

(No Model.)

F. WINDLER.

CAR COUPLING.

No. 333,986.

Patented Jan. 5, 1886.

Fig. 1.

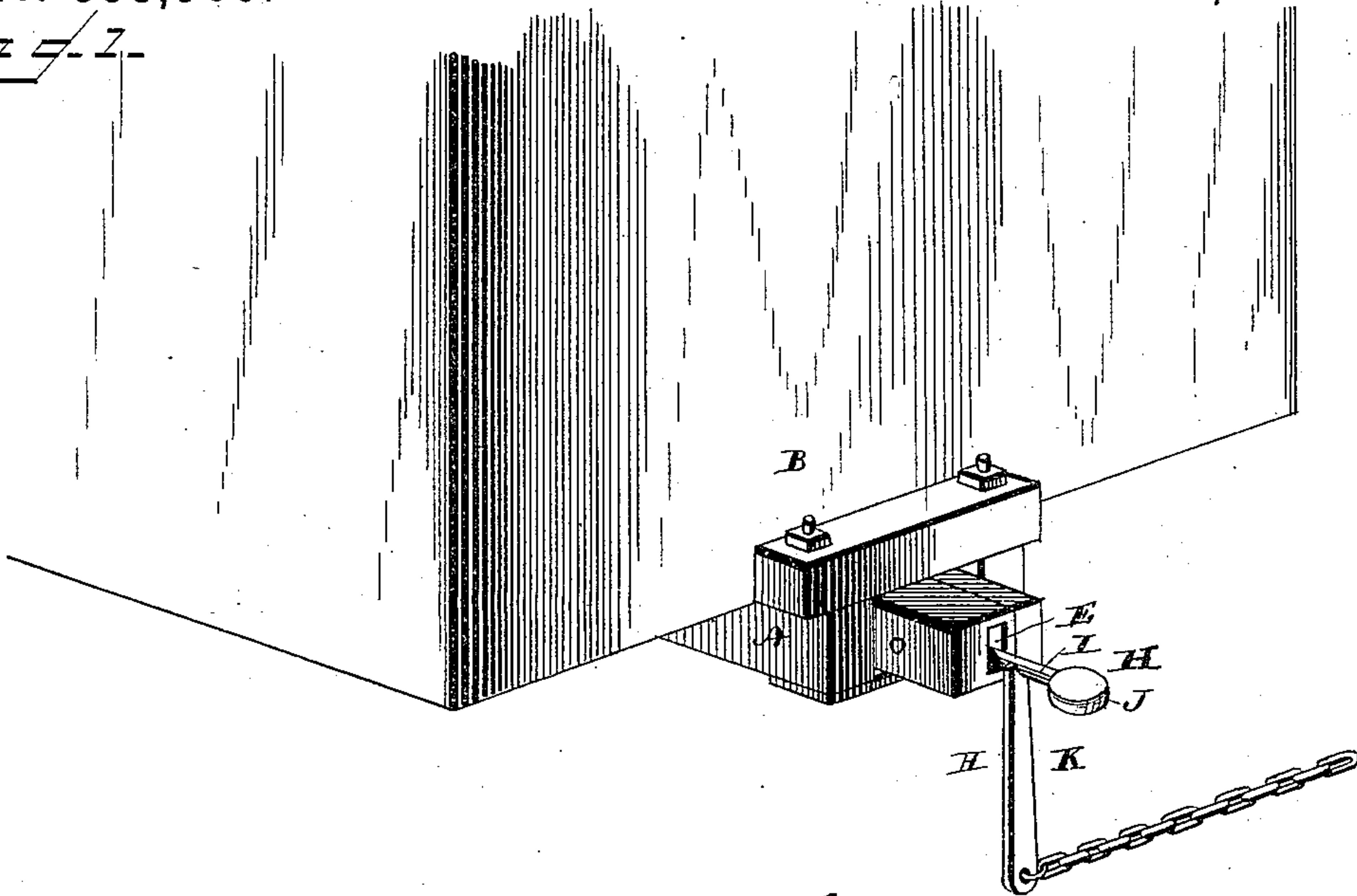


Fig. 2.

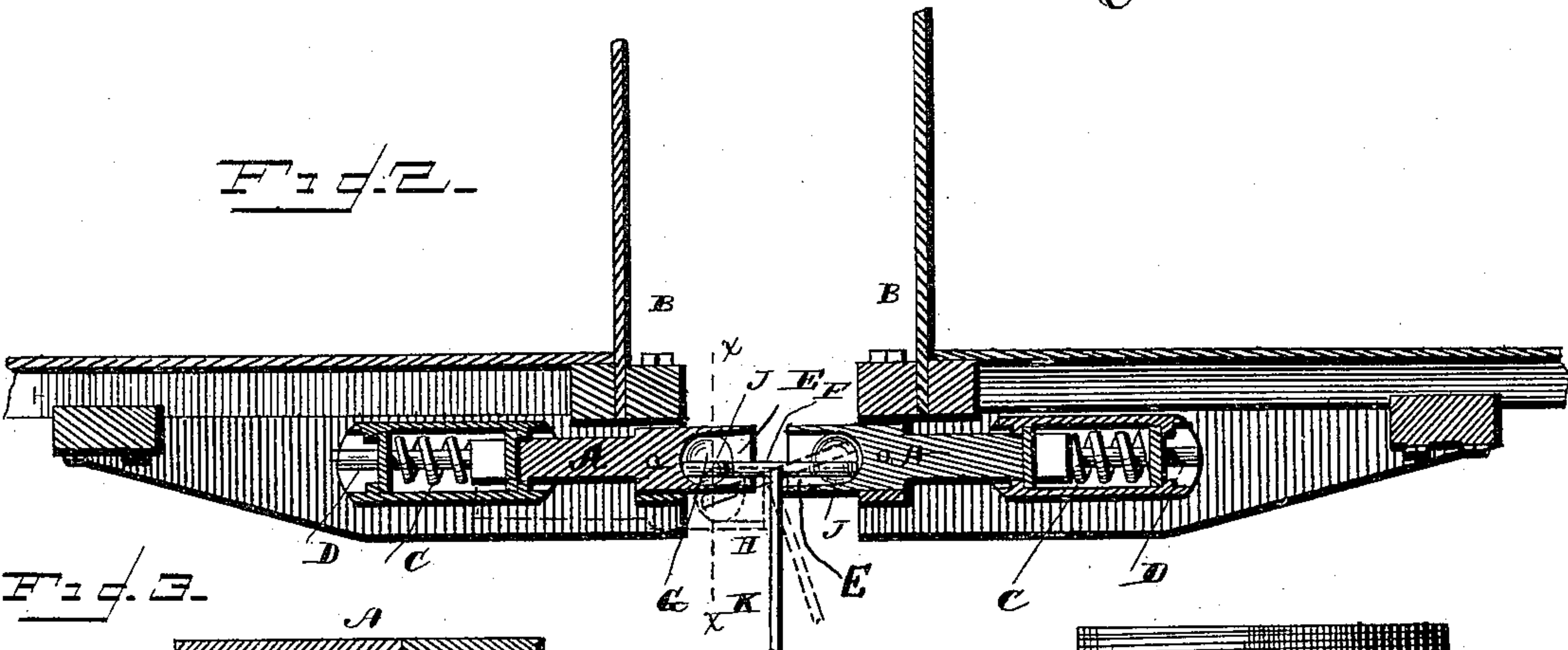


Fig. 3.

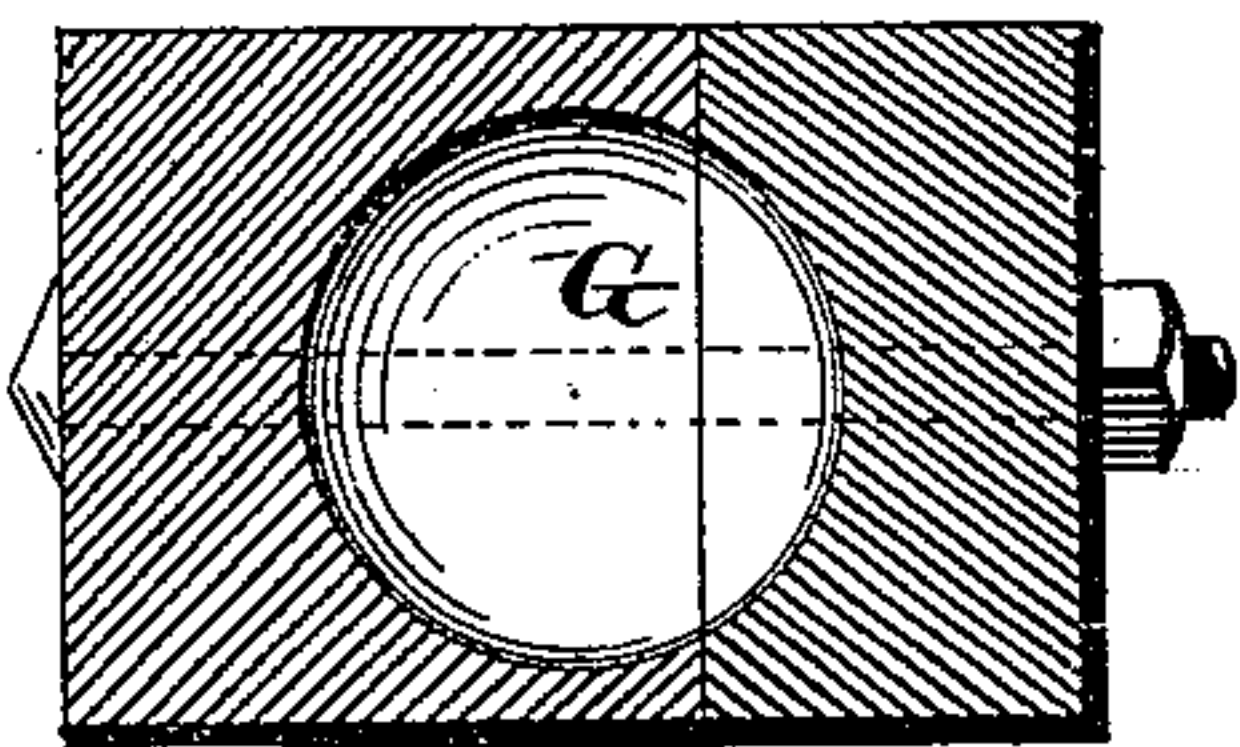


Fig. 4.

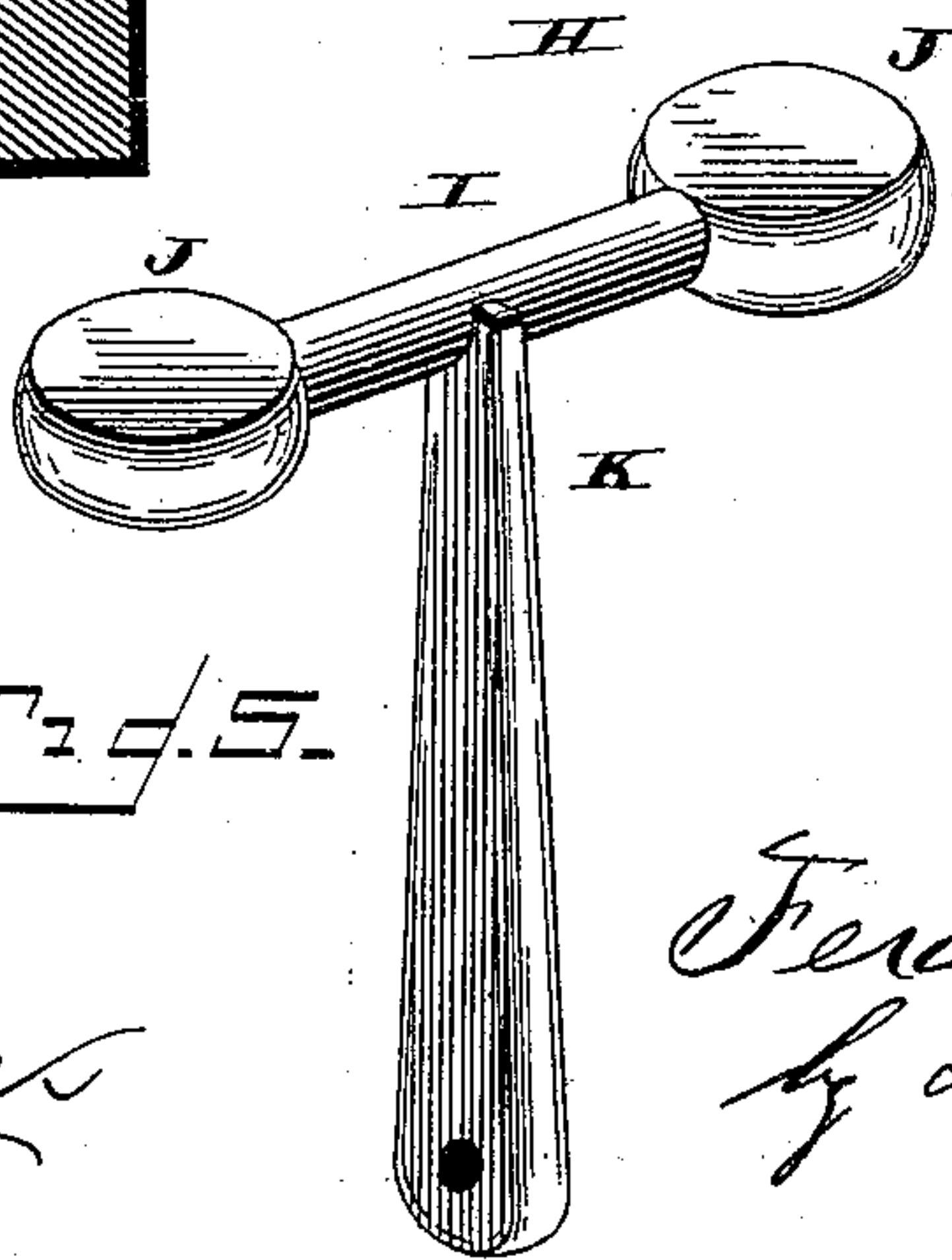
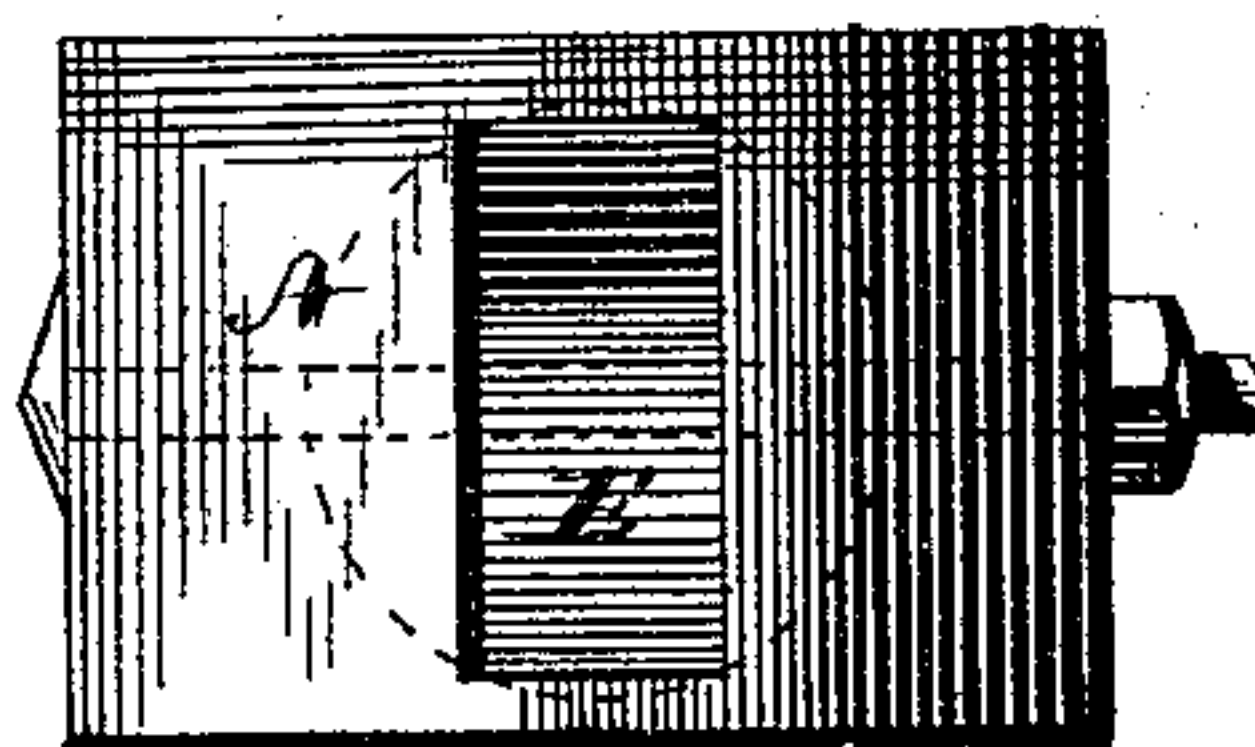


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

FERDINAND WINDLER, OF KEOKUK, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 333,986, dated January 5, 1886.

Application filed August 24, 1885. Serial No. 175,224. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND WINDLER, of Keokuk, in the county of Lee and State of Iowa, have invented certain new and useful
5 Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same,
10 reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 is a perspective view showing one end of a railroad-car equipped with my improved coupling. Fig. 2 is a longitudinal
15 vertical sectional view showing two draw-heads properly attached to the ends of their respective cars and equipped with my improved coupling, the dotted lines showing the
20 position assumed when the cars are of unequal height. Fig. 3 is a transverse vertical sectional view of one of the draw-heads, taken on the line *xx* in Fig. 2. Fig. 4 is a front view
25 of one of the draw-heads prior to the insertion of the coupling-link, and Fig. 5 is a perspective view showing the coupling-link detached from the draw-head.

The same letters refer to the same parts in all the figures.

30 This invention relates to couplings for railroad-cars; and it has for its object to provide a device of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency, and which
35 may be easily manipulated by the operator without necessity of his going between the cars for the purpose of coupling the same.

With these ends in view the invention consists in the improved construction, arrangement,
40 and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A A designate a pair of draw-heads equipped with my
45 improved coupling. Said draw-heads are attached in the usual manner to the under sides of the ends of the cars B B, springs C being coiled in the usual manner upon the rearwardly-extending buffer-stems D. The front
50 ends of the draw-heads have vertical slots E, for the admission of the coupling bar or link

H, the construction of which will be presently described. The said vertical slot E opens into the approximately-spherical or somewhat elongated recess G, which forms the mouth of
55 the draw-head, and which is adapted to receive the end of the coupling link or bar.

H designates the coupling link or bar, which consists of a central bar or body, I, of suitable length, the ends of which are provided
60 with flattened circular disks or plates J J, which may be formed in any suitable manner upon the said bar. Attached centrally to the bar I is a downwardly-extending lever or handle, K, by means of which it may be manipulated in the operation of the car-coupling.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my improved car-coupling will be readily understood.
70

The general construction of the device is simple and inexpensive, and of such a nature as to insure the greatest possible amount of strength and durability.

In order to couple the cars when they come
75 together, the link or coupling bar is grasped by its handle K, which is held in a horizontal position, thus turning the plates or disks at the ends of the coupling-bar to a vertical position and enabling them to enter the vertical
80 slots in the front ends of the draw-heads. The plate or disk at one end of the link or coupling bar may first be inserted into the draw-head of one of the cars, which is stationary, and the disk or plate at the opposite end may
85 then be readily guided into the draw-head of an approaching car, to which it is to be coupled. As soon as the cars come together, the hold upon the handle or lever of the link or coupling bar is released, and the latter will
90 then by its own weight drop to a vertical or perpendicular position, thus turning the link or draw-bar to a horizontal position and placing the disks or plates at the ends of said link or bar at right angles to the slots in the front
95 ends of the draw-heads and preventing their withdrawal from the same.

In order to uncouple the cars, the operation is simply reversed—that is, the handle or lever K is raised to a horizontal position, thus per-
100 mitting the disks or plates at the ends of the link or coupling-bar to escape through the

vertical slots in the front ends of the draw-heads.

The process of uncoupling may be performed by the operator without going between the cars by having a rope or chain attached to the lower or outer end of the lever or handle K, and leading to one side of the car, as shown in Fig. 1 of the drawings, where it may be readily grasped by the operator, who, by pulling upon the said rope or chain, may raise the lever or handle to a horizontal position, when it may be readily grasped and removed from the cars as soon as the latter are separated.

It will be readily seen that in the event of the cars to be connected by my improved coupling being of unequal height, this fact will not in the least interfere with the operation or efficiency of my improved coupling, inasmuch as the recesses in the draw-heads for the reception of the disks or plates at the ends of the coupling bars or links permit the latter to play freely up and down, as will be seen in Fig. 2 of the drawings. It will also be seen that if, in the event of accident, a car should happen to be overturned it will be instantly and automatically disengaged from the next adjoining car, which is thus not endangered to the same extent as otherwise it would be. The simplicity of construction is such that the coupling cannot by any possibility get out of order, and it may be manufactured and put upon the cars at a moderate expense.

It will be seen that by constructing the coupling-link with the circular head having rounded edges, and constructing the draw-heads with the approximately spherical recesses in which the circular heads of the coupling-link are received, that when two cars of unequal height are to be coupled and it is therefore necessary for one end of the coupling-link to drop considerably below the level of the other end, the free end of the link will be enabled to turn smoothly and easily to this lower level on account of its circular head having rounded edges and the spherical form of the recess in the draw-head in which the said link-head is seated and turns, no sharp edges or corners being presented to interfere with the said movement of the head of the link, this

construction, therefore, having a decided advantage over those forms of construction in which the heads of the coupling-link are formed with straight square-cornered bearing-edges, which bear in their operative positions squarely against the straight square inner wall of the forward end of the draw-head recess, as has been heretofore the case.

In the practical manufacture of my improved car-coupling it may be found desirable to make various minor changes in the construction and arrangement of details, and I would therefore have it understood that I do not limit myself to the precise construction and arrangement of parts herein shown and described, but reserve to myself the privilege of making all such changes and modifications as may be resorted to without departing from the spirit of my invention.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The herein-described coupling bar or link for car-couplings, the same consisting of a rod or bar provided at each end with a horizontal circular disk or plate having the rounded edges and having a centrally-located downwardly-extending arm or lever, whereby it may be manipulated, substantially as and for the purpose herein set forth.

2. As an improvement in car-couplings, the combination, with the draw-head provided at its front end with a vertical slot opening into an approximately spherical somewhat elongated mouth or recess, of a coupling-link consisting of a bar provided at its ends with flattened circular disks or plates having the rounded edges, and having a centrally-located downwardly-extending arm or lever, all constructed and operating substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

FERDINAND WINDLER.

Witnesses:

H. C. BECHTOLD,
HENRY BANK, Jr.