

(No Model.)

E. LACHMANN.
ALARM APPARATUS.

No. 486,380.

Patented Nov. 15, 1892.

Fig. II.

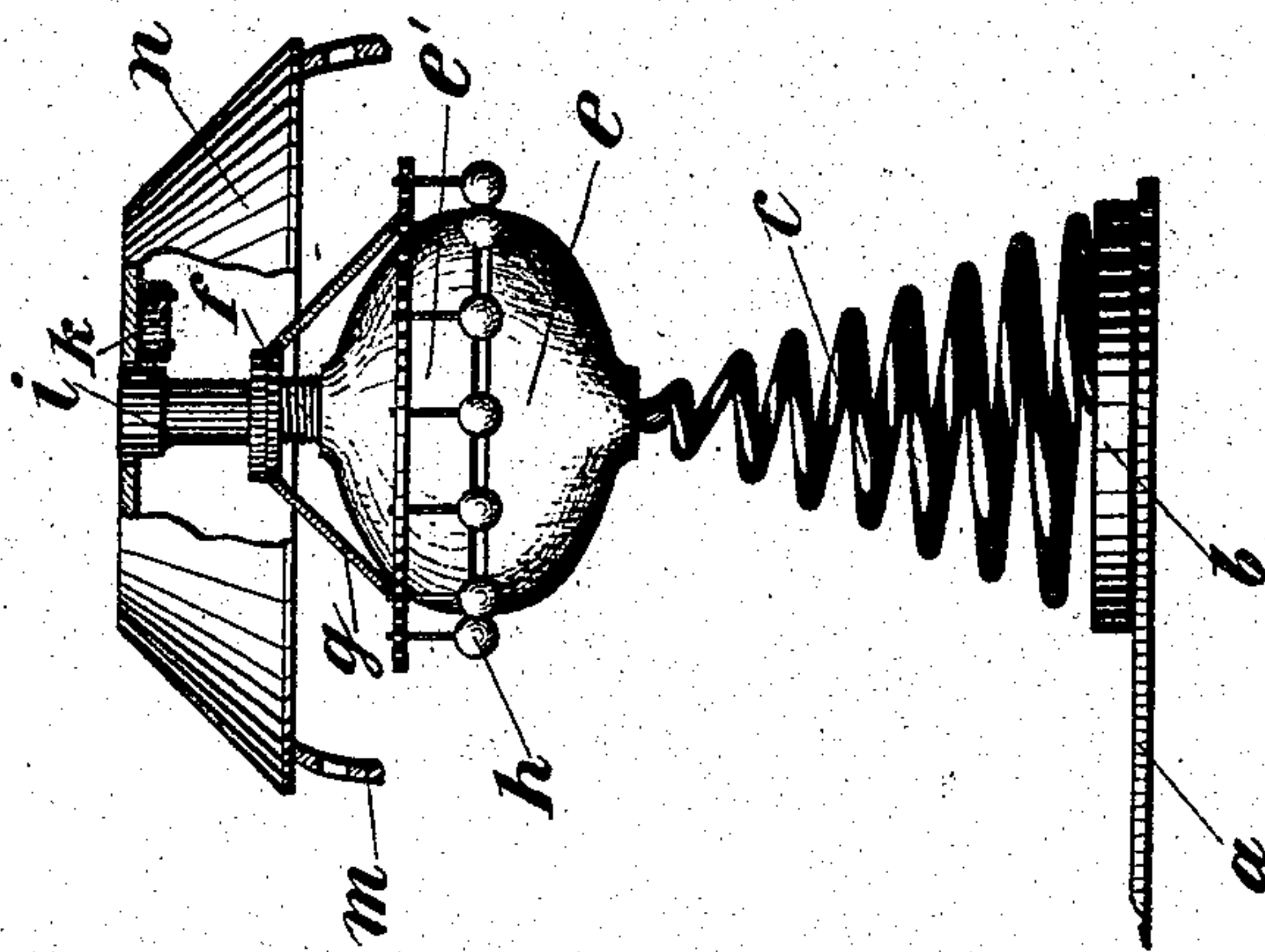


Fig. I.

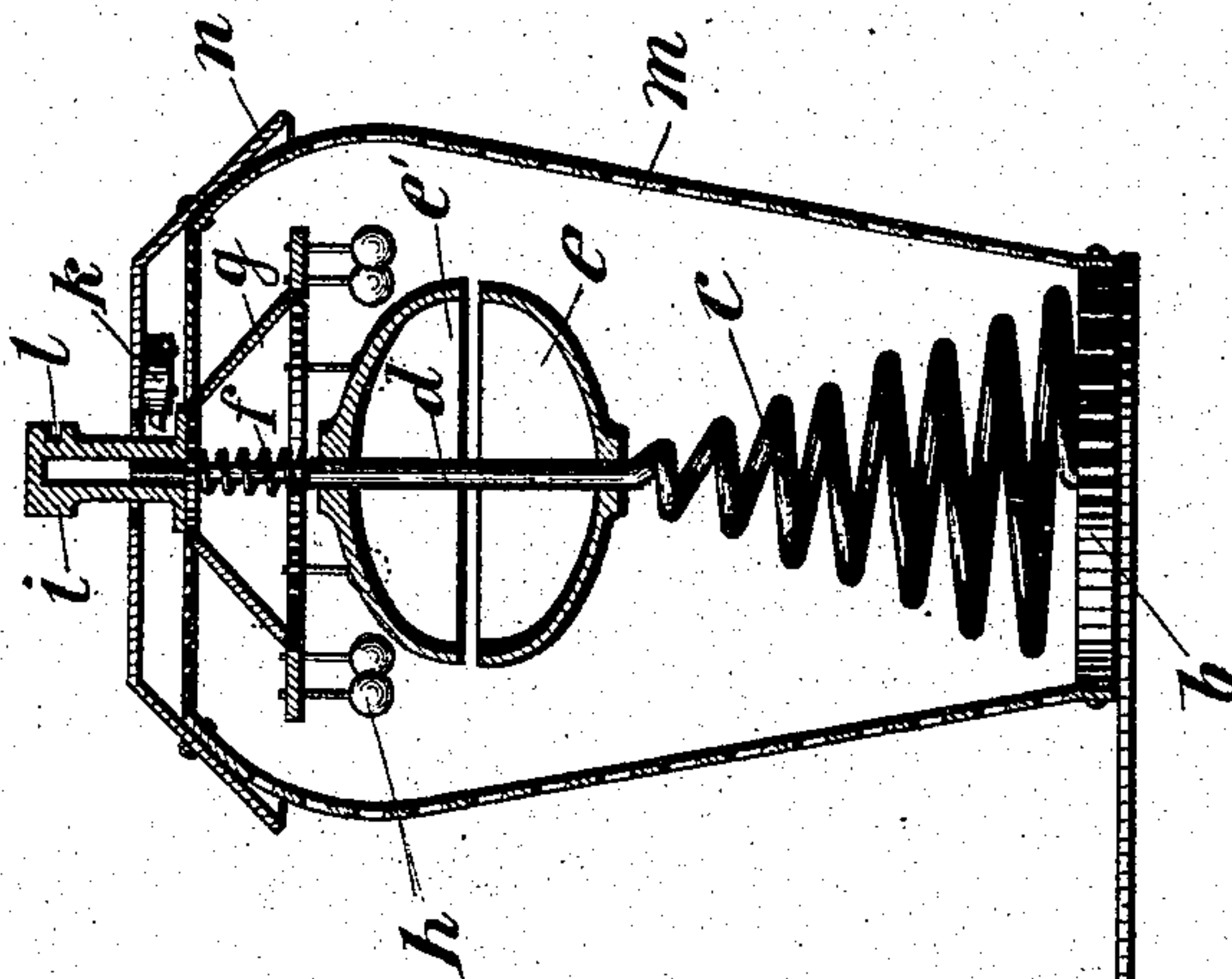
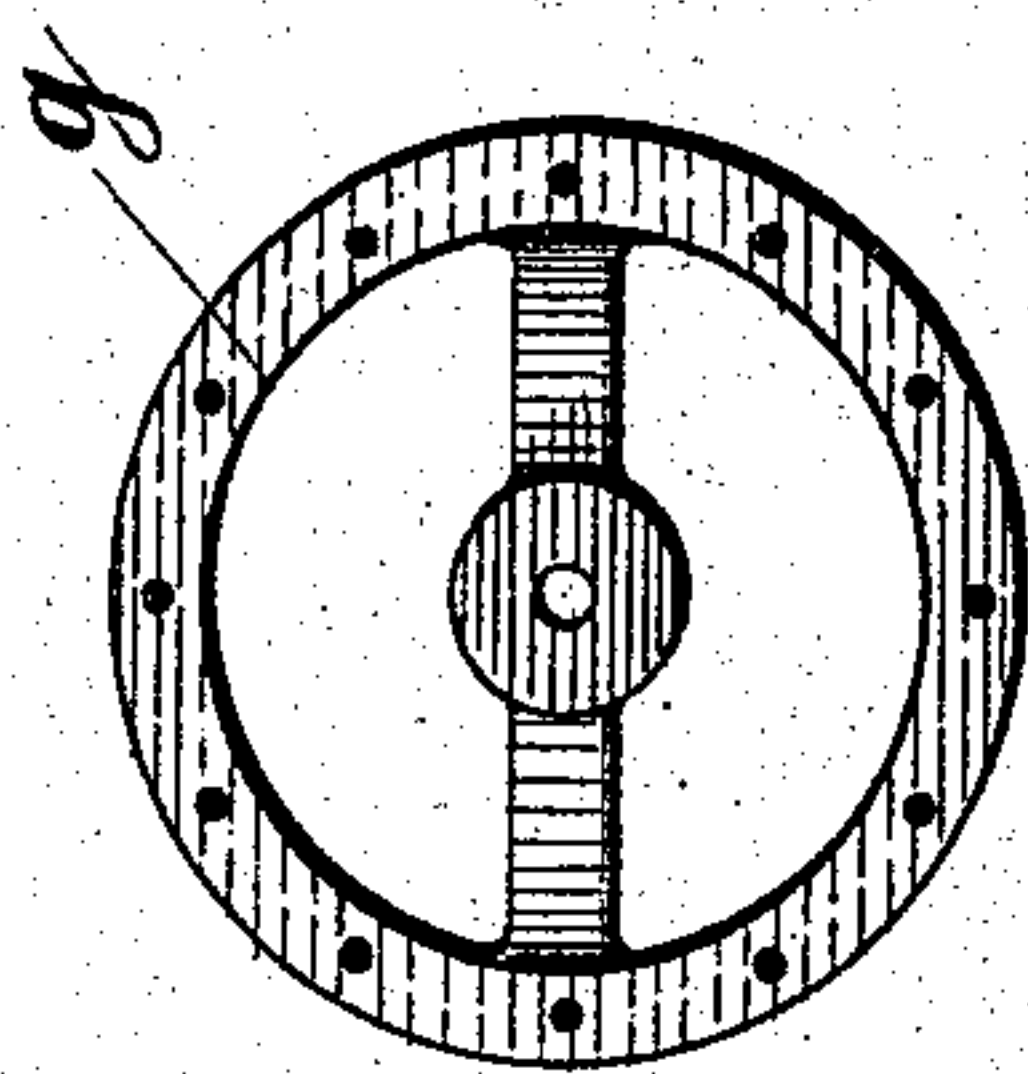


Fig. III.



Witnesses:

Geo. B. Lamm,
Harry D. Rohrer.

Inventor:
Emil Lachmann.

By *Knight Bros.*
Attorneys.

UNITED STATES PATENT OFFICE.

EMIL LACHMANN, OF BERLIN, GERMANY.

ALARM APPARATUS.

SPECIFICATION forming part of Letters Patent No. 486,380, dated November 15, 1892.

Application filed March 29, 1892. Serial No. 426,974. (No model.)

To all whom it may concern:

Be it known that I, EMIL LACHMANN, of Berlin, in the Kingdom of Prussia, German Empire, have invented a new and useful Alarm Apparatus, of which the following is a specification.

The object of my invention is an alarm apparatus, which consists in a bell having clappers mounted in a shiftable frame which is controlled by a knob, so that the clappers may be shifted and set in inactive or active position at will, the whole being mounted to receive vibratory motion from the object to which it is applied and cause the alarm to sound automatically, and the apparatus is applicable to all purposes—such, for instance, as vehicles, to prevent the unauthorized removal of the same by giving an alarm, or to doors for the purpose of giving notice of the opening of the same.

In order that my invention may be fully understood, I will now proceed to describe the same as it is used for vehicles, reference being had to the accompanying drawings, wherein like letters refer to like parts throughout the figures, and in which—

Figure I is a sectional view of the apparatus with the clappers set in inactive position. Fig. II is a side view of the same with the clappers placed in active position, and Fig. III is a detail view of the clapper-carrying ring.

a is a flat elastic steel spring, one end of which is screwed to the vehicle or other object and to the other end of which is attached a disk *b*, on which is mounted an elastic spiral spring *c*, wound in the form of a cone and terminating in a vertical stem *d*. Upon the stem *d* is mounted a double gong or bell *e e'*, the two halves of which are slightly apart and of different tone. Around the upper end of stem *d*, above the bell *e e'*, is placed a spiral spring *f*, upon which rests the clapper-frame *g*, through which the stem also passes, as shown in Fig. I. This frame consists of the upper and lower rings spaced by the downwardly and outwardly inclined arms, and from the lower ring the clappers *h* are suspended, preferably, by pieces of gut. While in the position shown in Fig. I these clappers

cannot when swinging to and fro touch the bell *e e'*. This is the inactive position of the apparatus.

i represents a hollow knob or button projecting upward from the clapper-frame, formed with a recess *l* and adapted to be pressed down over the end of the stem *d*.

k is a lock having a beveled spring-bolt and adapted to engage in recess *l* when the knob is depressed.

By pressing the knob *i* downward the ring *g* is brought into the position shown in Fig. 2, so that the clappers *h* when vibrating strike against the double gong or bell *e e'*.

The spring-bolt of lock *k* maintains the knob *i* in the lower position, the catch or bolt of the lock springing automatically into the recess *l* of the knob *i*. In order to shift the apparatus to inactive position, the lock *k* must be unlocked by means of a key, when the spring *f* will lift the clapper-ring *g* away from the bell *e e'* to the position shown in Fig. I.

To prevent the destruction of the apparatus, it is surrounded by a casing *m* of wire-work or other suitable material, the upper part of which is provided with a cover *n* to protect the apparatus against the weather, the lower part being fixed to the disk *b*.

During the authorized use of the vehicle the bell is not sounded, because the spiral spring *f* maintains the ring *g*, with the clappers *h*, in the upper position, (see Fig. I,) so that the clappers *h* can swing freely without striking against the bell *e e'*; but when the driver leaves the vehicle he has only to press the knob *i* downward until the catch or bolt of the spring-lock *k* springs into the recess *l* of the knob *i*, when the apparatus is ready for action and the driver may confidently leave the vehicle without fear of the unauthorized removal of the same, because, owing to the great elasticity of the double-spring arrangement of the apparatus, the slightest movement of the vehicle, even on a very smooth road, will give a loud alarm, produced by the numerous clappers and the double-sounding bell. This alarm can only be prevented by the unlocking of the lock, which is preferably an unpickable lock, the key of which is carried by the driver. When the

latter intends to use the vehicle again, he disengages the apparatus by unlocking the lock.

What I desire to secure by Letters Patent is—

1. An alarm apparatus consisting of a bell, a movable frame carrying the clappers adapted to strike the bell when brought near, and a lock adapted to retain the clapper-frame in striking position, the whole being mounted upon a vibratory support, substantially as described.

2. An alarm consisting of the bell, a clapper mounted in a shiftable frame adapted for movement in and out of active position, and the lock for holding the frame in active position, all substantially as set forth.

3. In an alarm, the combination of the elastic support, the clappers mounted on the elastic support and thereby adapted to receive vibratory motion through the support and mounted adjustably with relation to the bell, and the lock for holding the bell and clappers in active relation, substantially as explained.

4. In an alarm for movable objects, the combination of the bell, the stem projecting above the bell, the clapper-frame carrying clappers, shiftable mounted on the stem near the bell and adapted to be moved to bring the clappers into and out of active relation to the bell, and the lock for holding the frame in position of active relation, all substantially as set forth.

5. In an alarm for movable objects, the combination of the bell, the stem upon which the bell is mounted projecting above the bell, the clapper-frame vertically movable on said stem and carrying clappers which are adapted to strike the bell when the frame is depressed, the spring for keeping the frame normally elevated, and the lock for holding the frame

in depressed position, all substantially as set forth.

6. In an alarm for movable objects, the combination of the spiral spring terminating in the stem, the bell mounted on the stem, the clapper-frame mounted movably on the stem beyond the bell and having clappers adjusted to strike the bell when the frame is moved toward the bell, but to rest out of reach of the bell when the frame is forced away, and the lock for holding the frame with the clappers in striking distance, all substantially as and for the purpose set forth.

7. In an alarm for movable objects, the combination of the plate-spring, the spiral spring mounted on one end of the plate-spring and terminating in the stem, the bell and clapper-frame mounted on said stem to be relatively movable thereon, clappers on the clapper-frame, adjusted to strike the bell when the bell and frame are brought together, but rendered inactive when the bell and frame are separated, and the catch for holding the frame and bell in active relation, all substantially as and for the purpose set forth.

8. In an automatic alarm, the combination of the bell and clapper-frame mounted to be relatively movable on a stem, clappers on the frame, adjusted to strike or not to strike as the bell and frame are brought together or are separated, the push-button having a recess, and a surrounding protecting-frame having a lock with a spring-bolt adapted to enter said recess, all substantially as and for the purpose set forth.

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

EMIL LACHMANN.

Witnesses:

PAUL FISCHER,

W. H. EDWARDS.