

(No Model.)

2 Sheets—Sheet 1.

F. GRONAU.
MECHANICAL MUSIC WORK.

No. 599,703.

Patented Mar. 1, 1898.

Fig. 1.

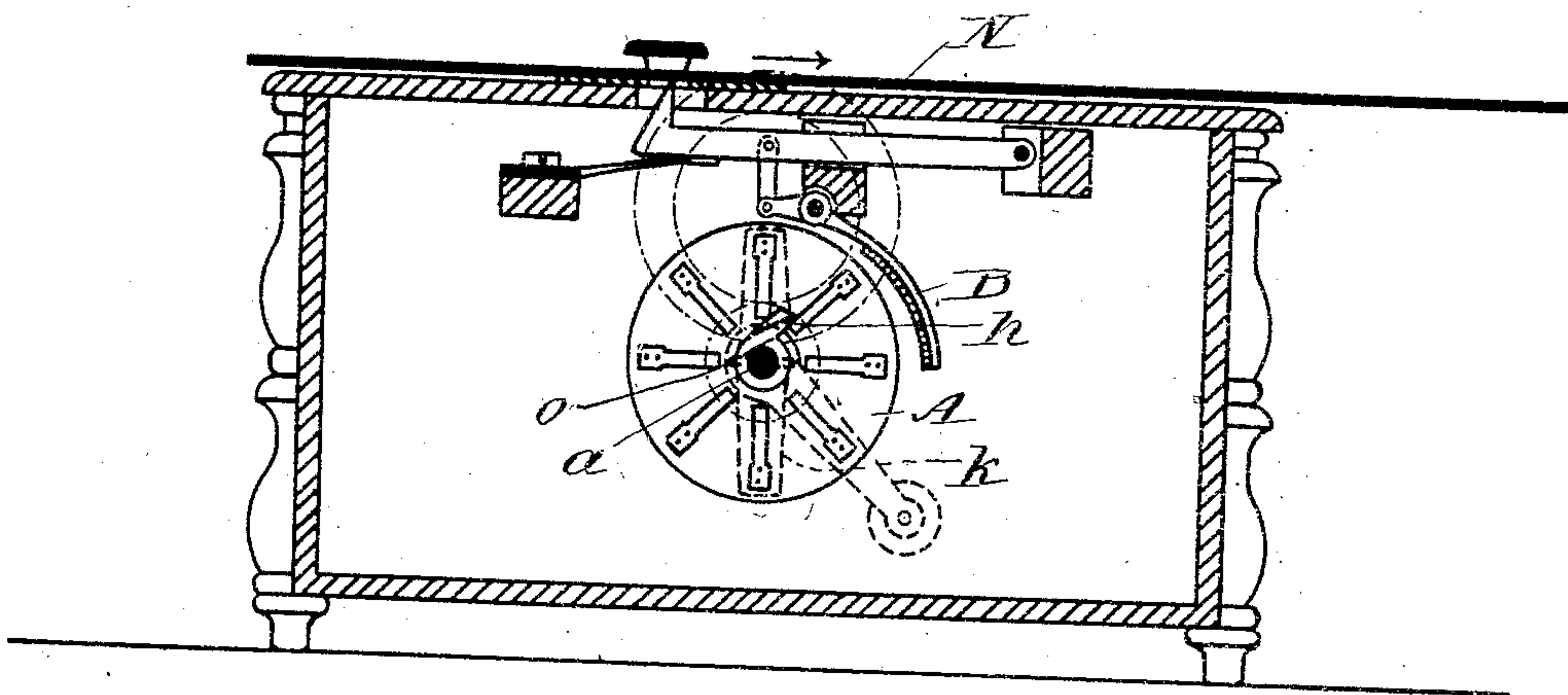
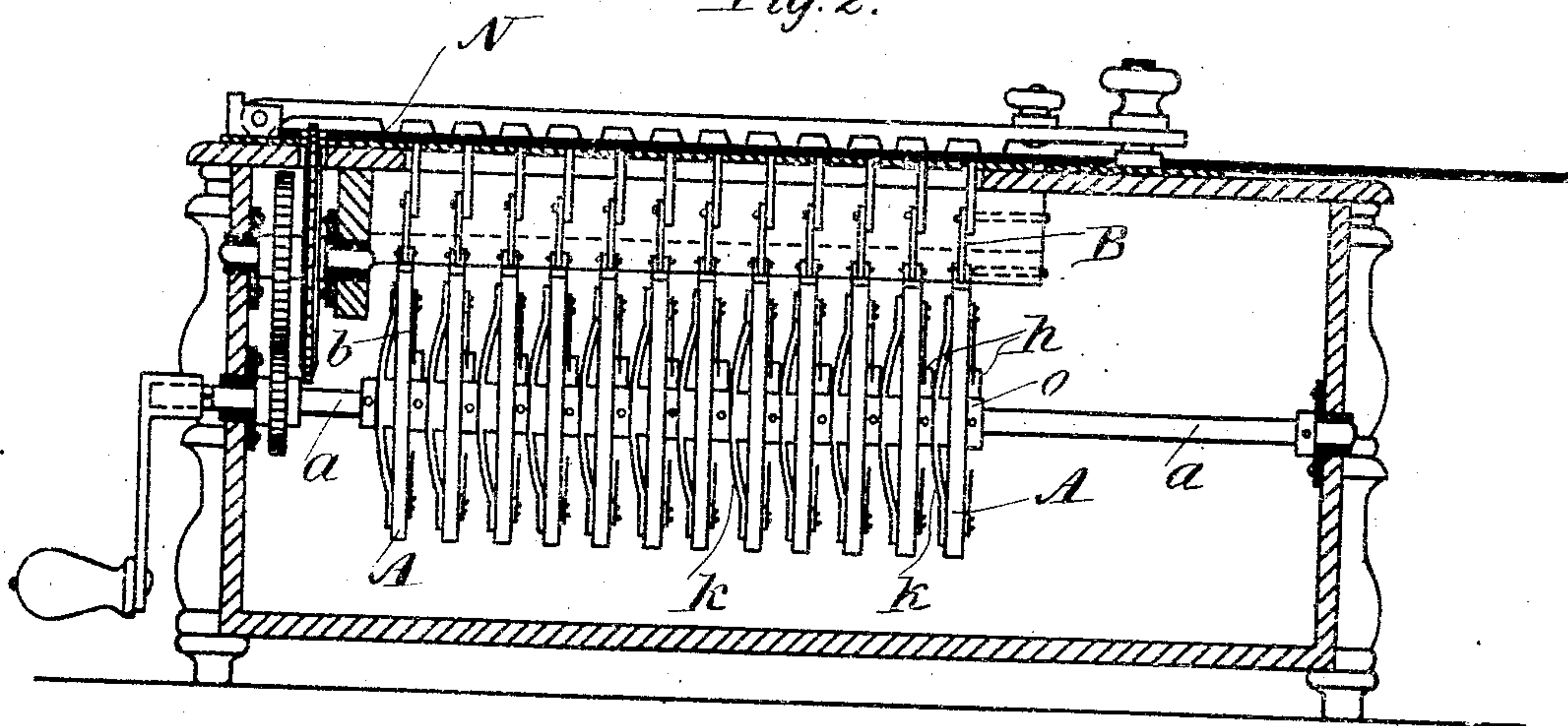


Fig. 2.



Witnesses

Emil Savor

Alfred Meister

Inventor

Friedrich Gronau
by Eudace Hoppening
att'y.

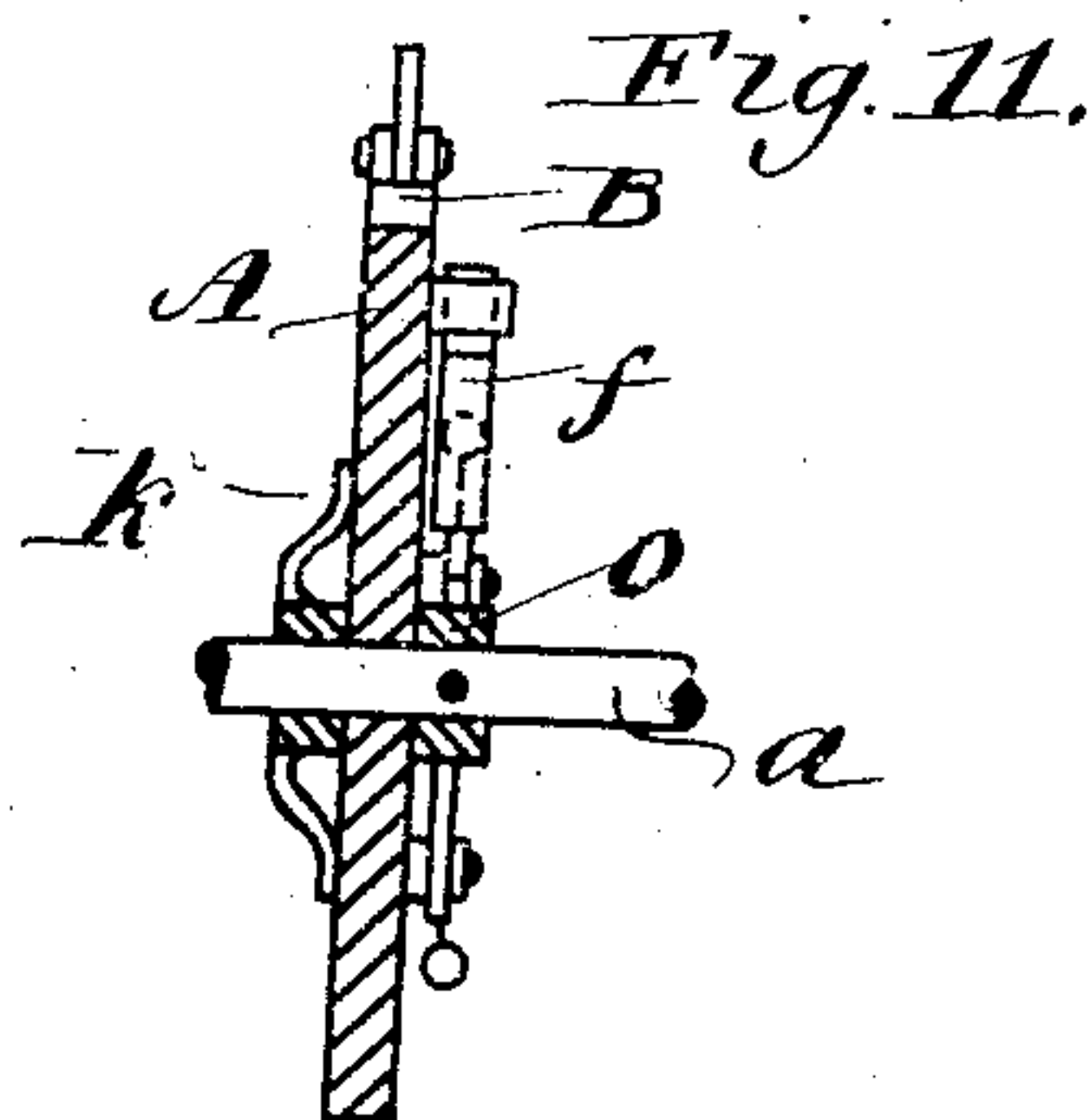
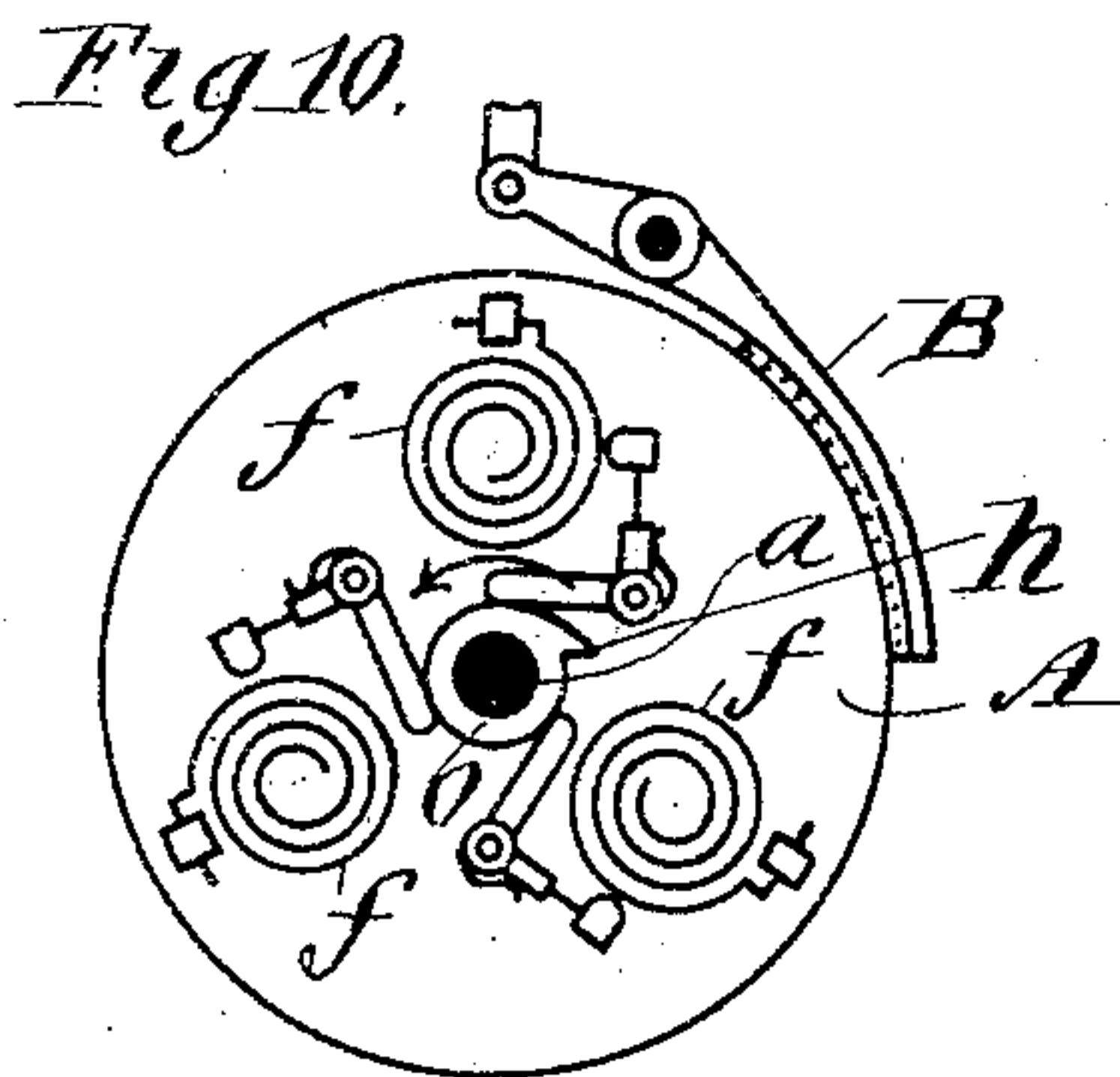
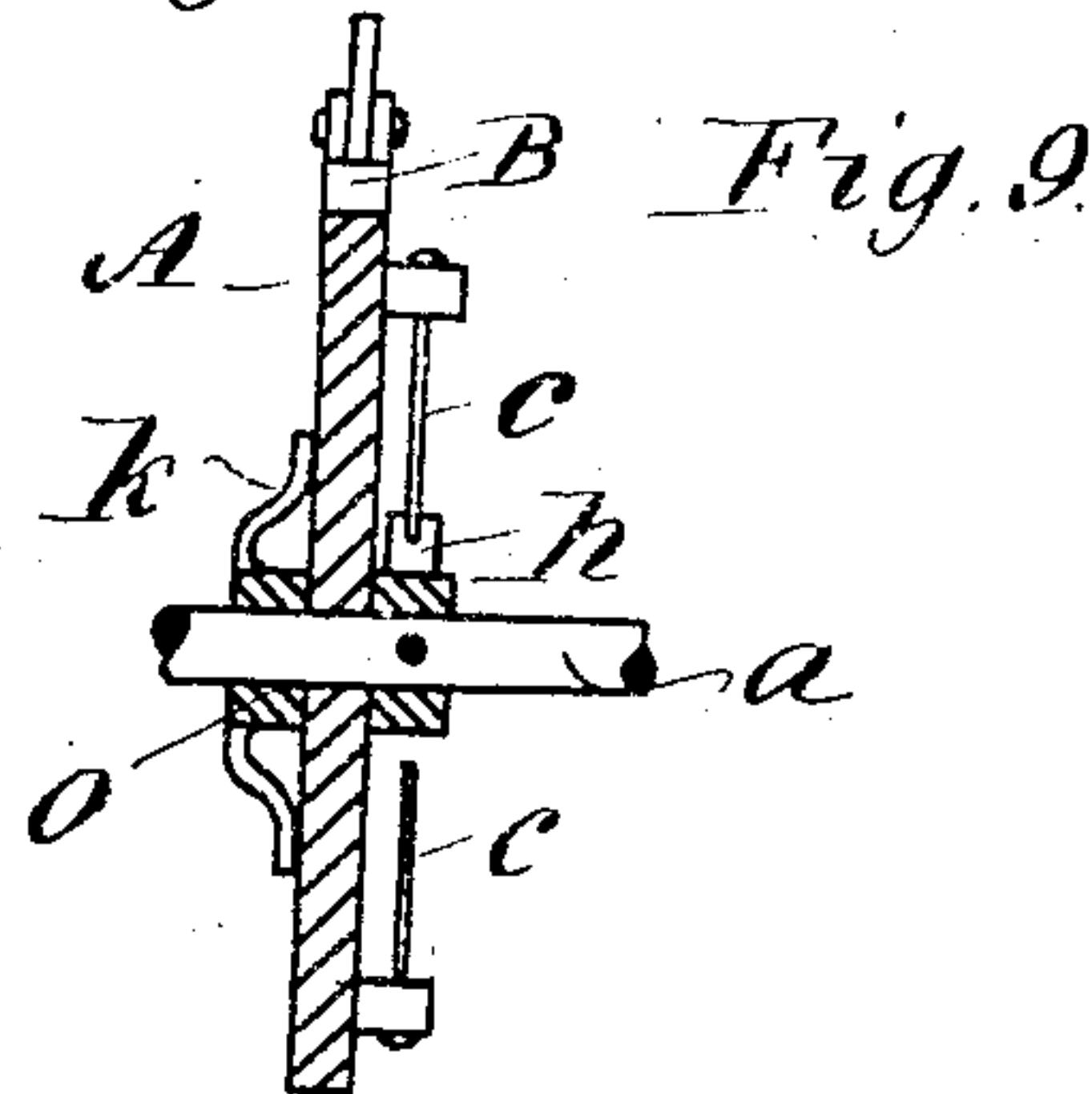
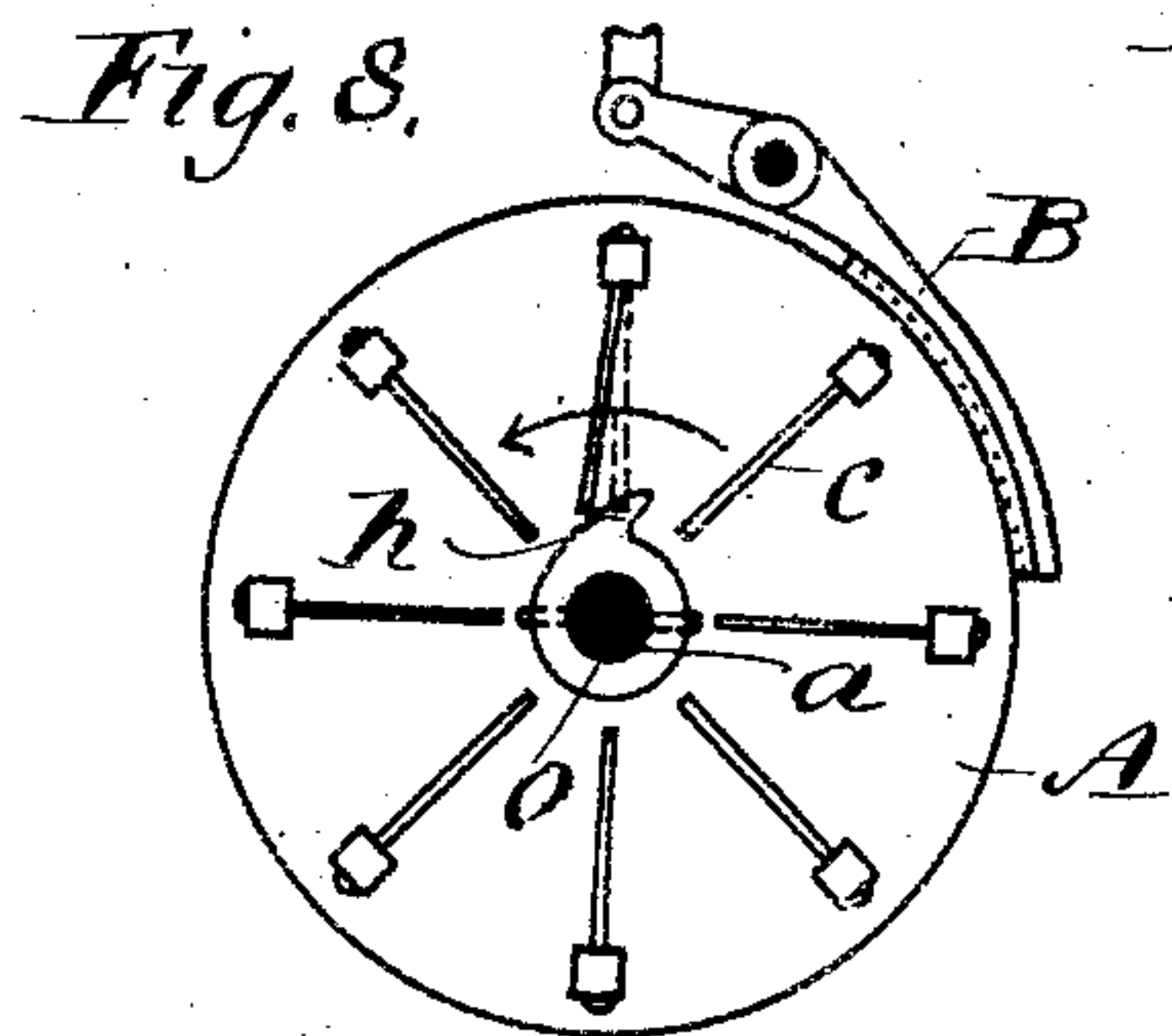
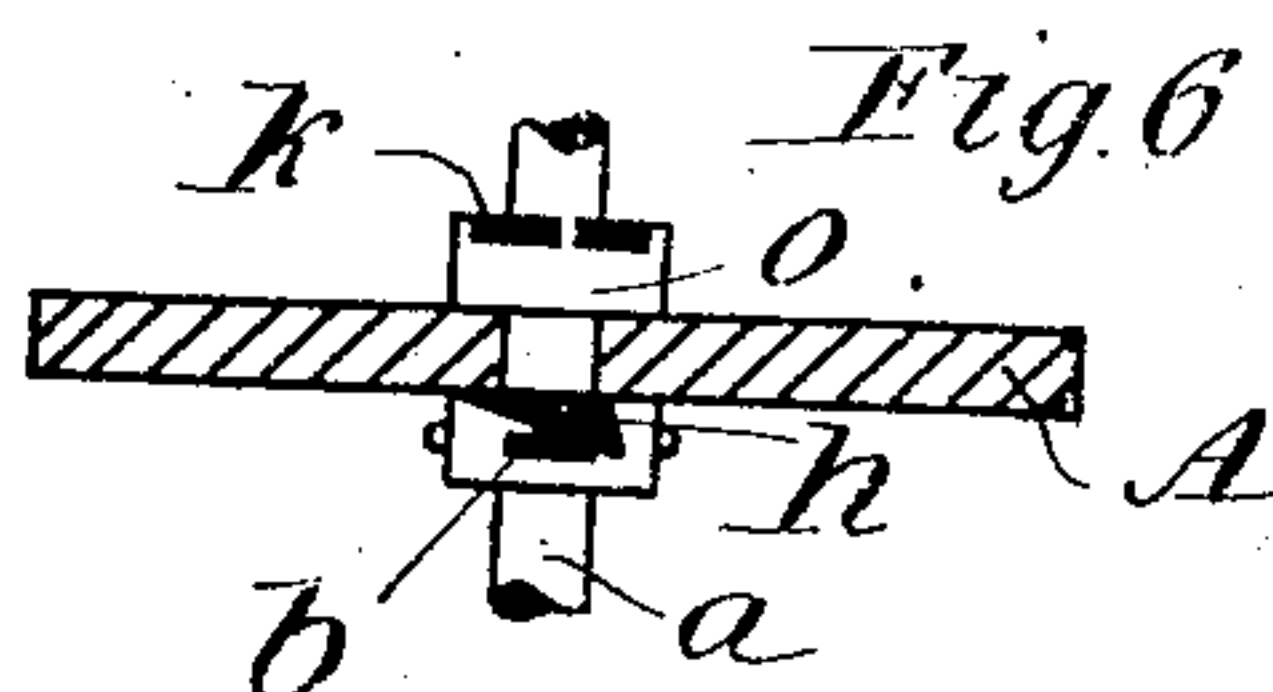
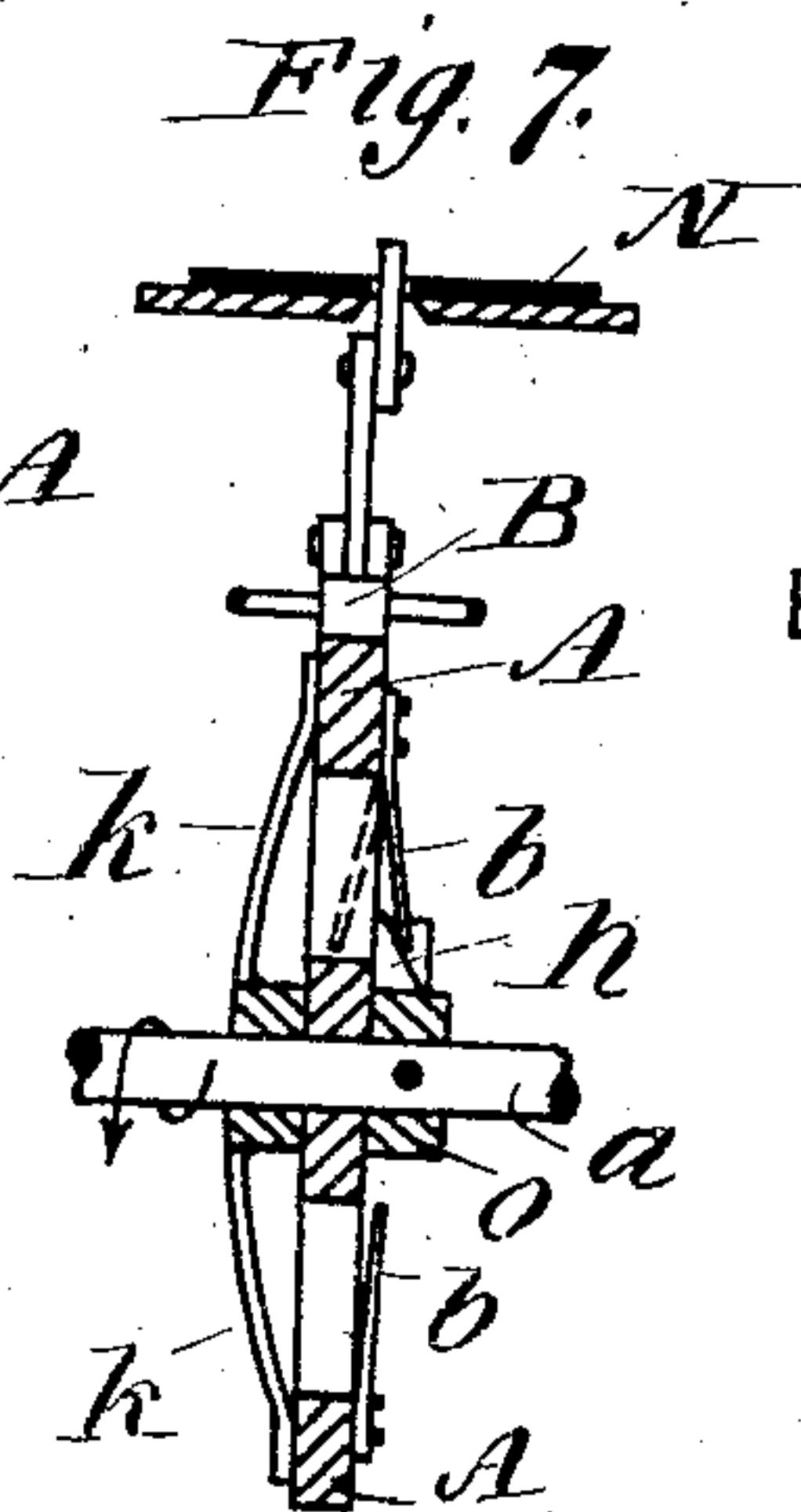
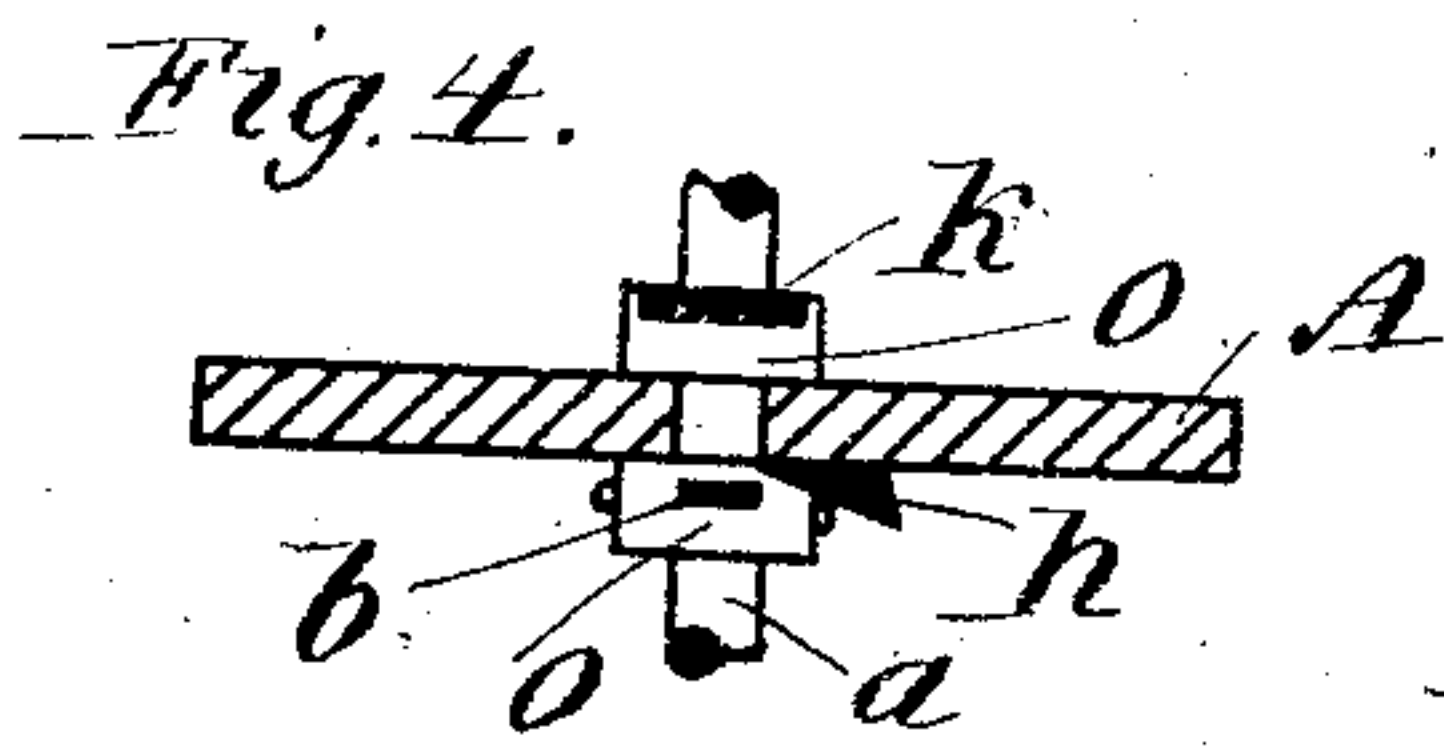
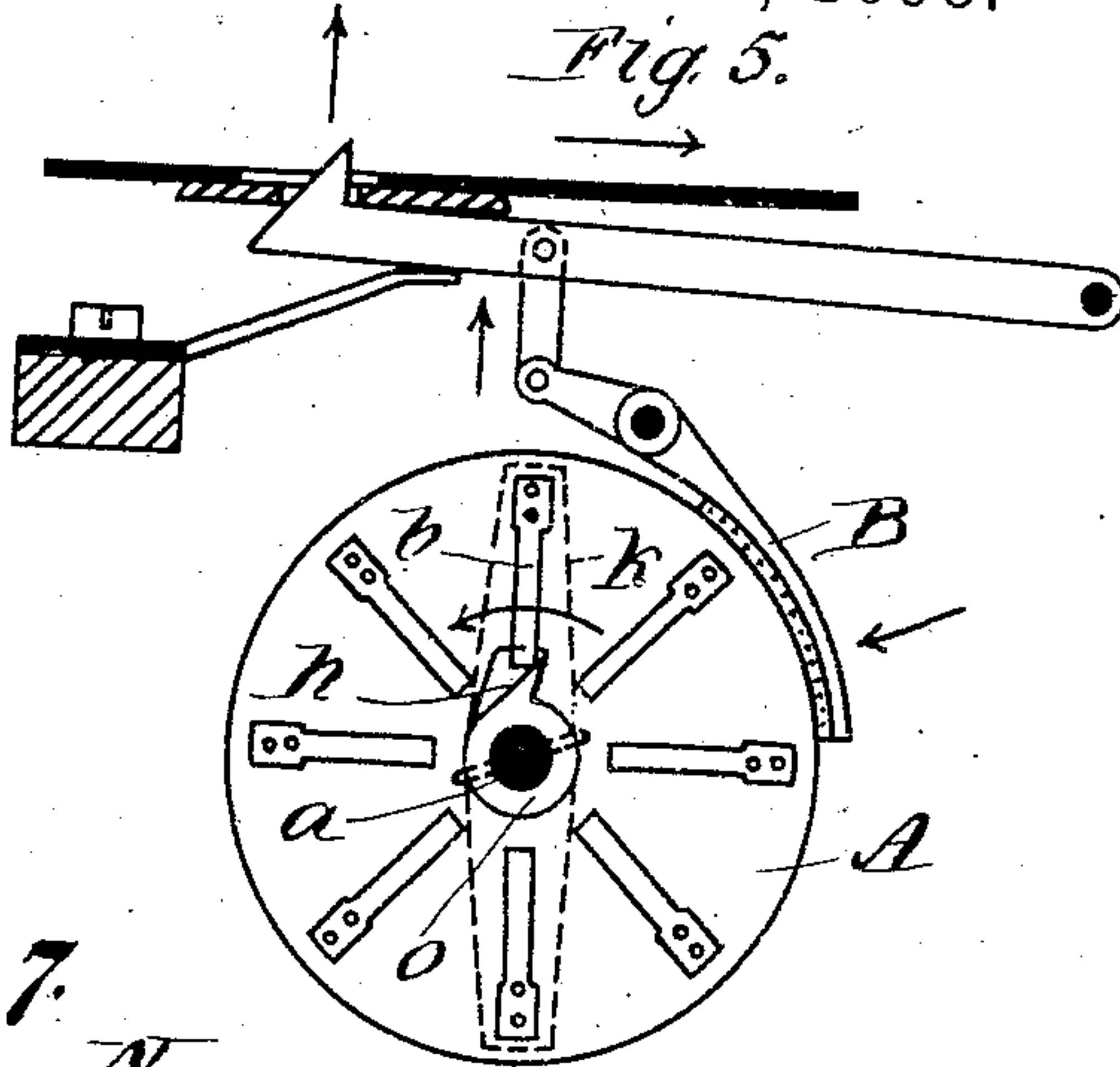
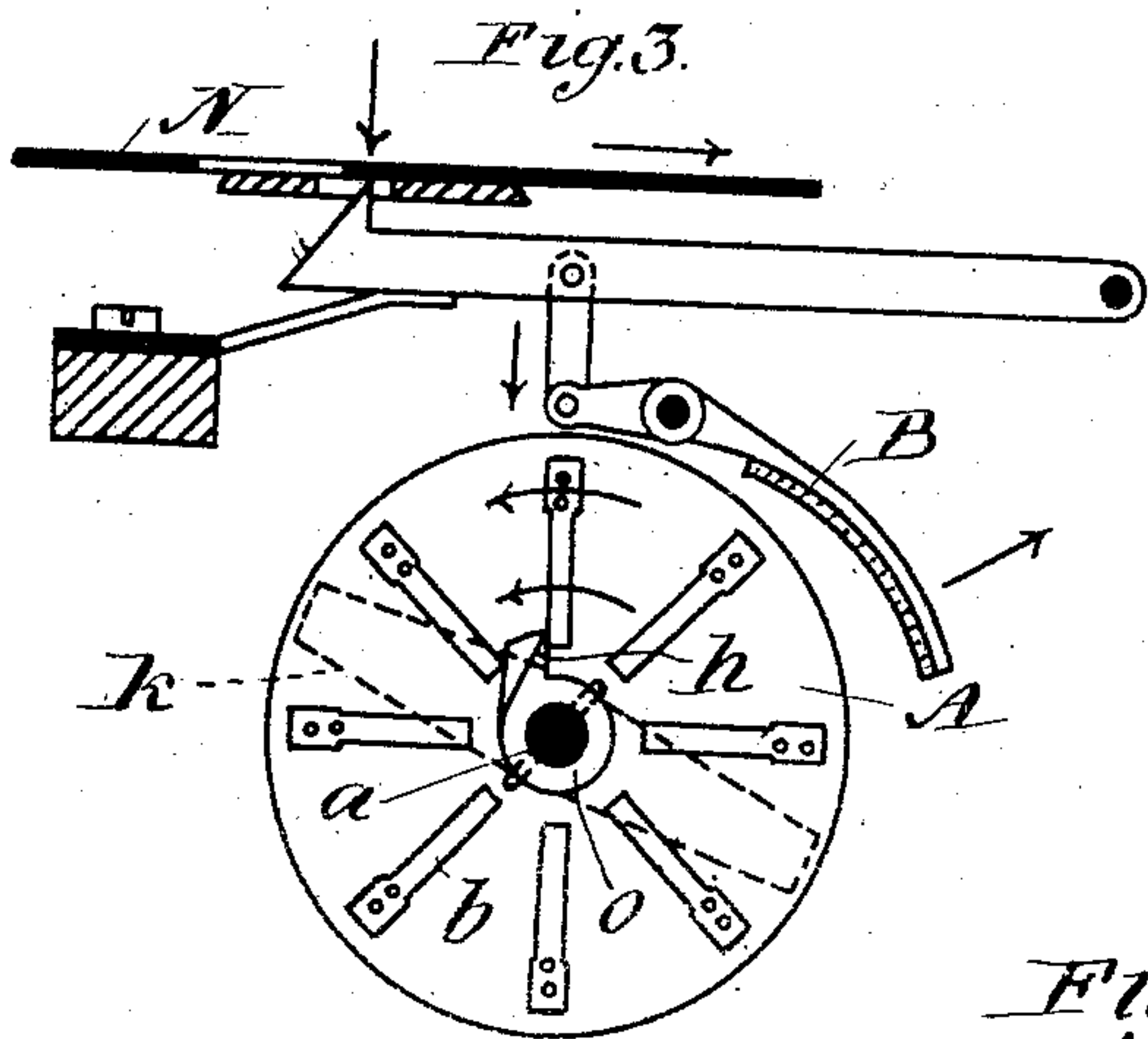
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MECHANICAL MUSIC WORK.

2. Sheets—Sheet 2.

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Witnesses.
Emil Savor
Alfred Misker

Inventor:
Friedrich Gronau
by Eustace Hopking
att'y.

UNITED STATES PATENT OFFICE.

FRIEDRICH GRONAU, OF LEIPSIC, GERMANY.

MECHANICAL MUSIC-WORK.

SPECIFICATION forming part of Letters Patent No. 599,703, dated March 1, 1898.

Application filed June 12, 1897. Serial No. 640,528. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH GRONAU, merchant, a subject of the Emperor of Germany, and a resident of Leipsic, Kingdom of Saxony, Empire of Germany, have invented certain new and useful Improvements in Mechanical Music-Works, of which the following is a full, clear, and exact description.

The present invention consists of a mechanical-musical-instrument work according to which the tones are produced by a series of disks loosely mounted on a rotary shaft, said disks carrying the means for producing the tone in question and having means in connection therewith for striking or causing the tone to be struck as soon as the particular disk carrying the tone has been arrested—i. e., as soon as a brake operated by a note-disk or other suitable means has been applied to said disk; and in order to render the present specification more easily intelligible reference is had to the accompanying sheets of drawings, in which similar letters of reference denote similar parts throughout the several views.

Figure 1 is a vertical cross-section of one form of embodying the present invention. Fig. 2 is a longitudinal section through the instrument embodied in Fig. 1. Fig. 3 is a side elevation of one of the loosely-mounted disks drawn to a larger scale and showing the means for producing the tone. Fig. 4 is a sectional plan of Fig. 3. Fig. 5 is a similar view to that of Fig. 3, showing the mechanism for arresting the disk in operative position. Fig. 6 is a sectional plan of Fig. 5. Fig. 7 is a central cross-section through the disk of Fig. 5; Fig. 8, a front elevation of the disk shown at Fig. 9; Fig. 9, a sectional elevation of the disk of Fig. 8; Fig. 10, a front elevation of a disk provided with bells, and Fig. 11 a sectional end elevation of the disk shown at Fig. 10.

In any suitable casing is mounted a rotary shaft *a*, which may be turned by means of a crank, Fig. 2, or any other suitable means, and on the said shaft are mounted a series of disks *A*, loosely mounted thereon and adapted to be arrested by means of a brake mechanism *B*, Fig. 1, which may be of any desired construction. This brake mechanism may be operated from a note-disk *N* or by any

other suitable means. On each disk *A* are mounted a series of detonating wires or bells, represented by *b*, Figs. 3 to 7 as tongues, by *c*, Figs. 8 and 9 as musical wires, and by *f*, Figs. 10 and 11 as bells or ringing spring-coils adapted to be struck by hammers.

The disks *A* are separated one from the other by means of collars *o o*, fast on the rotary shaft *a*, while on the said shaft and in proximity to the tongues or to the stems of the hammers of each disk is mounted a striker *h*, adapted as soon as the said disk is arrested by means of its brake to impinge against the tongue or hammer and cause one of the same to operate to sound the required note. Each disk is provided with several tongues of one and the same key. As shown at Figs. 3 and 5, each brake may be operated by means of a hook which is spring-pressed against a note-disk, and when an opening or orifice of said disk passes over the upwardly-projecting end of said hook the same will rise, thereby applying the brake to the particular disk which it is required to operate. Springs *k* may be attached to the collars *o*, by means of which the disks are kept in engagement with their striker *h*.

I wish it to be clearly understood that the present invention is not by any means confined to the particular means hereinbefore described for carrying out the same, as such means may be modified in any required manner. The sounding mechanism is quite indifferent and may be of any construction whatever. The means for operating the braking mechanism are also indifferent and may consist of a note disk or sheet *N*, or of a keyboard or any other suitable device.

I claim as my invention—

1. The combination of a shaft and means for rotating the same, a series of disks having each a sounding medium thereon said disks being loosely mounted on the said shaft, a striking mechanism fast on said shaft and means for arresting any of the said disks at the desired moment substantially as described.

2. The combination of a shaft and means for rotating the same, a series of loosely-mounted disks thereon each having a resonating spring thereon and a striker on the said shaft for each disk, a brake mechanism for each disk and means for operating each

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brake mechanism at the required moment in the manner and for the purpose substantially as described.

3. The combination of a rotary shaft *a*, and
5 a series of disks *A* loosely mounted thereon,
a series of resounding wires or tongues on
each disk being tuned as specified, a collar
between each pair of disks having a spring to
act as specified, a striker fast on the said ro-
10 tary shaft to operate each tongue or wire, a
series of brakes in proximity to each disk
and a note-disk *N* and means for operating

said brakes inserted between the note-disk
and the brakes in the manner and for the
purpose substantially as described and shown 15
and for the purpose specified.

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

FRIEDRICH GRONAU.

Witnesses:

HERM. LARK,
RUDOLPH FRICKE.