

J. H. DICKINSON.
ADJUSTABLE TRACKER FOR PNEUMATIC PLAYING ATTACHMENTS.
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915,942.

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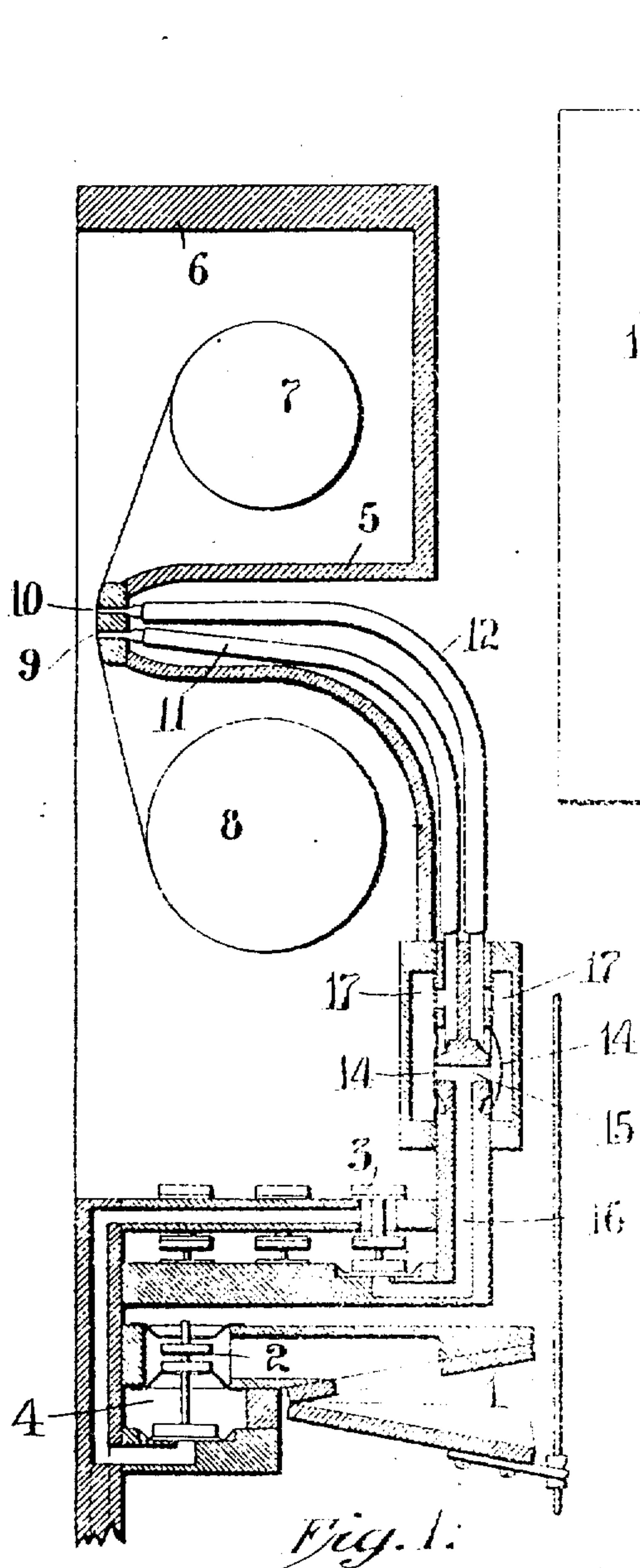


Fig. 1.

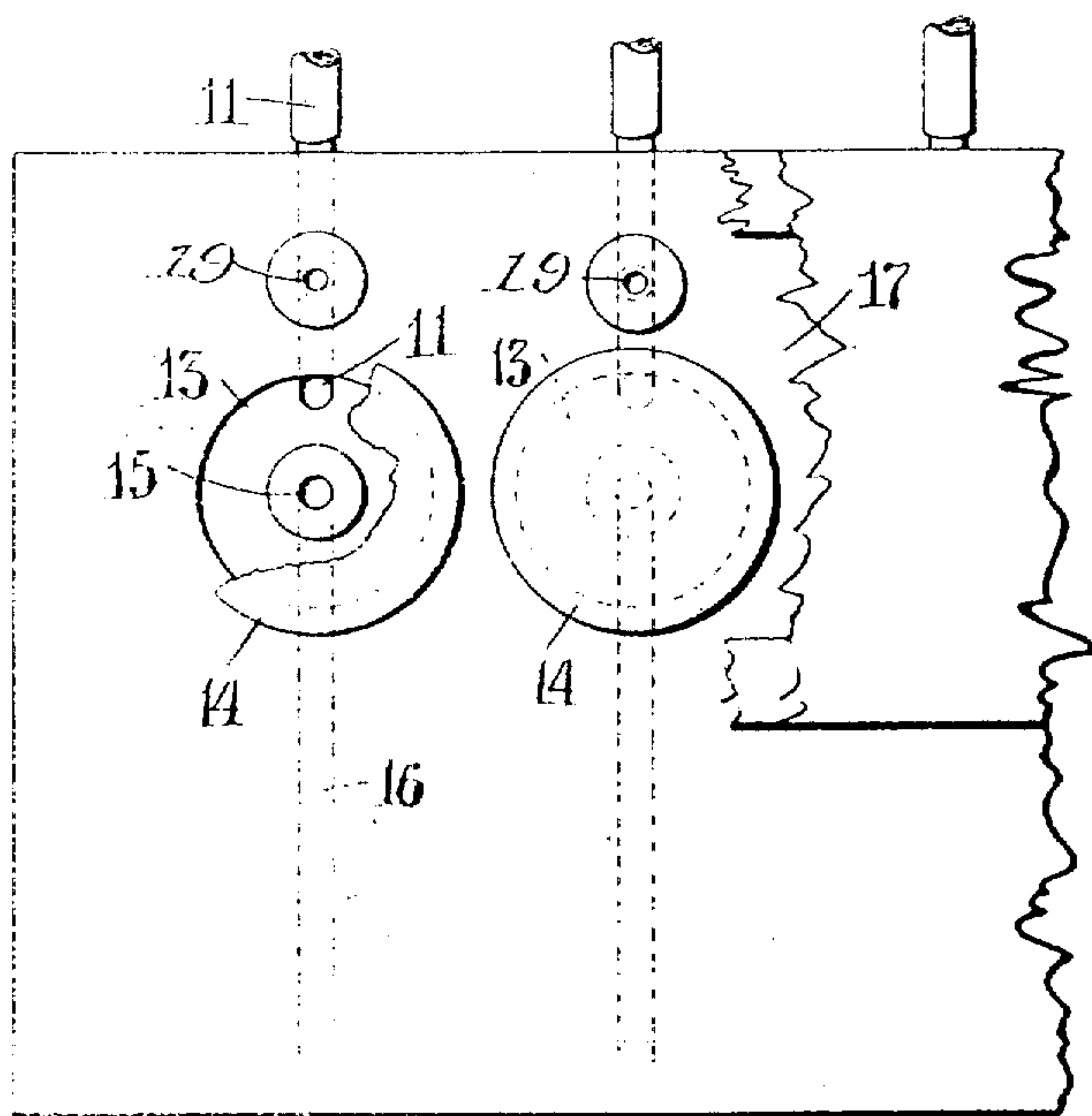


Fig. 3.

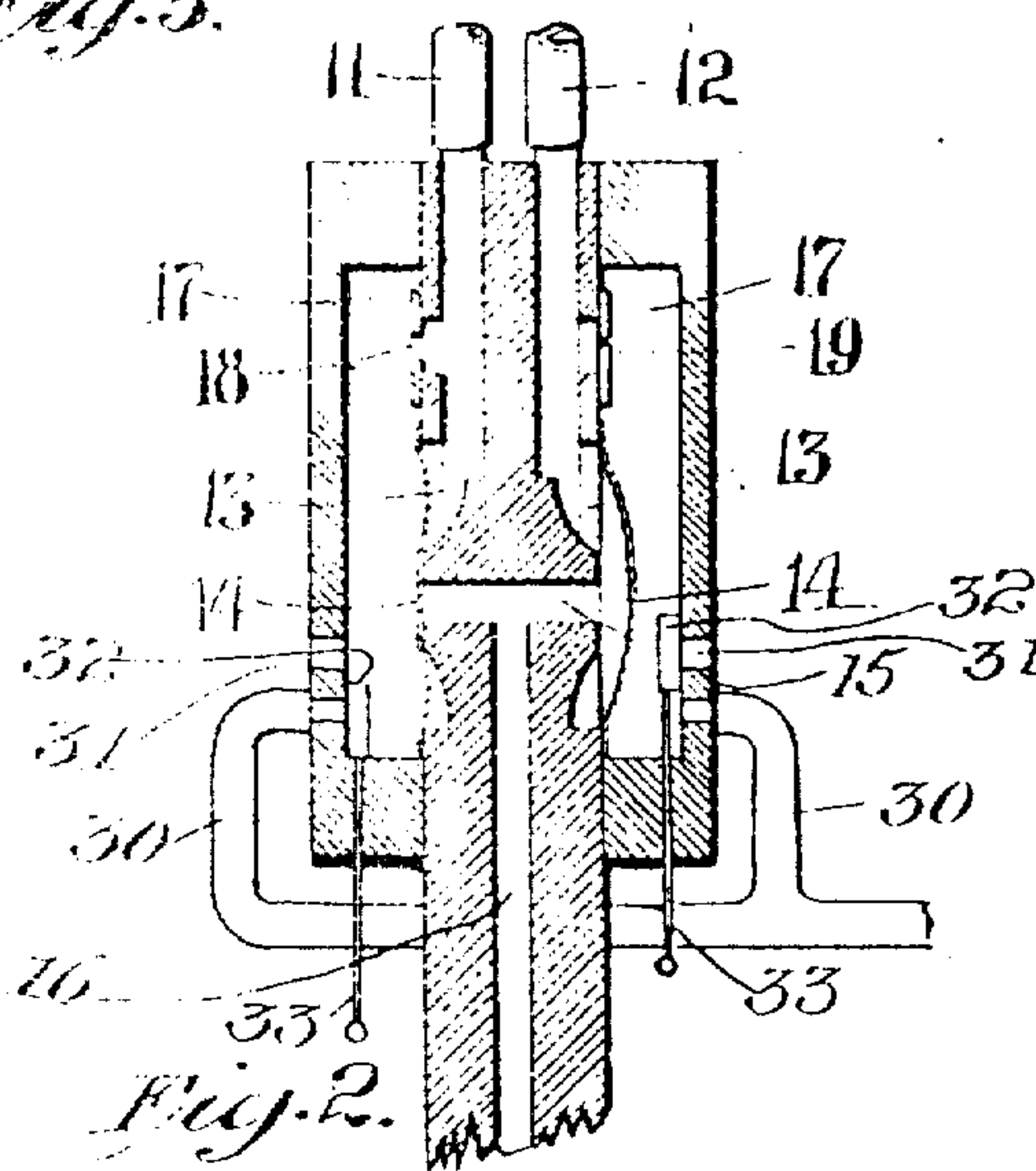


Fig. 2.

WITNESSES:

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ADJUSTABLE TRACKER FOR PNEUMATIC PLAYING ATTACHMENTS.

No. 915,942.

Specification of Letters Patent.

Patented March 23, 1909.

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To all whom it may concern:

Be it known that I, JOSEPH H. DICKINSON, a citizen of the United States, and a resident of Cranford, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Adjustable Trackers for Pneumatic Playing Attachments, of which the following is a specification.

This invention relates to improvements in adjustable trackers for pneumatic playing attachments for musical instruments.

The object of my invention is to provide a new and improved tracker having two independent rows of tracker holes connected with ducts, and with means for easily and rapidly bringing the ducts of either row into or out of operative communication with ducts leading to the player mechanisms, all of simple construction, and effective and reliable in action and operation.

In the accompanying drawings in which like numerals of reference indicate like parts in all the figures: Figure 1 is a vertical sectional view through one embodiment of my new and improved tracker board and one player pneumatic and the valves thereof. Fig. 2 is an enlarged detail sectional view of the mechanism for bringing the ducts of either row of holes into and out of communication with a player mechanism. Fig. 3 is an elevation of the construction shown in Fig. 2, parts being broken away.

The striker pneumatic 1, its valves 2 and 3 and the wind chest 4 are all of conventional construction. The hollow tracker board 5 is secured in the music box 6 containing the music rolls 7 and 8, of conventional construction. The tracker board 5 is provided in its outer edge with two longitudinal rows of holes 9 and 10 and the holes may differ in number, in said rows, may differ in size, in the two rows and may be spaced differently in the two rows, for example, there may be sixty-five holes 9 in one row and eighty-eight holes 10 in the other row. Each hole 9 is connected with a duct 11 and each hole 10 with a duct 12, which ducts may for example be formed of rubber or metal tubes. Each duct 11 and 12 terminates in a chamber 13 on the edges of which a diaphragm valve 14 is secured each of which can close one end of a transverse duct 15, around which ends of the duct seats for the diaphragm valves are formed. The transverse duct 15 is connect-

ed with a single duct 16 leading to the valve of a striker pneumatic, in the embodiment illustrated, the valve 5. The several diaphragm valves 14 are thus arranged in two sets, each corresponding to one set of ducts 11 or 12 and the valves 14 of each set are located in a separate chamber 17, which chambers may be connected with atmosphere or with a suction chamber by well known pneumatic or other means.

Each duct 11 and 12 is connected by a bleed hole with that chamber 17 in which the valve 14 of said duct is located. The bleed holes 18 in the ducts 11 connected with the sixty-five holes 9 are made larger than the bleed holes 19 in the ducts 12 connected with the eighty-eight note holes 10 as clearly shown in Fig. 2, as the holes 9 in the sixty-five row are larger than the holes 10 in the eighty-eight row and to insure the same rapidity of action for the holes of both rows the bleed holes must be varied in size according to the size of the tracker hole.

As shown in Fig. 2 atmospheric air has been admitted into the left hand chamber 17 and presses the left hand diaphragm valve 14 upon the left hand end of the transverse ducts 15 thus cutting out the ducts of the sixty-five hole row from communication with the duct 16 leading to the striker pneumatics.

The right hand chamber is connected with the suction device and the air entering through the tracker holes 10 keeps the right hand diaphragm in valves 14 off their seats thus keeping the ducts of the eighty-eight hole row in communication with the ducts 16 leading to the striker pneumatics. By admitting air into the right hand chamber 17 and exhausting the air from the left hand chamber 17, conditions are reversed and the ducts of the sixty-five hole row are connected with the striker pneumatics and the ducts of the eighty-eight hole row are disconnected from the pneumatics.

Any well known means may be used for connecting either chamber 17 with the atmosphere or with a suction device. I have shown, for example; the chambers 17 connected by tubes 30 with a suction device (not shown) and by holes 31 with the atmosphere. A slide valve 32 connected with a manipulating rod 33 is provided in each chamber for the purpose and either closing the ports 31 or the suction tube 30.

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

1. The combination with a tracker board, having two rows of holes, the holes in one row being different in size, from the holes in the other row, of ducts connected with the holes and arranged in two groups, common ducts, each connected with two corresponding ducts of the two groups above mentioned, a valve for each duct, for controlling its communication with its common duct, substantially as set forth.

2. The combination with a tracker board, having two rows of holes, the holes in one row being different in size from the holes in the other row, of ducts connected with the holes and arranged in two groups, a transverse duct for each pair of ducts leading from the tracker, a valve for each end of the transverse duct, a duct connected with the transverse duct, a pneumatic connected with said duct, two air chambers containing said valves, each duct leading from a tracker hole having a bleed hole communicating with the corresponding chamber, the bleed holes for the ducts connected with the larger tracker holes being larger than the bleed holes for the ducts connected with the smaller tracker holes, substantially as set forth.

3. The combination with a tracker board, having two rows of holes, the holes in one row being different in size from the holes in the other row, of ducts connected with the holes and arranged in two groups, a common duct connected with two corresponding ducts of the two groups above mentioned, a

diaphragm valve for each duct, which diaphragm valve controls the communication between the duct and the common duct relating to a pair, two air chambers containing the valves of said two groups of ducts, a bleed hole in each duct and communicating with the corresponding chamber, the bleed holes for the ducts communicating with the larger tracker holes being larger than the bleed holes for the ducts communicating with the smaller tracker holes, substantially as set forth.

4. The combination with a tracker board, having two rows of holes, the holes in one row being different in size from the holes in the other row, of ducts connected with the holes and arranged in two groups, a common duct connected with two corresponding ducts of the two groups above mentioned, a pneumatic valve for each duct, and two air chambers containing said valves, substantially as set forth.

5. The combination with a tracker board having two sets of holes, the holes of one set being larger than the holes of the other set, of a duct connected with each hole, which ducts have bleed holes and the bleed holes for the ducts connected with the larger tracker board holes being larger than the bleed holes for the ducts connected with the smaller tracker board holes, substantially as set forth.

Signed this 21st day of November A. D. 1908.

JOSEPH H. DICKINSON.

Witnesses:

A. A. SCOTT,
A. W. SPERRY.