

(No Model.)

C. E. SCRIBNER.
ELECTRIC POLARIZED ANNUNCIATOR.

No. 411,133.

Patented Sept. 17, 1889.

Fig. 1.

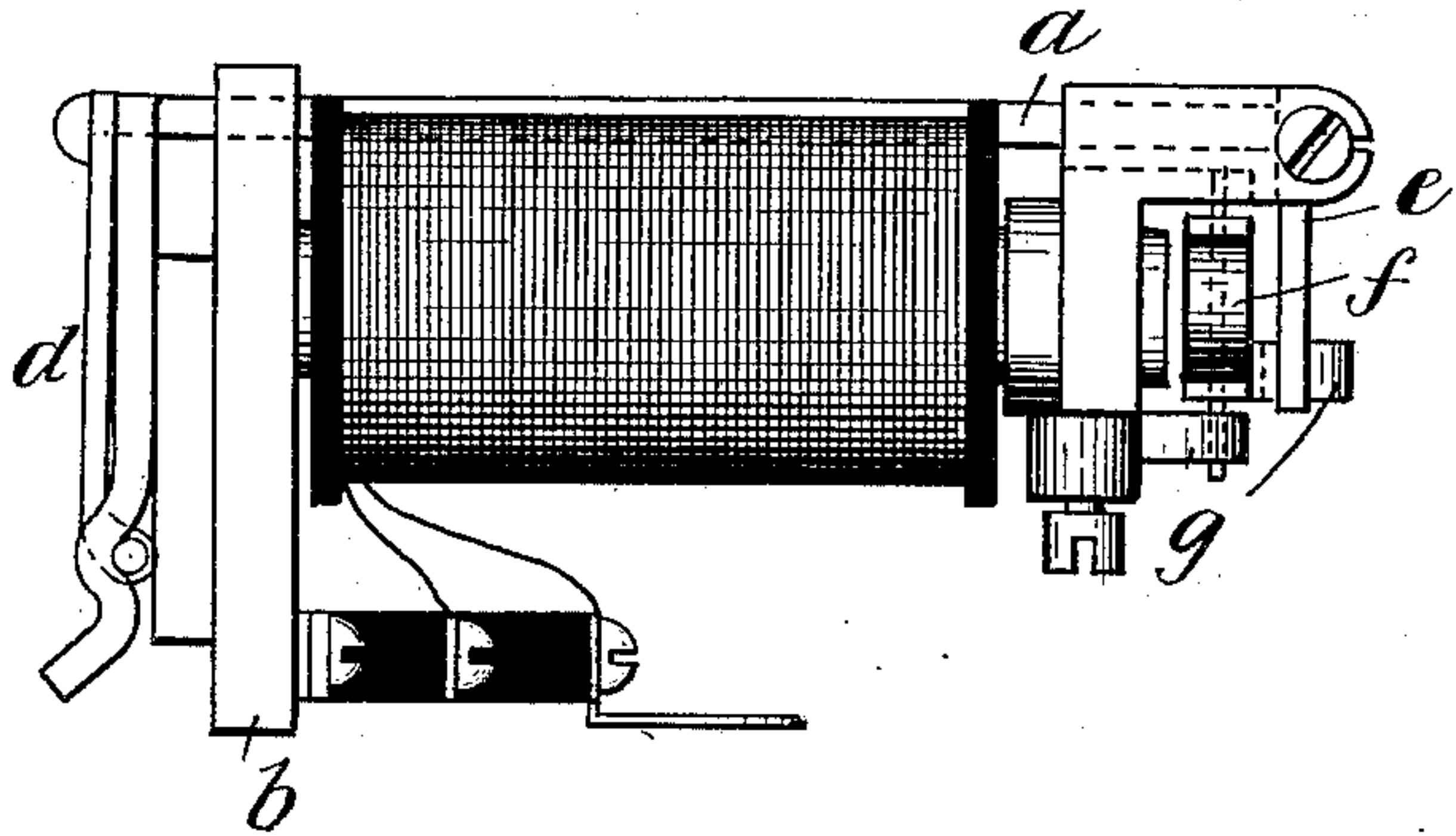


Fig. 3.

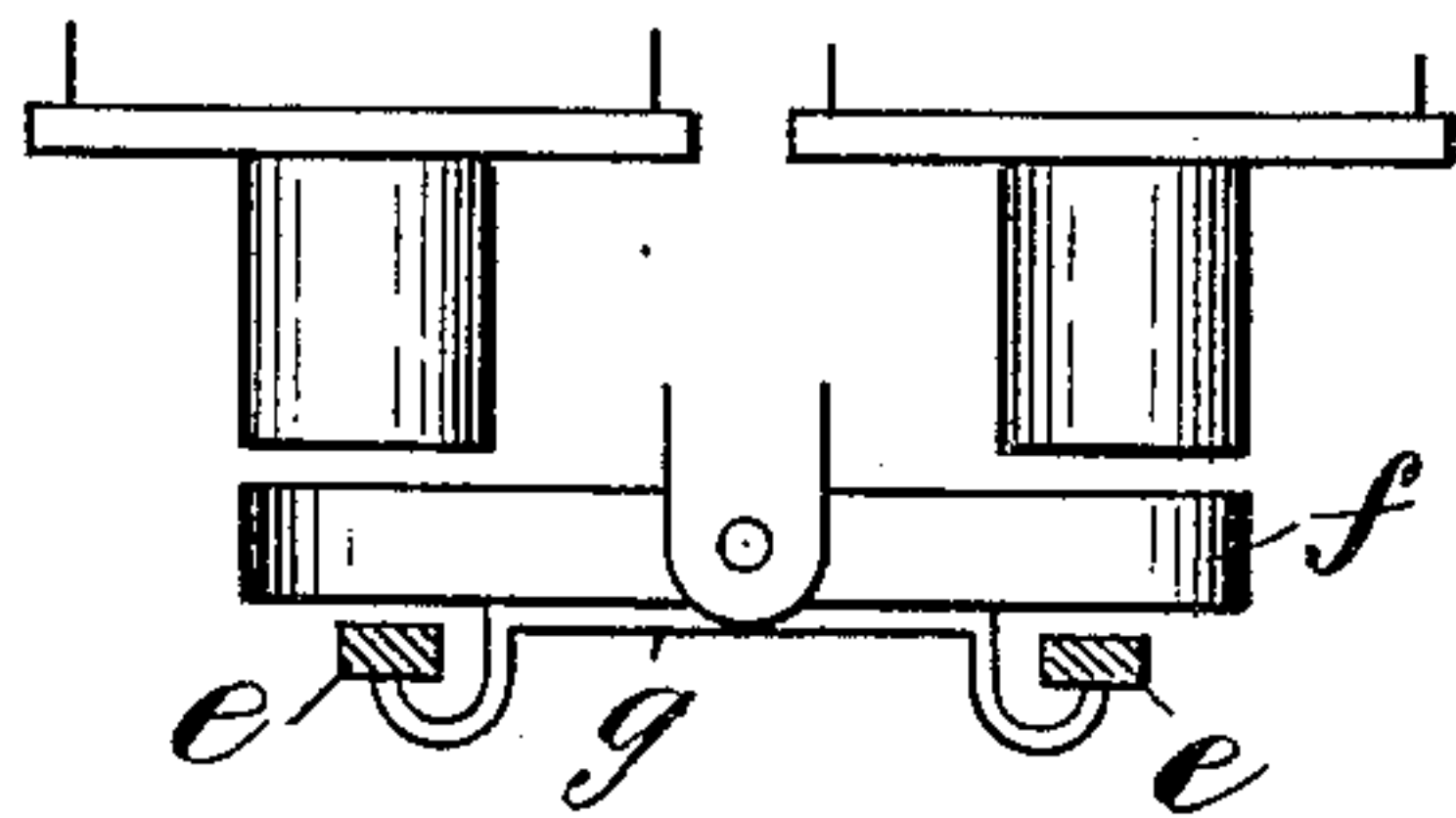
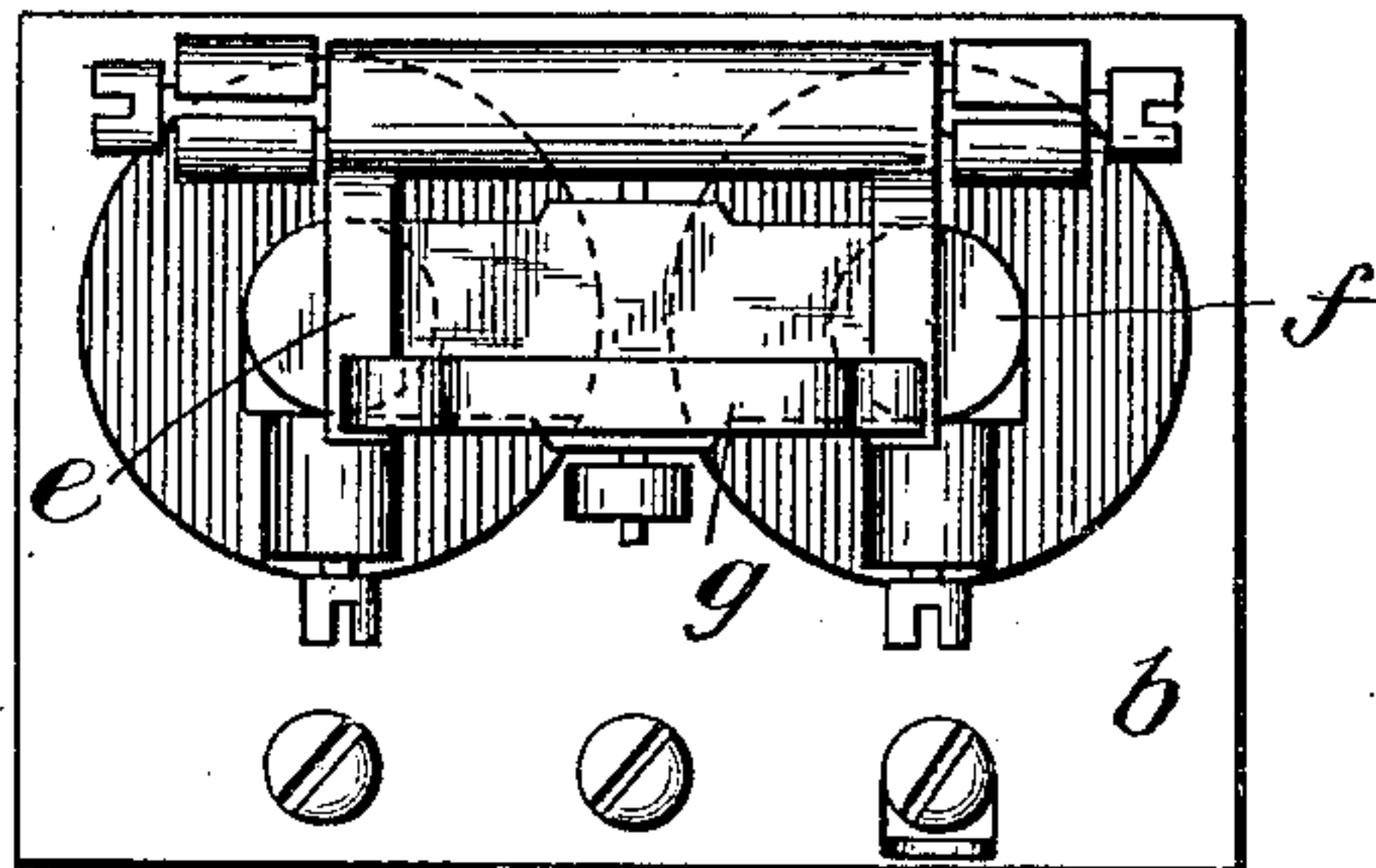


Fig. 4

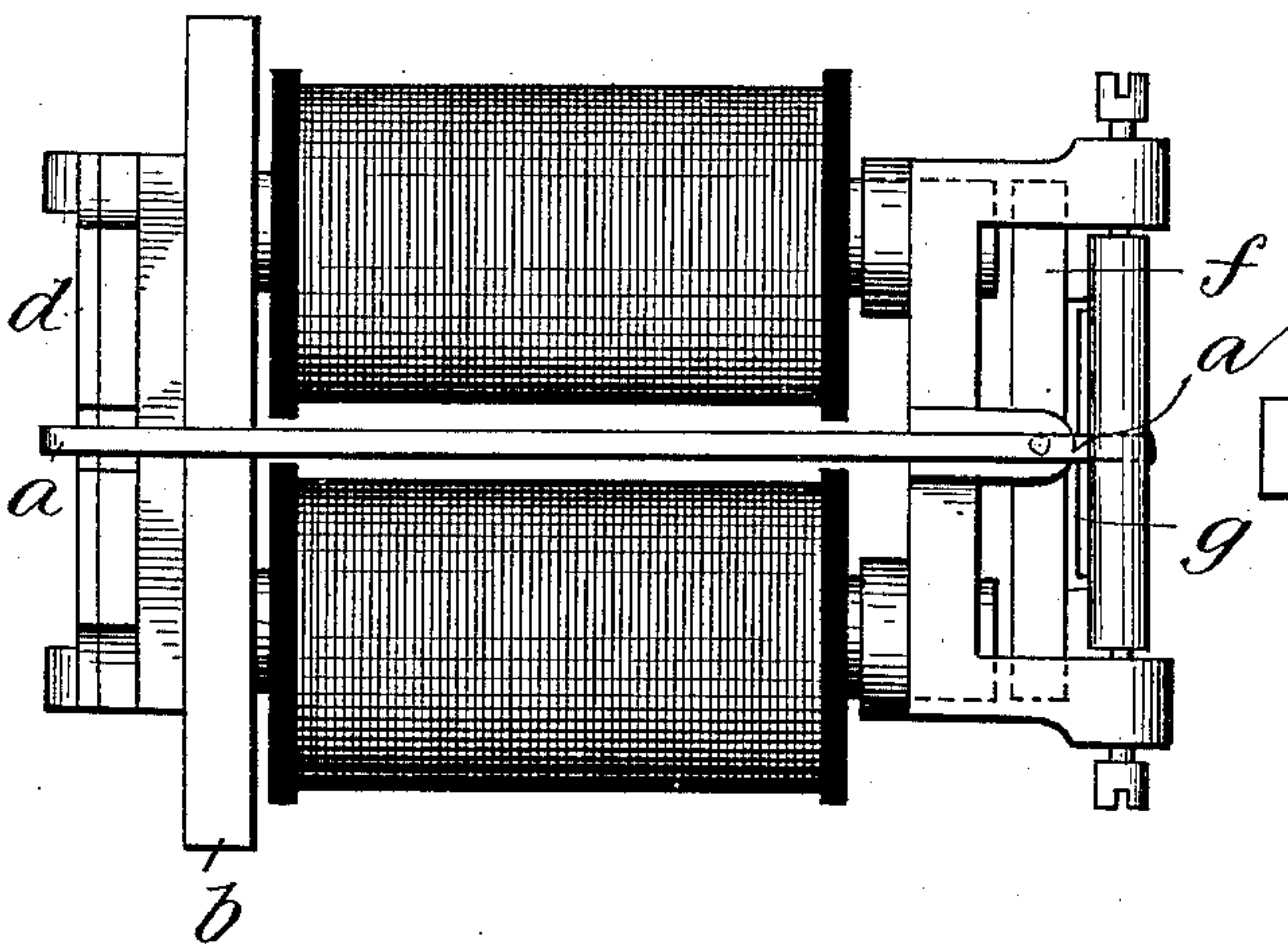


Fig. 2.

Witnesses:
Saml. B. Dover
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UNITED STATES PATENT OFFICE.

CHARLES E. SCRIBNER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN
ELECTRIC COMPANY, OF SAME PLACE.

ELECTRIC POLARIZED ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 411,133, dated September 17, 1889.

Application filed December 27, 1886. Renewed November 21, 1887. Serial No. 255,773. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. SCRIBNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Electric Polarized Annunciators, (Case 126,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to polarized electric annunciators, and its object is to render such annunciators more sensitive. Heretofore the James C. Warner annunciator has been largely used as an individual annunciator in telephone-lines. By the use of the ordinary magneto-generator this Warner annunciator can be operated over circuits of, say, five thousand ohms resistance. Circuits sometimes have a much higher resistance—say from ten to twenty thousand ohms—and in such cases the Warner annunciator becomes inoperative with the ordinary magneto-generator. By using a polarized annunciator provided with a centrally-pivoted armature, and placing the lever or catch which holds the shutter in such position that it will be struck by the armature at the right moment, I am enabled to cause the shutter to fall over lines having very great resistance. I have practically worked my annunciator with an ordinary generator through a line having twenty thousand ohms of resistance.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the annunciator which I have invented. Fig. 2 is a plan view thereof. Fig. 3 is a rear elevation of the same. Fig. 4 is a detailed view from below showing the centrally-pivoted armature and the ends of the lugs of the hook in position to be operated thereby.

Like parts are indicated by similar letters of reference in the different figures.

The lever or hook *a* extends forward through the front plate *b*, and rests upon the shutter *d*, as shown. This lever is provided with lugs *e e*, which project downward, as shown,

at the rear of the centrally-pivoted polarized armature *f*. The striker *g* may be of brass and is attached rigidly to the armature, and when the armature is in motion vibrates therewith, so as to bring its curved ends or feet, which serve as kickers, alternatively against the lugs *e e*. Normally the one end or the other of armature *f* will rest against its opposing pole of the electro-magnet.

In Fig. 4 the different ends of the armature *f* are shown at the same distance from their opposing poles respectively. In this position it may be considered as having half completed one stroke or vibration. The whole momentum of the armature when moving fastest is thus made to strike alternatively against the lugs *e e*, and hence I am able to obtain the maximum amount of work from the current passing through the coils.

By placing the different parts in the position shown in the drawings I am enabled to make an annunciator which will take up no more area upon the switch-board than the Warner drop. The permanent magnets may be arranged as shown in Fig. 2, so that the different poles of each permanent magnet may come behind different armatures.

There are many modifications of my device which would suggest themselves to one skilled in the art.

I have shown the striker *g* attached to the armature in position to strike its different ends against the lugs or arms *e e*, connected with the pivoted lever *a*. In this manner I am enabled to cause the armature *f* to strike against said arms when moving with the greatest force. It is evident that some portion of the armature itself might be placed in position to strike directly against the hook or lever *a* with the same result. As long as the hook or detent *a* or other device which operates the signal is in such position that it may be struck so as to be moved to operate the signal by the vibrating armature the annunciator, will be found sufficiently sensitive.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In an electro-magnet, the centrally-pivoted polarized armature in combination with a

hook or detent, said hook or detent operating a signal device and placed near the centrally-pivoted armature, whereby said hook is struck alternatively as the armature vibrates.

- 5 2. The combination of the armature *f*, the striker *g*, and the lugs *e e* with the hook or detent, and a signal device operated by said hook or detent, substantially as described.

In witness whereof I hereunto subscribe my name this 16th day of November, A. D. 1886. 10

CHARLES E. SCRIBNER.

Witnesses:

GEORGE P. BARTON,
WM. M. GILLER.