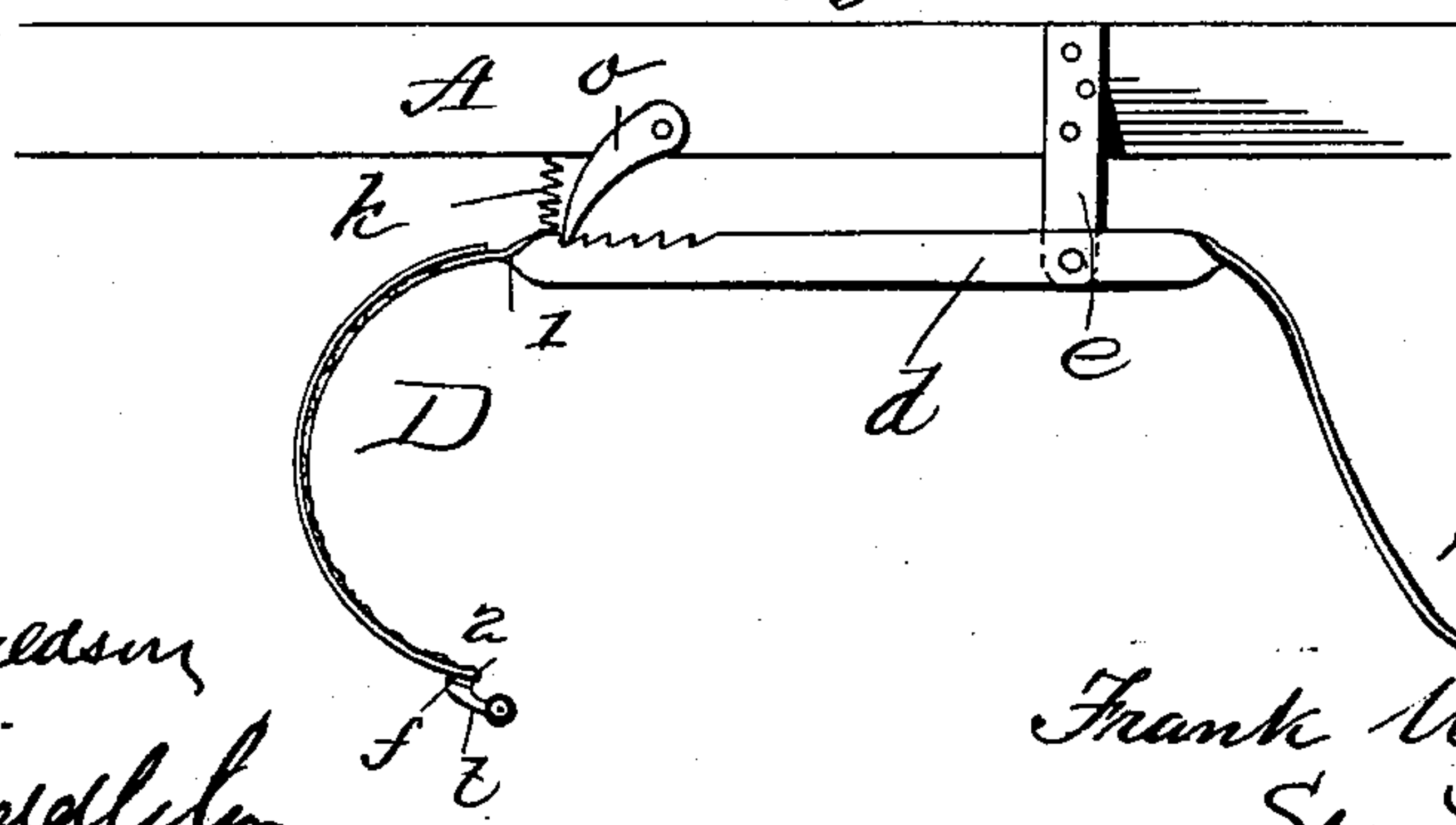
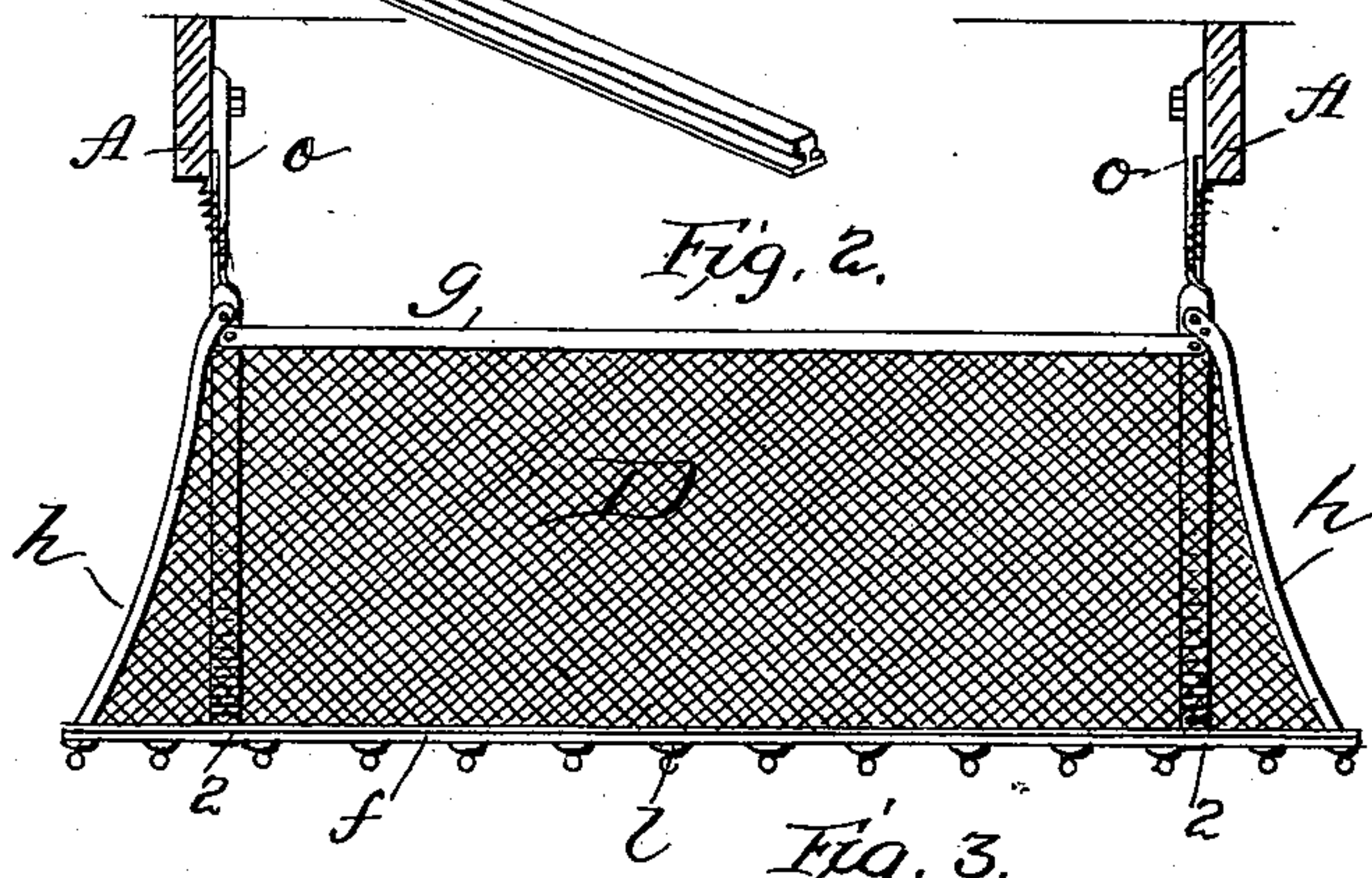
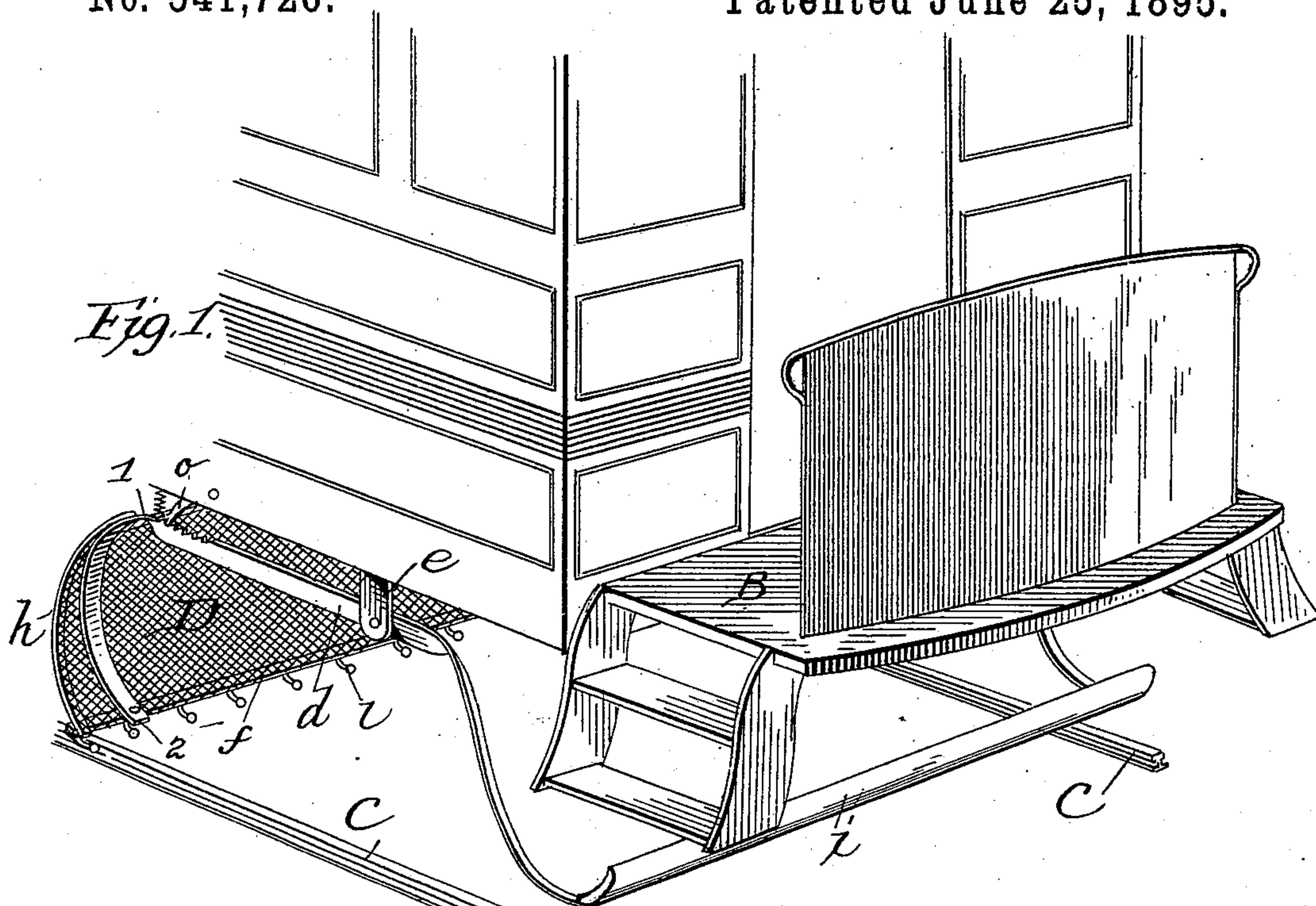


(No Model.)

F. W. DARLING.
CAR FENDER.

No. 541,726.

Patented June 25, 1895.



Attest
F. L. Middleman

Inventor
Frank W. Darling
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Att'y

UNITED STATES PATENT OFFICE.

FRANK W. DARLING, OF HAMPTON, VIRGINIA.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 541,726, dated June 25, 1895.

Application filed January 30, 1895. Serial No. 536,710. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. DARLING, a citizen of the United States, residing at Hampton, in the county of Elizabeth City and State of Virginia, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to car-fenders, of that class especially designed to be applied to city and suburban railroads propelled by mechanical power. It is more particularly of that class in which a basket or scoop is used to pick up and carry a person who may happen to be knocked down by the car.

My invention consists essentially, of a basket or scoop suspended underneath the forward end of a car, and positively connected with a bar in front, which bar is arranged to be lifted by the person who may have fallen in front of it, and thus the scoop is depressed and brought into action.

My said invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing the front end of the car and my improved apparatus in position thereon. Fig. 2 shows a rear elevation of the scoop with a section of the beams upon which it is held. Fig. 3 shows the apparatus in side elevation.

In the drawings A represents the side beams of a car, and B the front of the platform. The car in Fig. 1 is shown in its proper relation to the rails C, C, of the track. The basket or scoop is shown at D. The particular construction of this scoop as shown in the drawings is not essential to my invention, but is a simple convenient form, and a part of the frame-work on which the netting is supported, forms also the suspending or supporting bars and a part of the tripping apparatus. These supporting bars are shown at *d* of which there is one on each side. They consist of flat bars of metal, preferably of steel, which at their point of connection with the hangers *e*, and in front and rear of this point are arranged on edge or with their wider faces in a vertical plane. At the rear end, these bars are formed with a half-twist, at the point 1—where they unite with the scoop, and the ends are bent down, and curved to a point 2, near the track. These lower ends are connected to a cross-bar

f, and another cross-bar *g* is connected to them at the upper point at the twist, said upper bar forming the upper edge of the scoop. The bar *f* is extended laterally beyond the end 2, as shown in Figs. 1 and 2, and with a curved brace *h*, forms a lateral extension of the frame. The bars *d* are pivoted to the lower ends of the hangers *e*, which are bolted to the beams A. The pivots are preferably short bolts, fixed in the hangers with threaded ends provided with nuts, so that by unscrewing the nuts, the bars may be sprung off from the bolts, and thus the apparatus be readily removed. In front of the pivoted point, these bars *d* are again twisted and bent down as shown in Figs. 1 and 3, and their ends are connected by a cross-bar or plate *i*. Preferably I form the downwardly bent front ends thinner by reducing the bars so that they will yield when forced upward by reason of any obstruction of unusual dimensions. The part *i* may be an iron plate, since it is necessary that the rear ends containing the scoop should be normally held up in the position shown in Fig. 3. This may be secured by forming the front end heavier than the rear or the object may be secured by means of spiral springs *k*, connecting the rear ends of the bars with the beams A. In case the balance be such that the front end is normally held down by gravity, I prefer still to use light springs as *k*, in order to prevent the scoop from being thrown down by the jarring of the car in its movement.

For greater certainty of action, I provide the bar *f* with spring fingers *l*, which project forward and downward between the rails, so that when the scoop is lowered, they are in a position to pick up anybody falling under the car. I prefer also to put upon the ends of these fingers balls of rubber or other suitable material, in order to render the ends blunt, and prevent them from injuring the person falling in front of them.

The normal raised position of the scoop is illustrated in Fig. 3. Preferably I arrange the parts so that the lower edges or ends of the fingers *l*, are about four inches above the plane of the tread of the rails, and when they are in this position, the lower edge of the bar or plate *i* is about five inches above the same plane. This allows the front plate or bar *i* to rise to a plane about nine inches above the rails,

which is sufficient to allow said bar to pass over the body of an ordinary person. But in case of need, the flat parts of the bars *d* are adapted as above explained to spring upward.

5 Manifestly the scoop is thrown down when the front end is raised as by passing over an obstruction, but is not held down after such an obstruction is passed over by the front bar.

In order to hold down the scoop, and cause
10 it to pick up the person fallen under the car, I provide pawls *o*, pivoted to the beams *A*, and bearing upon notched upper edges of the bars *d*. These are arranged as shown to act by gravity and to hold the scoop down until they
15 are released.

The scoop is covered with netting, which may be of wire or rope as may be preferred. I have used rope netting with good effect.

I have described the bars *d* as being formed
20 with one piece, but it will be understood that this is not essential.

From the description above given, it will be seen that the scoop is operated by the lifting of the bar *i* through positive connections be-
25 tween the bar and the scoop, and that thereby I have obtained simplicity of construction and certainty of action.

What I claim is—

1. A car fender comprising a movable scoop

suspended beneath the car, a vertically mov- 30
able cross bar arranged to be lifted by contact with objects upon the track, and rigid connections from the cross bar to the scoop, substantially as described.

2. In a car fender, the rigid frame compris- 35
ing the rear scoop, and the front cross bar arranged to contact with and be lifted by objects upon the track, and pivotal connections between the intermediate portion of said frame and the car body, substantially as de- 40
scribed.

3. In a car fender the rigid frame compris-
ing the rear scoop, and the front cross bar ar-
ranged to contact with and be lifted by ob- 45
jects upon the track, pivotal connections between said frame and the car body and means for engaging the frame after the scoop has been lowered by the upward movement of the cross bar whereby the scoop is held firmly against upward movement, substantially as 50
described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK W. DARLING.

Witnesses:

JAMES M. SPEAR,

W. CLARENCE DUVALL.