

C. COLE.
Car Axle.

No. 100,860.

Patented March 15, 1870.

Fig 1.

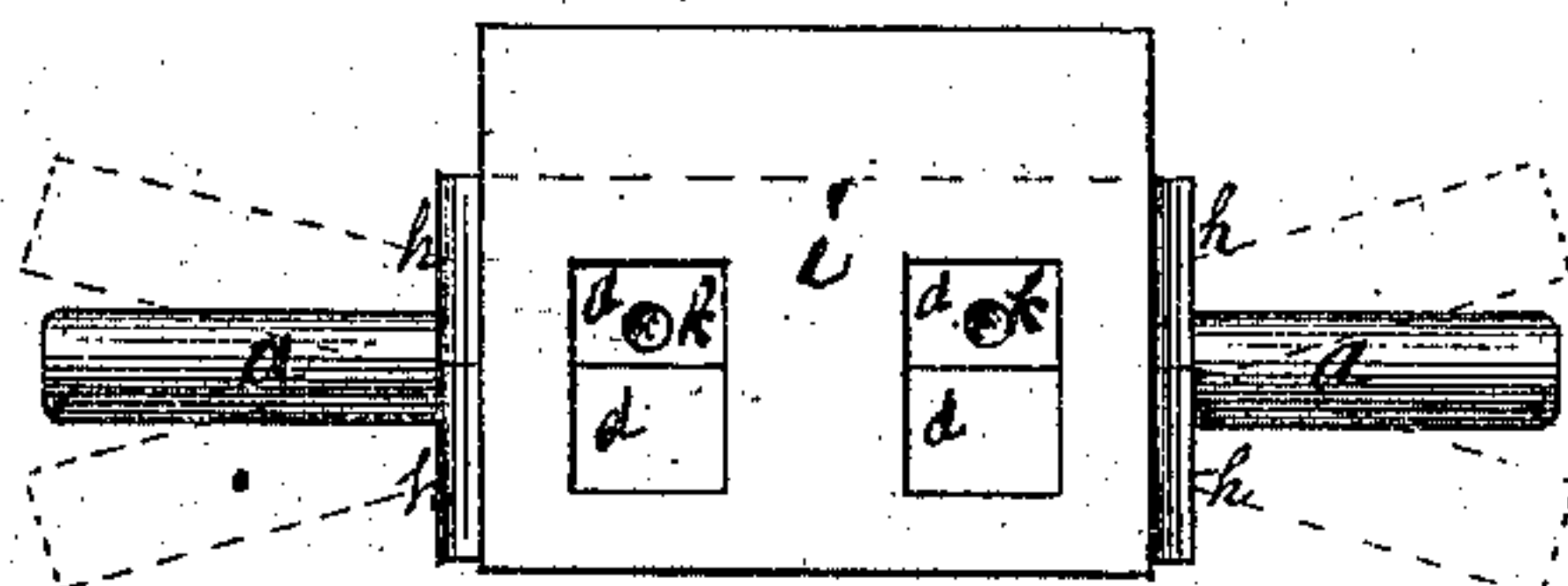


Fig 2.

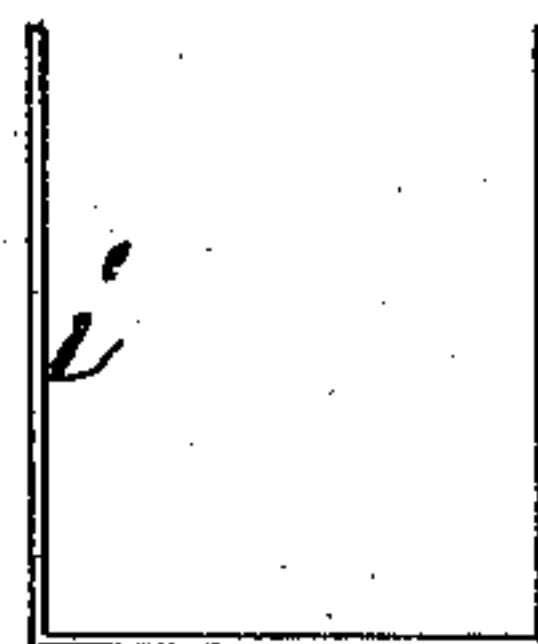


Fig 3.

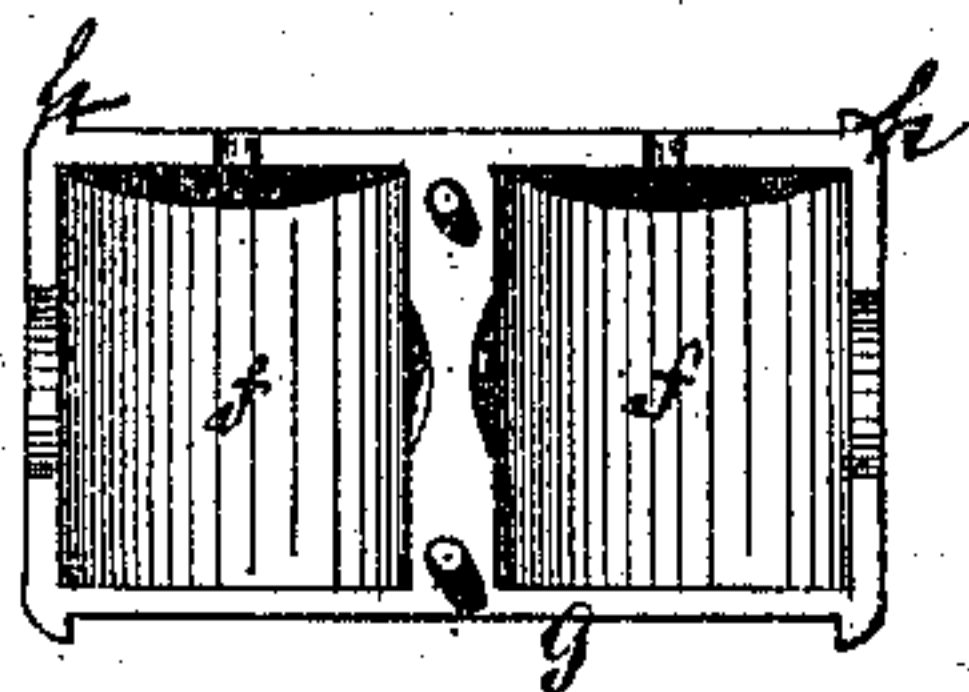


Fig 4.

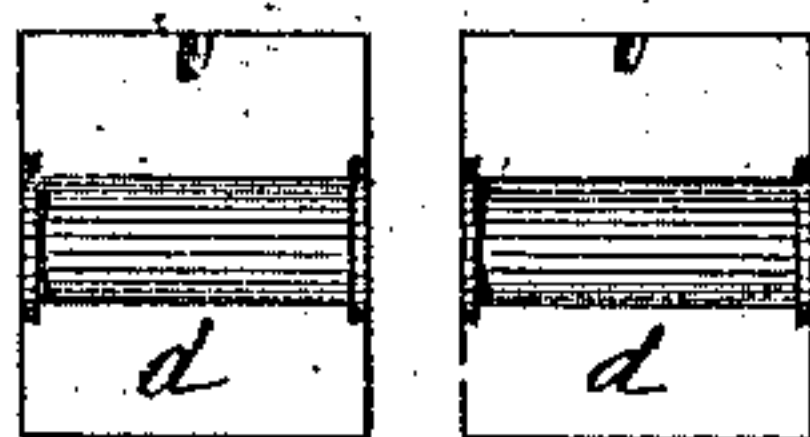


Fig 5.



Fig 6.

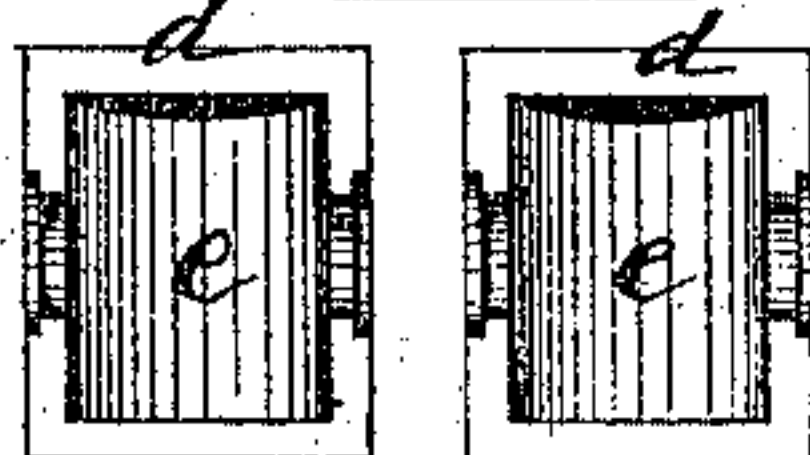
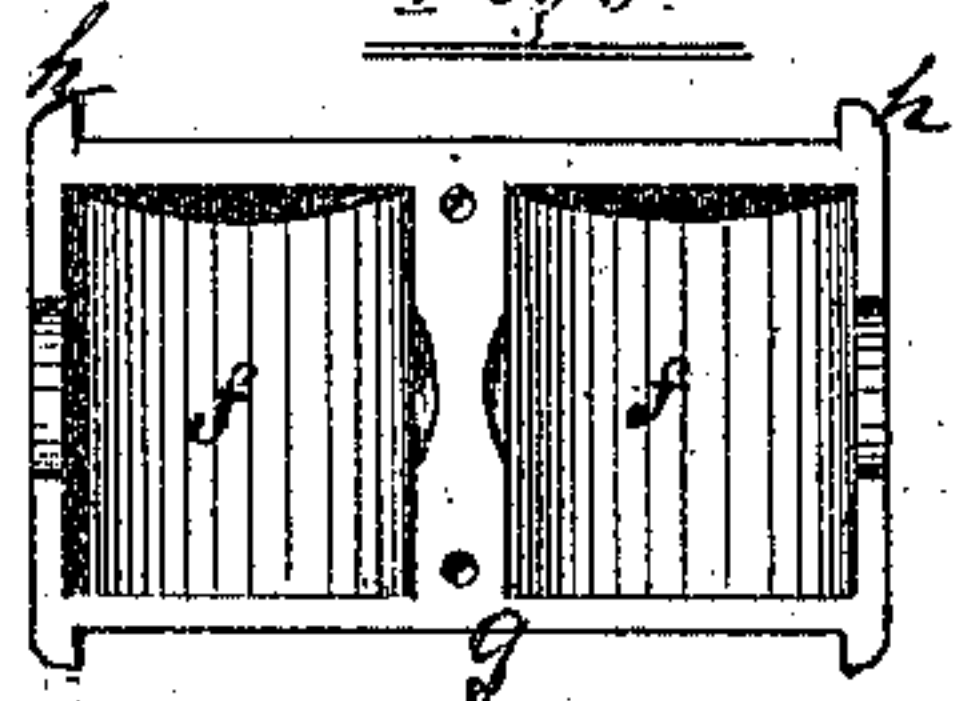


Fig 7.



Witnesses

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Inventor.

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CHARLES COLE, OF TROY, NEW YORK, ASSIGNOR TO HIMSELF AND HARVEY COLE, OF HARTFORD, CONNECTICUT.

Letters Patent No. 100,860, dated March 15, 1870.

IMPROVEMENT IN RAILWAY-CAR AXLES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CHALES COLE, of Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Compound Compensating Car-Axle; and to enable others skilled in the art to make and use the same, I will proceed to describe its construction, referring to the drawings, in which the same letters indicate like parts in each of the figures.

The nature of this invention consists in forming each axle in two parts, and uniting the two inner ends by means of rocking or oscillating boxes firmly arranged inside of a coupling-case, and this case firmly secured to the underside of the car, between the wheels or the common axle journal-boxes.

The object of this invention is to secure compensation for the extra surface one wheel has to travel more than the other while running over curves.

It is often the case that a train of cars running at its usual speed, having the axles and wheels as now constructed, is brought almost to a dead stop, whereas, if each wheel was free to turn, or to adapt itself independently one of the other to the surface it has to run over, this difficulty would be avoided, and which, by the use of this invention, will nearly or quite remove the difficulty experienced as now constructed.

In the accompanying drawings—

Figure 1 is a side view of this invention.

Figure 2 is a clasp or case, in which the coupling-case, in which the oscillating boxes are arranged, is secured.

Figure 3 shows the coupling-case in two parts, the upper and lower halves.

Figure 4 shows the upper and lower portion of the oscillating boxes, in which the inner ends of the compound shaft, Figure 5, is firmly secured.

a a is the double shaft or compound axle, broken off

inside of the wheels, the inner ends of this axle are provided with bearings *b b* and collars *c c*, and are fitted into the bearings of the oscillating boxes *d d*. One or both of these boxes *d d* are provided with an oil or lubricating reservoir, *e*. These boxes, when closed together over the bearings of the axle, are round, and are fitted into chambers or bearings *f*, formed in the coupling-case *g*. These coupling-cases are provided with flanged collars *h h*, so that when the two parts *g* are firmly secured together, in any of the common ways of securing journal-boxes together, they are placed within the clasp case *i*, and the whole firmly secured to the under timber of the car.

k are lubricating orifices.

It will be clearly seen that when the axle is thus made in two parts and properly fitted into oscillating boxes *d*, and these boxes also properly fitted and secured together, and placed within the coupling-case *g* and the coupling-case or its equivalent, is secured to the under side of the car, while all of the other parts, the wheels, journal-boxes, &c., are constructed in the common way, there will be less strain upon the axle, less resistance or friction to retard the motion, or to take up the power of the engine.

I have endeavored to show the nature, construction, and advantage of this invention, so as to enable others skilled in the art to make and use the same therefrom.

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

The oscillating boxes *d*, arranged in the coupling-case *g*, in combination with the shaft *a* and clasp case *i*, substantially as set forth.

CHARLES COLE.

Witnesses:

WM. McLAUGHLIN,
ELIJAH W. STODDARD.