

No. 840,913.

PATENTED JAN. 8, 1907.

A. C. COOKE.
TOY AUTOMOBILE.
APPLICATION FILED NOV. 28, 1904.

2 SHEETS—SHEET 2.

Fig. 3.

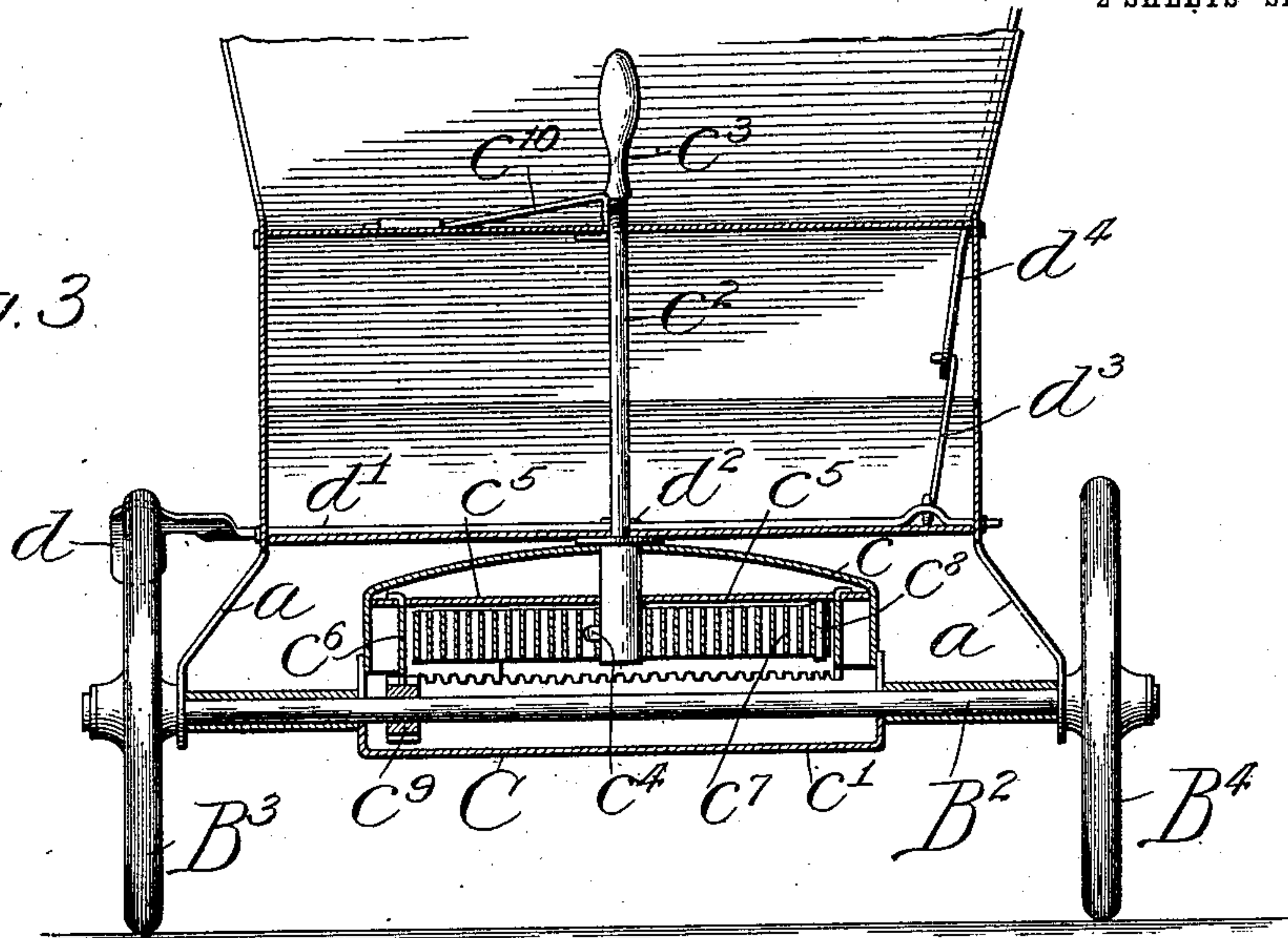


Fig. 4.

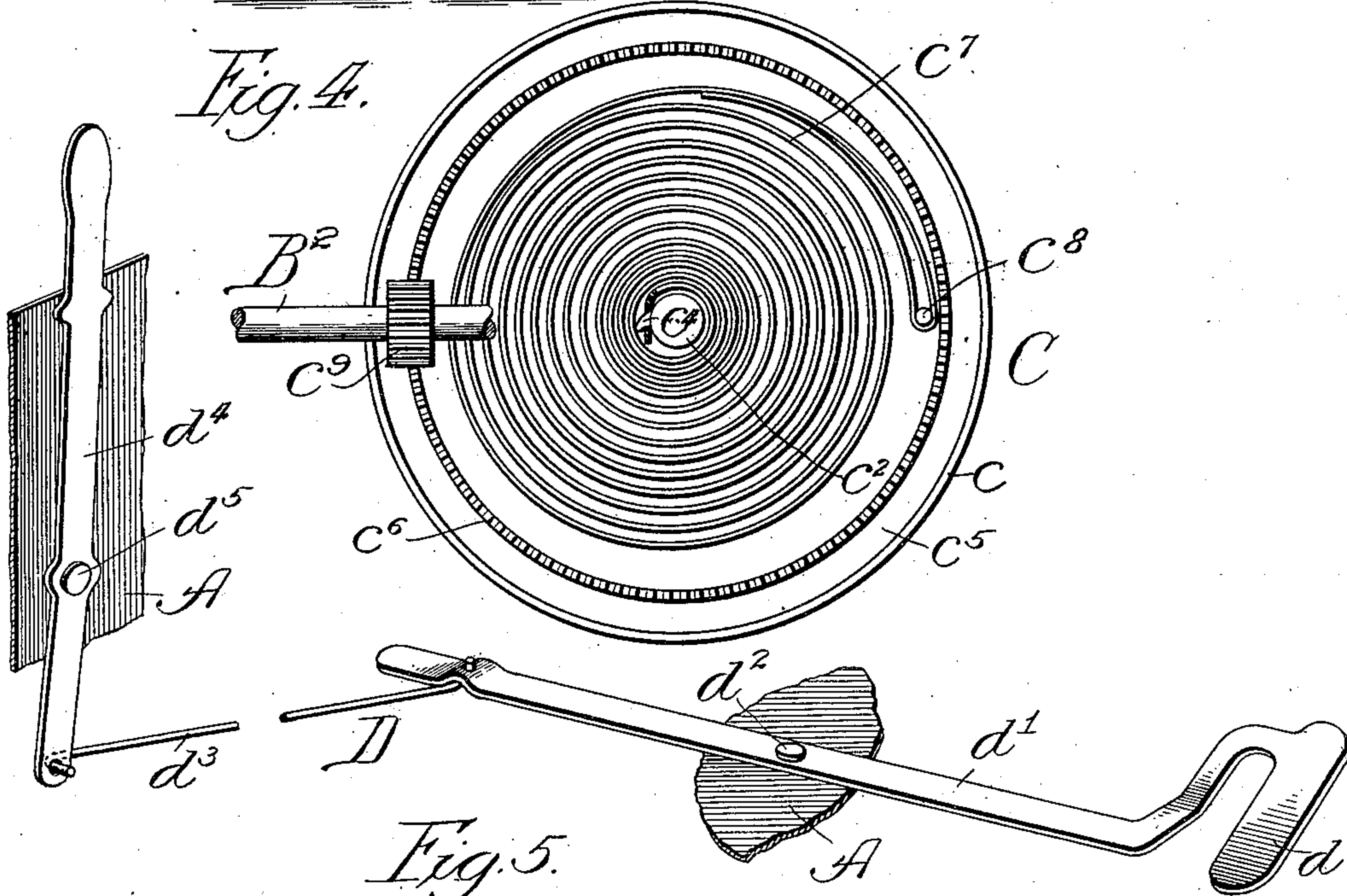


Fig. 5.

Witnesses:
E. S. Chyford,
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Inventor
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Att'ys in

UNITED STATES PATENT OFFICE.

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TOY AUTOMOBILE.

No. 840,913.

Specification of Letters Patent.

Patented Jan. 8, 1907.

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To all whom it may concern:

Be it known that I, ADRIAN C. COOKE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Toy Automobiles, of which the following is a specification.

My invention relates particularly to improvements in the general construction of toy automobiles; and my primary object is to provide a machine of greatly-improved operation, durability, and compactness without sacrificing cheapness of construction.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents my improved toy automobile, in side elevation, with the rear wheels removed and a portion of the gear-casing broken away; Fig. 2, a front elevational view with the steering-gear shown in section to illustrate the manner of mounting the front axle of the machine; Fig. 3, a section taken as indicated at line 3 of Fig. 1; Fig. 4, a bottom view of the power mechanism, the lower portion of the casing removed; and Fig. 5, a perspective view of a device for restraining the drive-wheel while the motive spring is being wound.

A description of the preferred construction is as follows:

A represents a body of usual construction provided at its rear portion with journal-brackets *a* for the rear axle; B, the front axle mounted in a steering-fork *b*, having a stem *b'* journaled in the front portion of the body A and provided at its upper end with a horizontal lever *b²*; B', the front wheels; B², the rear axle equipped with a fixed driving-wheel B³ and a loose wheel B⁴; C, power mechanism connected with the rear axle, and D a wheel-locking device adapted for holding the drive-wheel while the motive spring is being wound. The body A has a dash with a rearwardly-curved upper end equipped with a notched segment *a'*, over which the lever *b²* works, enabling the steering-gear to be set as desired.

The steering-fork or steering-head *b* comprises a substantially horizontal member equipped centrally with a depending bearing *b³* for the central portion of the axle B and also equipped at its ends with vertically-slotted depending guides *b⁴*, in which the end

portions of the axle play. Thus the axle is tilttable about its central bearing in a vertical plane, enabling either wheel readily to override any small obstruction which it may encounter.

The power mechanism C comprises a casing having upper and lower sections *c c'*, respectively; a stem *c²*, having its upper end equipped with a crank *c³* and its lower end extending into the casing and equipped with a lateral stud or hook *c⁴*; a disk *c⁵*, through which the stem passes freely and which is equipped on its lower side with a circular steel band *c⁶*, provided at its lower edge with teeth, the disk and toothed band constituting a large gear; a clock-spring *c⁷*, having its outer end secured to the disk *c⁵* by means of a pin *c⁸* and its inner end provided with a slot engaged by the hook *c⁴* on the stem *c²*; a pinion *c⁹*, secured on the shaft B² and meshing with the large gear, and a depressible catch *c¹⁰*, serving to hold the crank *c³* after the spring has been wound. The crank *c³* has a horizontal arm which moves over the upper surface of the top of the rear portion of the automobile-body, and the spring-catch presents an abrupt shoulder in one direction and an incline in the other direction, so that the crank may be moved freely in one direction, but will have its movement limited in the other direction. The casing-sections comprise flanged disks, with the flanges thereof telescopically connected. The upper section may be stationary or it may revolve with the large gear. The lower section has its upturned flange slotted to admit the axle and provided with ears *c¹¹*, bent over the top of the upper section, thereby supporting the lower section. The toothed band *c⁶* comprises a steel stamping curved into circular form and having lugs on its upper edge which extend through perforations in the disk *c⁵* and are clenched above the disk. The large gear thus formed has downwardly-presented teeth and is spaced above the axle properly to engage the pinion on the axle.

The lock D comprises a wheel-engaging shoe *d*, carried by a horizontal lever *d'*, which extends through a slot in the left side of the body A and is connected by a pivot *d²* with the bottom of the body, a link *d³*, connected with the lever *d'*, and a vertical hand-lever *d⁴*, connected by a pivot *d⁵* with the inner sur-

face of the right side of the body, the frictional engagement serving to hold the hand-lever in any desired position.

The manner of use will be understood
5 without detailed description. The wheel-
lock may be applied to the driving-wheel by
shifting the hand-lever d^4 rearwardly. The
spring of the motive power may be wound by
turning the crank c^3 to the right, the catch c^{10}
10 yielding to permit passage of the crank in the
winding operation. When the driving-wheel
is released by swinging the hand-lever d^4
forwardly, the spring, which is the connecting
medium between the stem c^2 and large gear,
15 will drive the large gear, and thus propel the
vehicle through the medium of the pinion,
rear axle, and fast wheel. In case either
front wheel encounters an obstruction it will
readily override the same, owing to the oscil-
20 lating axle, thus preventing stoppage and the
running down of the spring due to slippage of
the driving-wheel. After the spring unwinds
the inner end slips off the hook or catch with
which the post c^2 is provided, thereby per-
25 mitting the machine to be carried forward
under its acquired momentum without wind-
ing the spring in the opposite direction, and

thereby retarding the movement of the ma-
chine. When the spring is rewound, how-
ever, the inner end at once catches on the 30
hook, so that it is held securely.

It will be understood that the driving
mechanism is applicable to any self-propelled
machine, whether an automobile or a self-
propelled boat, and the driving-shaft may 35
constitute the axle, as shown, or any equiva-
lent element.

Changes in details of construction are con-
templated. Hence no undue limitation should
be understood from the foregoing detailed 40
description.

What I regard as new, and desire to secure
by Letters Patent, is—

In a toy automobile, the combination with
a front axle, of a steering-fork having a cen- 45
tral bearing in which the axle may oscillate
vertically and having vertical guide-slots for
the end portions of the axle, substantially as
and for the purpose set forth.

ADRIAN C. COOKE.

In presence of—
L. HEISLAR,
E. P. RICH.