C. DUCREUX.

Combined Safety Attachment and Brake for Carriages.

No. 85,803. Patented Jan'y 12, 1869.

Fig. 1

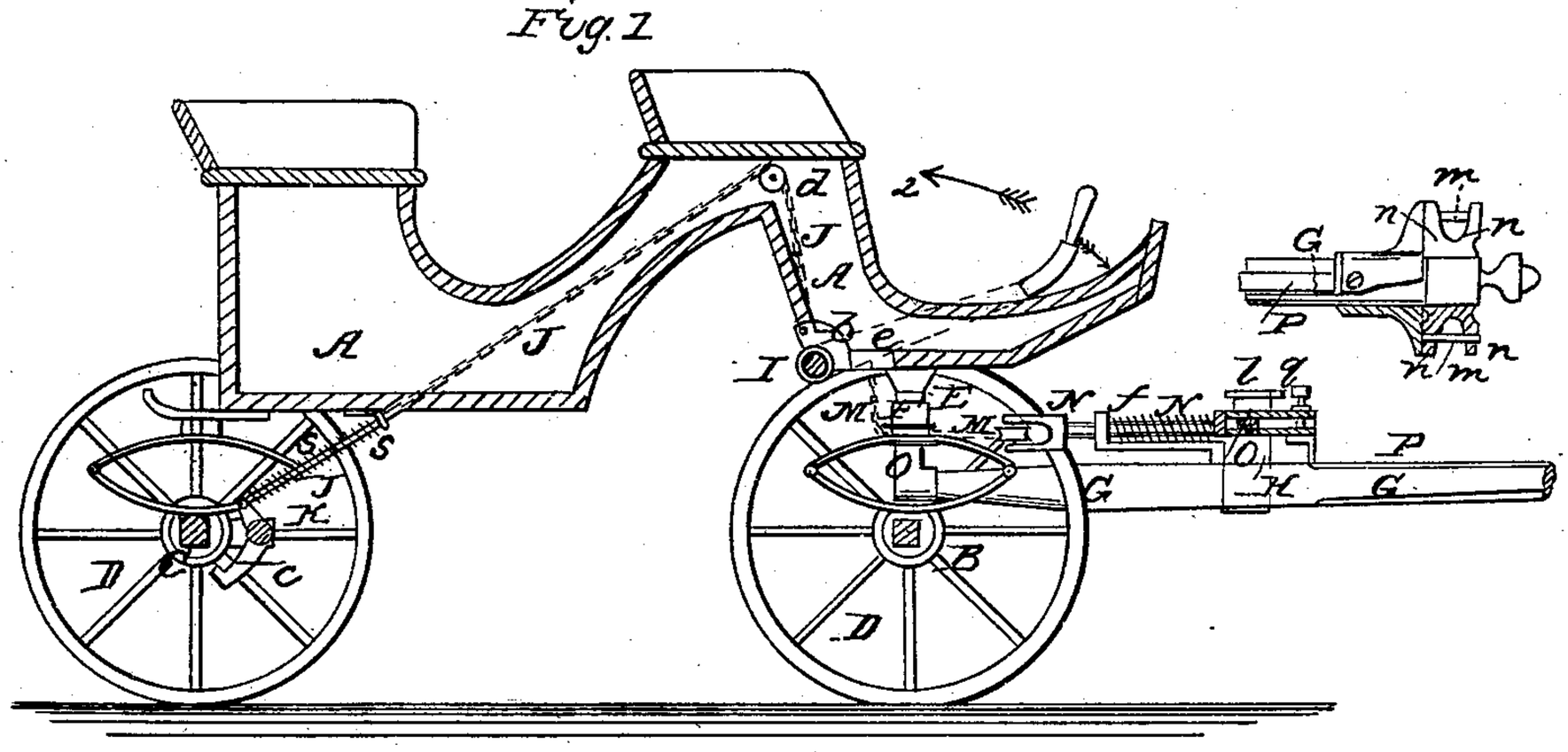


Fig. 2.

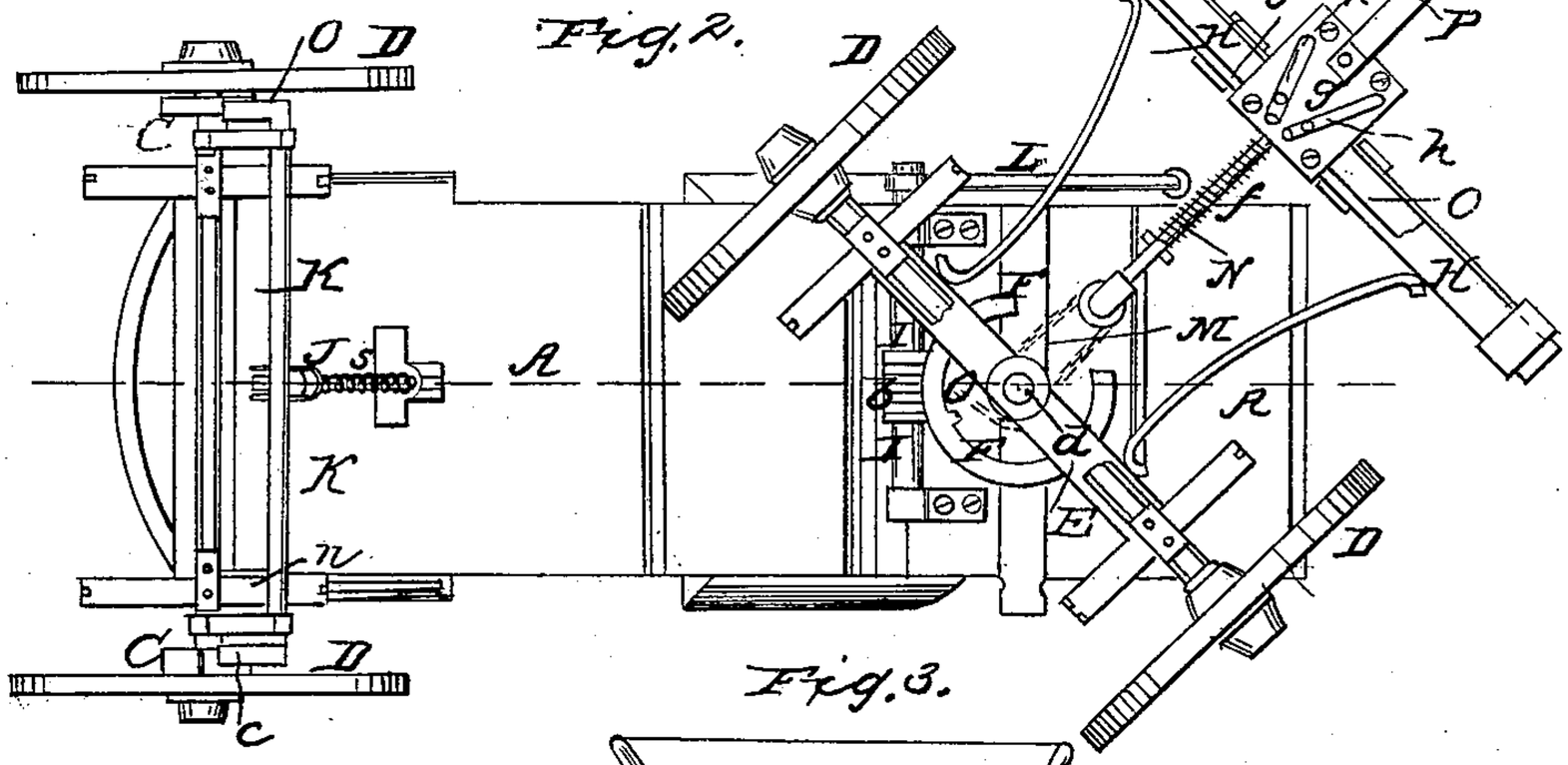
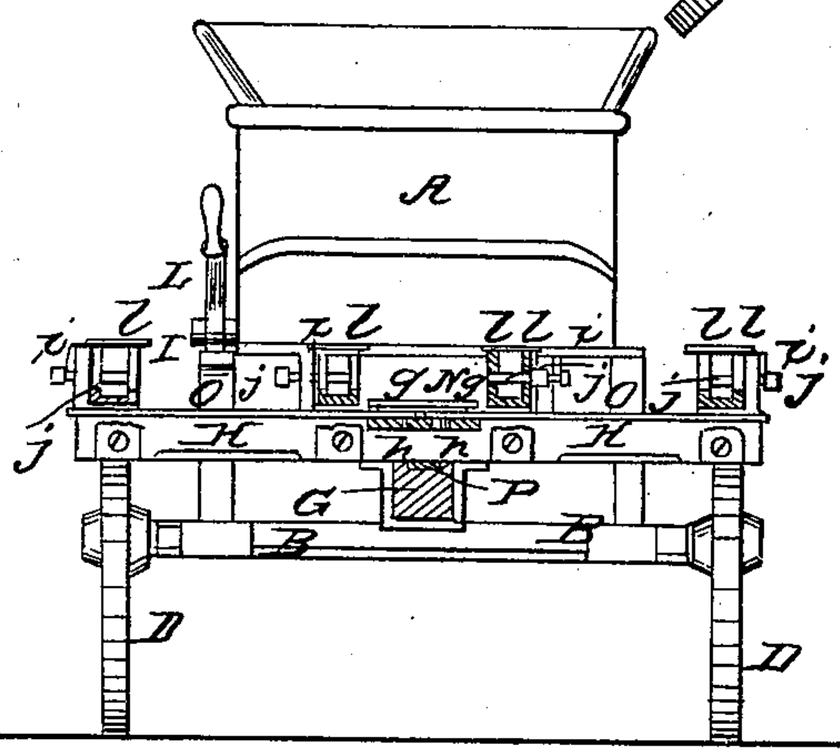


Fig. 3.



Witnesses:
Wm. A. Hagan
Chas. E. Collon.

Inventor:
C. Ducreux
per Munn & Co
Attorneys

United States Patent Office.

CLAUDE DUCREUX, OF NEW YORK, N. Y.

Letters Patent No. 85,803, *dated January* 12, 1869.

IMPROVEMENT IN COMBINED SAFETY-ATTACHMENT AND BRAKE FOR CARRIAGES.

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, CLAUDE DUCREUX, of the city, county, and State of New York, have made and invented new and useful Improvements in Safety-Attachment to Carriages, and that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 represents a longitudinal vertical section of a carriage provided with my improved safety-attachment;

Figure 2 is an inverted plan view of the same;

Figure 3 is a front elevation of the same, partly in section; and

Figure 4 is a detail top view of the front end of the pole.

Similar letters of reference indicate corresponding parts.

This invention relates to certain improvements on the safety-attachments for carriages, for which Letters Patent, No. 60,705, were granted to me on the 1st day of February, 1867; and

The invention consists—

First, in so connecting the operating-lever with the brake and detaching-apparatus, that either the brake alone, or both the brake and the detaching-apparatus, can, by one move of the lever, be operated. The object is to allow the same lever to apply the brakes, if the carriage or wagon is moving down-hill, or is drawn too quickly, without necessitating at the same time the detaching of the horses; and

Second, the invention also consists in a novel device for operating the detaching-apparatus. This device is perfectly simple and effective, and consists only of a series of sliding bars connected, by means of a chain, with the rock-shaft, from which the aforesaid operating-lever projects. This chain runs along the edge of a pulley, which has its axis in line with the king-bolt, so that the length of chain will not be affected by the turning of the front axle of the wagon.

A, in the drawing, represents the body of a carriage or wagon of ordinary or suitable construction;

B is the front axle;

C, the hind axle;

D D are the wheels;

E is the head-block above the front axle;

F is the fifth-wheel; and

a, the king-bolt.

All these parts are arranged as ordinary or usual; so are, also, the pole G and cross-bar H, secured to the same.

I is a horizontal rock-shaft, having its bearings in any suitable part of the wagon-body.

From this shaft project upward lugs or ears, *b b*, or a lug or ear, *b*, to which the front end of a chain, J, is secured that reaches back to and turns the rock-shaft K, by means of which the brake-shoes *c* are operated.

The chain J passes over a pulley, *d*, so that its front part is radial to the axis of the shaft I, and thus, in whatever direction the shaft I may be turned by means of a lever, L, projecting from it, the chain will always be pulled and the brakes applied.

A spring, *s*, applied to the mechanism in a suitable manner, brings the parts back to their original position as soon as the lever L is released.

From the front end of the shaft I projects a lug, *e*. The same is, by means of an endless chain, M, connected with the rear end of a sliding bar, N, which bar moves above the rear end of the tongue. It is held forward by means of a spring, *f*, by means of which the chain M is also kept tense.

On the front end of the bar N is formed a plate or box, *g*, in which oblique slots are arranged.

Pins *h h*, that project from bars O, which slide on the cross-bar H, fit into the slots of the plate *g*, as shown in fig. 2.

From the bars O project ears *i*, on which pins *j j* are arranged, which pins fit through lugs *l l* that project from the cross-bar, as is clearly shown in fig. 3, thereby holding the traces or whiffle-trees between such lugs.

When the lever L is turned forward, as per arrow 1 in fig. 1, the brake is applied, but the chain M is slackened, and the detaching-apparatus is not operated; but when the lever L is moved backward, as per arrow 2, the chain M will be stretched; thereby the bar N will be drawn back, the pins *h h* and their bars O will, by the oblique slot, be caused to move laterally, and thereby the traces or the whiffle-trees are disengaged.

With the bar N may also be directly connected a bar, P, which moves on the pole G, and which is branched at its front end, as shown in fig. 4, and carries pins, *m*, that hold the pole-straps between ears *n n*, projecting from the pole, so that these pole-straps can also be detached by the said motion of the lever L. Thus, by moving the lever L one way, the brake only will be applied, and by moving it in the other direction, both the brake and the detaching-apparatus will be operated at once.

The chain M passes along both sides of a pulley, *o*, which is formed on the king-bolt, or on an extension of the same. Thereby the length of chain between the lug *e* and the bar N is always maintained equal, even if the front part of the carriage is turned at a considerable angle, as indicated in fig. 2.

All these improvements may also be applied to two-wheel sulkies, as well as to all sorts of one-horse double-shaft carriages or wagons.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The rock-shaft I, when combined with the brakes and detaching-apparatus of a wagon or carriage in such a manner that when the said shaft is turned in one direction the brake only is applied, while both the detaching-apparatus and the brake will be operated when the shaft is turned in the other direction, as set forth.

2. So connecting the brake-rod or chain J with the crank on the rock-shaft I, that the brakes will be applied in whatever direction the said shaft may be turned, as set forth.

3. Connecting the rock-shaft I by means of a chain, M, with the sliding bar N, on which the slotted plate *g* is arranged or formed, which plate, when moved longitudinally, imparts lateral motion to the bars O, substantially as and for the purpose herein shown and described.

4. The pulley or wheel *o*, having its axis in line with that of the king-bolt, in combination with the chain M, sliding bar N, and rock-shaft I, all arranged and operating substantially as herein shown and described, for the purpose specified.

C. DUCREUX.

Witnesses:

FRANK BLOCKLEY,

ALEX. F. ROBERTS.