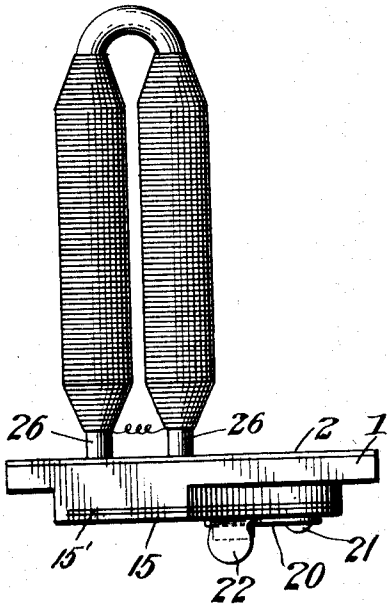


W. H. REISNER.  
 MAGNETIC VALVE FOR ORGANS AND THE LIKE.  
 APPLICATION FILED MAR. 31, 1921.

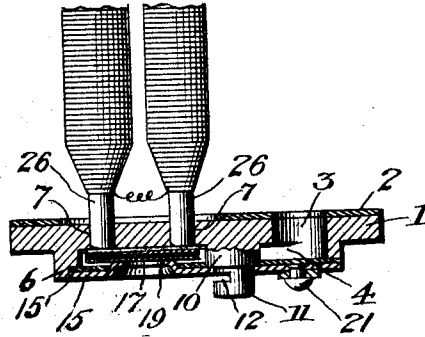
1,387,664.

Patented Aug. 16, 1921.

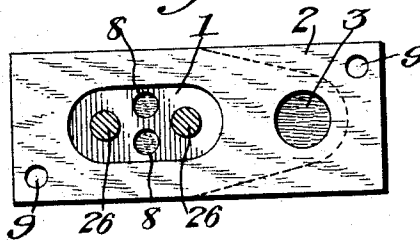
*Fig. 1.*



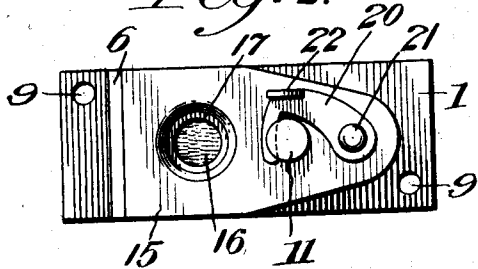
*Fig. 6.*



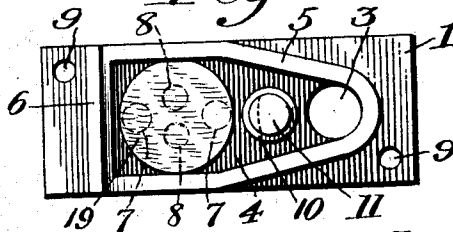
*Fig. 3.*



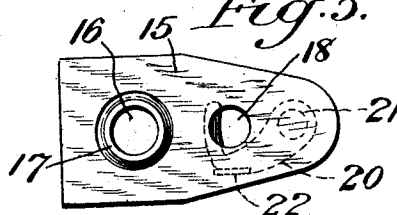
*Fig. 2.*



*Fig. 4.*



*Fig. 5.*



*Inventor:*

*William H. Reisner*  
 by *Chas. J. Keill* *Atty*

# UNITED STATES PATENT OFFICE.

WILLIAM H. REISNER, OF HAGERSTOWN, MARYLAND, ASSIGNOR TO THE W. H. REISNER MANUFACTURING COMPANY, OF HAGERSTOWN, MARYLAND, A CORPORATION OF MARYLAND.

MAGNETIC VALVE FOR ORGANS AND THE LIKE.

1,387,664.

Specification of Letters Patent. Patented Aug. 16, 1921.

Application filed March 31, 1921. Serial No. 457,256.

*To all whom it may concern:*

Be it known that I, WILLIAM H. REISNER, a citizen of the United States, residing in the city of Hagerstown, county of Washington, State of Maryland, have invented certain new and useful Improvements in Magnetic Valves for Organs and the like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to certain new and useful improvements in electrically operated pneumatic valves for use in organs and other instruments in which valves of this type are commonly employed, and has for its object to materially simplify the construction of devices of this character and render the same susceptible of adjustment, repair and replacement without the exercise of special skill or experience.

The invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of the device in its assembled relation;

Fig. 2 is a bottom plan view thereof;

Fig. 3 is a top plan view showing the poles of the magnet in section;

Fig. 4 is a bottom plan view with the bottom closure removed;

Fig. 5 is a plan view of the bottom plate or closure; and

Fig. 6 is a longitudinal sectional elevation through the valve device.

Referring to the drawings, 1 indicates a base plate or support, preferably cast of relatively soft metal or alloy, the casting being provided on its under face with a chamber 4, defined by a continuous flange 5, said chamber terminating in a port or opening 3 through the top of the base 1. Preferably the top face of the base 1 is provided with a sheet of packing 2, which may be of paper or other similar material, adapted to make a close joint between the base and the part to which said base is to be secured by means of screws or other fastening devices passing through openings 9 in the base.

Secured in two openings 7, 7, through the base 1 are the two legs 26 of an electromagnet of the type usually employed in apparatus of this character, the ends of the pole pieces 26 being substantially flush with the

lower face of the base 1 and within the chamber 4. One lateral edge of the flange 5 is extended beyond the normal plane of said flange to constitute an abutment 6 with which the lateral edge of a cover plate 15 abuts. Said cover plate, which is preferably of brass or similar metal, conforms generally with the configuration of the flange 5 and serves to cover the chamber 4 and to form an air-tight joint with the face of the flange 5 by means of a sheet of paper or other suitable packing 15' secured to the inner face of said plate 15. The said cover plate 5 is provided with an air port 16, which, when the plate is in position on the base, lies between the pole pieces of the magnet, said port being provided with a valve seat 17 formed by pressing or stamping the metal about the port 16 outwardly, as illustrated in Figs. 5 and 6. Coöperating with the valve seat 17 surrounding the port 16, on the one hand, and with two venting openings 8, 8, formed in the plate 1 between the poles 26, 26, of the magnet, on the other, is a disk valve 19 of magnetic material, preferably faced on each side with a cover of paper or similar material, which serves to effect a tight joint between the valve seat 17 and the inner surface of the base adjacent the venting openings 8, 8, and also as a medium to prevent the magnetic valve disk 19 from freezing to the ends of the magnet poles.

In order to lock the closure plate 15 to the base, in proper relation on the flange 5, the base is provided with a stud 10 projecting from the lower face thereof and terminating in a reduced outer section 11, which latter passes through a circular opening 18 in the plate 15. The end 11 of the stud 10 is provided with a lateral cut or kerf 12 adapted to receive the curved end of a latch 20, which is connected by a pivot 21 to the under face of the plate 15 and has a finger piece 22 by means of which the latch 20 is swung to and from locking engagement with the end 11 of the stud 10.

In constructing and assembling the device, as described, the base 1, together with integral flange 5, abutment 6 and stud 10, is cast in a suitable mold about the poles 26 of the electromagnet, after which the disk valve 17 is placed in position within the chamber 4, as illustrated in Fig. 4, and the

cover plate 15 is applied to flange 5, with the reduced end 11 of stud 10 projecting through the opening 18 in the plate, and the lateral straight edge of the plate engaging abutment 6 on said flange 5. The latch 20 is then swung on its pivot 21 to cause the hooked end thereof to engage the kerf 12 in the end 11 of the stud 10, the said hooked end of the latch serving to lock the plate 15 securely to the base by reason of the camming action of the inner edge of the hooked end and the rounded engaging face of the kerf 12, and at the same time forcing the packing 15' on the inner face of the cover plate into air-tight engagement with the flange 5.

When the device is applied to its proper position in the organ or other apparatus, the valve 19 normally engages the valve seat 17 surrounding the port 16. When, however, the electromagnet is energized, the poles 26 thereof attract the valve 19 and lift the same from the valve seat 17, thereby opening up communication with the windway 4 through port 16, and closing the ports 8, 8', as will be understood.

When it is necessary to repair or adjust the valve, the cover plate 15 is readily removed by swinging back the latch 20 there- by unlocking the plate which may be lifted out of engagement with the stud 10 and flange 5 and access had to the valve 19 for adjustment, repair or replacement. It will be particularly noted that the entire valve mechanism is self-contained, involves but few and simple parts that may be readily assembled, and is a complete device applied in its proper position with facility and despatch and without requiring any particular skill on the part of the operator.

What I claim is:

1. A valve for organs and the like comprising a base having a port and a recess therein constituting a windway, an electromagnet supported by the base with its poles adjacent said recess, a plate engaging the base and covering said recess having a port and an opening therein, a valve cooperating with the port in the plate and actuated by said magnet, a stud on said base engaging the opening in said plate, and means cooperating

with said stud for locking the plate to the base.

2. A valve for organs and the like comprising a base having a recess in its lower face and a port therethrough communicating with said recess, an electromagnet supported by said base with its poles adjacent said recess, a plate having a ported valve seat and a circular opening overlying and covering said recess, a valve in said recess cooperating with said valve seat and actuated by said magnet, a stud on said base engaging the opening in said plate, and a pivoted latch on said plate engaging the stud to lock the plate to the base.

3. A valve for organs and the like comprising a base having a recess in its lower face and a port therethrough communicating with said recess, an electromagnet supported by said base with its poles adjacent said recess, a plate having a ported valve seat and a circular opening overlying and covering said recess, a valve in said recess cooperating with said valve seat and actuated by said magnet, a stud on said base having a reduced outer end passing through the opening in the plate and provided with a lateral kerf, and a pivoted latch on said plate cooperating with the kerf on the stud to lock the plate to the base.

4. A valve for organs and the like comprising a base having a recess in its lower face and a port therethrough communicating with said recess, a transverse abutment on said plate adjacent one edge of said recess, an electromagnet supported by said base with its poles adjacent said recess, a plate overlying and covering said recess having an edge cooperating with said abutment, a ported valve seat and a circular opening therein, a valve in said recess cooperating with said valve seat and actuated by said magnet, a stud on said base engaging the opening in said plate, and a pivoted latch on said plate engaging the stud to lock the plate to the base.

In testimony whereof I affix my signature.

WILLIAM H. REISNER.

Witnesses:

SAM B. LOOSE,

ALEXANDER H. CAMPBELL.