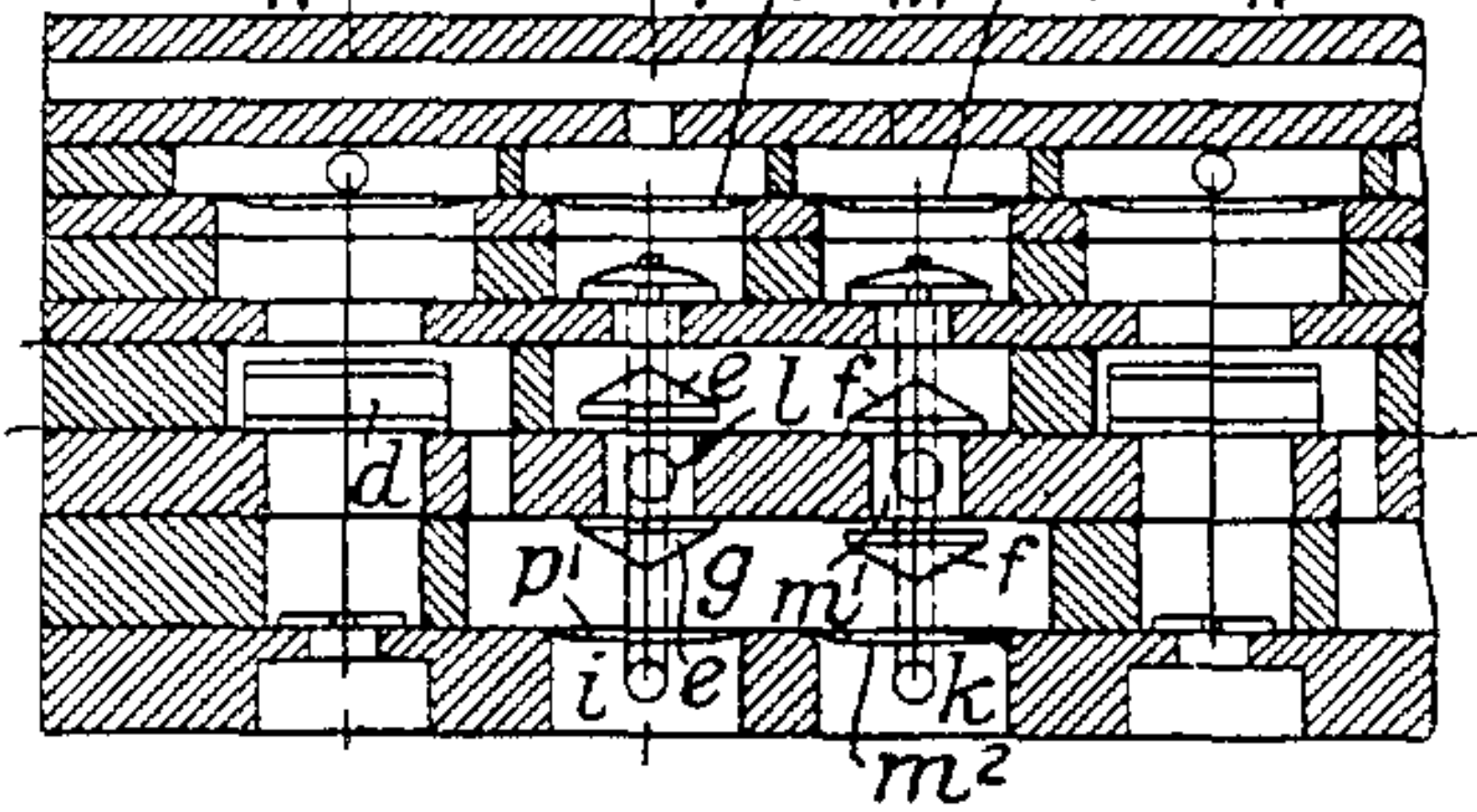
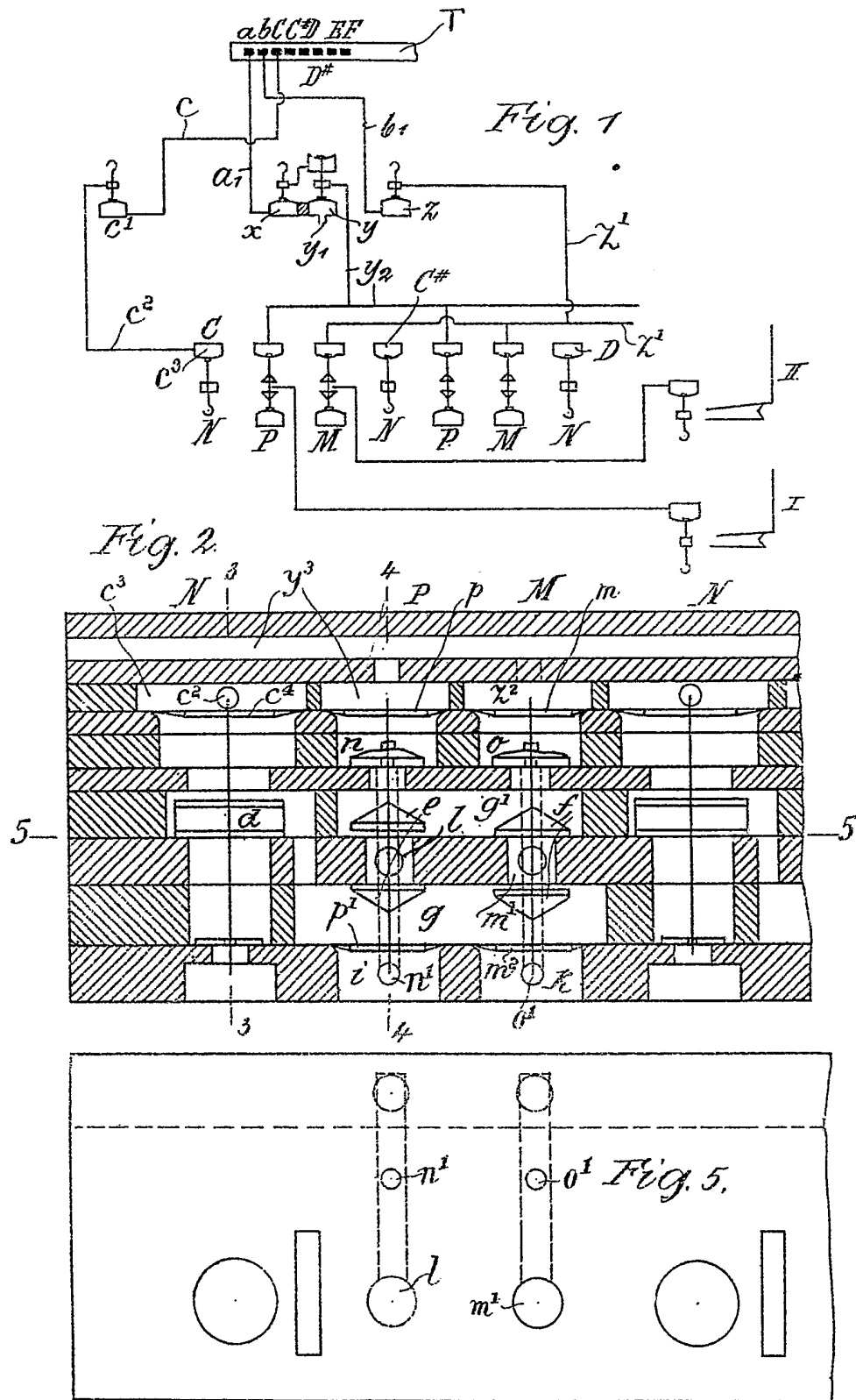


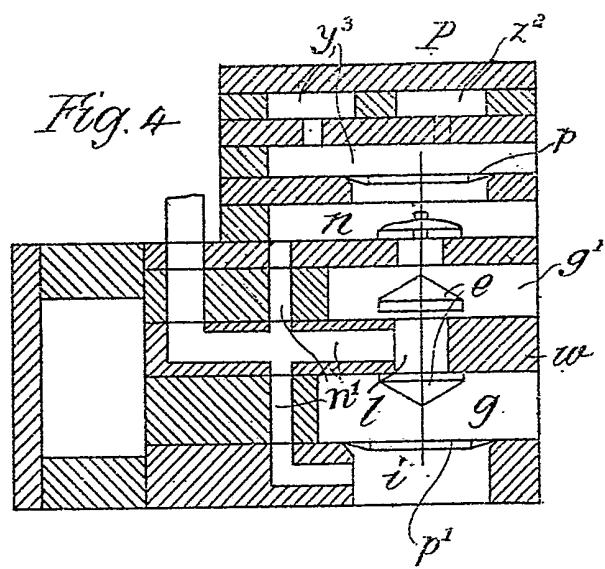
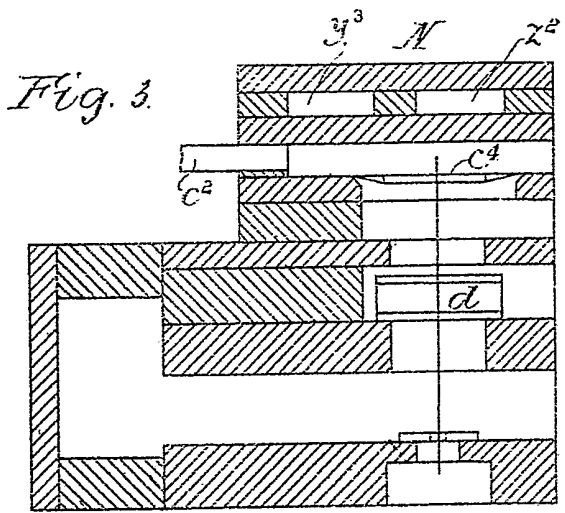
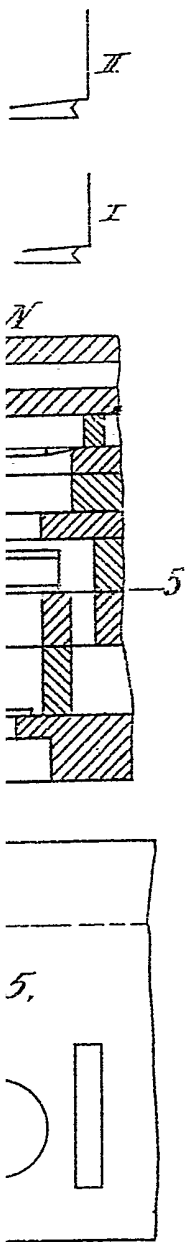
FIG. 1.

FIG. 2. N P P M m N



[This Drawing is a reproduction of the Original on a reduced scale.]





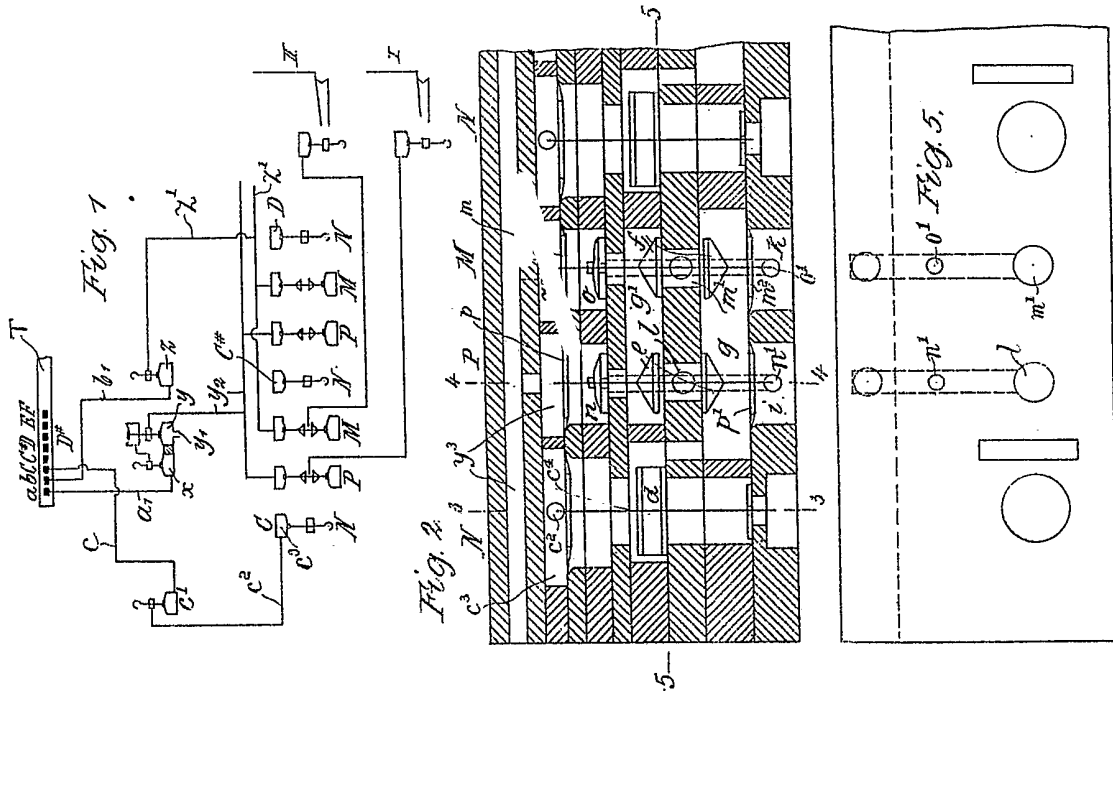


Fig. 1

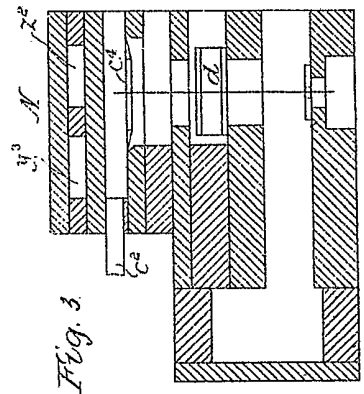


Fig. 3

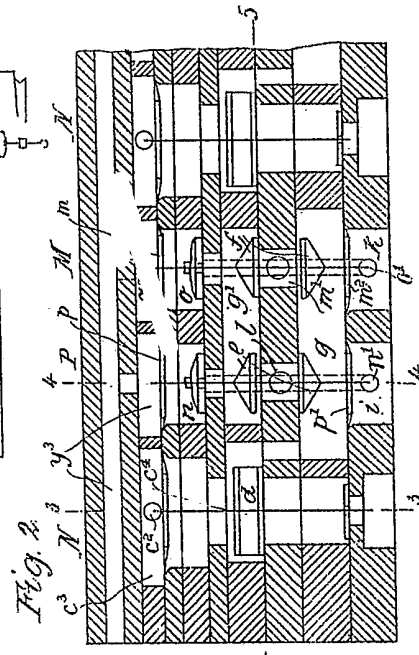


Fig. 2

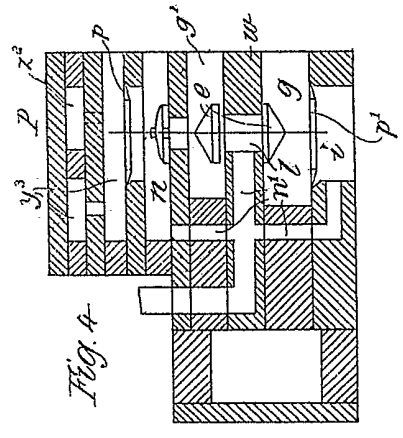


Fig. 4

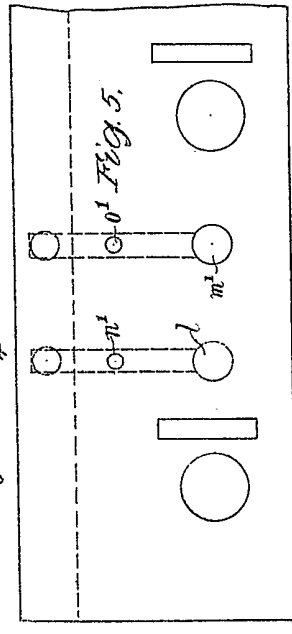


Fig. 5

[This Drawing is a reproduction of the Original on a reduced scale]

# PATENT SPECIFICATION



Application Date: Sept. 6, 1920. No. 25,631/20.

173,819

Complete Left: June 8, 1921.

Complete Accepted: Jan. 6, 1922.

## PROVISIONAL SPECIFICATION.

### Improvements in Automatic Organs and similar Musical Instruments.

I, KARL BOCKISCH, of the Firm of M. Welte and Sohne G.m.b.H., of Freiburg, Baden, Germany, German nationality, do hereby declare the nature of this invention to be as follows:—

This invention relates to automatic organs and similar musical instruments played by tune-sheets, of the kind described in the former Letters Patent No. 15,173 of 1914 wherein individual notes of the pedal register or division can be sounded without sounding the corresponding notes of the manual registers or divisions and has for its object to dispense with the use of the mechanism therein described and comprised partly by pneumatic and mechanical devices, and employ devices whereby quick action of the parts is obtained and they can be more readily adapted to organs of different constructions.

According to the invention pneumatic devices only are provided in connection with notes of the tracker board, and the pipes to be sounded, and so constructed that individual notes of the pedal register or division can be sounded without sounding the corresponding notes of the manual registers or divisions or sounded in conjunction therewith.

In a suitable arrangement for carrying out my invention I provide a set of three pneumatic relays for each note, which relays are in indirect pneumatic connection with a note-hole and the control holes for the pedal play and the cutting out of the manual note corresponding to that of the pedal play, respectively. The note relays are individually connected indirectly to the various note-holes in the tracker board, respectively, whilst the two groups of pedal and manual-cut-out relays are also connected indirectly to the two holes in the tracker board which control

them, respectively. The controlling chambers of these relays are provided with a diaphragm in connection with pairs of connected valves designed to control openings at opposite ends of chambers which openings at one end of the chambers are in communication with the atmosphere. The openings at the other ends of the chambers, in the case of the pedal play relay and cutting out relay, are in communication with a chamber controlled by the valve for the note-holes, the openings at the other end of the chamber of which valve is in communication when one valve of each pair is closed, the other valve of the pair is open, and the normal position of the three sets of valves in connection with the note control, pedal control and manual cut-out chambers is, in the case of the two first named sets of valves, with the suction opening closed and with the last named sets of valves with the suction opening open. When a note opening in the tracker board is exposed by the tune-sheet, air is sucked out of the note control chamber and causes the diaphragm thereof to move and close its air-valve and open its suction-valve, thereby exhausting air from the chamber hereinbefore described containing the suction valves of the other two control chambers. If, just prior to the exposure of the note opening, a pedal control opening in the tracker board is exposed by a hole in the tune-sheet, air pressure will be admitted to the pedal control chamber which is normally under suction, so that the pedal suction valve will be opened by the action of the diaphragm in the said control chamber, whereby the opening of the note suction valve above referred to will allow the suction to be communicated past the said pedal exhaust valve into the chamber

[Price 1/-]