(No Model.)

D. W. TROY.

SPEED INDICATING ALARM.

No. 552,213. Patented Dec. 31, 1895.

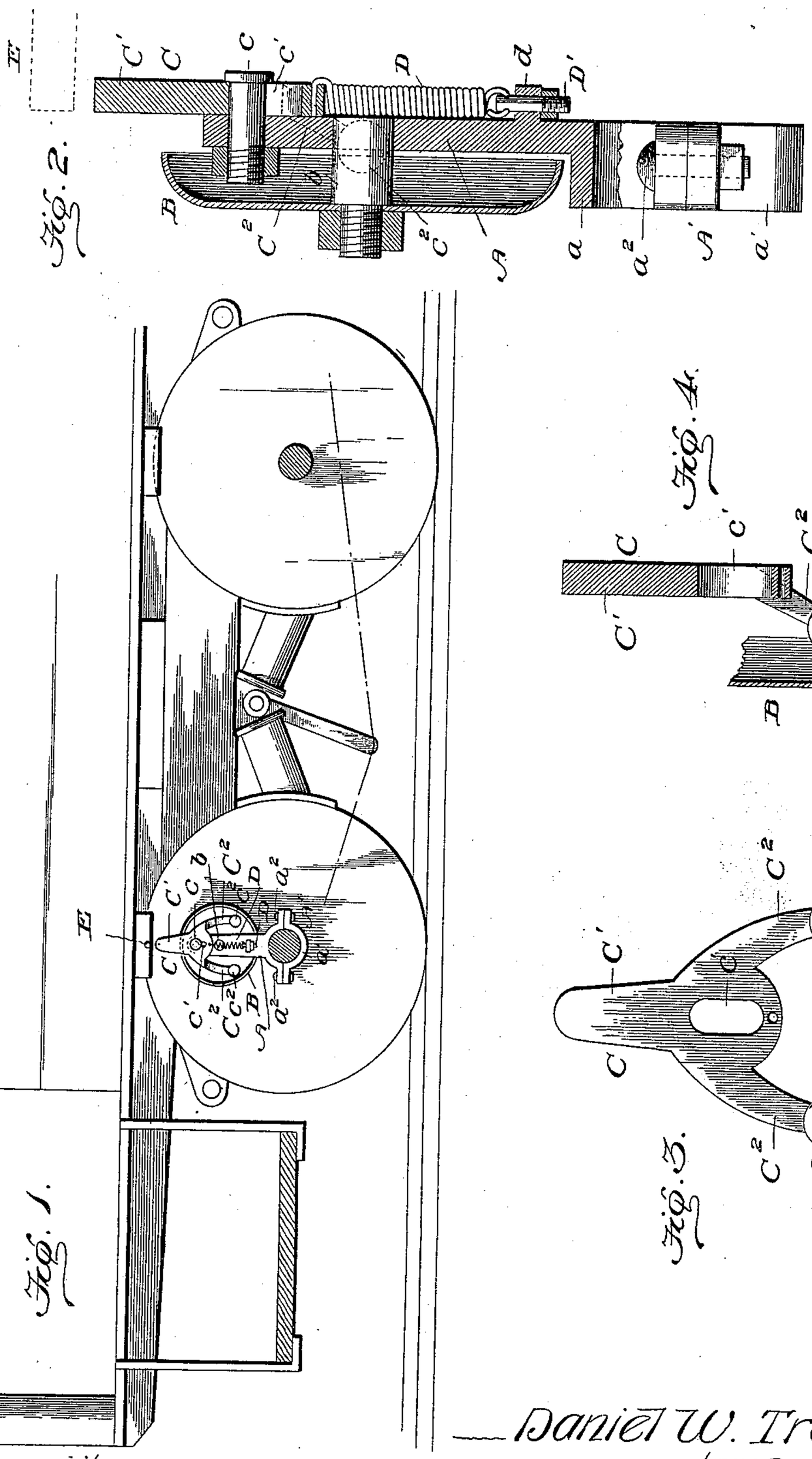

Fig. 1.

Fig. 4.

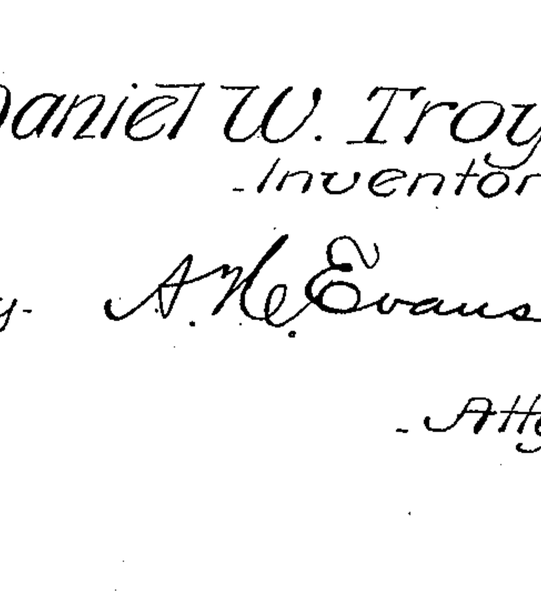

Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

DANIEL W. TROY, OF MONTGOMERY, ALABAMA.

SPEED-INDICATING ALARM.

SPECIFICATION forming part of Letters Patent No. 552,213, dated December 31, 1895.

Application filed July 23, 1895. Serial No. 556,940. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. TROY, a citizen of the United States, residing at Montgomery, in the county of Montgomery and State of Alabama, have invented certain new and useful Improvements in Centrifugal Alarms or Indicators for Street-Cars, of which the following specification contains a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 shows the alarm or indicator applied to a car-axle. Fig. 2 is a longitudinal section of the same removed. Figs. 3 and 4 are detail views.

The object of the invention is to provide a centrifugal alarm or indicator for axles of street-cars which will indicate, as by the sounding of a gong or otherwise, whenever the car attains a speed over and above that allowed by the city regulations or laws—eight miles per hour, for instance.

The invention consists in the construction and arrangement of parts hereinafter described, and set forth in the claims.

A represents an arm having a strap or clip A′ at its inner end for securing it to the car-axle or other rotary part of the running or driving gear, said strap or clip comprising a section *a* carried by the arm A and a section *a′* adapted to be secured thereto by bolts a^2.

B is a gong secured to a post or stud *b* projecting from one side of the arm A between the ends thereof, the gong lying with its concave face next to said arm. Beyond the stud *b*, at the outer end of the arm, is a second transverse stud *c*, on the outer end of which, at the side of the arm A opposite to the gong, slides and turns the hammer or striker C provided with three arms C′ C^2 C^2 and a slot *c′* parallel with the arm A and in longitudinal alignment with the hammer or striker-arm C′ which projects beyond the periphery of the gong and has a rounded outer extremity. The arms C^2 C^2 are bent or inclined inwardly past the arm A and project into the concave side of the gong, where they are provided with striking-heads c^2 c^2 to strike the gong and sound the alarm.

D is a spring secured at one end to the striker or hammer C between its two arms C^2 C^2 and at its opposite end secured to the end of an adjusting-screw D′ mounted in a threaded aperture in a lug *d* projecting from the arm A at the inner or axle end thereof, and this spring holds the striker or hammer C retracted or in its inactive position until the speed of the car is increased to such an extent that the centrifugal action will throw it outwardly against the action of said spring. By adjusting the tension of this spring through the medium of screw D′, or otherwise, the striker or hammer may be held inactive until any desired speed of the car has been reached or exceeded, as this varies in different cities. Whenever the determined or lawful speed is exceeded, the hammer or striker will be thrown outward along the arm A until the rounded end of the arm C′ comes in contact with a rounded stationary stud or cam E in the path thereof, which will cause the hammer or striker to rock on its axis *c* and throw one or the other striking-heads c^2 against the gong. The gong will thus be sounded once for every revolution of the arm A. This stud or cam may be on the motor-box or some part of the car-truck.

As soon as the motorman hears the alarm or sees the indicator, he will "slow up" till the same is discontinued.

I have shown the alarm or indicator as adapted to sound a gong, but it is evident that the sliding and rocking part C might be connected with any suitable visual alarm, signal or indicator, just as well.

Having thus described the invention, what is claimed is—

1. A centrifugal speed alarm comprising a gong or bell having a counterbalanced relatively movable striker or hammer normally held inactive, and means for attaching the gong or bell and its striker to the axle or other rotary part of the running or driving gear; whereby the centrifugal force due to increase of speed will cause the hammer or striker to be thrown into active position against the action of its counterbalance and sound the alarm, substantially as described.

2. A centrifugal speed alarm comprising a gong or bell provided with means for securing it to the axle or other rotary part of the running or driving gear, and a counterbalanced striking or hammer mechanism also carried by said attaching means and rotating with said axle or other rotary device, the said

striking or hammer mechanism being thrown outwardly (when the centrifugal force due to excess of speed, overcomes its counterbalancing medium), into contact with a relatively stationary part to cause said hammer or striking mechanism to strike the bell or gong and give the alarm, substantially as described.

3. A centrifugal alarm for street cars to indicate excessive or unlawful speed, comprising an arm adapted to be secured to some rotating part of the running or driving gear, and having a spring-controlled alarm-or-signal-operating slide thrown outwardly against the action of its spring by centrifugal action, and a stationary lug or cam adapted to be struck by the slide when in its outmost position, whereby the alarm is sounded substantially as described.

4. A centrifugal alarm for street cars, comprising an arm adapted to rotate with an axle or shaft and provided with a gong, and a spring controlled striker or hammer, sliding and turning on the said arm and having its inner portion lying within the gong to sound or strike it, and its outer portion projecting beyond the gong, and adapted, when the striker is thrown outward by centrifugal force, to engage a relatively stationary stud or lug, substantially as described.

5. A centrifugal alarm for street cars, comprising an arm adapted to rotate with an axle or shaft of the car or its motor, a gong on the arm, and a spring controlled, three-armed slotted striker sliding and turning on the said arm, with two of its arms within the gong and its outer arm adapted when the striker is thrown outwardly by centrifugal action, to engage a relatively stationary lug or cam on the car, substantially as described.

6. A centrifugal alarm for street cars, comprising an arm adapted to rotate with an axle or shaft of the car or its motor, a gong mounted on the said arm, a sliding and turning striker or hammer, also mounted on the arm to engage the gong, and a spring connected at one end to the striker or hammer and having an adjusting screw at its opposite end; the said striker when thrown outwardly by centrifugal force engaging with its outer end a relatively stationary lug or cam, substantially as set forth.

7. A centrifugal alarm consisting in the arm having a clamp or clip at its inner end for securing it in some rotating part, a gong secured at one side of the arm, a sliding and turning hammer or striker on the opposite side of the arm and having three arms, two of which are projected inwardly into the gong and the third arm extending outwardly past the gong, and an adjustable spring holding the striker in its normal position; said striker being adapted to be thrown outwardly against the action of said spring, by centrifugal force, to bring its outer arm in contact with a relatively stationary arm or cam.

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Witnesses:
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