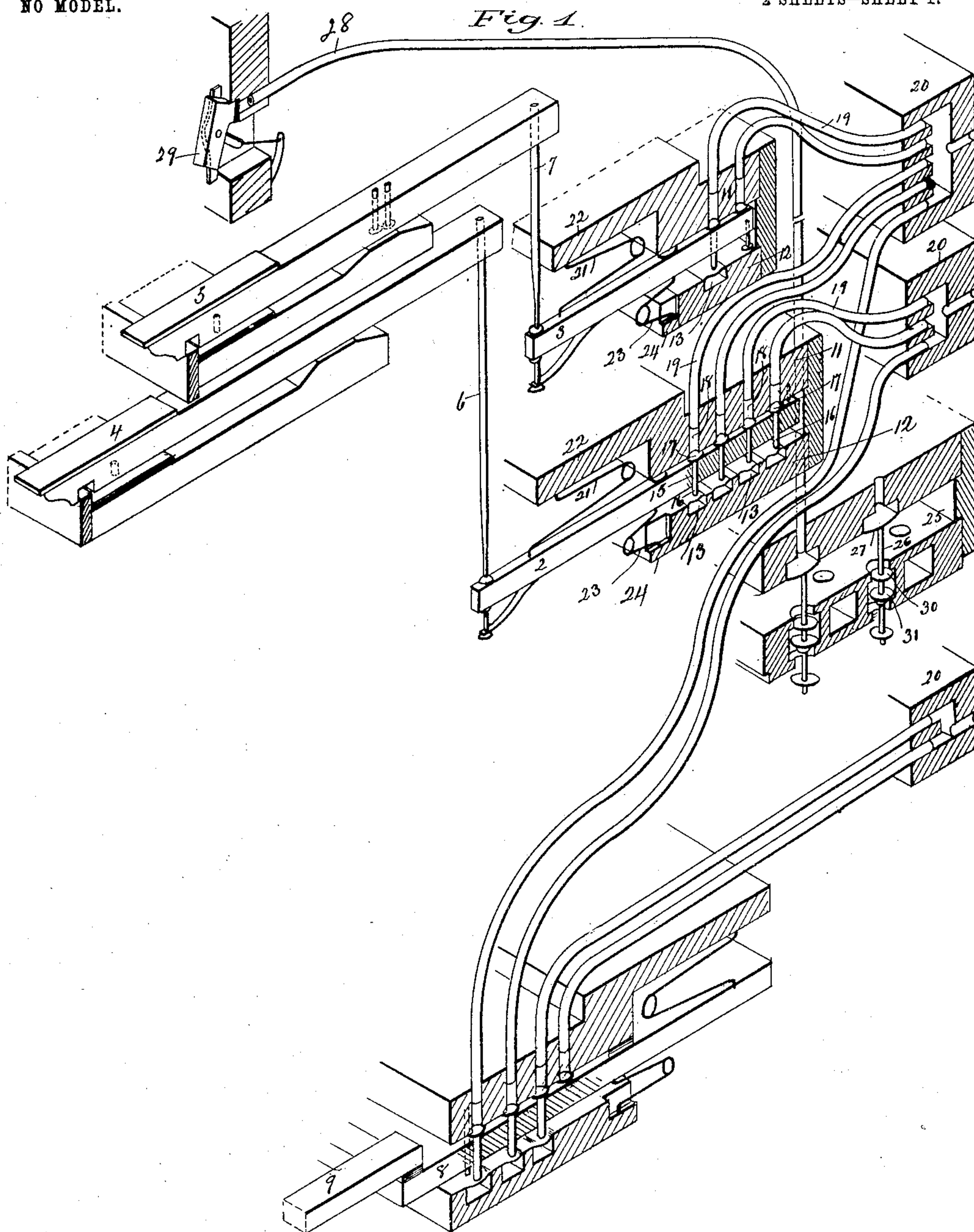


F. CAMPKIN.
PNEUMATIC ACTION AND COUPLER FOR ORGANS.

APPLICATION FILED AUG. 17, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses.
J. H. Hummer
D. Goffe Shipps

Frederick Campkin.
Inventor.
By Atty. Seymour & Earle

F. CAMPKIN.
PNEUMATIC ACTION AND COUPLER FOR ORGANS.

APPLICATION FILED AUG. 17, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

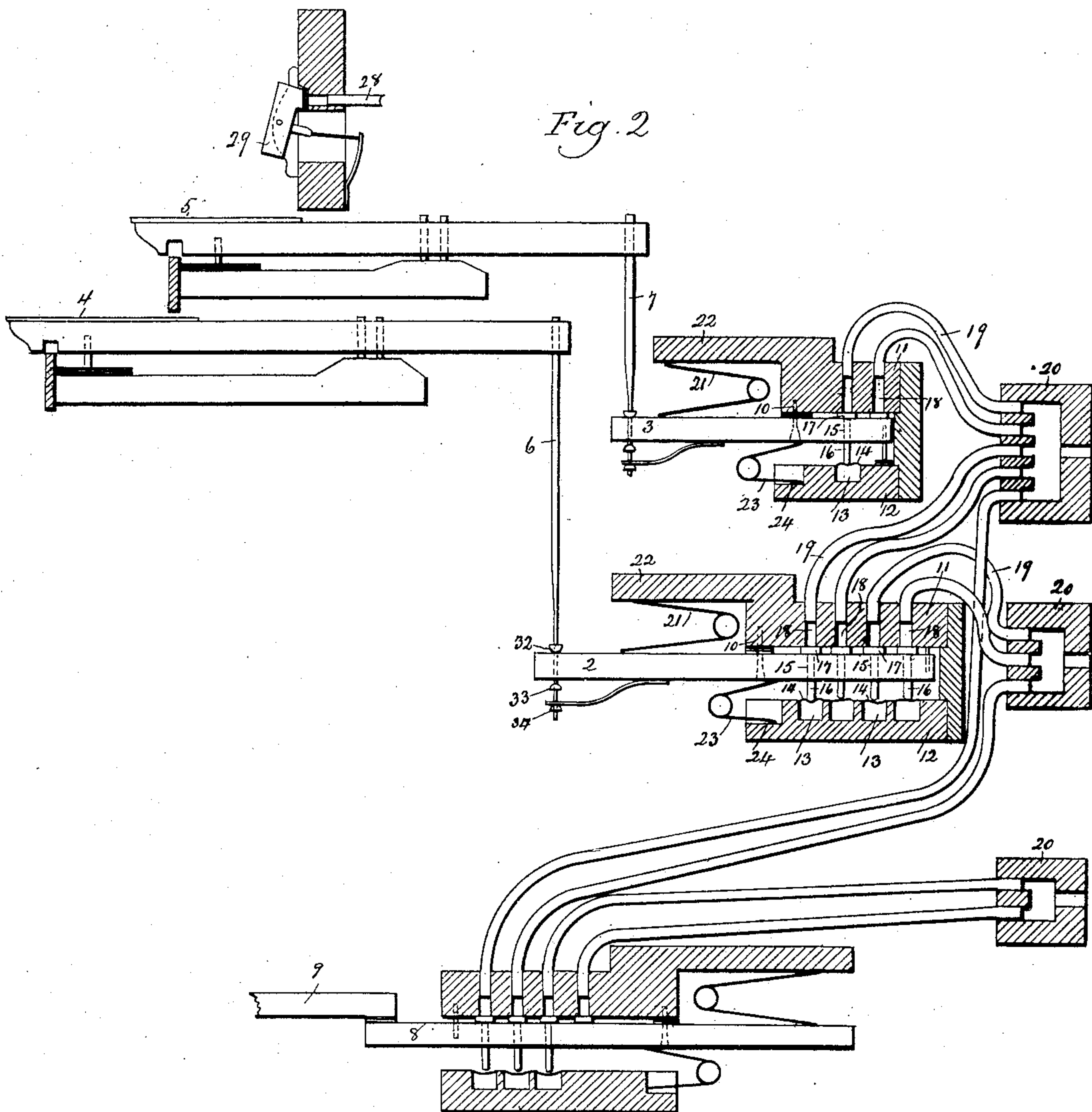
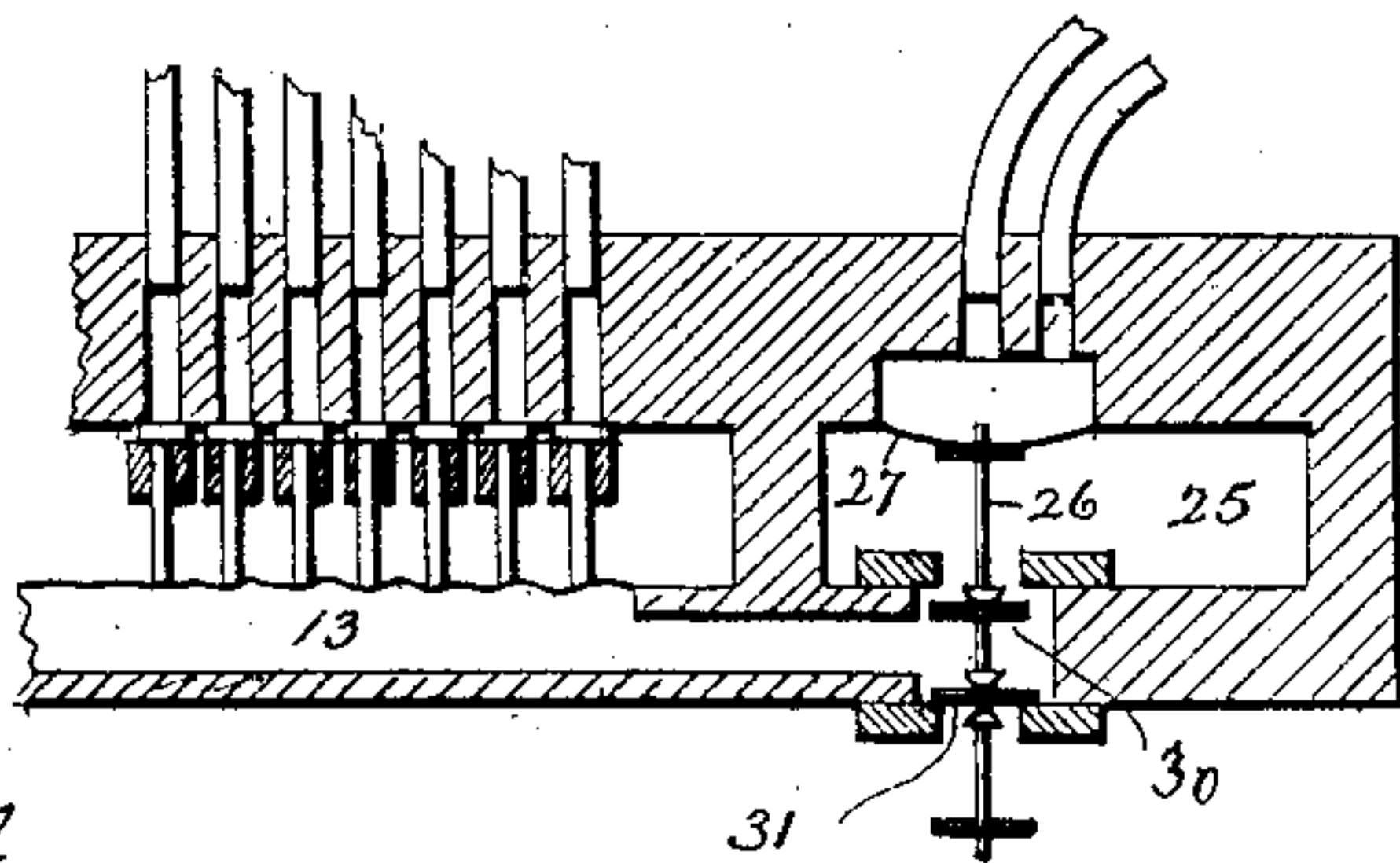


Fig. 3



Witnesses:
J. H. Shumway
D. Goffe Phelps

Frederick Campkin.
Inventor

By attys
Seymour & Earle

UNITED STATES PATENT OFFICE.

FREDERICK CAMPKIN, OF NEW HAVEN, CONNECTICUT.

PNEUMATIC ACTION AND COUPLER FOR ORGANS.

SPECIFICATION forming part of Letters Patent No. 741,884, dated October 20, 1903.

Application filed August 17, 1903. Serial No. 169,734. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK CAMPKIN, a subject of the King of Great Britain, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Pneumatic Actions and Couplers for Organs; and I do hereby declare the following, when taken in connection with the accompanying drawings and the figures of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken diagrammatic perspective view of the parts of an organ, illustrating my invention; Fig. 2, a broken side view of the same; Fig. 3, a broken longitudinal sectional view of one of the pockets and tube-bars, showing the controlling-chamber at one end.

This invention relates to an improvement in pneumatic actions and couplers for organs, the object of the invention being a simple arrangement of parts positive in action and easily accessible for removal in case of necessity for repair; and the invention consists in the construction as hereinafter described, and particularly recited in the claims.

In illustrating my invention I have shown the parts of a great organ, a swell-organ, and a pedal-organ, respectively operated by the lower-bank, upper-bank, and pedal keys, the action of the three parts being similar. The levers 2 and 3 are operated, respectively, by the lower-bank keys 4 and the upper-bank keys 5 through trackers 6 7, while the lever 8 is operated through a pedal-key 9. The levers are mounted on pins 10 and extend between tube-bars 11 and pocket-bars 12, the pocket-bars being formed with a series of longitudinal pockets 13, more or less in number, and closed at their upper sides by strips or diaphragms 14 of leather, or a single strip may cover the entire series of pockets, the leather over the pocket being fulled to allow it to rise or fall beyond the level of the upper edge of the pockets. In the levers are vertical holes 15, through which pins 16 extend and so as to stand over the pockets 13, the pins having valves on their upper ends 17, adapted to close ports 18 in the tube-bar 11, which ports are connected with tubes 19, the

tubes 19 extending through connecting-blocks 20 in the usual manner. To maintain the levers in their normal position, springs 21 are arranged between the tops of the levers and the spring-bar 22 and springs 23 between the lower edge of the lever and shoulders 24, formed in the pocket-bar 12. Air in the pockets 13 is controlled through a chamber 25 at the end of the pocket and tube bars, in which chambers there is a valve-stem 26 for each pocket. This valve-stem is secured at its upper end to a diaphragm 27, which is controlled by air in the tube 28, leading to the keyboard, the port of which is opened or closed by a tablet 29 in the usual manner. On the valve-stem within the pockets are inlet-valves 30 and outlet-valves 31, and so that if the diaphragm is depressed the valve 30 will be opened, allowing air from the chamber 25 to enter the pocket 13 and lift the strip of leather 14 and hold the pins 16 against the ports of the tubes 18. In this position if the levers be raised by the depression of the keys the pins will maintain their position, and hence the pipes controlled by them will not sound; but should the tablet 29 be turned to open the port of the tube 28 the diaphragm 27 will be raised by the air in the chamber 25, and hence close the inlet-valve 30, opening the outlet-valve 31, allowing air in the pocket to escape, and hence let the diaphragms be depressed. If then the lever be moved, the pins will fall with it and open the port in the tube-bar above such pockets and cause the pipes connected therewith to sound.

Preferably and as herein shown in order to give a certain amount of movement independent of the levers the ends of the trackers 6 7 are threaded to receive nuts 32 33, which may be turned to any desired position and so that the tracker will lift until the nut 33 comes in contact with the under side of the lever before the lever will be lifted, while below the nuts 33 are nuts 34, bearing against springs 35, secured to the under side of the levers, which are weaker than the springs 21, so as to yield and allow the trackers to rise before the levers are lifted. This independent movement of the trackers permits the keys to be depressed to a greater or less extent before the levers are lifted to open the pipes and so that if the keys are accidentally

touched they will not sound unless depressed to a sufficient extent to move the levers, and this independent movement may be regulated to suit the convenience of the player.

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

1. In a pneumatic action and coupler for organs, the combination with a pocket-bar 10 having longitudinal pockets closed on their upper sides by a diaphragm, tube-bars above said pockets and having ports therein, levers extending between said bars and carrying pins arranged in line with said pockets on 15 the diaphragm on which they rest, and whereby when the diaphragm for the pockets is inflated the pins will be held against the ports on the tube-bar independent of the lever, substantially as described.

20 2. A pneumatic action and coupler for organs comprising a pocket-bar with longitudinal pockets therein, a chamber at one end into which said pockets open, valves between said chamber and pockets, diaphragms in 25 said chamber carrying valve-stems controlling the valves between the chamber and pockets, a tube-bar above the pocket-bar

having ports therein in line with said pockets, a lever extending between said bars, and pins in said levers having valves at their upper ends adapted to close the ports in the tube-bar, said pins resting upon the diaphragm over the pockets so that the pins may be held against the ports in the tube-bar independent of the lever, substantially as described. 35

3. A pneumatic action and coupler for organs comprising a pocket-bar having longitudinal pockets closed by diaphragms, a tube-bar above the pocket-bar and having ports 40 therein, a lever extending between said bars and carrying pins with valves to close the ports in the tube-bar, springs bearing against the upper and lower edges of the levers to maintain them in position, substantially as 45 described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FREDERICK CAMPKIN.

Witnesses:

FREDERIC C. EARLE,
CLARA L. WEED.