in it are formed the transverse nail-
grooves *e*, for removing the plates from the
holders, the distances between the grooves be- 80
ing the same.

The bars from which the plates are formed
are drawn through a hardened die, and the
perforation in the die may be of such form as
to make the edges of the plates flat or round- 85
ed, as preferred. The perforation is finished
and highly polished and imparts its finish to
the bars. These bars are cut up or separated
into finished plates by punching out the part *a*.

I am well aware that unsuccessful efforts 90
have been made to form plates by rolling rods
into bars and forming grooves in the bars at
one operation, milling the sides of the bars,
and cutting the bars into plates; but

What I claim as new, and desire to secure by 95
Letters Patent, is—

A drawn metal bar having a series of equi-
distant grooves, *b*, formed in one of its sides,
and a series of transverse and equidistant
grooves, *e*, formed in its opposite side, also 100
having a series of equidistant slots or throats
extending through the bar and adapted to be
made into reed-plates by punching out the
part *a*, as described.

In testimony whereof I affix my signature in 105
presence of two witnesses.

FREDERICK J. BRAND.

Witnesses:

GEORGE TERRY,
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