

G. O'BRYAN.
MEANS FOR SOUNDING ALARM GONGS.
APPLICATION FILED JUNE 16, 1910.

Patented Mar. 25, 1913.
2 SHEETS—SHEET 1.

1,057,359.

Fig. 1.

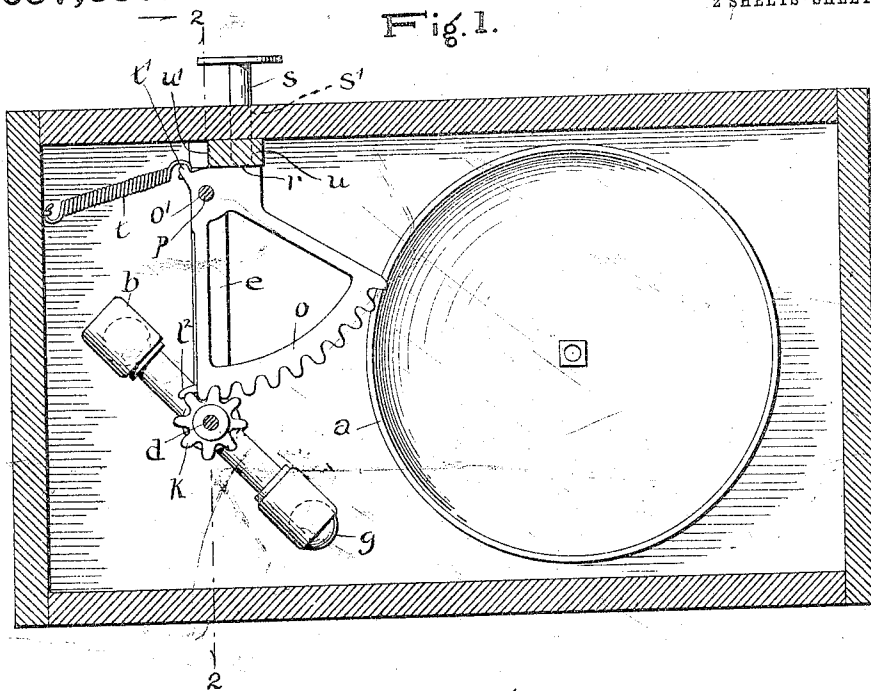
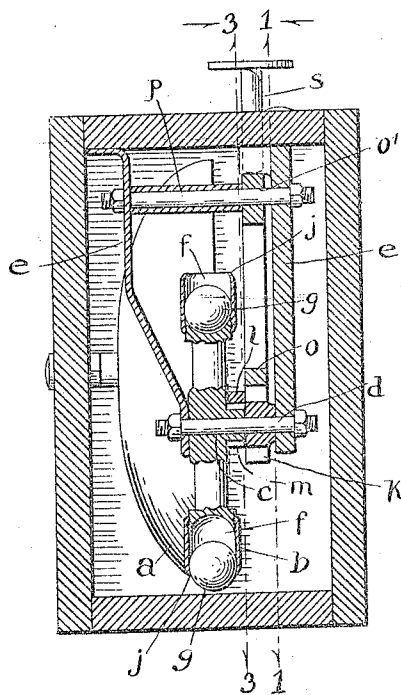


Fig. 2.



Witnesses
Stuart Hilder.
Francis M. Anderson.

Inventor
Gory O' Bryan
by E. W. Anderson & Son
his Attorneys

G. O'BRYAN.
MEANS FOR SOUNDING ALARM GONGS.
APPLICATION FILED JUNE 16, 1910.

Patented Mar. 25, 1913.
2 SHEETS—SHEET 2.

1,057,359.

Fig. 4.

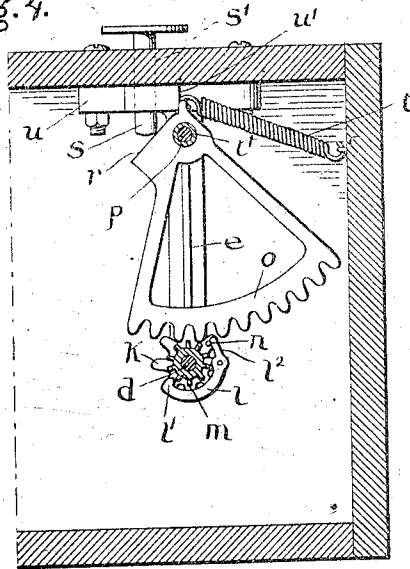


Fig. 5.

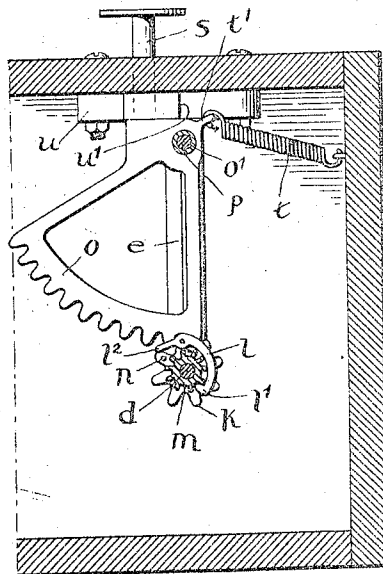
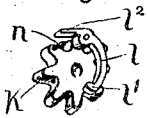


Fig. 6.

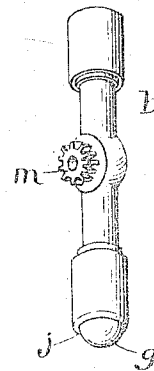


Fig. 3.

Witnesses
Stuart Hilder.
Frances M. Anderson.

Inventor
Gory O' Bryan.
by E. W. Anderson & Son
his Attorneys

UNITED STATES PATENT OFFICE.

GORY O'BRYAN, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-FOURTH TO CHARLES H. JENKINS AND ONE-FOURTH TO THOMAS W. MORAN, BOTH OF LOUISVILLE, KENTUCKY.

MEANS FOR SOUNDING ALARM-GONGS.

1,057,359.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed June 16, 1910. Serial No. 567,235.

To all whom it may concern:

Be it known that I, GORY O'BRYAN, a citizen of the United States, resident of Louisville, in the county of Jefferson and State of Kentucky, have made a certain new and useful Invention in Means for Sounding Alarm-Gongs; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a sectional face view of the invention, showing the plunger and rack in normal position, the section being taken on the line 1—1, Fig. 2. Fig. 2 is a vertical transverse section on the line 2—2, Fig. 1. Fig. 3 is a view similar to Fig. 1, with parts broken away, the section being taken on the line 3—3, Fig. 2 upon the opposite side of the rack. Fig. 4 is a similar view showing the plunger depressed and the rack at the limit of its movement caused by such depression. Fig. 5 is a detail perspective view of the pinion and its pawl. Fig. 6 is a detail perspective view of the clapper.

The invention relates to means for ringing the alarm gongs of street cars or other vehicles, having for its object to provide an improved device for the purpose of giving a clear sound in the stroke of the clapper and a continuity of strokes with a minimum of effort on the part of the motorman or driver.

The invention consists in the novel construction and combinations of parts as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the letter *a*, designates the gong or bell and *b*, is the rotary clapper, of straight character, having journal bearings centrally of its length at *c*, upon a shaft *d*, supported at its free ends in arms *e*, *e*, extending downward from the floor of the car. This clapper has at the free end of each arm thereof a recess *f*, of cylindrical character, forming the receptacle for a loose ball *g*, having movement therein, the balls being confined in place by inward extending rims *h*, at the extremities of the arms.

At the side of the clapper, upon the shaft *d*, a pinion *k*, is provided, having pivoted to its inner face an arcuate pawl *l*, having an intumed hook end *l'*, capable of engage-

ment with a ratchet wheel *m*, forming a central part of the clapper. Movement of the pawl away from its ratchet when disengaged therefrom is limited by a pin *n*, carried by said pinion and capable of engagement with a stop arm *l'*, of the pawl to stop the same in its movement.

For the purpose of operating the pinion and rotating the clapper a sector-form rack *o*, has pivotal bearings at *o'*, upon a shaft *p*, connecting the arms *e*, *e*, at the upper portions thereof, said rack having an anvil face *r*, at its upper portion extending to one side of its pivot and adapted to be struck by a plunger *s*, extending through a perforation *s'* in the floor of the car and operated by the foot of the motorman or driver.

In the operation of the invention, the plunger works powerfully upon the rack to strike the same to one side, at the same time turning the pinion and causing the clapper to rotate rapidly upon its shaft, the loose balls in the ends of the arms of the clapper in its rotation striking the bell repeatedly for each stroke of the plunger. Owing to the balls forming the working ends of the clapper arms, the bell is struck at a single point only by each ball, and the ball is as quickly repulsed in its chamber through the elastic reaction, whereby the sound of each stroke is made clear and full. The pawl *l*, has normal engagement with the ratchet wheel *m*, through force of gravity, as shown in Fig. 3 of the drawings, and at the end of the stroke of the rack is released from such engagement, also through force of gravity, as shown in Fig. 4 of the drawings. The sector rack is returned to normal position by means of a coil spring *t*, having connection with a lug *t'*, at the upper portion of the rack, this lug having stop engagement with the vertical face *u*, of the casting *u*, of which one of the arms *e*, is made an integral part, when the rack has been turned about forty-five degrees; the upward or return movement of the rack being limited by engagement of its anvil face *r*, with the lower face of the casting.

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

1. In an alarm, a stationary gong, a stationary shaft, a rotary striker loosely mounted on said shaft and having two oppositely extending arms provided each with

a short end-recess, a loose ball in each recess, a ratchet wheel fast to said striker, a pinion loosely mounted on said shaft, and a pivoted pawl carried by said pinion and having automatic engagement with and release from said ratchet wheel through force of gravity, a rack in engagement with said pinion, a plunger for operating said rack, and a retraction spring for said rack.

- 10 2. Means for sounding an alarm gong, comprising a casting having a lower face, an end face and a downward extending arm, a shaft having support in said downward
15 extending arm below one edge of said lower face, a vibratory rack upon said shaft provided with an upper anvil face and an end lug, a plunger for operating said rack, a retraction spring for said rack, a lower shaft
having support in said downward extending

arm, a rotary clapper loosely mounted on 20 said lower shaft, a ratchet wheel in rigid connection with said clapper, a pinion upon said lower shaft in engagement with said rack, a pawl pivoted to said pinion, capable of intermittent engagement with and release 25 from said ratchet wheel through force of gravity, the upper anvil face of said rack having stop engagement with the lower face of said casting at the end of its return stroke and said lug having stop engagement with 30 the end wall of said casting at the end of the effective stroke.

In testimony whereof I affix my signature, in presence of two witnesses.

GORY O'BRYAN.

Witnesses:

MENEFEE WIRGMAN,
THOS. W. MORAN.