

C. FOGELBERG.  
 REED ORGAN TREMOLOS.

No. 181,527.

Patented Aug. 29, 1876

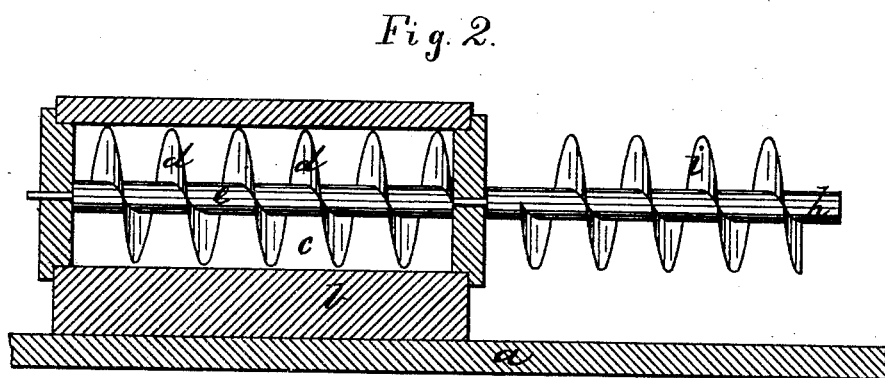
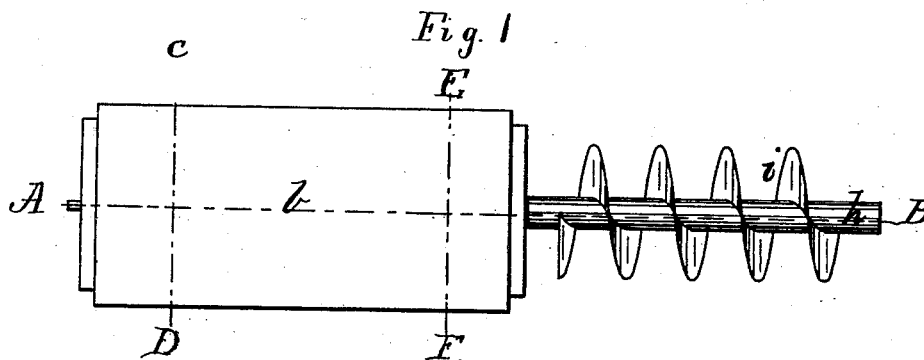


Fig. 3.

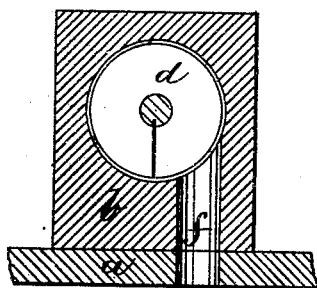
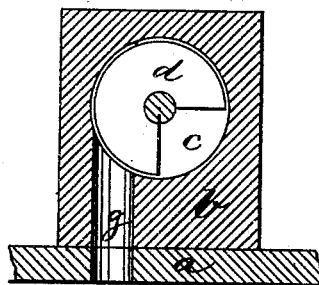


Fig. 4.



Witnesses:

Henry Chadbourne.  
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Inventor:

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 by  
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# UNITED STATES PATENT OFFICE.

CARL FOGELBERG, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN REED-ORGAN TREMOLOS.

Specification forming part of Letters Patent No. 181,527, dated August 29, 1876; application filed July 24, 1876.

*To all whom it may concern:*

Be it known that I, CARL FOGELBERG, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Tremolo Attachments for Organs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in tremolo attachments for reed or pipe organs; and consists of a case or receptacle in which a shaft is allowed to rotate freely in bearings in two opposite ends of said receptacle. To the said shaft is secured a helix or screw-formed wing or sheet, that is wound around the shaft in a spiral, and forms the driving mechanism for the tremolo, and it is put in rotary motion by means of compressed or rarefied air entering and escaping through two perforations made in the said receptacle. The air used for the purpose of rotating the helix-shaped driver may be taken from the bellows in the usual manner, or otherwise, as may be convenient, and stops or valves are used to open and close the entrances to and from the wind-receptacle, in the ordinary way.

The rotary shaft projects through one end of the receptacle in which it has its bearings, and to it is secured another helix-shaped wing or sheet secured to a shaft that is set in rotary motion by means of the driver aforesaid. By means of this rotary screw-shaped wing, the air is oscillated and vibrated either before or after it passes through the reeds or pipes, and in this manner produces a tremolo sound of the note that is struck. This tremolo attachment may be secured to the reed-board, or any other desirable part of the organ, without departing from the spirit of my invention.

In the accompanying drawings, Figure 1 represents a plan view. Fig. 2 represents a central longitudinal section on the line A B, shown in Fig. 1. Fig. 3 represents a cross-section on the line C D, shown in Fig. 1, and Fig. 4 represents a cross-section on the line E F, also shown in Fig. 1.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

*a* represents the reed-board, or any other suitable part of the organ, to which the box *b* is secured. The latter is provided with a receptacle, *c*, in which the helix-shaped fan-motor *d* is set in rotary motion around the shaft *e*, to which it is secured. The shaft *e* revolves in bearings in the ends of the box *b*, as shown. *f* and *g* represent openings by which the air is forced into, through, and from the receptacle *c*, for the purpose of giving a rotary motion to the helix-shaped fan-motor *d*, either by means of compressed air or vacuum, as may be desired. To the outer end of the shaft *e* is secured a secondary shaft, *h*, carrying a secondary helix-shaped fan, *i*, outside of the box *b*, by which the air that is to enter the pipes or reeds, or has entered the latter, is set in vibratory or oscillating motion, by which the desired tremolo of the notes is produced.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

The herein-described tremolo attachment for organs, consisting of the box *b*, receptacle *c*, helix-shaped fan-motor *d*, rotary shaft *e*, and openings *f g*, in combination with the rotary helix-shaped fan *i*, and its shaft *h*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I have affixed my signature in presence of two witnesses.

CARL FOGELBERG.

Witnesses:

ALBAN ANDRÉN,  
HENRY CHADBURN.