

No. 871,787.

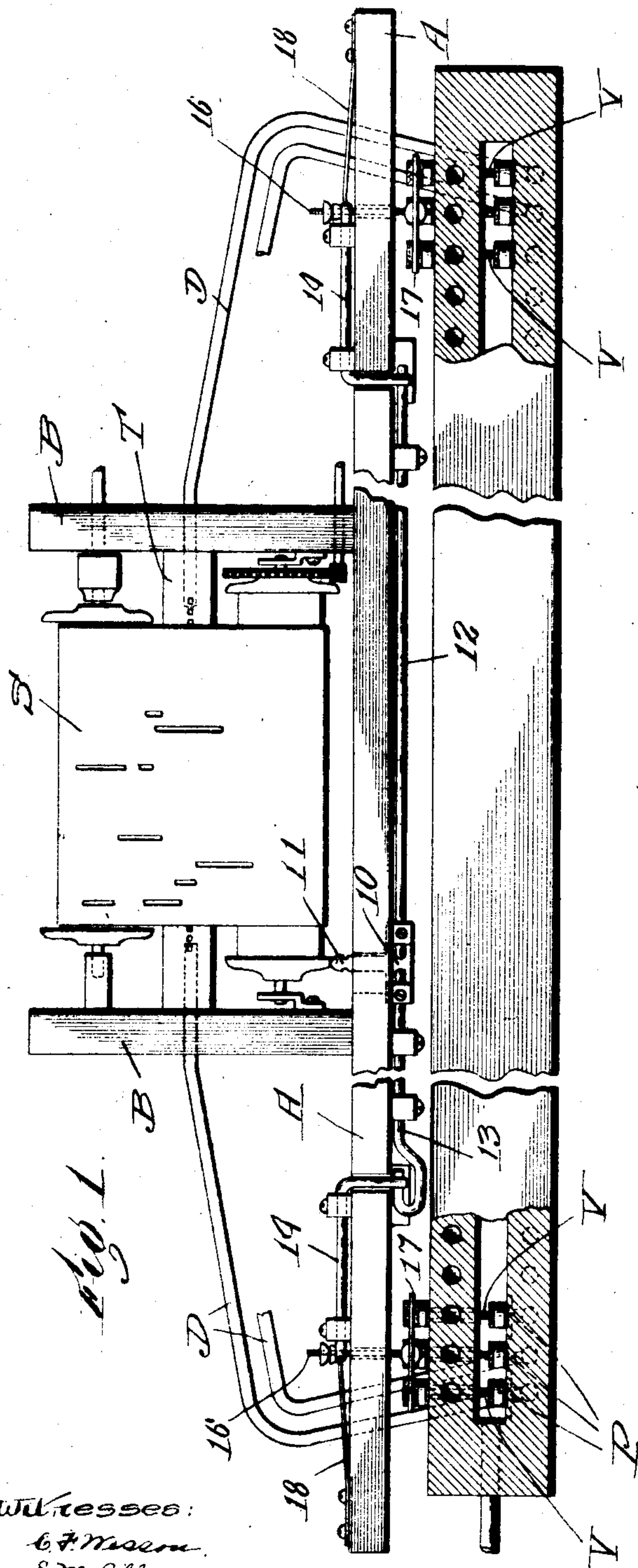
PATENTED NOV. 26, 1907.

T. DANQUARD.

NARROW MUSIC SHEET ATTACHMENT FOR MUSICAL INSTRUMENTS.

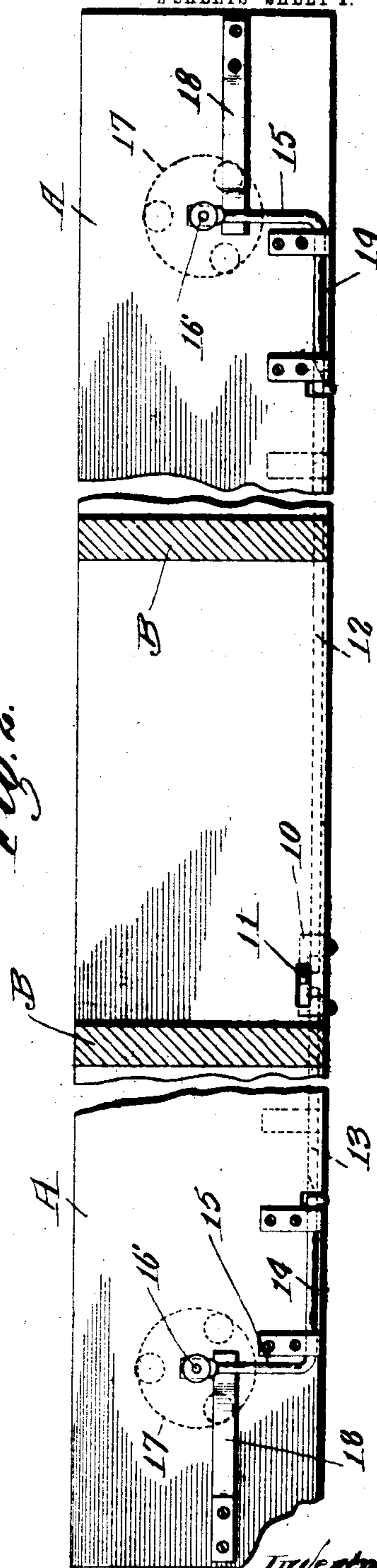
APPLICATION FILED MAY 26, 1905.

2 SHEETS—SHEET 1.



Witnesses:
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Fig. 2.



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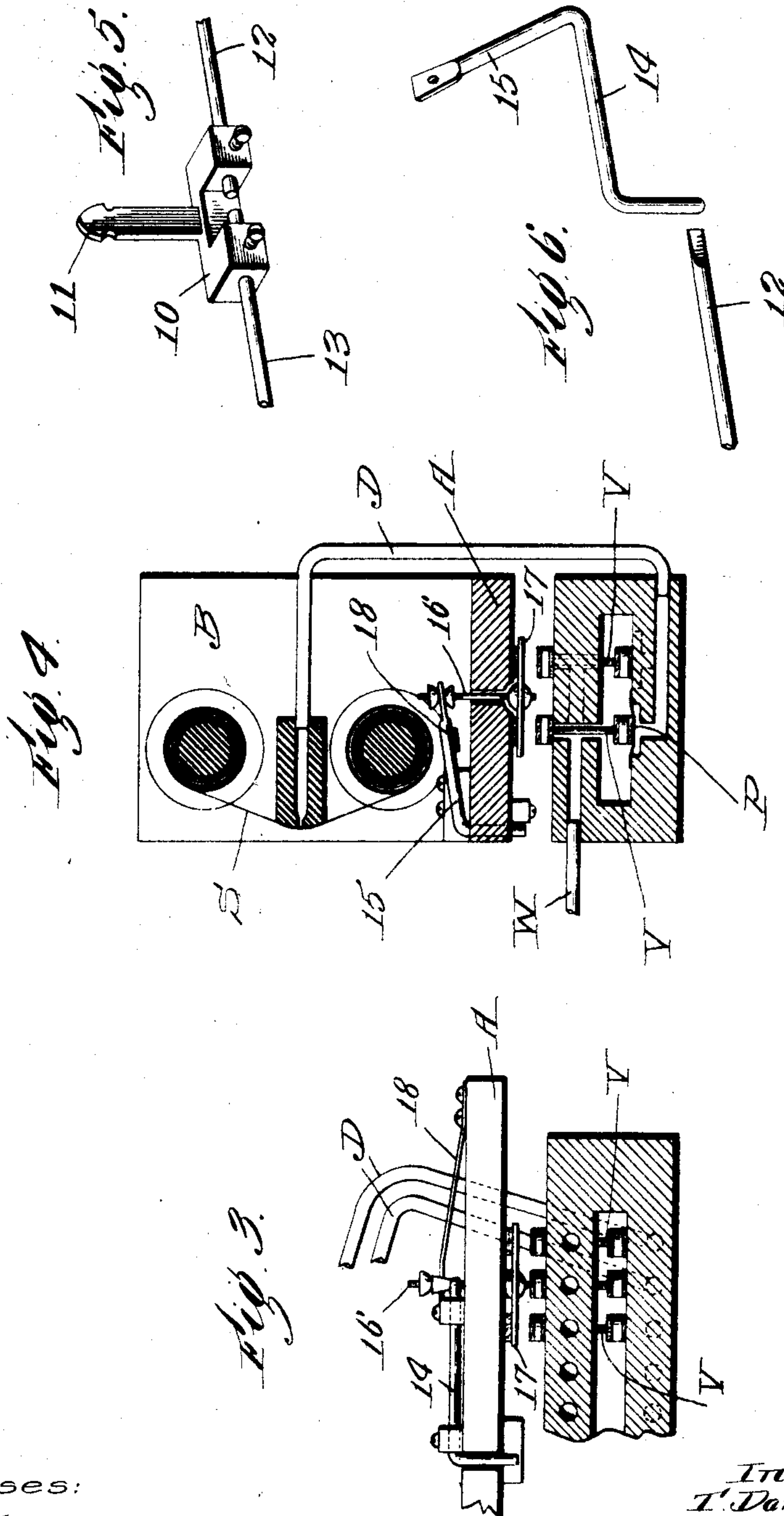
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APPLICATION FILED MAY 26, 1906.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

THOMAS DANQUARD, OF NEW YORK, N. Y., ASSIGNOR TO AUTOPIANO COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

NARROW-MUSIC-SHEET ATTACHMENT FOR MUSICAL INSTRUMENTS.

No. 871,787.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed May 26, 1905. Serial No. 262,423.

To all whom it may concern:

Be it known that I, THOMAS DANQUARD, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Narrow-Music-Sheet Attachment for Musical Instruments, of which the following is a specification.

This invention relates to that class of musical instruments which are controlled from tracker boards by the use of traveling strips or sheets of perforated paper.

The especial object of this invention is to provide simple efficient connections permitting the use of comparatively narrow music sheets upon tracker boards which are adapted for wider music sheets. To accomplish this result a narrow music sheet attachment for musical instruments constructed according to this invention is designed to engage and prevent operation of the primary pneumatic puppets corresponding to notes beyond the range of the music sheet which it is desired to use.

This invention consists of the parts and combinations of parts as hereinafter described and more particularly pointed out in the claims at the end of this specification.

In the accompanying two sheets of drawings, Figure 1 is a front view partly broken away of sufficient parts of a musical instrument to illustrate the application of this invention thereto. Fig. 2 is a plan view of the same. Fig. 3 is a fragmentary view showing the parts in different position from that illustrated in Fig. 1. Fig. 4 is a transverse sectional view. Fig. 5 is a detail view of the setting handle, and Fig. 6 is a detail view of one of the rock-shafts.

Among the various makes or types of automatic musical instruments, and especially in different automatic piano players, different widths of music sheets are employed.

The tracker boards of nearly all piano players or similar musical instruments are of substantially the same gage or have their channels arranged with the same spacing. The tracker boards, however, are made of different widths according to the width of the music sheets to be employed, and in order to use music rolls or music sheets which are narrower than the range of any particular tracker board, it is necessary to provide some means for preventing sounding of

notes which are beyond the range of the music sheet which it is desired to use. In practice this has heretofore been done by the use of small valve plates for closing a number of tracker board channels at each end of the tracker board.

In practice I have found that the use of small valve plates cooperating directly with the channels of a tracker board is unsatisfactory, as such cut-off plates can be kept tight only with comparative difficulty. To overcome this objection, I have provided a narrow music attachment for an automatic musical instrument in which all the tracker board channels are left open when a narrow music sheet is employed.

The improper speaking or sounding of notes beyond the range of a narrow music sheet in use is prevented by locking or otherwise rendering inoperative the primary pneumatic puppets corresponding to such notes. In the construction herein illustrated, the puppets at each end of the pneumatic action are held from operation when desired by two locking plates. These locking plates are moved down into engagement with the puppets by means of connections from a single setting handle.

Referring to the drawing for a detail description of an apparatus embodying this invention, A designates a board or ledge forming part of the casing of a piano player or other automatic musical instrument. Carried by the board A are side boards B which carry the journals or bearings of the winding rolls for music sheets and which also support the tracker board T. Leading from the tracker board T are pipes or passages D which connect with the primary pneumatics P. Controlled by each of the primary pneumatics P is a puppet valve V controlling the connection of a pipe W either with the atmospheric air or with the main wind trunk. The passage or pipe W is connected to a second primary controlling the striking pneumatic which need not be herein shown or described. The parts as thus far referred to may be of ordinary or usual construction and need not be herein described at length.

Whenever the construction is to be used with a music sheet which is narrower than the full capacity of its tracker board T, for example, when a narrow music sheet S is to be employed as illustrated in Fig. 1, it is nec-

5 necessary to prevent the sounding of notes be-
 yond the range with a narrow music sheet S.
 To accomplish this purpose I preferably em-
 10 ploy a slide 10 having a handle 11, project-
 ing up in front of the winding rolls in posi-
 tion to be readily operated by the user. Ad-
 justably mounted in the setting slide 10 are
 oppositely extending wires 12 and 13. The
 15 wires 12 and 13 are provided at their ends
 with cams or inclined portions which face in
 the same direction, that is to say, the wire
 13 is preferably provided with a hook at its
 end, so that it may be provided with a wedge
 20 shaped point which will incline in the same
 direction as the point at the end of the set-
 ting wire 12. Coöperating with the setting
 wires 12 and 13 respectively are two sets of
 locking connections for holding a number of
 25 the puppet valves out of operation. These
 locking connections are duplicates of each
 other and a description of one such set of
 connections will be sufficient, for example,
 the locking connections for holding a num-
 ber of the bass note puppets (three in the pres-
 30 ent instance) out of operation comprises a
 rock-shaft 14 having an arm extending
 down vertically in position to be engaged by
 the wire 13. Extending rearwardly from
 the rock-shaft 14 is an arm 15 which is ad-
 justably connected to the rod 16, carrying
 35 a locking plate 17. The locking plate 17 is
 normally held up by a spring 18. When the
 locking plate 17 is moved down to engage the
 tops of a number of puppets it will hold said
 40 puppets down so that they will be rendered
 inoperative, permitting the use of a narrow
 sheet upon the tracker board T. One par-
 ticular advantage of the use of a narrow
 music sheet attachment for musical instru-
 45 ments constructed according to this inven-
 tion resides in the fact that the range of the
 cut-off devices may be increased to any de-
 sired extent. For example, while I have
 illustrated cut-off connections adapted to
 50 make a change of six notes only in the ca-
 pacity of the instrument, it is understood
 that this can be readily increased by sub-
 stitution of larger locking plates 17, which
 can be readily put in and taken out accord-
 ing to the character of the change in width
 of the music sheet to which it is desired to
 adapt it to any particular instrument.

I am aware that changes may be made in
 practicing my invention by those who are
 55 skilled in the art in applying my invention
 to different forms of instruments. I do not
 wish, therefore, to be limited to the particu-
 lar construction I have herein shown and de-
 scribed, but

60 What I do claim and desire to secure by
 Letters Patent of the United States is:—

1. In a music playing device, the combina-
 tion of primary pneumatics, the puppets
 controlled thereby and means for holding in
 65 inoperative position the puppets correspond-

ing to notes beyond the range of the music
 sheet which it is desired to use.

2. In a music playing device, the combina-
 tion of primary pneumatics, the puppets
 controlled thereby, two sets of connections 70
 for holding in inoperative condition the pup-
 pets corresponding to the bass and treble
 notes respectively which are beyond the
 range of the music sheet which it is desired
 to use, and means for operating said sets of 75
 connections from a single setting handle.

3. In a music playing device, the combina-
 tion of primary pneumatics, the puppets
 controlled thereby, a locking plate, means
 for normally holding up the locking plate and 80
 means for moving the locking plate down
 into engagement with the puppets corre-
 sponding to notes which are beyond the
 range of a music sheet which it is desired to
 use. 85

4. In a music playing device, the combina-
 tion of primary pneumatics, puppets
 controlled thereby, a locking plate, means
 for normally holding the locking plate out
 of operative position, a rock-shaft connected 90
 to move the locking plate and a setting
 handle for tipping the rock-shaft to operate
 the plate to hold the puppets from operat-
 ing, which correspond to notes beyond range
 of the music sheet which it is desired to use. 95

5. In a music playing device, the combina-
 tion of primary pneumatics, puppets
 controlled thereby, a locking plate for cer-
 tain of the puppets, a spring normally hold-
 ing the locking plate out of operative posi- 100
 tion, a rock-shaft for setting the locking
 plate, a slide wire and a setting handle for
 operating the slide wire.

6. In a music playing device, the combina-
 tion of primary pneumatics, puppets 105
 controlled thereby, two locking plates for
 preventing the puppets from operating which
 correspond to the bass and treble notes re-
 spectively which are beyond the range of the
 music sheet which it is desired to use, a set- 110
 ting handle and connections for operating
 both of the locking plates from the setting
 handle.

7. In a music playing device, the combina-
 tion of primary pneumatics, puppets 115
 controlled thereby, locking plates for the
 puppets corresponding to the bass and treble
 notes respectively, which are beyond the
 range of the music sheet it is desired to use,
 a rock-shaft for setting each of the locking 120
 plates, a slide having a cam for operating
 each of said rock-shafts and a setting handle
 connected to move the slide.

8. In a music playing device, the combina-
 tion with the primary pneumatics, of 125
 two locking devices for preventing those
 pneumatics from operating which corre-
 spond to the bass and treble notes respec-
 tively, which are beyond the range of the
 music sheet which it is desired to use, a set- 130

ting handle, and connections for operating both of said locking devices from the setting handle.

9. In a music playing device, the combination of a tracker having note channels or passages connected therewith, a primary pneumatic for each of said note channels or passages, and means for positively rendering a predetermined number of said pneumatics at each end of the series inoperative while the corresponding channels or passages are maintained open and all the pneumatics are subjected to the same conditions of air tension or pressure, the said means leaving the intermediate pneumatics unaffected.

10. In a music playing device, the combination of a tracker having note channels or passages, a primary pneumatic connected with each of said channels or passages, and two sets of connections for positively rendering those primary pneumatics corresponding to bass and treble notes, respectively, beyond the range of the music sheet to be

used, inoperative while the corresponding channels or passages are open, the said means leaving the intermediate pneumatics unaffected.

11. A music playing device having primary pneumatics, a movable plate for locking certain of the primary pneumatics in inoperative position, and means for moving said plate to simultaneously move a plurality of the primary pneumatics into inoperative position.

12. A music playing device having primary pneumatics and a movable plate for locking certain of the primary pneumatics in inoperative position.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

THOMAS DANQUARD.

Witnesses:

J. M. BARTLETT,
HOPPER S. MOTT.