No. 631,230. Patented Aug. 15, 1899.

L. SCHIFF.

ALARM.

(Application filed May 26, 1899.)

(No Model.)

Fig. 1.

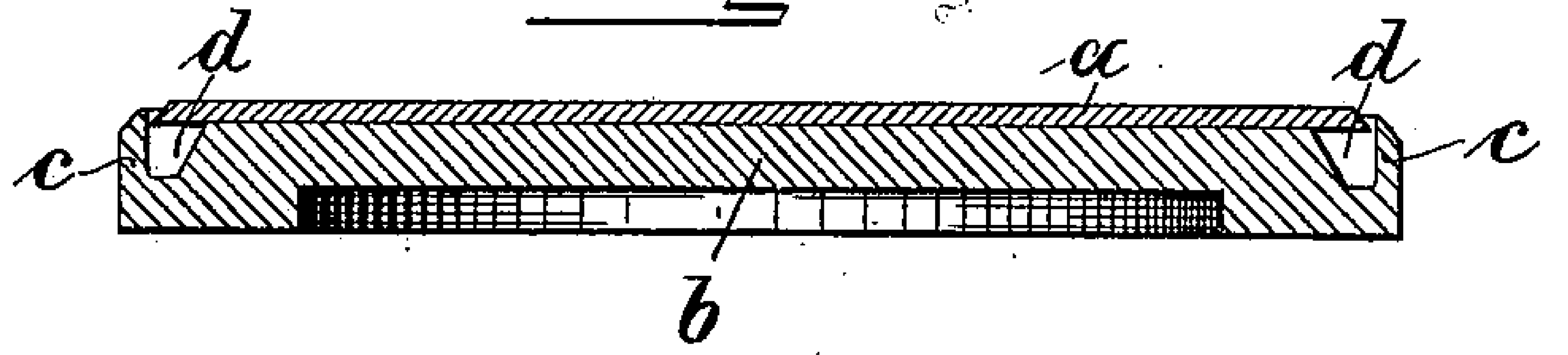


Fig. 2.

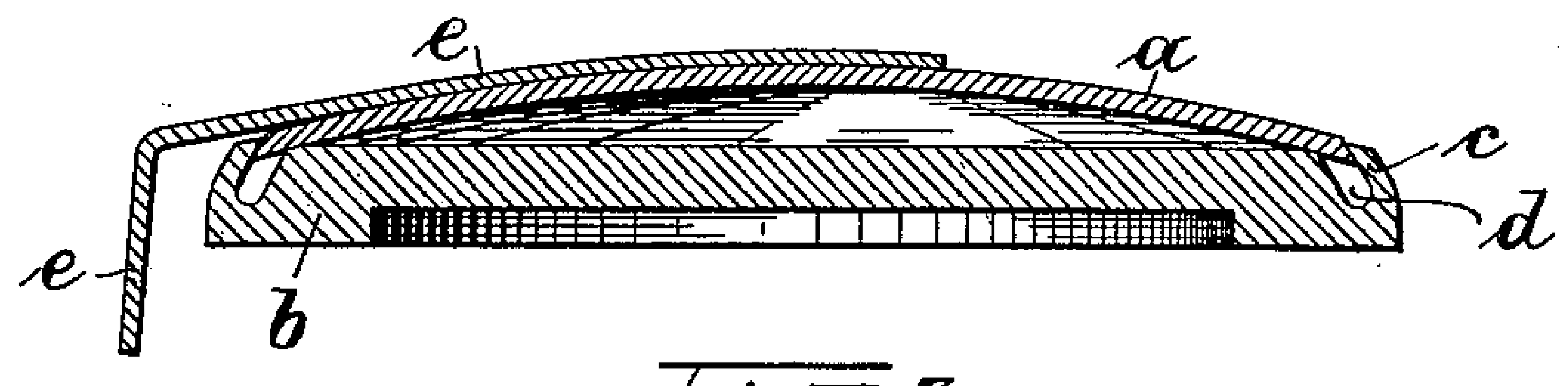
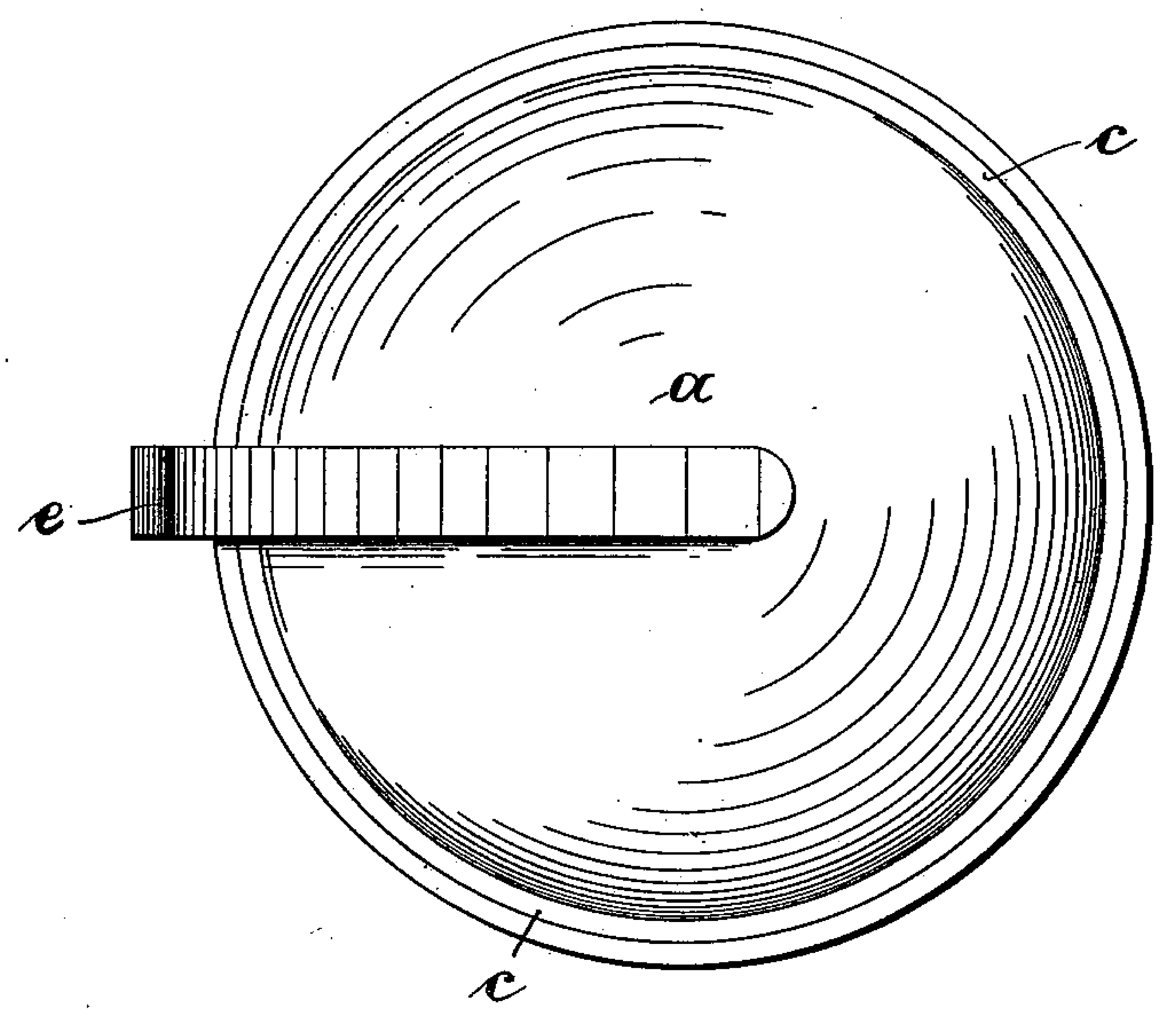


Fig. 3.



Witnesses:
[illegible]
Walter Jesse.

Inventor:
Ludwig Schiff
by Eustace W. Hopkins
Att'y.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LUDWIG SCHIFF, OF WILMERSDORF, GERMANY.

ALARM.

SPECIFICATION forming part of Letters Patent No. 631,230, dated August 15, 1899.

Application filed May 26, 1899. Serial No. 718,406. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG SCHIFF, a subject of the Emperor of Germany, residing at Wilmersdorf, near Berlin, Germany, have invented certain new and useful Improvements in Alarm Devices, of which the following is a full, clear, and exact description.

The present invention relates to alarms; and it consists of novel means for producing the alarm. According to the present improvement the sound is produced by means of a disk of sheet metal stretched over a circular shoulder formed on a base-plate and retained in the bulged or stretched position by means of an overlapping flange. A spring is soldered or otherwise fixed to the outer surface of the said metal disk, and the sound is produced by causing a rotary tooth or star wheel to vibrate the end of the said spring. The tone of an alarm of the class described may be varied by varying the tension of the disk.

In order to render the present specification more easily intelligible, reference is had to the accompanying drawings, in which similar letters of reference denote similar parts throughout the several views.

Figure 1 is a vertical section through the disk and base-plate before the former is stretched over the circular shoulder of the latter. Fig. 2 is a similar section showing the metal disk properly stretched or bulged and secured in position by means of the circular base-plate flange, which is forced over the edge of the disk; and Fig. 3 is a plan of the finished alarm.

In carrying out the invention the base-plate *b* is provided with a circular groove *d*, forming the circular shoulder *f*, over which the disk of sheet metal *a* is stretched. When the disk has been stretched and secured in position, the spring *e* is attached thereto and the sound is produced by causing a tooth or star wheel to rotate against the free end of the said spring *e*.

The alarm is made by first placing the disk of sheet metal on the base-plate so that its edges overlap the shoulder *f* and lie within the circular flange *c*. The parts are then placed in a lathe and the edge of the disk *a* is depressed into the groove *d*, stretching or bulging the disk over the shoulder or ridge *f*, the flange *c* being simultaneously pressed down over the edge of the disk and serving to secure the same in proper position. The spring *e* may then be soldered or otherwise attached to the surface of the disk.

If a rotary tooth or star wheel is caused to vibrate the free end of the disk the alarm will be sounded, and the tone of the same may be varied according to the degree of tension to which the disk *a* is strained.

I claim as my invention—

1. An alarm device consisting of a base-plate having a circular shoulder and a sheet-metal disk bulged or stretched over said shoulder, means for retaining the disk in its bulged or stretched position and a spring attached to the said disk and having free extending end substantially as set forth.

2. In an alarm the combination of a base-plate *b* having circular groove *d* to form shoulder *f* and a standing circular flange *c*, a metal disk stretched over said shoulder and retained in the stretched position by the said flange and a spring attached to the face of said disk and having free projecting end in the manner and for the purpose substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

LUDWIG SCHIFF.

Witnesses:
WALDEMAR HAUPT,
HENRY HASPER.