(No Model.) 2 Sheets—Sheet 1.

W. ZIELKE.

ACCORDION OR SIMILAR MUSICAL INSTRUMENT.

No. 543,367. Patented July 23, 1895.

Fig: 2

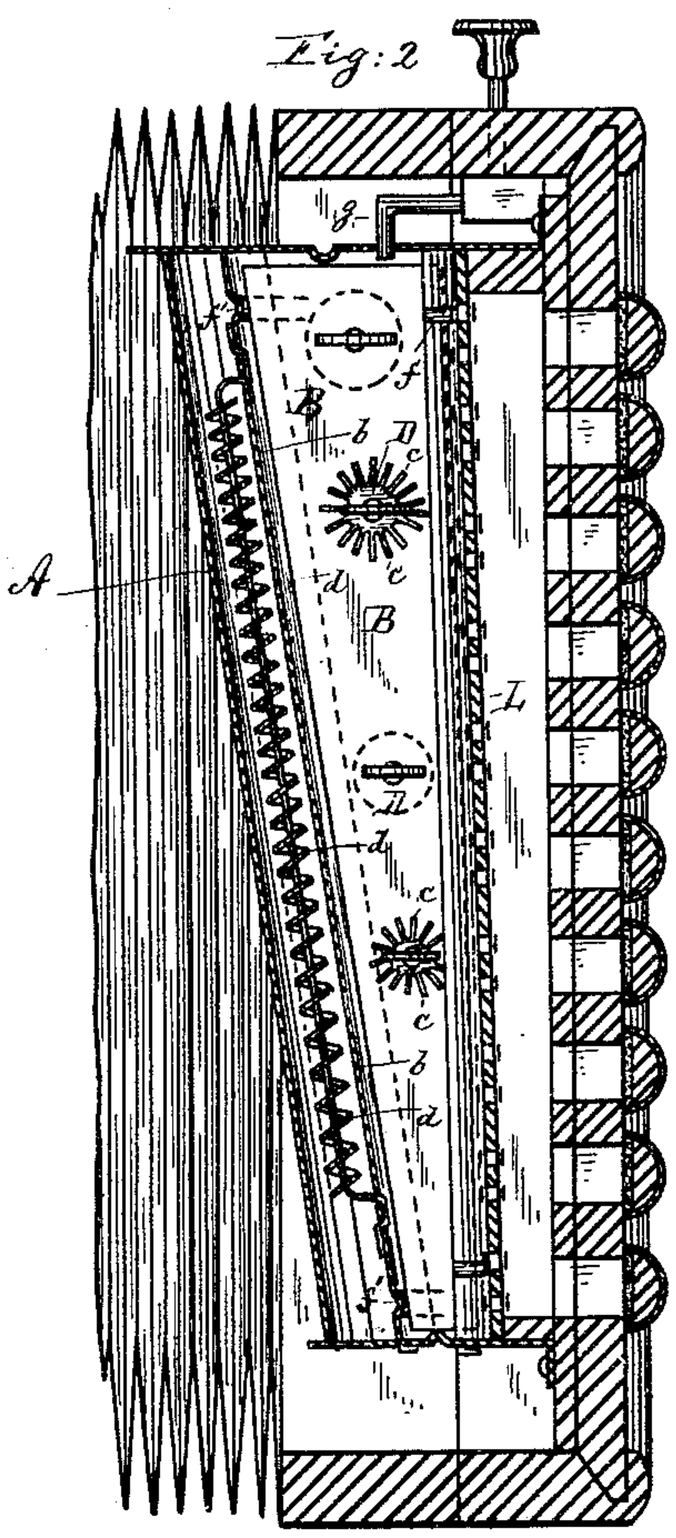


Fig: 1

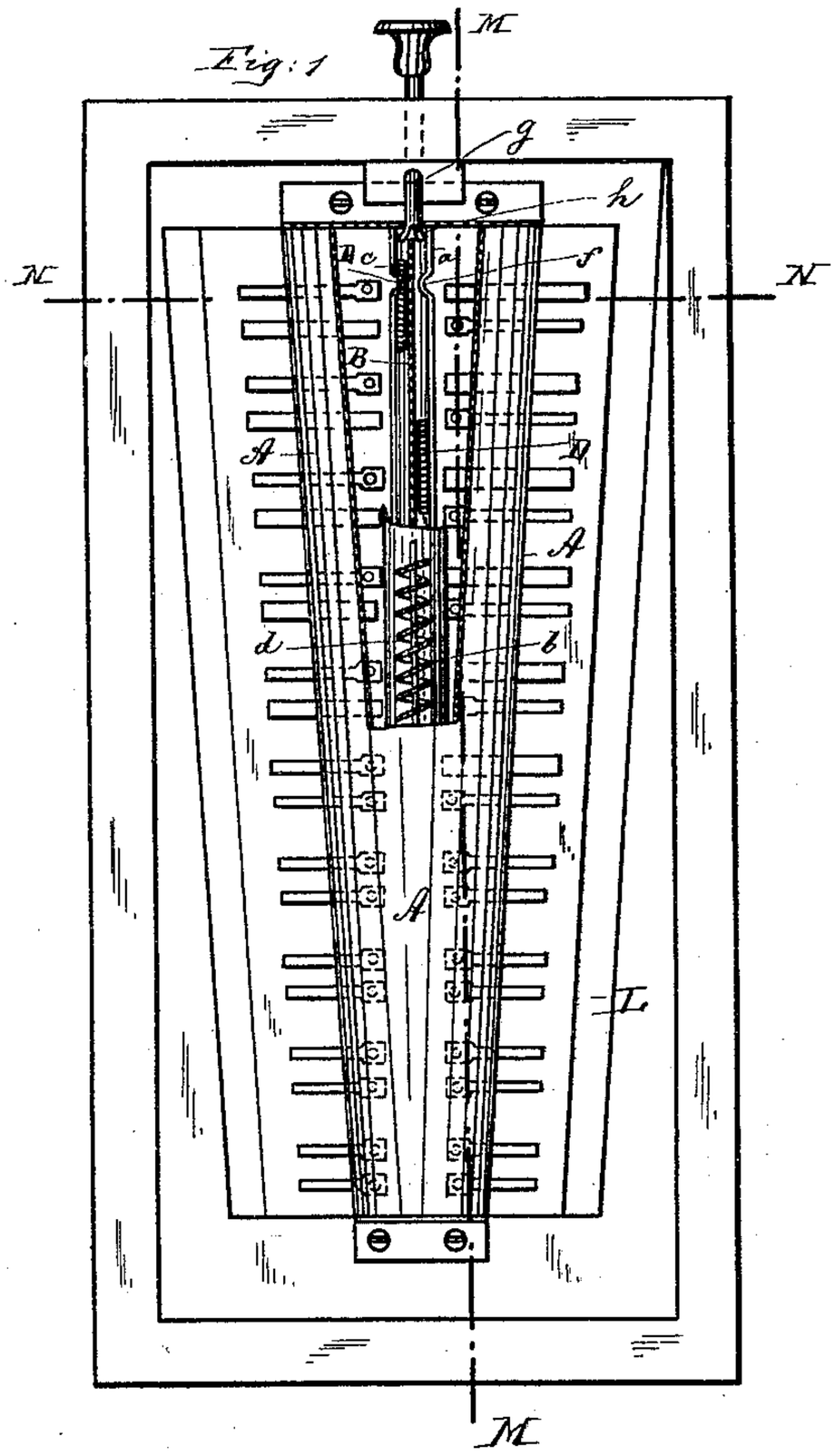


Fig: 4

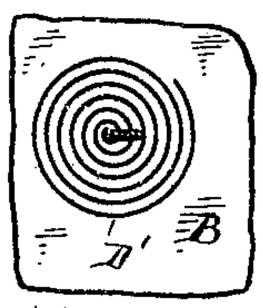
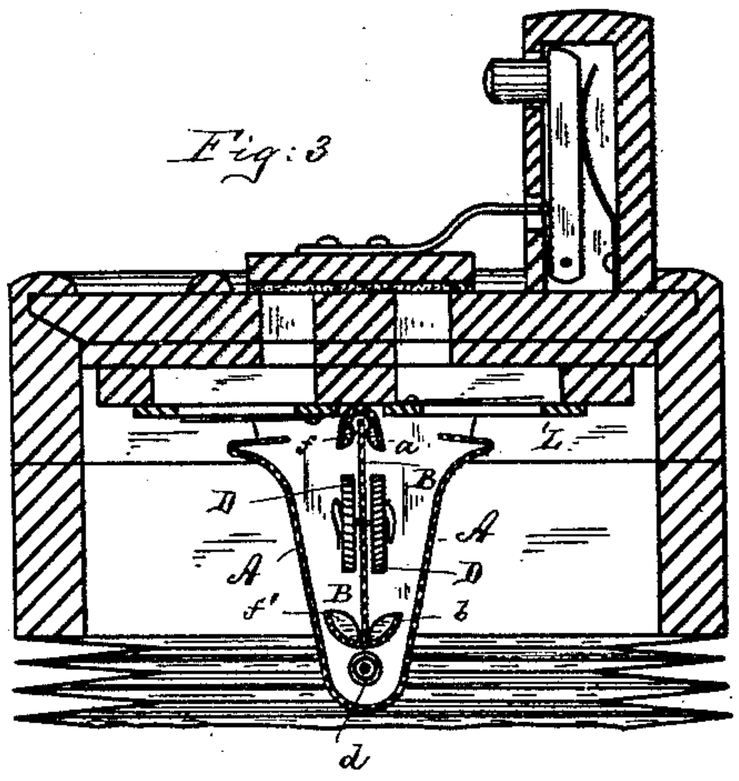


Fig: 3



Witnesses:
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Inventor:
Wilhelm Zielke
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(No Model.) 2 Sheets—Sheet 2.

W. ZIELKE.

ACCORDION OR SIMILAR MUSICAL INSTRUMENT.

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Fig: 6

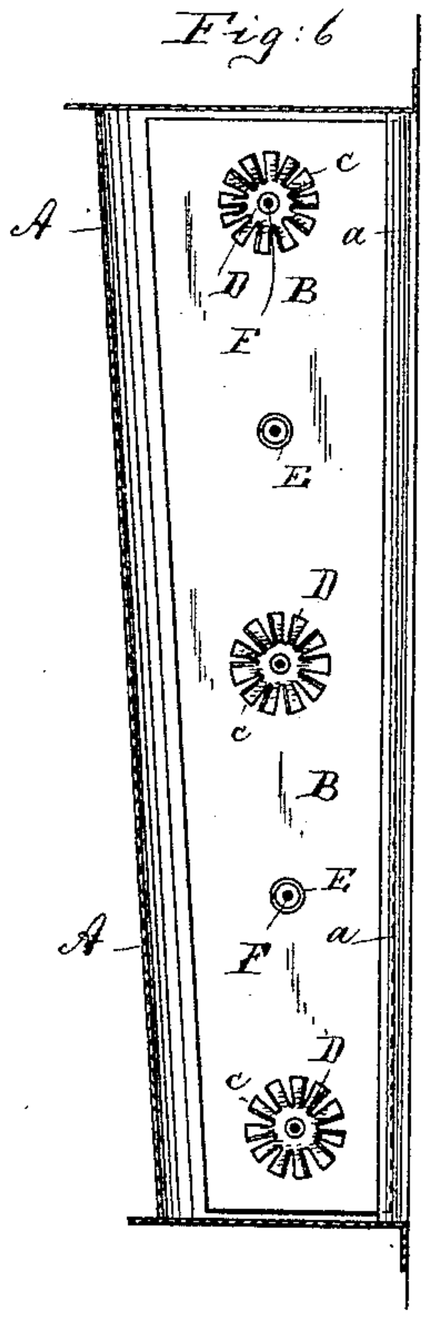


Fig. 5.

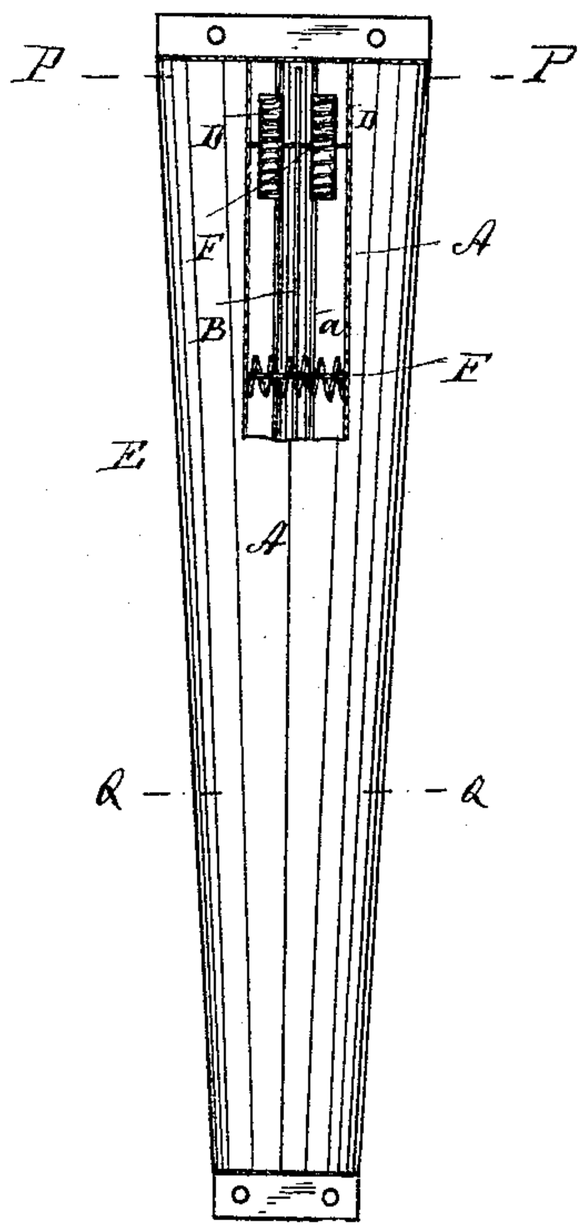


Fig: 8

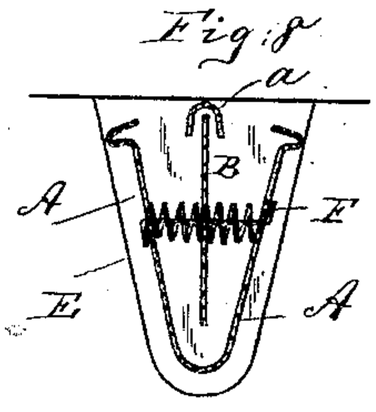
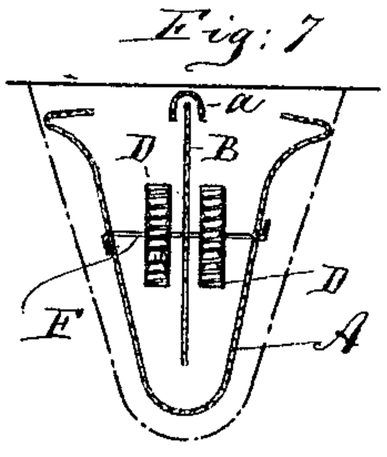


Fig: 7



Witnesses:

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Inventor;

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by his attorneys

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UNITED STATES PATENT OFFICE.

WILHELM ZIELKE, OF THORN, GERMANY.

ACCORDION OR SIMILAR MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 543,367, dated July 23, 1895.

Application filed February 25, 1895. Serial No. 539,587. (No model.)

To all whom it may concern:

Be it known that I, WILHELM ZIELKE, of Thorn, in the Kingdom of Prussia, Germany, have invented an Improvement in Accordions or Similar Musical Instruments, of which the following is a specification.

This invention relates to an improvement in accordions and similar musical instruments; and it has for its object to strengthen and beautify the tone and also to produce a singing by-tone, which imparts a peculiar charm to the instrument.

In the accompanying drawings, Figure 1 is an inner face view, partly in section, of one of the reed-plates of my improved accordion. Fig. 2 is a longitudinal section on line M M, Fig. 1; Fig. 3, a cross-section on line N N, Fig. 1; Fig. 4, a detail of spring D′; Fig. 5, a front view, partly in section, of the sounding-bell, showing a modification of the vibrating partition; Fig. 6, a longitudinal section thereof; Fig. 7, a cross-section on line P P, Fig. 5; and Fig. 8, a cross-section on line Q Q, Fig. 5.

The letter L represents the reed-plate of an accordion or similar musical instrument, over the inner face of which is secured a trough-shaped sound-bell A. This bell is composed of sheet metal or other suitable material, and is adapted to collect the sound-waves. Within the bell A there is contained a longitudinal partition B, which is attached to the accordion in such a manner that it is free to vibrate. To this effect its edges are engaged by grooved rails *a* and *b*, having indentations *f f′* that bear lightly against the partition, so that the latter is free to respond to the slightest tone vibration. To the partition B are secured suitable vibrating bodies adapted to produce a singing by-tone. These bodies may consist of disks or wheels D having tongues C that are vibrated by the action of the instrument to produce the by-tone. In place of the wheel D, I may use a spiral watch-spring D′. (Shown in Fig. 4.) To the partition B may be furthermore secured a longitudinal spiral spring *d*, Fig. 2, composed of a thin, narrow, and easily-vibrating metal strip, or of a series of corrugated strips that serve to produce the by-tone.

To cut off the by-tone produced by the partition and by the vibrating bodies secured thereto, I employ a push-button or stop *g*, having a forked end *h*. When the stop is depressed its forked end will straddle the edge of partition B, so as to lock the same in place and prevent its vibration.

In Figs. 5 to 8 the rail *b* is dispensed with, and the partition is shown to be hung upon pivots F that have their bearings in the bell A. The disks D and spiral springs E are mounted upon these pivots, and the latter assume the additional function of holding the partition in position.

In playing the instrument the air-pressure will produce a rapid vibration of the partition, and this in turn will cause a regulation of the air-waves that cause the vibration of the reeds. Thus the reeds require less air than heretofore, and therefore I may build my accordions much smaller than those heretofore built and still obtain the same volume of sound. Moreover, the air-pressure acts always uniformly during a partial or a full motion of the bellows, and this causes a uniform action of the reeds and their response to the slightest pressure.

What I claim is—

1. In an accordion or similar musical instrument the combination of the reed plate with a sound bell and with a vibrating partition within such bell, substantially as specified.

2. The combination of a reed plate with a sound bell, an inclosed vibrating partition and inclosed sound producing vibrating bodies, substantially as specified.

3. The combination of a reed plate with a sound bell, an inclosed vibrating partition and rails engaging the edges of the partition, substantially as specified.

4. The combination of a reed plate with a sound bell, an inclosed vibrating partition, and a forked stop adapted to engage and arrest said partition, substantially as specified.

5. The combination of a reed plate with a sound bell, an inclosed vibrating partition and with vibrating springs and disks secured within the bell, substantially as specified.

6. The combination of a reed plate with a sound bell, an inclosed vibrating partition and pivots that connect the partition to the bell, substantially as specified.

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

WILHELM ZIELKE.

Witnesses:

MAX MATTÄHI,

RUD. E. FRICKE.