

G. COLE.

APPLICATION OF MECHANISM TO TOY LOCOMOTIVES, CARRIAGES,  
TRUCKS, &c.

No. 302,650.

Patented July 29, 1884.

Fig. 2.

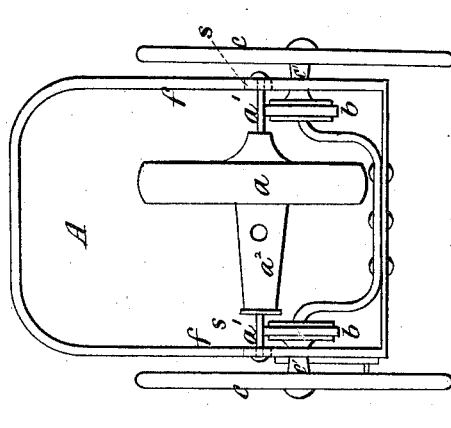


Fig. 1.

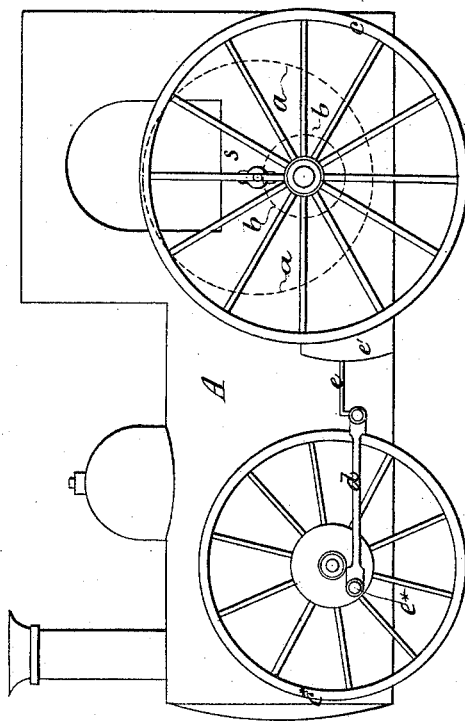
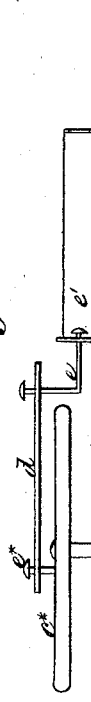


Fig. 3.



Witnesses:  
Louis H. F. Whitehead.  
Matthew Pollock

Inventor:  
George Cole  
by his Attorneys  
Brown & Hall

(No Model.)

3 Sheets—Sheet 2.

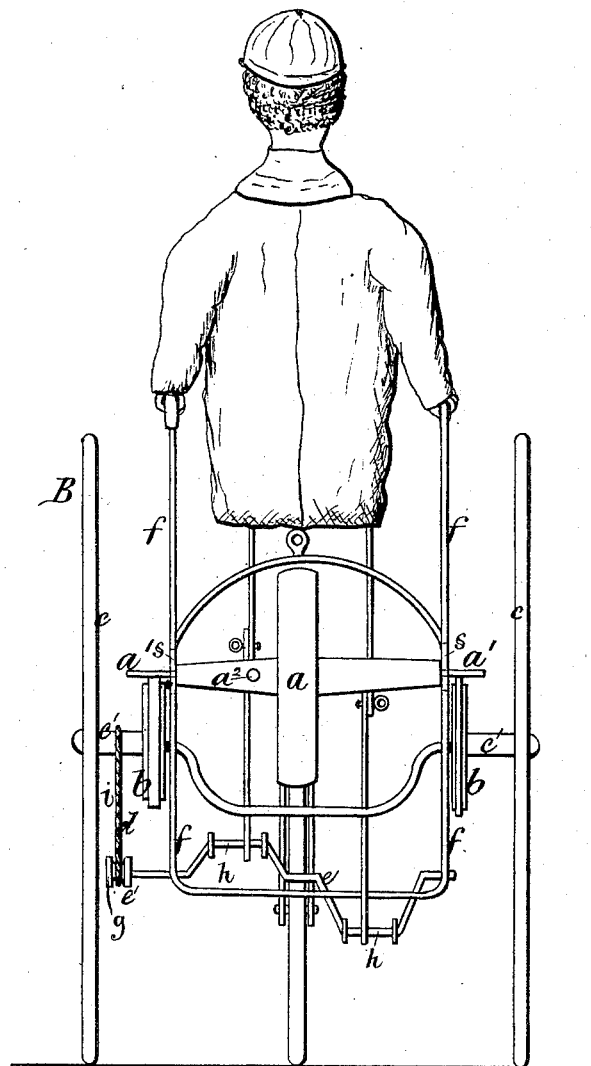
G. COLE.

APPLICATION OF MECHANISM TO TOY LOCOMOTIVES, CARRIAGES,  
TRUCKS, &c.

No. 302,650.

Patented July 29, 1884.

*Fig. 4.*



Witnesses:-

*Louis H. Whitehead.*

*Matthew Pollock*

Inventor:-

*George Cole*  
*by his Attorneys*  
*Brown & Hall*

(No Model.)

3 Sheets—Sheet 3.

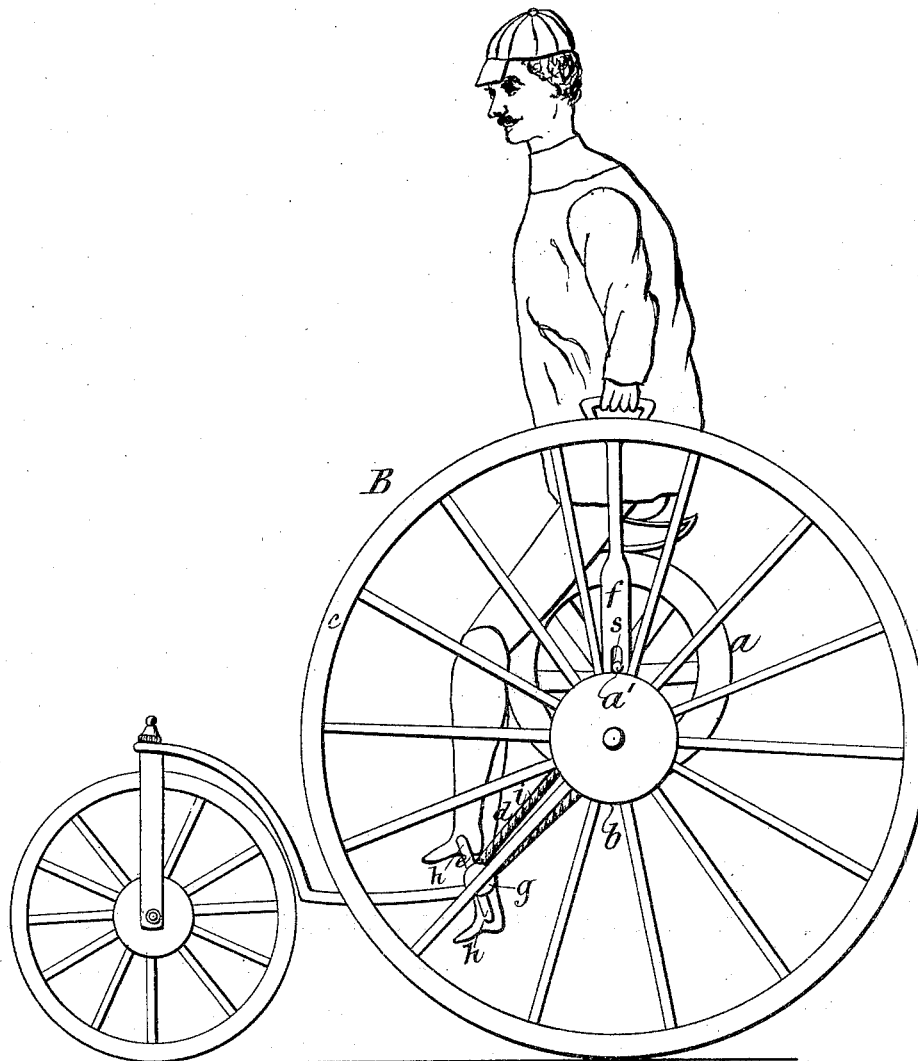
G. COLE.

APPLICATION OF MECHANISM TO TOY LOCOMOTIVES, CARRIAGES,  
TRUCKS, &c.

No. 302,650.

Patented July 29, 1884.

*Fig. 5.*



Witnesses:—

*Louis M. F. Whitehead.*

*Matthew Pollock*

Inventor:—

*George Cole*  
*By his Attorneys*  
*Brown & Hall*

# UNITED STATES PATENT OFFICE.

GEORGE COLE, OF LONDON, ENGLAND.

APPLICATION OF MECHANISM TO TOY LOCOMOTIVES, CARRIAGES, TRUCKS, &c.

SPECIFICATION forming part of Letters Patent No. 302,650, dated July 29, 1884.

Application filed April 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE COLE, a subject of the Crown of Great Britain, residing at No. 6 Falcon Square, in the city of London, England, merchant and manufacturer, have invented certain new and useful improvements in mechanism for propelling toy locomotives, velocipedes, and other toy vehicles running on wheels, of which the following is a specification, reference being had to the accompanying drawings.

This invention consists in the combination, with the running-wheels of a locomotive, velocipede, or other toy vehicle, of friction-wheels attached to said running-wheels and a rotary fly, the axle of which is supported upon and kept in contact with the peripheries of said friction-wheels, and which, by being set in motion by a string employed like that of a humming-top, is made to impart rotary motion through its axle and the friction-wheels aforesaid to the running-wheels of the locomotive, velocipede, or other vehicle.

Figure 1 in the drawings is a side view of a toy locomotive having my invention applied. Fig. 2 is a transverse section of the same. Fig. 3 is a plan of a portion of the same. Fig. 4 is a back view of a tricycle illustrating the application of the invention to that class of toy vehicles. Fig. 5 is a side view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

Referring first to Figs. 1 and 2, the rotary fly is there represented as consisting of a fly-wheel made heavy in proportion to its diameter, and made fast upon an axle,  $a'$ , which is supported upon the friction-wheels  $b$ , which are firmly secured to the hubs  $c'$  of the wheels  $c$  of the toy, concentric therewith. The said axle is kept in place on the said friction-wheels by being fitted to upright slots  $s$ , provided in the frame  $f$ , which forms part of the toy. The said wheels  $b$  may have their peripheries covered with india-rubber or other material suitable for producing such degree of friction upon the axle  $a'$  as will cause the said wheels to derive motion from the said axle when the fly-wheel is put in rotary motion, and thereby to produce the rotation of the wheels  $c$  and the

running of the locomotive. The axle  $a$  has provided in it a hole,  $a^2$ , for the insertion of and holding a cord, which is to be wound around the axle for the purpose of giving motion to the axle and its fly by drawing off the said cord rapidly in the same way that motion is given to a humming-top. The front wheels,  $c^*$ , of the locomotive are represented as having attached to them crank-pins  $e^*$ , for giving motion, by means of connecting-rods  $d$ , to the piston-rod  $e$  of the cylinder  $e'$ .

Referring, now, to Figs. 5 and 6 of the drawings,  $a$  is the fly-wheel having its axle  $a'$  passing through slots in the frame  $f$ , which supports the seat of the tricycle  $B$  and the figure thereon, and to which the axle or axles of the wheels  $c$  are secured. The axle  $a'$  is supported upon the friction-wheels  $b$ , which are secured one to each wheel  $c$ , and motion is given to the wheels  $c$  to propel the tricycle by a cord wound on the axle  $a'$ , and rapidly drawn off, as in the case of the toy locomotive first described. An endless band,  $g$ , on the hub  $c'$  of one of the wheels  $c$ , or on a pulley thereon, passes over a pulley,  $g$ , on a double-crank shaft,  $h$ , supported in bearings in the frame  $f$ , and gives motion thereto. Each crank of this shaft is connected with one of the feet of the figure of the rider, for the purpose of giving motion to the jointed legs thereof, and producing the appearance of acting upon treadles to propel the vehicle.

It is obvious that the rotary fly and the friction-wheels through which rotary motion is imparted to the wheels of the toy vehicle may be applied to a toy in the form of any kind of wheeled vehicle.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with the running-wheels of a toy vehicle, of friction-wheels attached to or connected with the said running-wheels and a rotary fly, the axle of which is supported on the said friction-wheels, substantially as and for the purpose herein described.

GEORGE COLE.

Witnesses:

JOHN G. TONGUE,

34 Southampton Buildings, London, W. C.

JOHN DEAN,

17 Gracechurch Street, London, E. C.