

(No Model.)

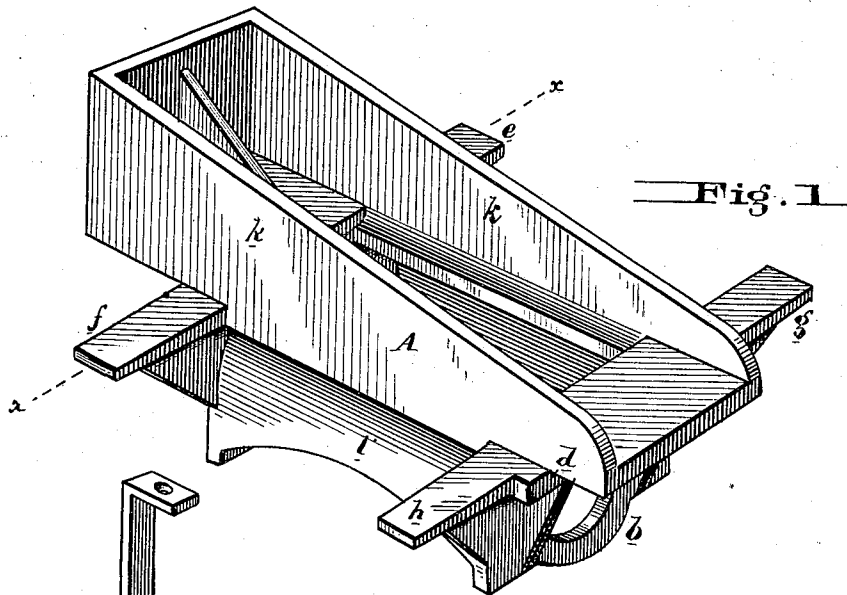
2 Sheets—Sheet 1.

J. W. CLOUD.

## DRAFT APPARATUS FOR CARS.

No. 324,084.

Patented Aug. 11, 1885.



**Fig. 1**

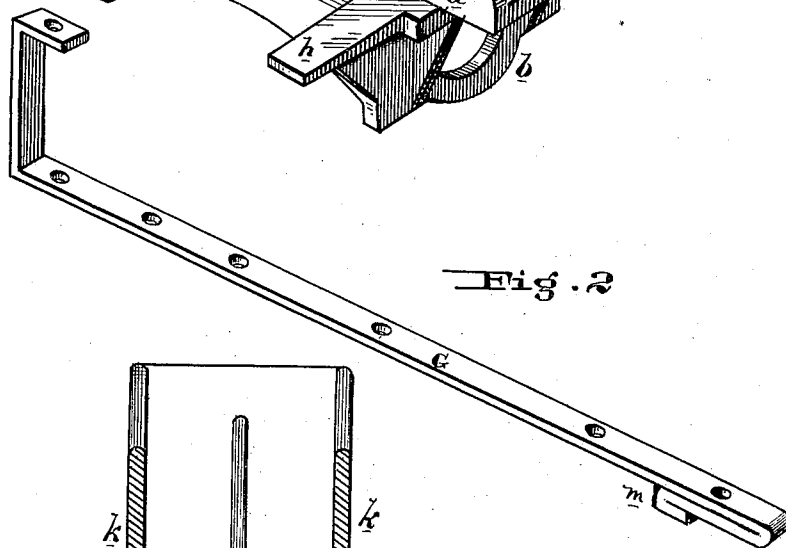
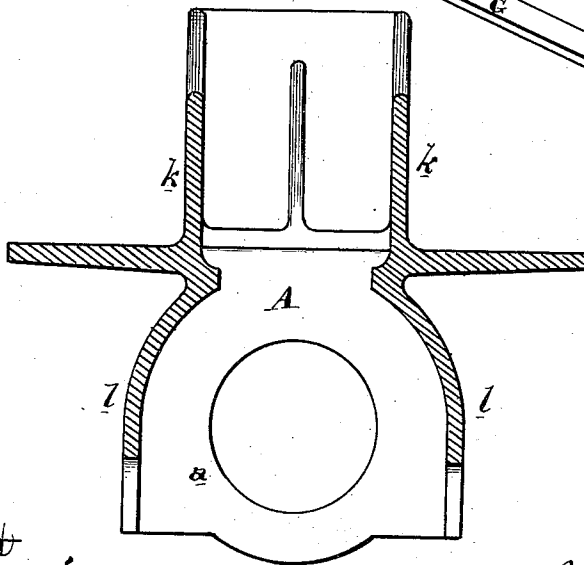


Fig. 2



**Fig. 3**

Attest  
Richard D. King  
John A. Matlack

**Inventor**  
John W. Cloud  
by his attorney  
Francis T. Chamberlain

(No Model.)

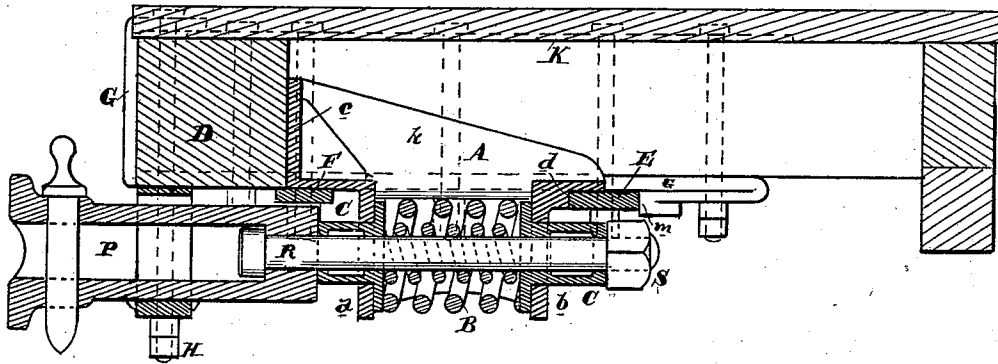
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# UNITED STATES PATENT OFFICE.

JOHN W. CLOUD, OF ALTOONA, PENNSYLVANIA.

## DRAFT APPARATUS FOR CARS.

SPECIFICATION forming part of Letters Patent No. 324,084, dated August 11, 1885.

Application filed June 24, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. CLOUD, of Altoona, Blair county, in the State of Pennsylvania, have invented a new and useful Improvement in Draft Apparatus for Railway-Cars, of which the following is a full and true description, reference being had to the accompanying drawings, which form a part of this specification.

10 The object of my invention is to strengthen the draft appliances of railway-cars, and so distribute and transmit the strains that they will come upon those parts of the car-framing best adapted to sustain them without injury.

15 My invention consists of the devices hereinafter described, and their combination with the under framing of a car in such a way as to transmit the shocks of pulling and buffing to the end sill, and through it to the ends of the under-frame timbers, reference being now had to the drawings, in which—

20 Figure 1 is a perspective view of the casting which forms the main feature of my improved construction; Fig. 2, a perspective view of the strap by means of which the strains due to buffing are transmitted to the end sill of the car. Fig. 3 is a sectional view of the casting shown in Fig. 1, taken on the line *xx*. Fig. 4 is a longitudinal vertical section of the under framing and draft appliances of a car constructed according to my invention, and Fig. 5 is a view of the bottom of such a car looking upward.

35 A is a draft-casting, made of steel or any material having the necessary strength. This casting is provided with the four parallel abutment-surfaces *a*, *b*, *c*, and *d*, Fig. 4. The surfaces *a* and *b* are so located as to receive the pulls and pushes transmitted through the draft-spring B and spring-followers C C, the small portions of which pass through openings in said surfaces, as shown in Fig. 4. The surface *c* transmits all pulling strains directly to the end sill, D, against which it abuts, and the surface *d* transmits all buffing strains to the cross-bar E, and through the straps G to the end sill, D. The casting A is held in place by the cross-bars F and E, Figs. 4 and 5, and lugs *e f g h* may also be provided to hold it securely in position. The walls *k* and *l* also assist in holding the casting A in its proper position, and they are of course shaped

and proportioned so as to give the casting the necessary strength.

G G are straps, having lugs *m* at one end, 55 against which the cross-bar E abuts. They are secured firmly to the end sill, D, by bending their other ends around its face and over its top, so as to receive one or more through-bolts, H. 60

K, Fig. 4, represents straps which pass along the top of the frame and assist in tying the end sill and center stringers together; but these may be omitted and the usual through-bolts used alone. 65

P, R, and S represent the usual draw head and bar, and need not be particularly described.

The formation of the casting A is such as I have found well adapted for practical use; but it may be modified in many ways, and I do not intend to limit my claims to the specific form shown in the drawings. 70

The straps G, by which buffing strains are transmitted to the end sill, may be varied in shape and position and in mode of attachment to the end sill; and it will be obvious that they may be made to engage directly with the draft-casting A without the intervention of the cross-bar E. 80

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a draft-casting for railroad-cars, having downwardly-projecting surfaces or shoulders for receiving thrusts and pulls through a draw-spring placed between such surfaces and shoulders, or surfaces for transmitting such thrusts and pulls to the car-framing, said casting being adapted to be secured to such framing by clamping, and without any bolts passing through the casting, substantially as shown and described. 85 90

2. The combination, with the end sill of a railway-car, of the draft-casting having shoulders or abutting surfaces *a b c d*, to receive and transmit the thrusts of the draw-spring, and straps or ties to transmit the buffing thrusts on the casting to the end sill, all so arranged that all pushing or pulling strains are transmitted directly to the end sill, substantially as shown and described. 95 100

3. The combination, with the end sill and under framing of a railway-car, of the draft-

casting secured to the under framing by straps,  
and without any bolts passing through the  
casting, and having shoulders or abutting  
surfaces *a b c d*, to receive and transmit the  
5 thrusts of the draw-spring, and straps or ties  
to transmit the abutting thrusts to the end  
sill, all so arranged that all pushing or pull-  
ing strains are transmitted directly to the end  
sill, substantially as shown and described.  
10 4. The combination of the draft-casting A  
and the end sill, D, with the cross-bar E and

straps or ties G, all substantially as and for  
the purpose shown and described.

5. The combination of the draft-casting R,  
having lugs *e f g h*, and the end sill, D, with 15  
the cross-bars E and F and straps or ties G,  
all substantially as and for the purpose shown  
and described.

JNO. W. CLOUD.

Witnesses:

FRANCIS T. CHAMBERS,  
JOSHUA MATLACK.