

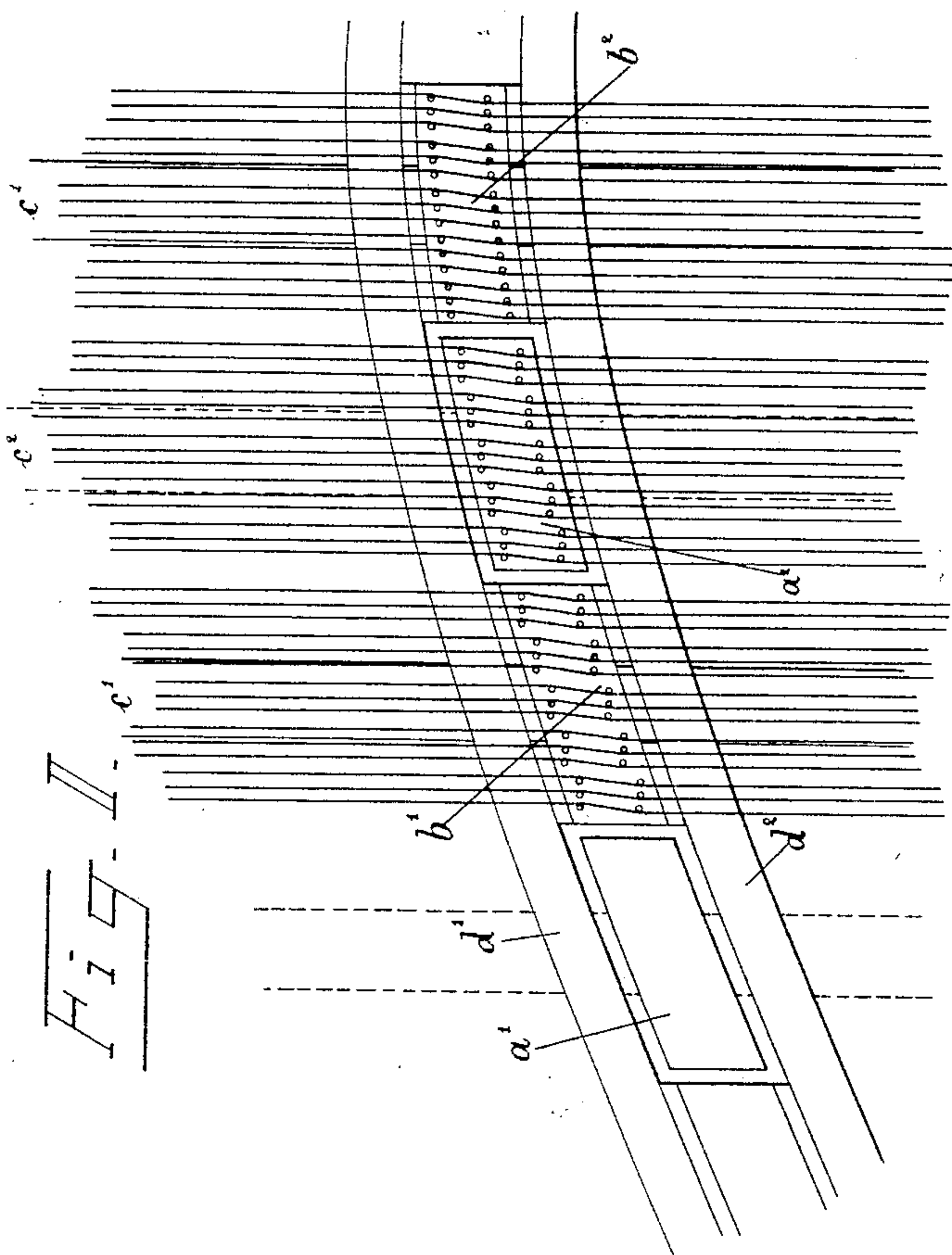
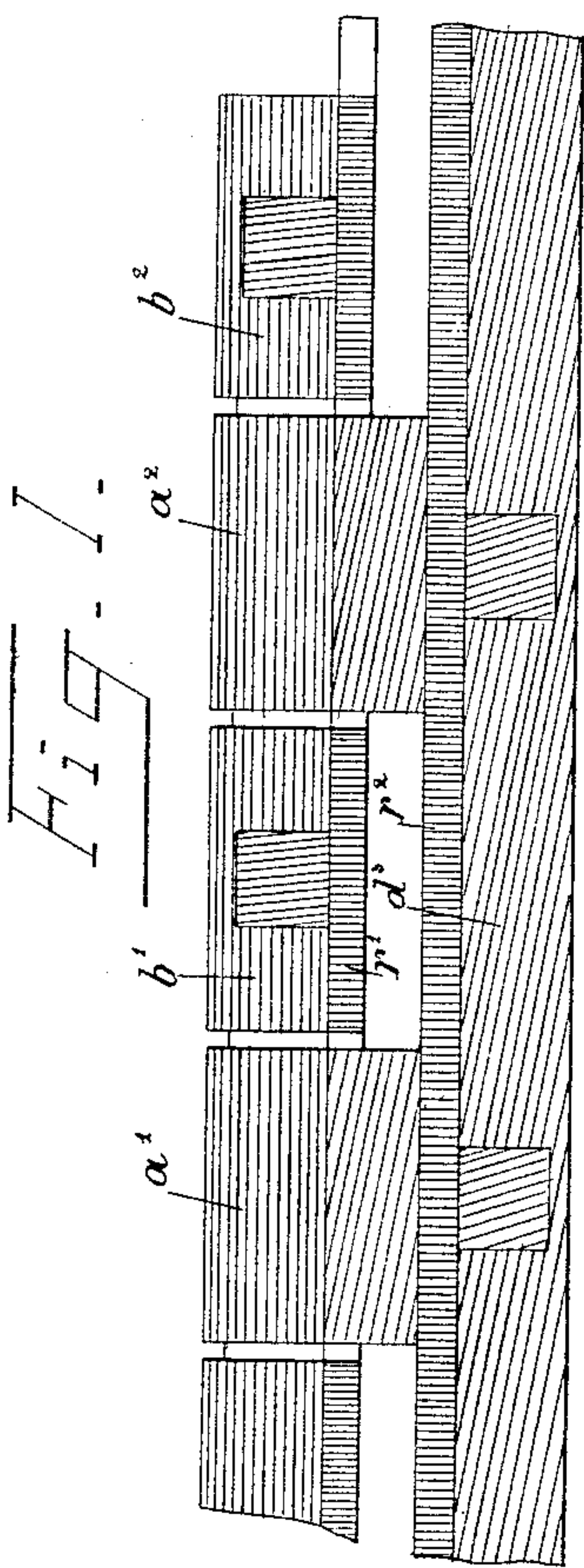
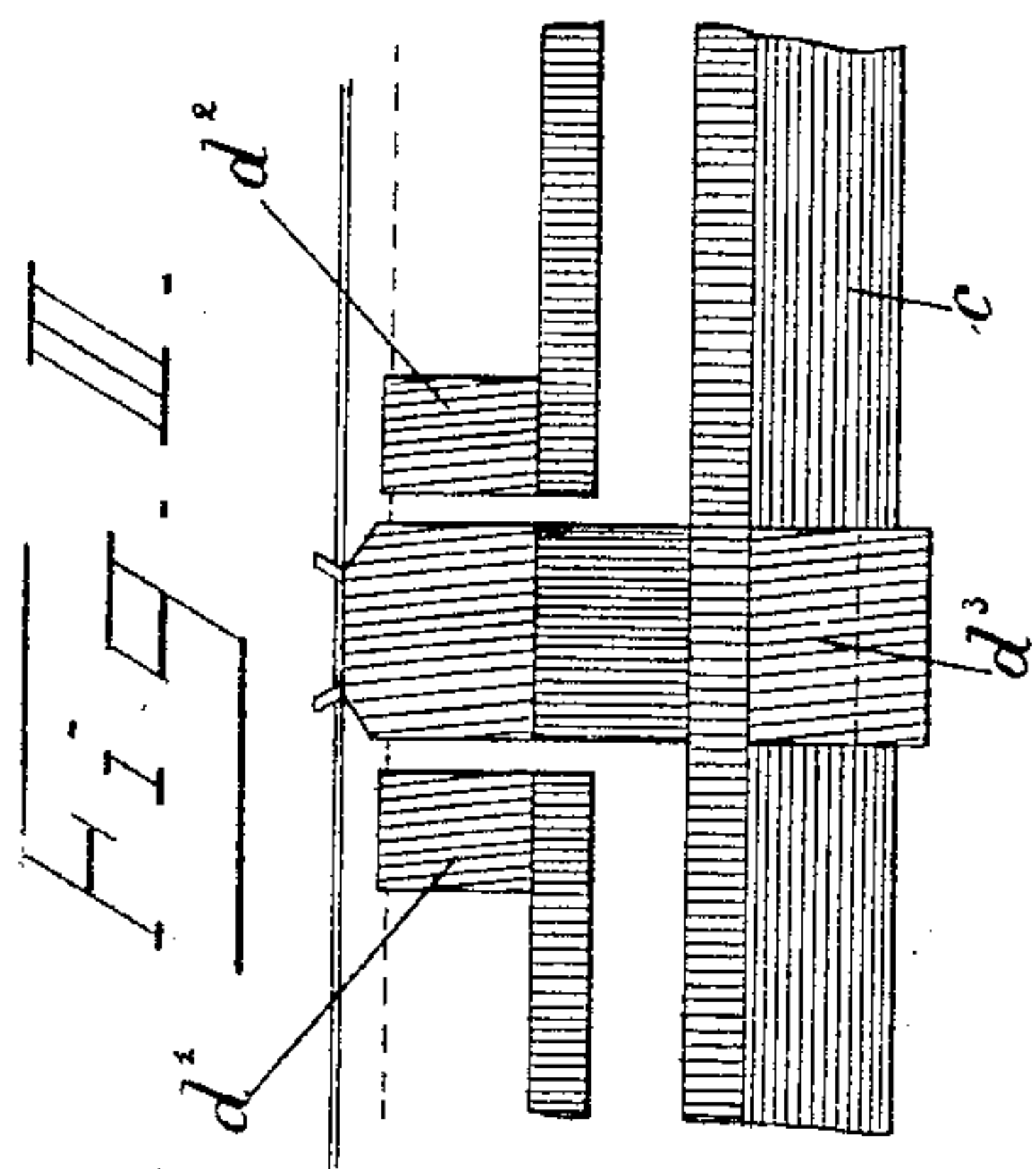
(No Model.)

2 Sheets—Sheet 1.

A. BODEN.  
SOUNDING BOARD FOR PIANOFORTES.

No. 513,478.

Patented Jan. 30, 1894.



Witnesses  
Jimmie Smith  
Edward R. Smith

Inventor  
August Boden  
by *Alfred M. Morrey*  
Attorney

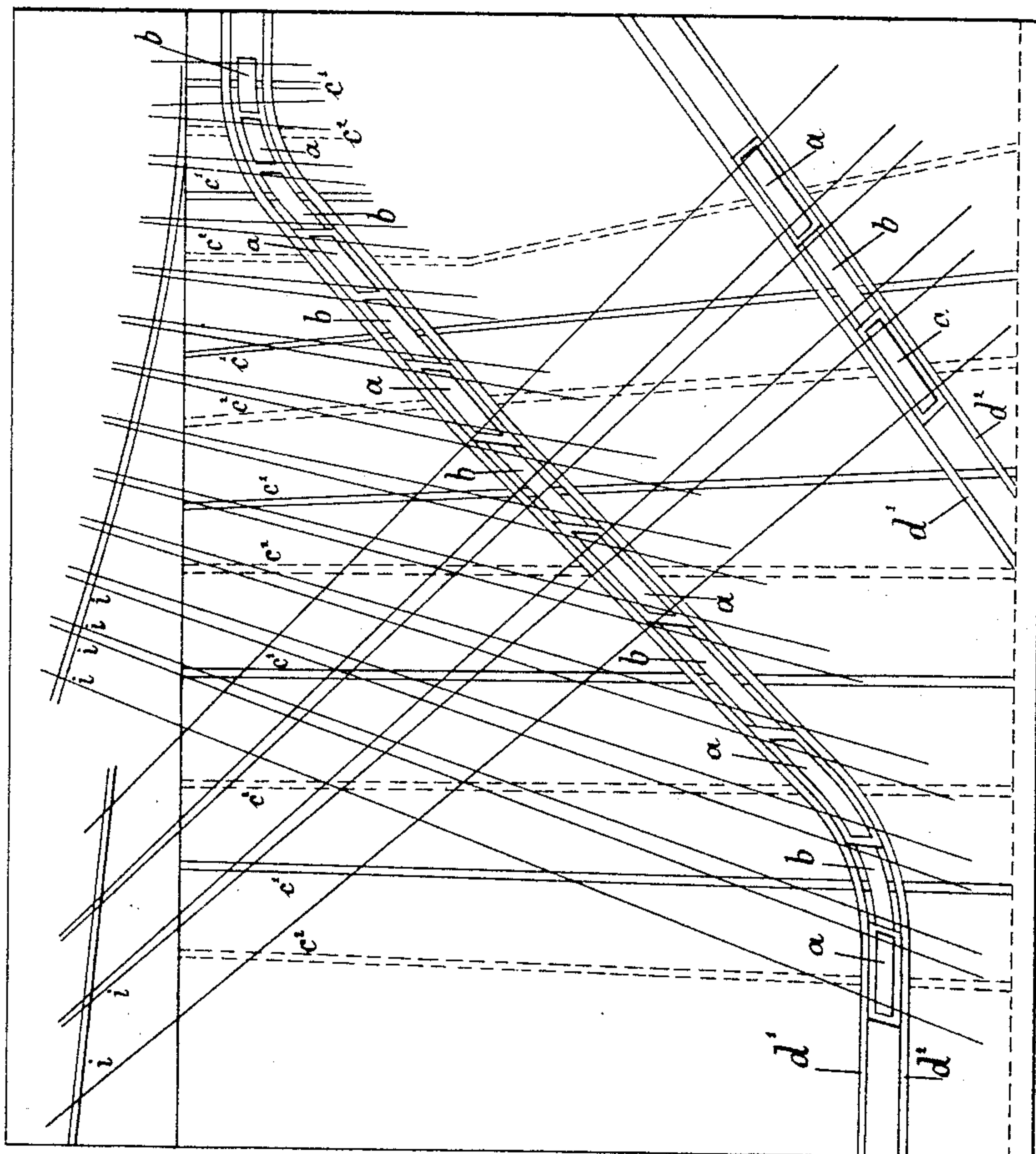
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Witnesses  
Jimmie Lingo,  
Edward Billner

In witness  
 August Roden  
 by *[Signature]*  
 Attorney



# UNITED STATES PATENT OFFICE.

AUGUST BODEN, OF HALBERSTADT, GERMANY.

## SOUNDING-BOARD FOR PIANOFORTES.

SPECIFICATION forming part of Letters Patent No. 513,478, dated January 30, 1894.

Application filed August 30, 1893. Serial No. 484,381. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST BODEN, organ-builder, of 9 Wernigeröder Strasse, Halberstadt, in the Kingdom of Prussia, German Empire, have invented a certain new and useful Improvement in Sounding-Boards for Piano-fortes, of which the following is a specification.

This invention relates to a double sounding-board for grand and cottage pianos, the sounding boards being of equal size and being alternately used for holding the wires in chords of four, five or six, said wires being attached to divided double bridges, so that each board carries half of the number of wires, surfaces free from wires being left between the separate chords of each board.

In order to make this invention more fully intelligible reference is made to the accompanying drawings, in which similar letters are used to denote similar parts throughout the several figures.

Figure 1 represents a longitudinal section of a part of the two sounding boards. Fig. 2 is a plan of the arrangement of the bridges shown strung. Fig. 3 is a crosssection of the double sounding-boards. Fig. 4 is a plan of the whole arrangement, showing the upper sounding-board.

$r'$  is the upper, and  $r^2$  the lower board,  $a'$  and  $a^2$  designating the bridges which pass through the upper one, and which support the wire chords of the lower board.

$b'$  and  $b^2$  are the bridges of the upper board. The respective bridges of the two boards are united by connecting bridges.

On the surface of the upper board  $r'$ , the connecting bridge runs in two parts  $d'$  and  $d^2$  (Fig. 2) parallel with the bridges  $b'$  and  $b^2$  supporting the wires. Ribs  $c'$   $c'$  pass through these bridges; said ribs can however be laid below the board. The lower sounding-board  $r^2$

(Fig. 1) has the connecting bridge  $d^3$  of the bridges  $a'$  and  $a^2$  together with the ribs  $c^2$  all on the under surface. The bridges of the lower board are connected to this latter by means of separate sounding blocks (Fig. 3) in order to compensate for the differences in tone, which arise from the different heights of the bridges. The bridges (Figs. 1 and 2)  $a'$  and  $a^2$  belong to the lower sounding board and pass up through suitable openings in the upper board to the wires.  $b'$  and  $b^2$  are the bridges of the upper board, which alternate regularly with those of the lower board.

$c'$  denotes the ribs of the upper and  $c^2$  (in dotted lines) the ribs of the lower sounding-board. Both boards are of the same size and form, and lie exactly one over the other.

The wire divisions are marked in the drawings (Fig. 4) by boundary lines  $i$ . Two lines pass over each bridge, of which the one shows the position of the first wire while the other line shows the position of the last wire of the chord.

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

A double sounding board for pianos provided with regularly alternating bridges resting upon the upper and lower boards, respectively, and with their top surfaces in the same plane and arranged so that each board bears upon its bridges half the number of strings, free surfaces uninfluenced by string pressure, being left on each side of the several bridges.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

AUGUST BODEN.

Witnesses:

FRIEDRICH SCHÜNEMANN,  
FERDINAND MERZ.