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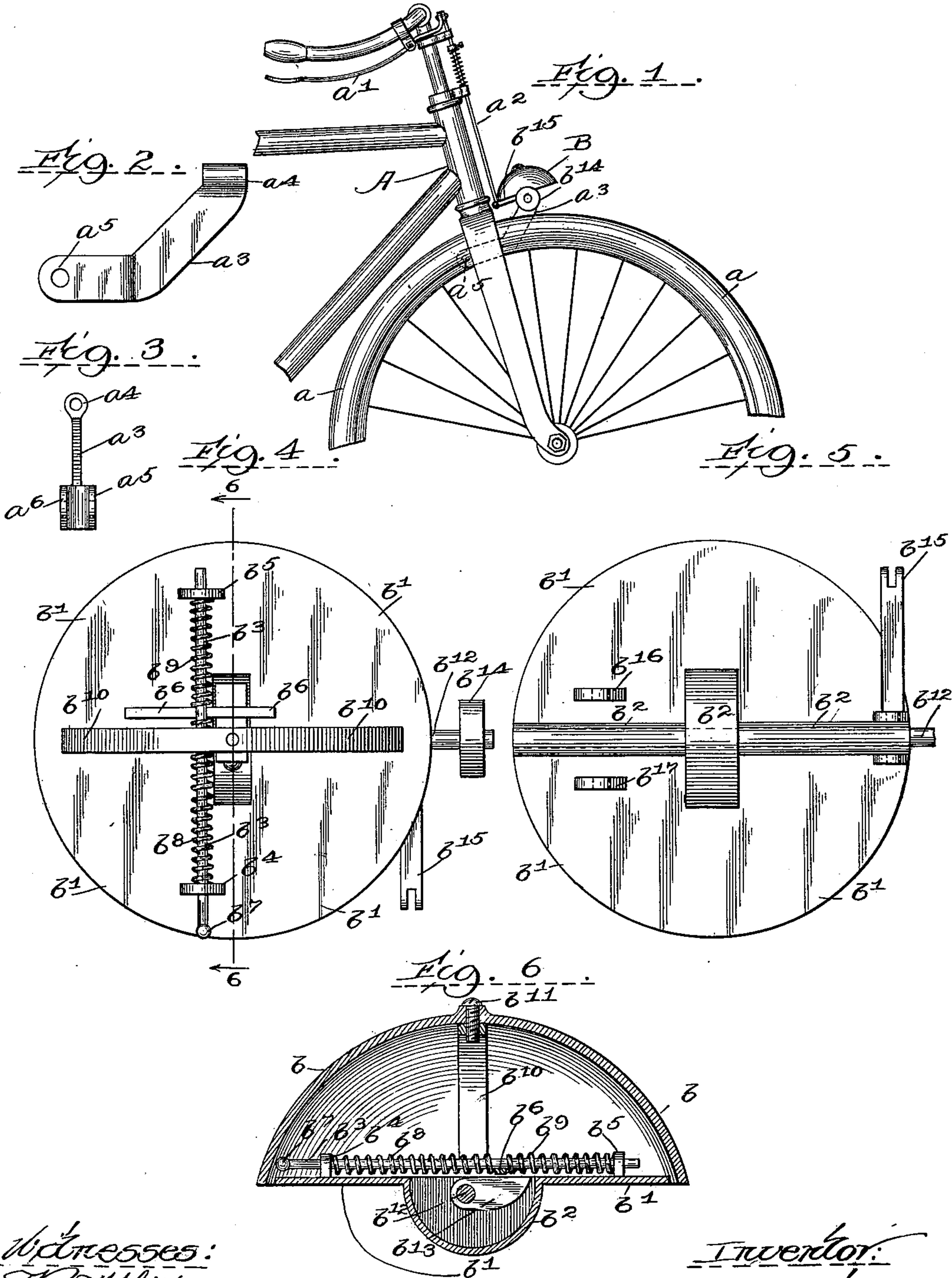
Patented Oct. 9, 1900.

E. D. STACY.  
AUTOMATIC GONG BELL.

(Application filed June 20, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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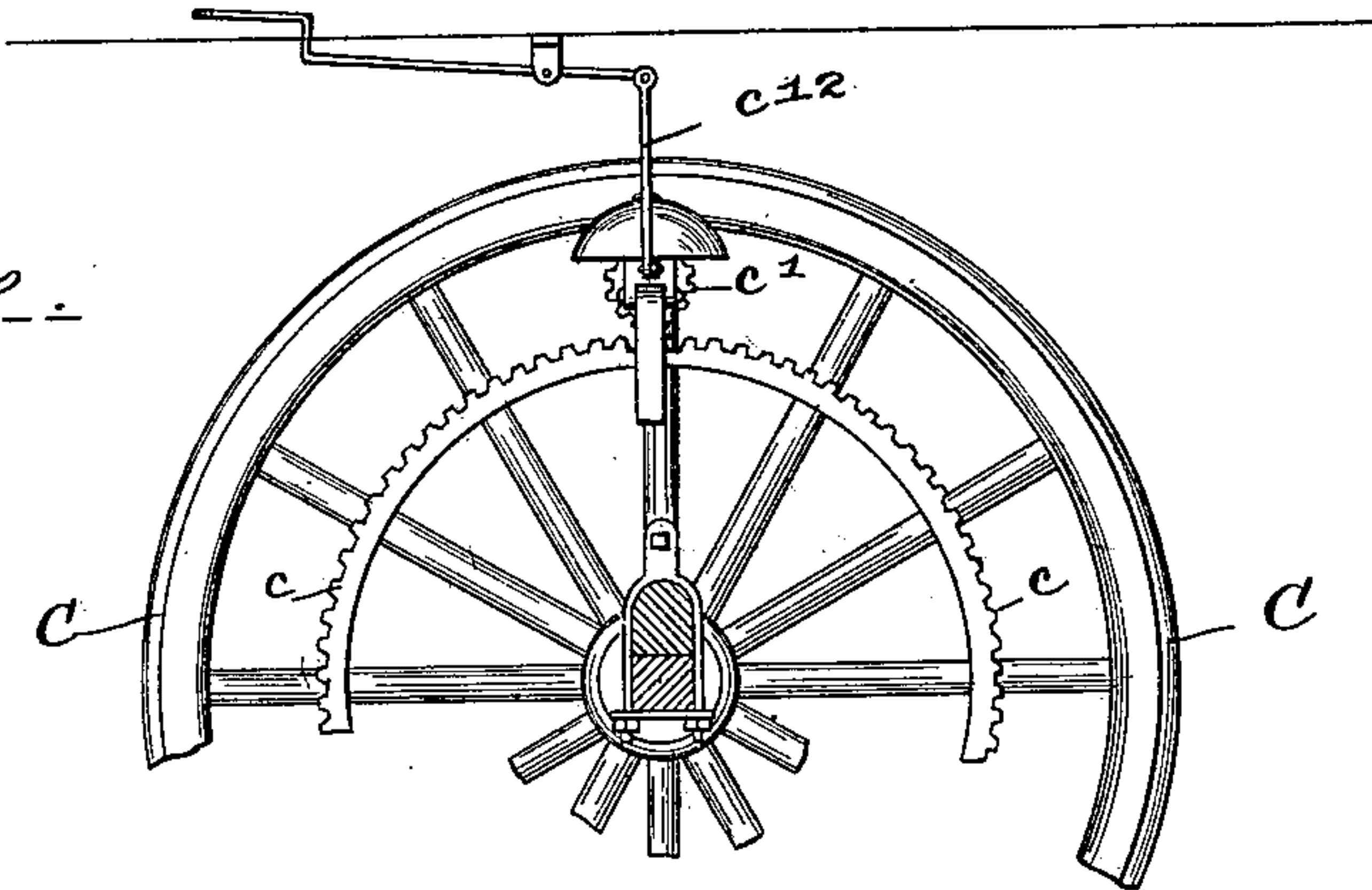
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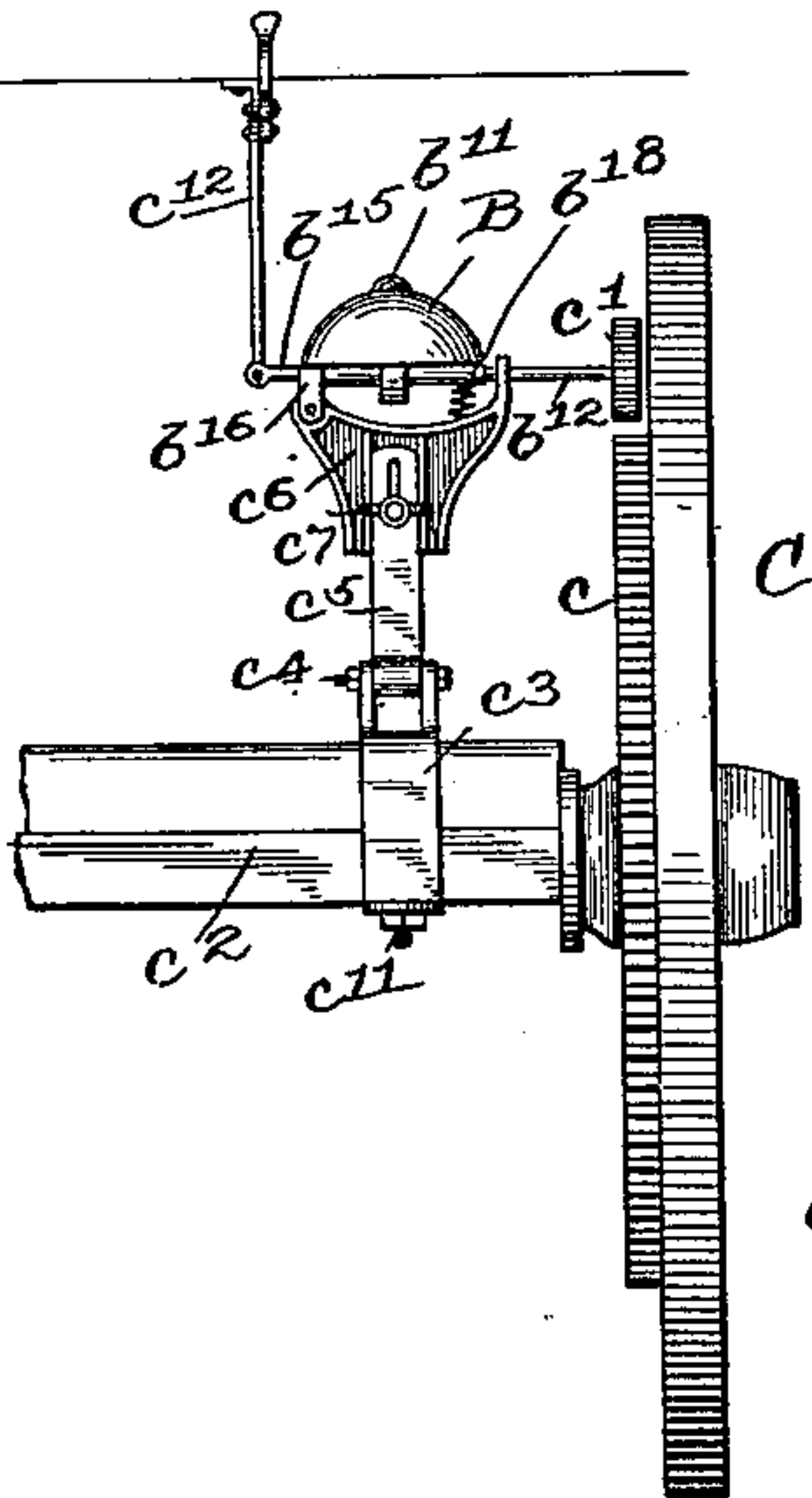
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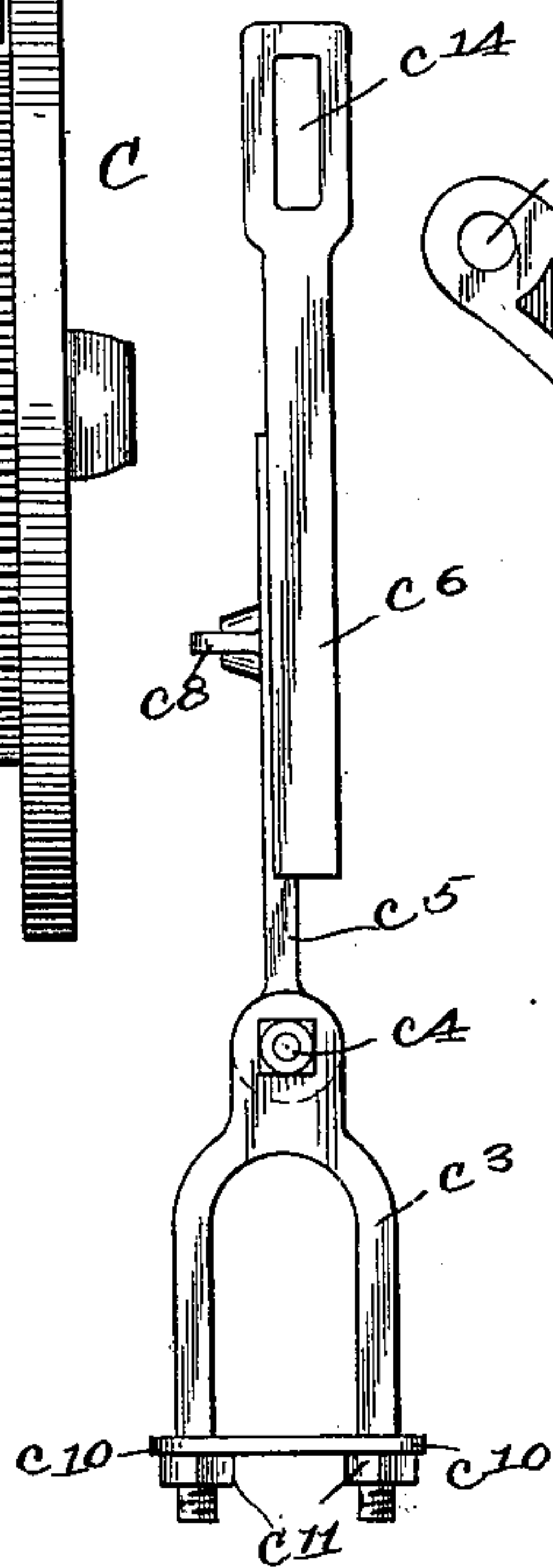
*Fig. 7.*



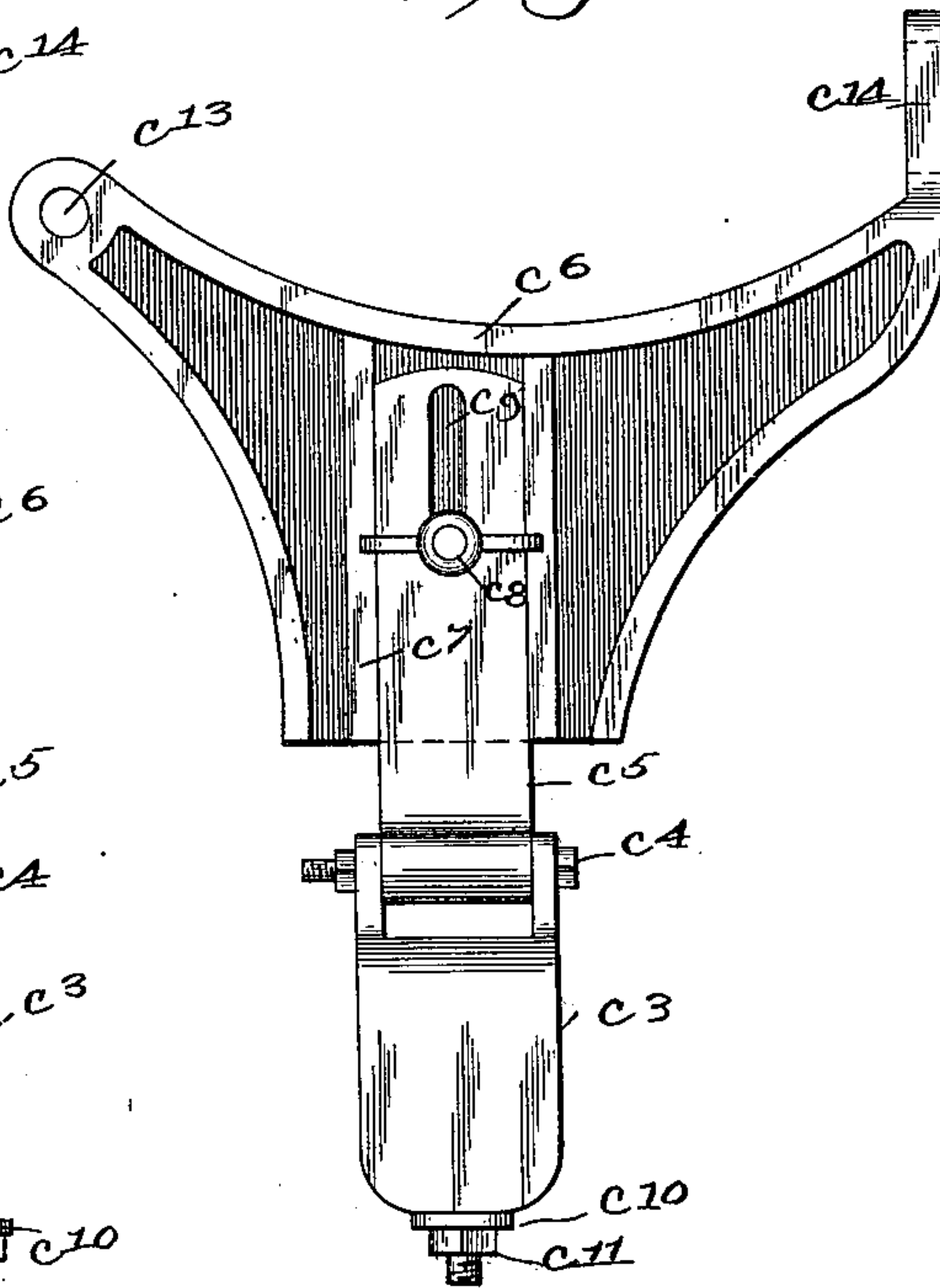
*Fig. 8.*



*Fig. 10.*



*Fig. 9.*



*Witnesses:*

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# UNITED STATES PATENT OFFICE.

EDWARD D. STACY, OF CHICAGO, ILLINOIS.

## AUTOMATIC GONG-BELL.

SPECIFICATION forming part of Letters Patent No. 659,327, dated October 9, 1900.

Application filed June 20, 1900. Serial No. 20,976. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD D. STACY, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Automatic Gong-Bells; and I do hereby declare the following to be a full, clear, and exact description, such as will enable persons skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in mechanically-operated gong-bells, and it is especially designed to be used in connection with vehicles. It is of that class of bells wherein the motive power to operate the bell is produced by the motion of the vehicle.

In the accompanying drawings, Figure 1 shows my bell attached to a bicycle. Fig. 2 is a bracket by means of which the bell is attached to the forks of the bicycle. Fig. 3 is an end view of the said bracket. Fig. 4 is a plan view of the bell with the gong removed. Fig. 5 is a view from the bottom of the bell. Fig. 6 is a section through line 6 6 of Fig. 4. Fig. 7 shows a carriage and a wheel thereof with my bell attached thereto. Fig. 8 is a side view of the same. Fig. 9 is an adjustable bracket by means of which the bell is fixed to the carriage part. Fig. 10 is a side elevation of the said bracket.

In all the figures the same letters of reference are used to designate similar parts.

B is a gong-bell.

$b'$  is a casting or base-piece for holding the mechanism for operating the clapper  $b^7$ .

$b^8$  is a spring surrounding the shaft  $b^3$ , to which the clapper  $b^7$  is attached. This spring has an abutment on the supporting-bracket  $b^4$ , through which the shaft passes loosely. It has another abutment on the piece  $b^6$ , which is fixed to the shaft. Spring  $b^9$  also surrounds the shaft and has an abutment on the bracket  $b^5$  and the piece  $b^6$ . A shaft  $b^{12}$  is rotatively supported in the housing  $b^2$  at right angles to the shaft  $b^3$ . A rotatable cam  $b^{13}$  is fixed to the shaft  $b^{12}$  under the piece  $b^6$ . The housing  $b^2$  also surrounds the cam  $b^{13}$ . The piece  $b^6$  is in the path of the cam  $b^{13}$ , and when the shaft to which the latter is fixed is rotated the spring  $b^9$  is compressed, and when the cam  $b^{13}$  passes the piece  $b^6$  the shaft  $b^3$  will be driven

by the spring  $b^9$  against the inside of the gong  $b$  for the purpose of vibrating and sounding the same. Gear-wheel  $b^{14}$  (or a friction-wheel may be used) is fixed to the shaft  $b^{12}$  for the purpose of rotating it. The spring  $b^8$  is designed to bring the clapper  $b^7$  back out of contact with the gong after the blow has been struck, so as to leave the gong free to vibrate. A bracket  $b^{10}$  rises above the frame  $b'$  of the bell and is adapted to support the gong in position by means of the screw  $b^{11}$ . An arm  $a^3$  (shown in Figs. 2 and 3) is adapted to support the bell on one of the forks of a bicycle-frame, as shown in Fig. 1. The arm is attached to the bracket  $b^{16}$   $b^{17}$  of the frame  $b'$  by means of a bolt that will pass through the said bracket and the perforation  $a^4$  of the arm  $a^3$ . The arm  $a^3$  is fixed to the bicycle-fork by means of a forked end  $a^5$   $a^6$  and a bolt for holding them together.

An arm  $b^{15}$  extends from the frame  $b'$  of the bell B for the purpose of bodily raising and lowering the bell upon the pivot  $a^4$  of the arm  $a^3$ .

The bell is placed on the bicycle so that the friction-pulley  $b^{14}$  is located immediately above the center of the bicycle-tire  $a$  of the wheel A.

A lever  $a'$  may be fixed to the bicycle handle-bar, such as is usually used for operating the brake of a bicycle, and a rod  $a^2$  thereof may be attached to the arm  $b^{15}$  of the bell. The open spiral spring which surrounds the rod  $a^2$  will hold the bell in an elevated position, so that the pulley  $b^{14}$  will be normally out of contact with the wheel  $a$  until the handle  $a'$  is depressed for the purpose of sounding the alarm, in which event the pulley  $b^{14}$  will be rotated when it comes in contact with the tire  $a$  of the wheel, and the bell will continue to ring loudly until the handle  $a'$  is again released. The power for rotating the shaft  $b^{12}$  of course is secured by the contact of the pulley  $b^{14}$  with the tire  $a$  of the wheel.

I have shown in Fig. 7 a means for attaching my bell to a carriage or other vehicle.

C is an ordinary vehicle-wheel.  $c$  is a gear which is fixed to the spokes of the said wheel between the hub and the rim thereof.  $c'$  is a pinion that is adapted to mesh into the said gear and which is fixed to the shaft  $b^{12}$ .



$c^6$  is a bracket to which the bell is hinged, at  $c^{13}$ , in the same manner that it is attached to the bracket  $a^3$ .

For the purpose of guiding the shaft  $b^{12}$  a slot  $c^{14}$  is made in the opposite end of the bracket. A spring  $b^{18}$  is adapted to hold the shaft against the upper limit of the said slot and to hold the bell in an elevated position, so that the pinion  $c'$  will be normally out of contact with the gear-wheel  $c$ . A treadle and vertical rod  $c^{12}$  is attached to the arm  $c^{15}$  of the bell for the purpose of compressing the spring  $b^{18}$ , and thereby bringing the pinion  $c'$  into contact with the gear  $c$  for the purpose of revolving the shaft  $b^{12}$  and sounding the alarm.

The bell is attached to the vehicle by means of the clip  $c^3$ , which is adapted to straddle the axle  $c^2$  and to be held in position by means of the plate  $c^{10}$  and the nut  $c^{11}$ , as shown in the various figures. The bracket  $c^6$  is supported upon a piece  $c^5$ , which latter is guided between guides  $c^7$  of the bracket  $c^6$  and is held in position by means of the nut and stud  $c^8$ . Slot  $c^9$  is cut in the piece  $c^5$  for the purpose of adjustment. The piece  $c^5$  is supported upon a pivot  $c^4$  between the piece  $c^3$  and  $c^5$ , whereby the bell may be inclined forward or backward, as the case may require, and then fixed in position.

Instead of the gear  $c$  and the pinion  $c'$  a friction-wheel may be used, and a friction-pinion may also be employed in lieu of the pinion  $c'$ , such as shown in Figs. 1 and 4.

The method of operation is plainly evident from the drawings and foregoing description.

When it is desirable to ring the bell, it is only necessary to revolve the shaft  $b^{12}$ , when the cam  $c^{13}$  by displacing the shaft  $b^3$  and the clapper  $b^7$  will compress the spring  $b^9$ , after which the shaft  $b^3$  will be relieved by the cam  $b^{13}$ , having passed beyond the piece  $b^6$ . The shaft propelled by the effect of the resilience of the spring  $b^9$  strikes the gong a blow, and at each and every revolution of the shaft  $b^{12}$

a blow will be struck upon the gong. For the purpose of revolving the shaft  $b^{12}$  it is only necessary to bring it into rotatable communication with some portion of the rotating part of the vehicle. I have shown a means by which this may be done in connection with a bicycle and also in connection with a vehicle, such as a carriage or the like.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. An automatic alarm-bell comprising a base-plate, a gong mounted over the said base-plate, a horizontal shaft supported in the base-plate under said gong, one end of said shaft adapted to be impelled against the side of said gong, an open helical spring surrounding said shaft, between said shaft-supports, another similar spring surrounding said shaft for holding said shaft normally out of contact with said gong, a cam for compressing the first said spring, a shaft to which the said cam is fixed and a housing depending from the said base under the said gong for the said shaft and cam, substantially as set forth.

2. An automatic alarm-bell comprising a base-plate, a gong mounted over the said base-plate, a projectile under said gong for striking said gong, a spring for holding said projectile out of contact with said gong, a spring for propelling said projectile, a cam adapted to be rotated for compressing the latter spring, a shaft to which said cam is attached, a housing in the said base for covering the said cam and shaft, and a means associated with a moving vehicle for rotating said shaft, substantially as set forth.

In testimony whereof I have signed this specification, in the presence of two subscribing witnesses, this 16th day of June A. D. 1900.

EDWARD D. STACY.

Witnesses:

FORÉE BAIN,  
M. F. ALLEN.