

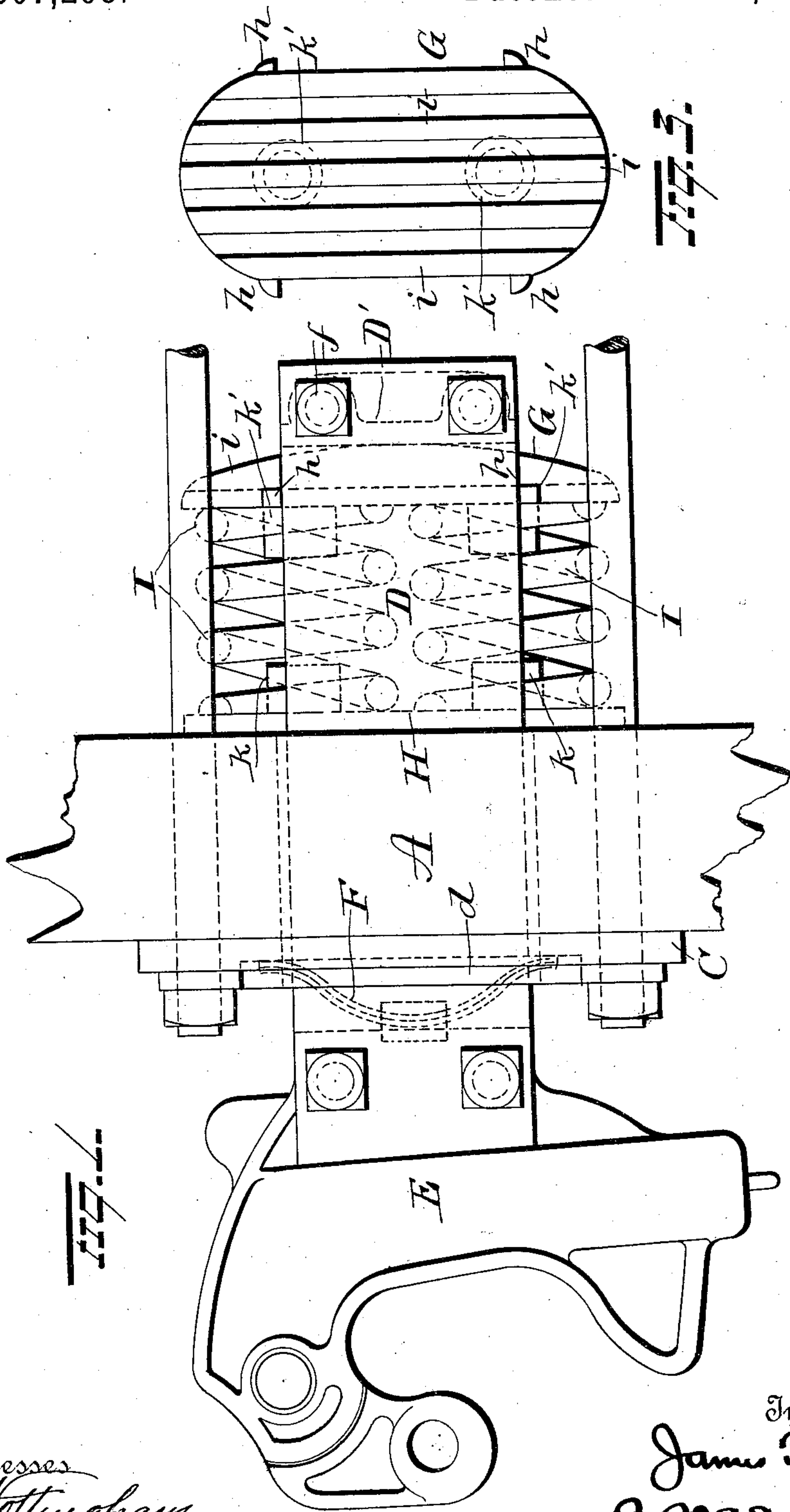
(No Model.)

3 Sheets—Sheet 1.

J. TIMMS.
DRAFT DEVICE FOR CARS.

No. 507,293.

Patented Oct. 24, 1893.



Witnesses
E. Nottingham
G. A. Downing

Inventor
James Timms
B. A. Symmons
Attorney

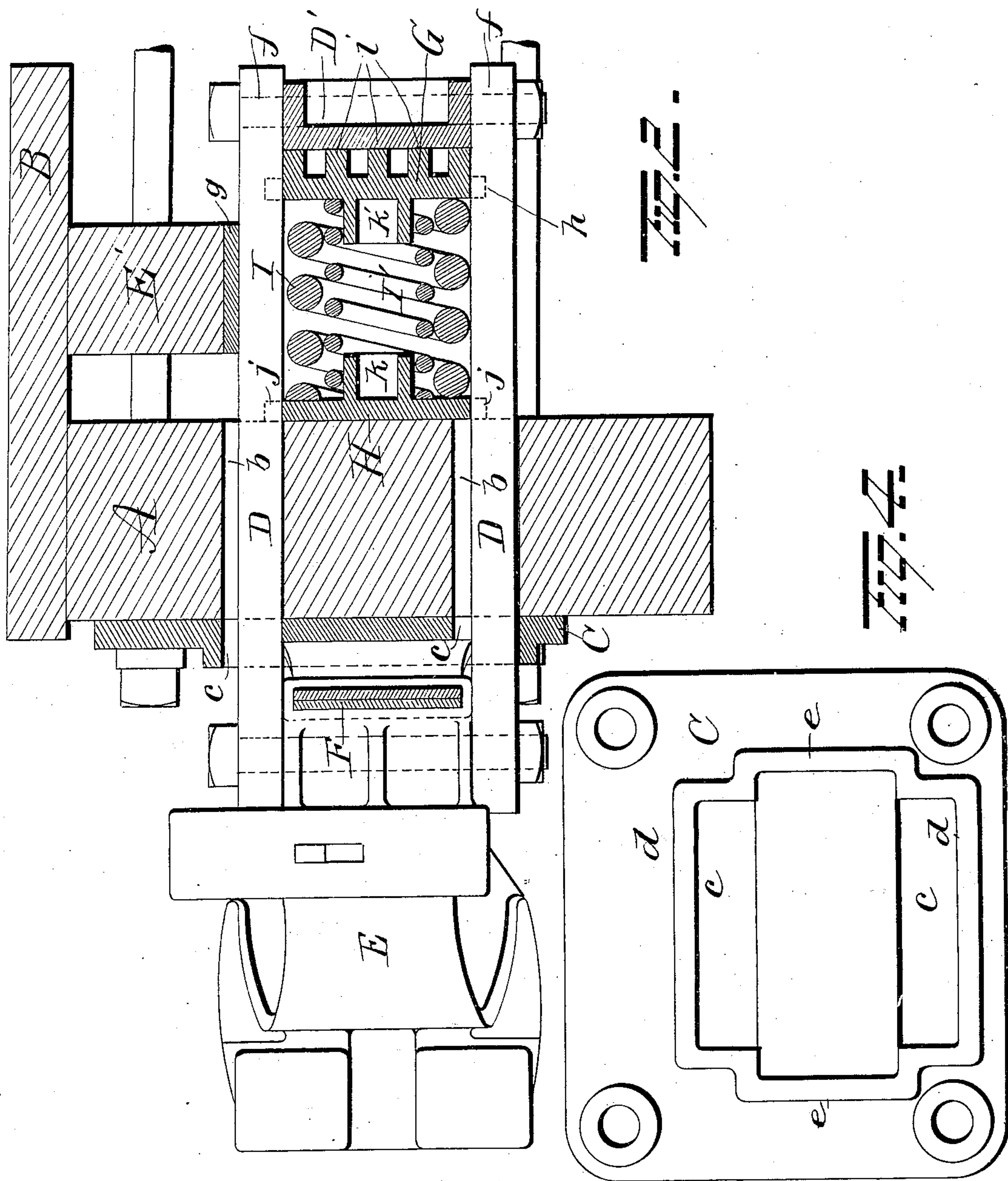
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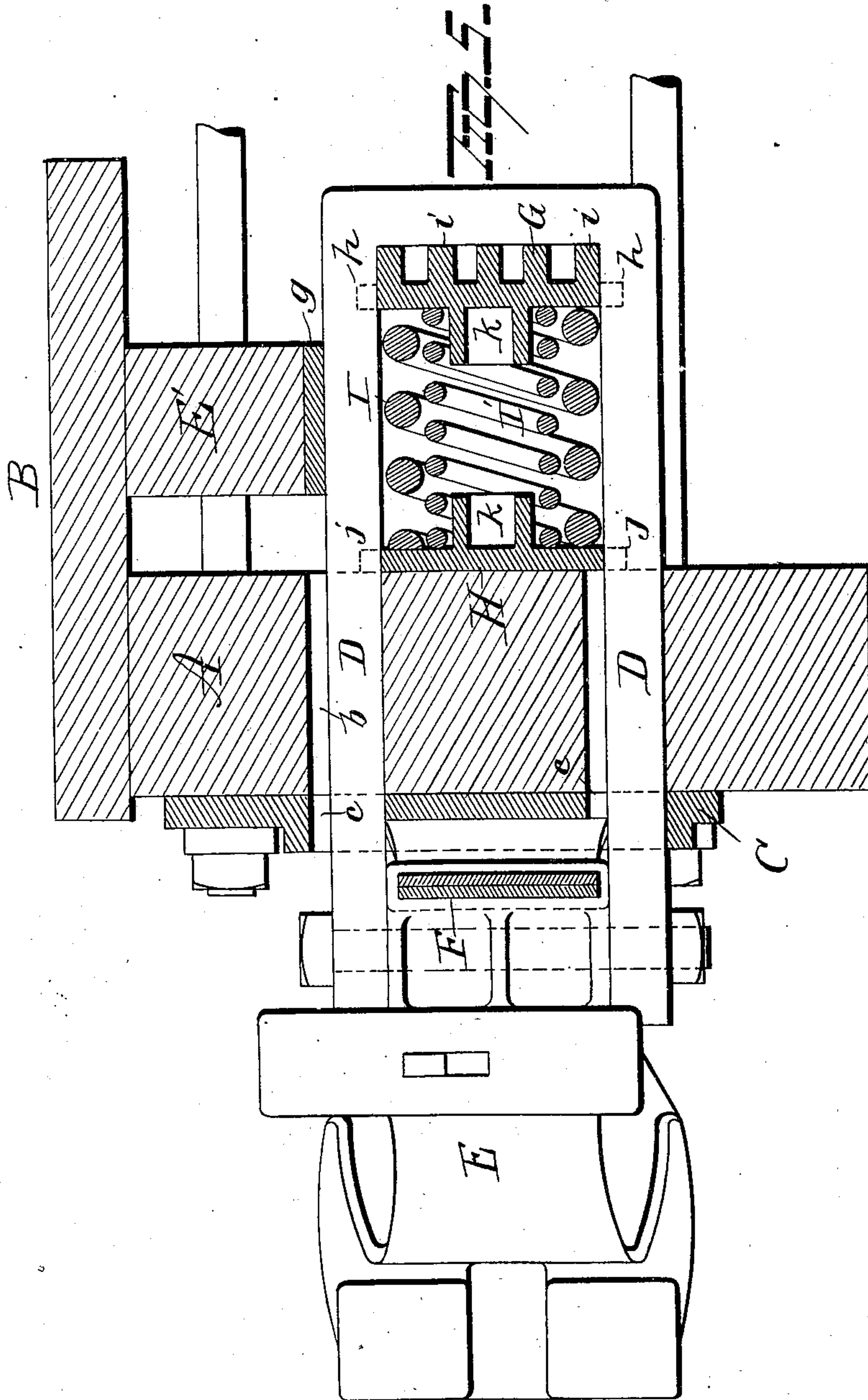
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UNITED STATES PATENT OFFICE.

JAMES TIMMS, OF COLUMBUS, OHIO.

DRAFT DEVICE FOR CARS.

SPECIFICATION forming part of Letters Patent No. 507,293, dated October 24, 1893.

Application filed May 12, 1893. Serial No. 474,009. (No model.)

To all whom it may concern:

Be it known that I, JAMES TIMMS, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Draft Devices for Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in car couplings and more particularly to draft attachments for the coupling,—the invention being especially adaptable for use on a locomotive engine tank.

The object of the invention is to construct a draft attachment for a car coupling in such manner that the knuckle of the coupling will be relieved of the grinding movement caused by the motion of the car to which the coupling is attached.

A further object is to attach a coupling in such manner that it can have a vertical and a lateral movement when in use:

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings: Figure 1 is a plan view illustrating my improvements. Fig. 2 is a sectional view. Figs. 3 and 4 are detail views. Fig. 5 is a view of a modification.

A represents the end sill, and B a portion of the platform of a car or locomotive engine tank. The end sill A is made with parallel, elongated openings *b, b*, with which elongated slots *c, c*, in a face plate C are adapted to align, said face plate being secured to the front face of the sill by means of bolts passing through the sill. At three sides of each slot *c*, flanges *d, d* project from the face plate C, and between the ends of the flanges *d*, flanges *e, e* project from said face plate for a purpose which will hereinafter appear. Passing through the slots *c* and openings *b* are plates D, the front ends of which are secured to the coupler head E. The plates D are of a thickness less than the depths of the slots *c* and openings *b* and are of a width less than the length of said slots and openings, so that said

plates D can have a lateral and a vertical movement in said slots or openings. The rear ends of the plates D are connected by a plate D', secured thereto by means of bolts *f*, passing through flanges projecting from said plate D' and the plates D, thus producing a yoke. In order to maintain the plates D and the coupler head E carried thereby, in a normally horizontal position, a bar E' is made to project downwardly from the platform B, in rear of the sill A, and at its lower end is preferably provided with a plate *g*, against which the upper plate D is adapted to bear. A semi-elliptical spring F is adapted to bear at its center against the coupler head E and at its ends against the face plate C, being limited in its movement on said plate by means of the flanges *e*,—said semi-elliptical spring being adapted to act as a buffer.

Located between the plates D, D, in proximity to the rear ends thereof, is a spring G, of a length sufficient to project at its ends beyond the edges of said plates D, and provided with lugs *h* adapted to bear against the edges of said plates and thus be maintained in proper relation thereto. The rear face of the plate G is provided with a series of curved ribs or flanges *i* adapted to bear on the end plate D' and produce a rocking bearing for the spring plate G on said end plate D'.

A plate H is located between the plates D and adapted to bear against the rear face of sill A, said plate H being retained in proper position by means of lugs *j* adapted to project therefrom parallel with the edges of the plates D. Located between the spring plate G and the plate H, are coiled springs I, and within the coiled springs I, smaller coiled springs I' are located and adapted to bear at their respective ends against said plates and maintained in proper position by means of bosses *k, k'* projecting therefrom.

From the construction and arrangement of parts above set forth it will be seen that the spring F will act as a buffer as above explained, and that the springs I, I', will serve to cushion the pulling action on the coupling. It will also be seen that the coupling head will be permitted to have a vertical and a lateral movement when in use, thus preventing the grinding movement upon the inner face of the knuckle of the coupling and also

allowing the coupling to be held intact, which would not be the case were the coupling to be bolted directly to the sill. It will also be seen that the pulling action of the coupling
5 will be brought to bear on the rear face of the sill.

Instead of making the plates D, D and D' in separate parts, they may be all made in one piece as shown in Fig. 5.

10 My improvements are very simple in construction, cheap to manufacture and effectual in every respect, in the performance of their functions.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to limit myself to the precise construction and arrangement of parts herein set forth, but,
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20 Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a sill having openings therein, of a drawhead having rearwardly extending plates extending loosely through the openings, said plates of less width and thickness than the openings and capable of sliding or being vibrated therein, means for connecting the plates together at or near
25 the rear ends, and springs interposed between the sill and connecting means between the plates, substantially as set forth.

2. The combination with a sill having openings therein, of a drawhead having rearwardly extending plates which pass freely through the openings in the sill and are connected together at or near their rear ends, said plates of less width and thickness than the openings, and springs located forward and
30 rearward of the sill and bearing respectively against the drawhead and connection between the plates, substantially as set forth.

3. The combination with a sill and a coupling, of a yoke connected to said coupling and passing through openings in the sill, springs located between the end of said yoke and the rear face of the sill, and a spring located between the front face of the sill and the coupling, substantially as set forth.
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4. The combination with a sill and a coupling, of a yoke secured to said coupling and passing through openings in the sill, said openings in the sill being longer than the width of the plates of said yoke and wider than the thickness of said plates, substantially as set forth.
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5. The combination with a sill and a coupling, said sill having openings therein, of a plate secured to the front face of said sill and having slots in alignment with the openings in the sill, plates secured to said coupling and passing through said openings and slots and of a smaller size than said openings and slots, an end plate connecting said first mentioned plates, springs located between the
45 end plate and sill, and a spring adapted to

bear on the coupling and the plate on the front face of the sill, substantially as set forth.

6. The combination with a sill and a coupling, of a yoke secured to said coupling and passing through said sill and adapted to have a lateral movement, a plate located in said yoke and adapted to have a rocking movement on the end of the yoke, and a connection between said plate and the sill, substantially as set forth.
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7. The combination with a sill and a coupling, of a yoke secured to said coupling and passing through said sill and adapted to have a rocking movement, a plate located in said yoke and adapted to have a rocking movement on the end of said yoke, and springs located between said rocking plate and the sill, substantially as set forth.
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8. The combination with a sill and a coupling of a yoke secured to the coupling and passing through said sill and adapted to have a vertical and a lateral movement, a spring plate adapted to bear on the end of said yoke and springs located between said spring plate and the sill, substantially as set forth.
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9. The combination with a sill and a coupling, of a yoke secured to the coupling and passing through said sill and adapted to have a vertical and a lateral movement, a plate located in said yoke, curved ribs on said plate adapted to have a rocking bearing on the end of said yoke, and springs located between said plate and the sill, substantially as set forth.
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10. The combination with a sill and a coupling, of plates secured to said coupling and passing through openings in the sill so as to have a vertical and lateral movement therein, an end plate connecting said plates, a spring plate located between said first-mentioned plates, curved ribs on said spring plate and adapted to have a rocking bearing on the end plate, and springs located between said spring plate and the sill, substantially as set forth.
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11. The combination with a coupling and a sill, of a plate secured to the front face of said sill, said plate and sill having openings therein, flanges projecting from said plate, a semi-elliptical spring adapted to bear against the coupling and on said plate between the flanges thereon, plates secured to the coupling and passing through the openings in the sill and plate secured thereto and adapted to have a vertical and lateral movement, and connections between the plates secured to the coupling and the rear face of the sill, substantially as set forth.
75

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES TIMMS.

Witnesses:

DUDLEY G. GRAY,
C. C. KING.