

M. CLARK.
 DUPLEX TRACKER BOARD FOR AUTOMATIC MUSICAL INSTRUMENTS.
 APPLICATION FILED NOV. 6, 1908.

915,018.

Patented Mar. 9, 1909.

Fig. 1

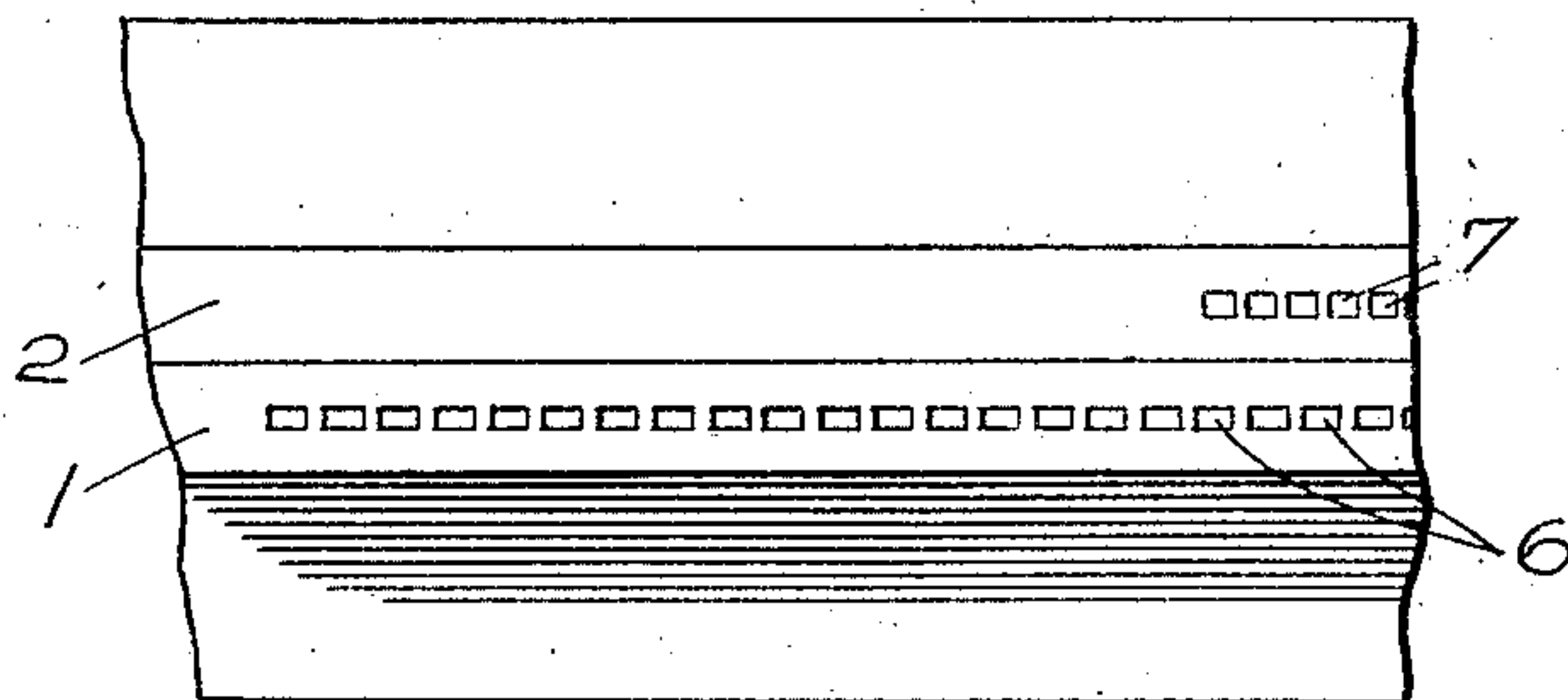


Fig. 2

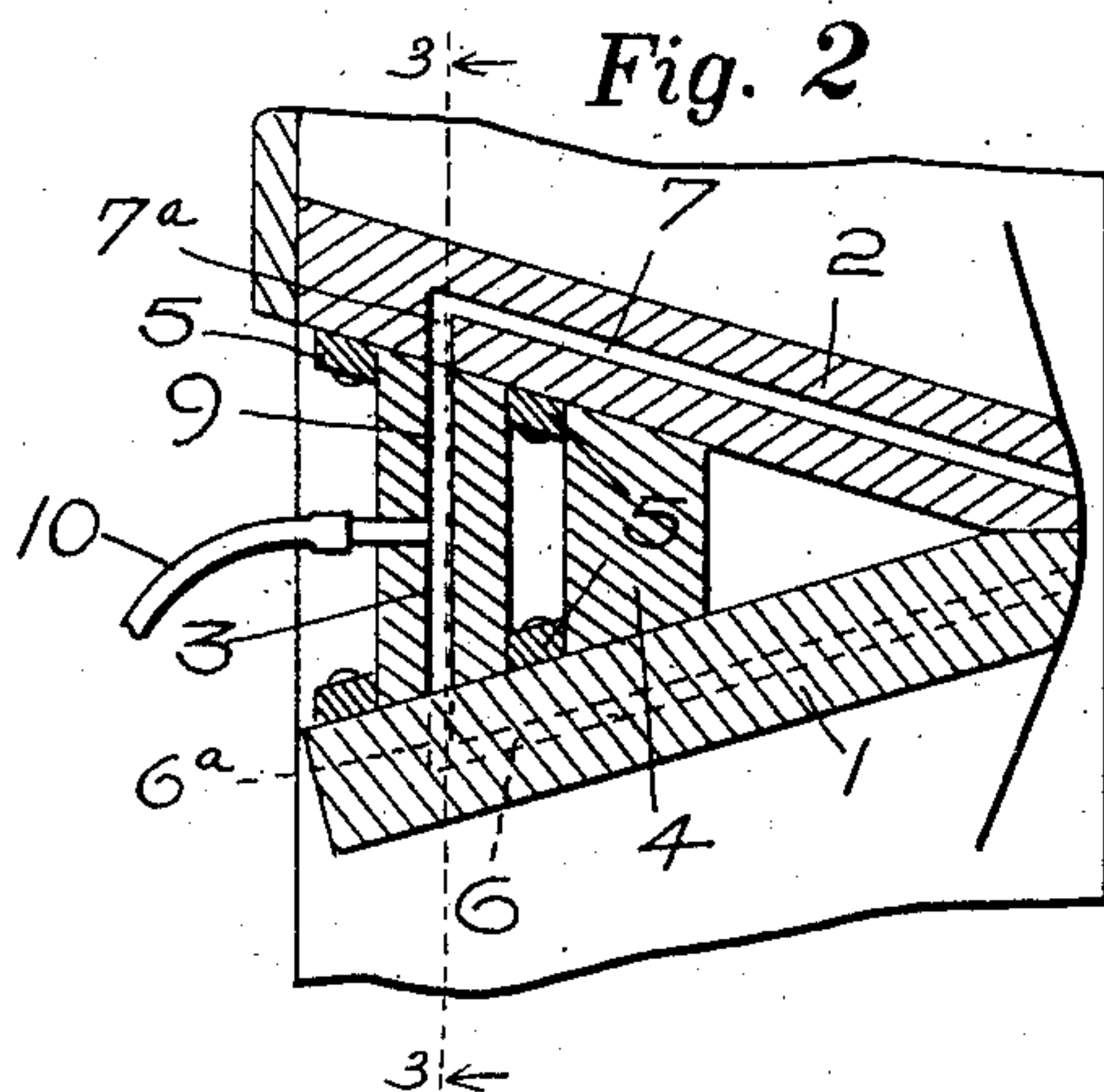
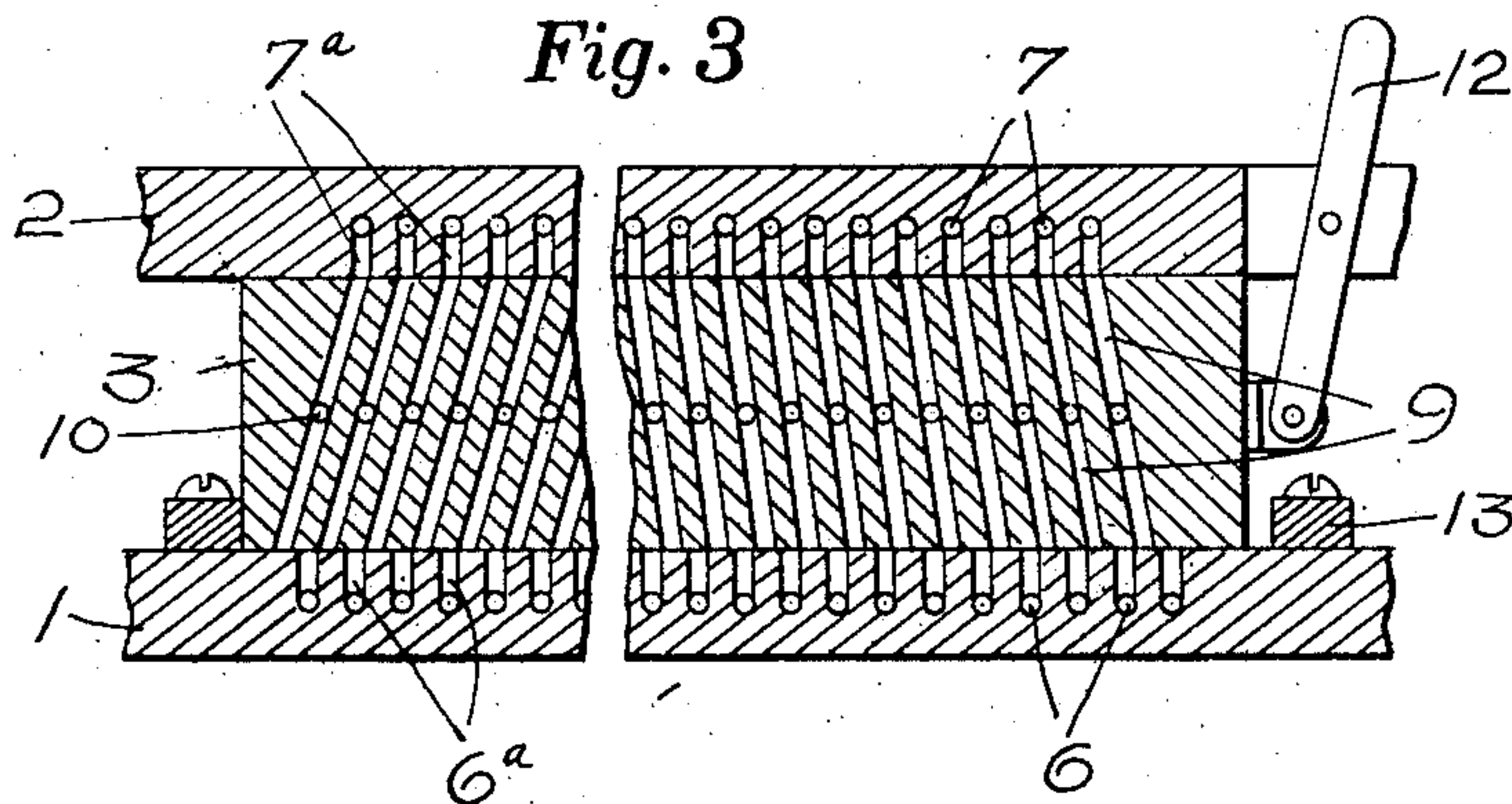


Fig. 3



WITNESSES:

John M. Culver
 Walter Evers

INVENTOR

Melville Clark
 by Burton Burton
 his atty

UNITED STATES PATENT OFFICE.

MELVILLE CLARK, OF CHICAGO, ILLINOIS.

DUPLEX TRACKER-BOARD FOR AUTOMATIC MUSICAL INSTRUMENTS.

No. 915,018.

Specification of Letters Patent.

Patented March 9, 1909.

Original application filed February 14, 1907, Serial No. 357,318. Divided and this application filed November 6, 1908.
Serial No. 461,264.

To all whom it may concern:

Be it known that I, MELVILLE CLARK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Duplex Tracker-Boards for Automatic Musical Instruments, of which the following is a specification, reference being had to the drawings forming a part thereof.

This application is a division of my original application No. 357,318, filed February 14, 1907.

It relates to one of the modifications shown in that application, in which the claims were directed to a different modification.

The purpose of the invention is to provide an improved tracker board construction for automatic musical instruments or players by which such instruments may be adapted to employ controlling sheets having their perforations cut according to different scales,—that is spaced more or less widely from center to center of the perforations.

It consists of the features and construction herein shown and described as indicated in the claims.

In the drawings:—Figure 1 is an edge elevation of a tracker board device embodying this invention. Fig. 2 is a vertical fore-and-aft section of the same. Fig. 3 is a section at the line 3—3 on Fig. 2.

The tracker device which embodies this invention as shown in the drawings consists of a tracker board comprising two members, 1 and 2, joined so as to be rigid with each other and meeting at their forward edges, from which they diverge rearwardly for admission between them of a third member, 3, which is fixed between them, being beveled on its edges for abutting snugly upon the oppositely facing or inner surfaces of the two members, 1 and 2, back of their meeting line, and provided with guides, 5, 5, between which said member, 3, is adapted to slide longitudinally of the members, 1 and 2. The said members, 1 and 2, are preferably secured together for rigidity with each other by an interposed spacer and brace bar, 4, extending longitudinally between the meeting of the two members, 1 and 2, and the sliding member, 3.

The two members, 1 and 2, have respectively sets of tracker ducts, 6 and 7, which at their mouths at the forward edges of said

members respectively are differently spaced, those of the member, 1, being, for example, spaced at a distance of about one-sixth of an inch from center to center, and those of the member, 2, being spaced more closely, as, for example, at a distance of about one-tenth of an inch from center to center. The said ducts, 6 and 7, are led out to the opposed surfaces of said members respectively by the short inwardly offset ports, 6^a, and 7^a, and are adapted to register with the ports of ducts, 9, in said member, 3, which at one edge of said member have their ports spaced to agree with the spacing of the ports, 6^a, of the member, 1, and at the opposite edge have their ports spaced to agree with the spacing of the ports, 7^a, of the member, 2, the ducts 9 thus diverging somewhat from one edge to the other of said member, 3.

Tubes, 10, 10, leading to the pneumatic action are connected to the ducts, 9, of the member, 3, at any convenient point intermediate the two lateral edges of said member. The duct ports of the ducts, 9, at the opposite edges of said member, 3, are, however, so located that they will not register at the same time with the ports, 6^a and 7^a, of the two members, 1 and 2 respectively; that is to say, when said ports of the ducts, 9, register at one edge with the ports, 6^a, of the ducts 6 in the member, 1, they are out of registration with the corresponding ports 7^a of the other member, which are therefore closed by the edge of said member, 3, operating as a valve on the inner face of the member, 2; and, similarly, when the member, 3, is moved longitudinally in its slide bearings on the two members, 1 and 2, sufficiently to cause the ports at the edge which seats on the member, 2, to register with the ports, 7^a, of that member, the ports at the opposite edge are carried out of registration with the ports, 6^a, of the member, 1, and said ports are closed by the edge of the member, 3, operating as a valve on the inner face of said member, 1. Either set of tracker ducts may therefore be brought into operative connection with the pneumatic action by adjusting the member, 3, one way or the other for registration of its duct ports at one edge of said member or the other with the ports on the member against which it bears at that edge. A convenient means for such adjustment consists of the lever, 12, which may be fulcrumed upon either of the members, and which is illus-

trated as fulcrumed upon the member, 2, projecting upward so as to be within reach of the operator. The stops, 13, on the lower member, 1, limit the throw of the member, 3, for registration of its duct ports with the ports of the members, 1 and 2, respectively.

I claim:—

1. In an automatic music-playing instrument, a tracker device consisting of a fixed element and a movable element, one of said elements having two sets of tracker ducts which lead respectively to ports in areas of said element which face in opposite directions, the other element having two sets of duct ports, said ports of the first and second element being relatively disposed on said elements respectively so that only one set of ports of one element can register at a time with the corresponding set of ports of the other element, said second element being interposed between said two oppositely facing surfaces of the first element and movable thereon to shift the registration of its ports with said sets of ports of the other element.

2. In an automatic music-playing instrument, a tracker device comprising two elements, one of said elements having two sets of tracker ducts terminating in a tracker mouth edge at which the mouths of said two sets of ducts are differently spaced, the ducts of said two sets being extended from their said tracker mouths to and having their respective series of ports opening at oppositely facing areas of the surface of said element, a second element coöperating with said first element having a series of ducts each provided with two ports at surfaces of said second element adapted to bear upon said

two oppositely facing surfaces of the first element, the said two sets of ports of said second element and the two sets of ports of the first element being relatively disposed on said elements respectively so that only one set of said ports of one element can register at a time with the corresponding set of ports of the other element, said two elements being relatively movable to shift such registration at will from one set to the other.

3. In an automatic music-playing instrument, a tracker device comprising an element consisting of two duct boards meeting at one edge and diverging from such edge and rigidly secured together, having respectively sets of tracker ducts differently spaced at the tracker edge, and having corresponding series of ports opening through oppositely facing surfaces of said duct boards respectively; a duct element whose ducts have terminal mouths or ports opening through oppositely facing edges of said member and adapted to register respectively with the two sets of ports of said two duct boards, said ports of the second element and ports of the first element being relatively disposed on said two elements so that only one set of duct ports of either member can register at a time, and means for shifting said second element at will to change the registration.

In testimony whereof, I have hereunto set my hand, in the presence of two witnesses, at Chicago, Illinois, this 2d day of November, 1908.

MELVILLE CLARK.

In the presence of—

JULIA S. ABBOTT,
M. GERTRUDE ADY.