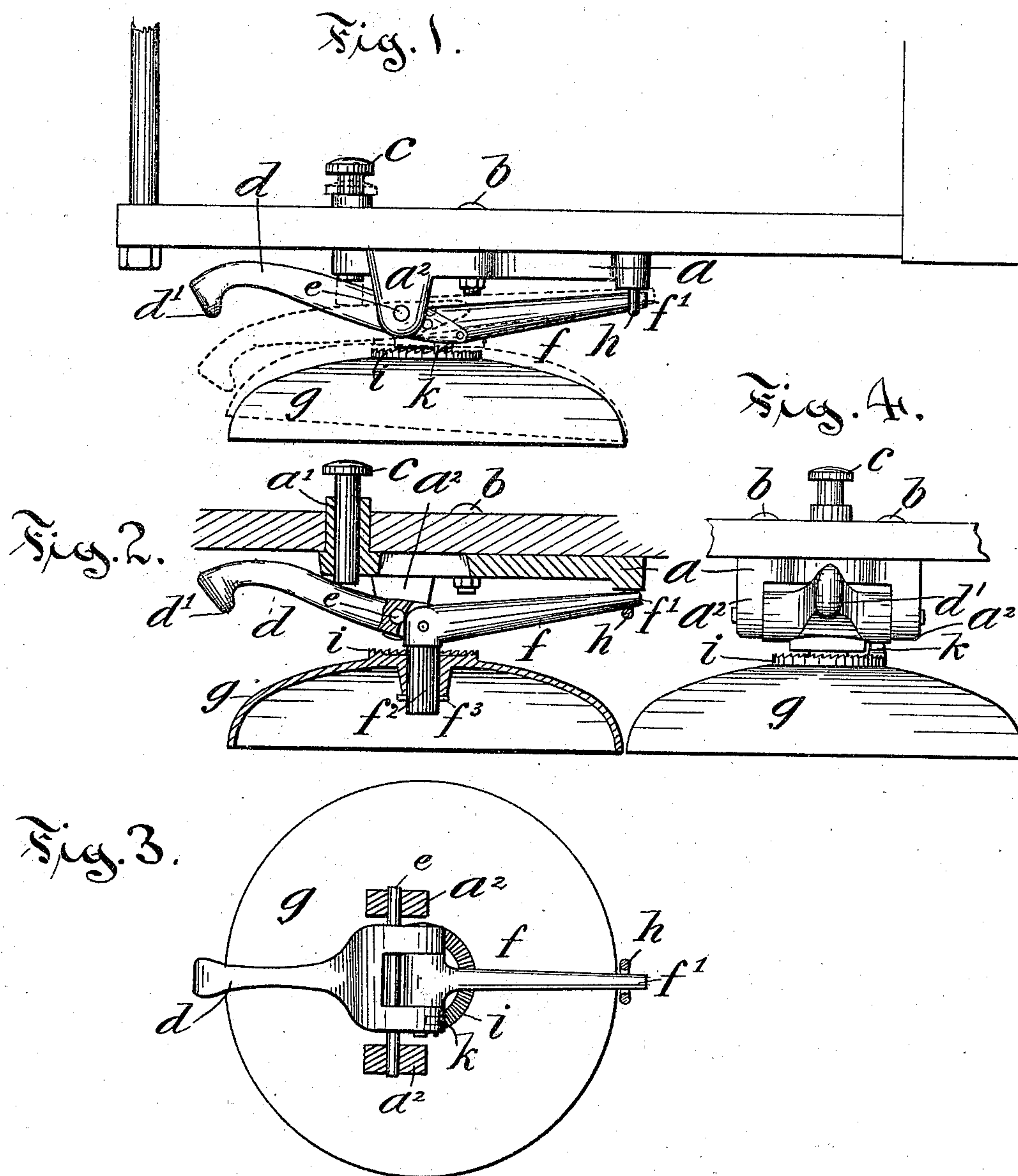


(No Model.)

J. C. WELLS.  
ALARM BELL.

No. 513,627.

Patented Jan. 30, 1894.



Witnesses:

Joseph Arthur Cantin  
Arthur B. Jenkins.

Inventor:

John C. Wells.  
by Simonds, Burdett & Frothingham,

Attorneys



# UNITED STATES PATENT OFFICE.

JOHN C. WELLS, OF EAST HAMPTON, CONNECTICUT, ASSIGNOR TO THE  
BEVIN BROTHERS MANUFACTURING COMPANY, OF SAME PLACE.

## ALARM-BELL.

SPECIFICATION forming part of Letters Patent No. 513,627, dated January 30, 1894.

Application filed October 18, 1893. Serial No. 488,474. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. WELLS, of East Hampton, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Alarm-Bells, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

The object of my invention is to provide an alarm bell that shall be particularly adapted for use on street cars or other vehicles for the purpose of sounding the alarm by repeated blows on a loud sounding gong and at the same time to provide a device which shall be less liable to cause the gong to crack under the heavy blows of the hammer.

A further object is to provide a simple, strong and comparatively cheap construction of parts of the bell and its sounding mechanism.

To this end my invention consists in the details of the several parts making up the suspended gong and its striking mechanism and in the details of the several parts as more particularly hereinafter described and pointed out in the claims.

Referring to the drawings: Figure 1 is a view in side elevation of the bell shown as attached to the under side of the platform of a vehicle, as a car. Fig. 2 is a detail view in central vertical section through the gong and bracket and with levers shown in side view, these parts being broken away to show construction. Fig. 3 is a detail top or plan view of the striking mechanism and bell cut away from the bracket in horizontal section. Fig. 4 is a detail view in end elevation of the bell and its striking mechanism.

In the accompanying drawings the letter *a* denotes a bracket or base preferably of metal cast to shape and adapted to be secured to the under surface of a floor or platform as by means of bolts *b*. The bracket in the form shown has a tubular socket *a'* extending upward and adapted to hold a tappet *c* with a broadened head in convenient position to receive the pressure of the foot of the driver of the vehicle, the under end of the tappet being arranged in operative contact with a hammer lever *d* which forms part of the bell striking mechanism. This hammer lever *d* is pivoted

to lugs *a<sup>2</sup>* on the bracket a pivot pin *e* passing through the lugs *a<sup>2</sup>* and the hammer lever forming the fulcrum on which the latter turns. The rear part of the hammer lever is bifurcated preferably and is pivotally connected to a bell lever *f*. This bell lever has an outward extending arm *f'* and a downward extending arm *f<sup>2</sup>*, the latter being cylindrical and adapted to support a gong *g* or sounding shell that is pivotally supported on the arm which extends through a cylindrical hole in the center of the gong. The latter is held in position on the arm *f<sup>2</sup>* by any convenient means, as a pin *f<sup>3</sup>* extending through the arm and underlying the hub at the center of the gong. The rear end *f'* of the bell lever extends through a guide *h* which is a loop of metal in which the end can loosely play. When the parts are pivotally connected in the manner described and as shown in the drawings the weight of the bell and its supporting mechanism tends to hold the hammer *d'*, which is on the outer end of the hammer lever, in a raised position, and the downward push upon the tappet not only forces the hammer lever downward toward the gong but lifts the gong toward the hammer slightly tilting it forward and upward and bringing the hammer into contact with the surface of the gong with a force depending on the force of the push upon the tappet. As soon as pressure upon the tappet is released the hammer is again raised into position for striking by the weight of the bell, and the connecting lever. By repeated blows on the surface of a fixed gong the latter is liable to be cracked and I obviate that danger by providing for a rotary movement of the gong on its support so that no two blows can be struck in succession on the same point on the surface of the gong.

The mechanism for providing for this rotary movement of the bell is as follows: On the top of the gong and facing upward a circular rack *i* having ratchet teeth is provided in position to be engaged by the lower end of a pawl *k* which is pivoted to the hammer lever. When this pawl is pivoted to the rear end of the lever, as shown, the downward striking movement of the hammer strikes the pawl rearwardly so that it will engage with a tooth of the rack and when the weight of the



structure again raises the hammer the pawl turns the gong on its pivot and so that the next blow of the hammer will fall on a different point on the surface of the gong from that last encountered by the hammer in striking. This pawl preferably operates by gravity as do the other parts, no springs being present in the structure.

It is obvious that a different arrangement of the parts may be made without departing from the main idea of the invention which principally consists in providing for the automatic lifting of the hammer arm by the weight of the bell and also for the automatic rotary movement of the gong, without departing from my invention, and my invention is not limited to the specific combination and arrangement of parts herein described for effecting such purpose.

I claim as my invention—

1. In combination with a bracket or base, a hammer lever pivoted to said base, a gong suspended from the hammer lever and serving by its weight to hold the hammer in a raised position, and a tappet for operating the hammer lever, all substantially as described.

2. In combination with a base or bracket, a hammer lever pivoted to said base, a bell lever pivoted to the hammer lever, a gong rotatively supported on the bell lever, mechanism

for rotating the gong and means for operating the hammer lever, all substantially as described.

3. In combination with a base, a hammer lever pivoted to said base, a bell lever pivoted to the hammer lever and having one end extending through a guide on the base, a gong rotatively supported on a downturned arm of the bell lever, a rack borne on the upper surface of the gong, a pawl borne on the hammer lever with one end in operative engagement with the rack and a tappet for operating the hammer lever, all substantially as described.

4. In combination with a base *a* having a tubular tappet socket *a'*, lugs *a<sup>2</sup>* and a lever guide *h*, a hammer lever *d* pivoted to said lugs on the base, a bell lever pivoted to the hammer lever in rear of the pivot pin *e* with one arm extending through the guide *h* and the other arm *f<sup>3</sup>* supporting the rotary gong *g*, the rotary gong *g* bearing a rack *i* on its upper surface, the pawl *k* pivoted to the hammer lever and in engagement with said rack, and a tappet *c* for operating the hammer lever, all substantially as described.

JOHN C. WELLS.

Witnesses:

C. W. BEVIN,  
EMMET B. RICH.