

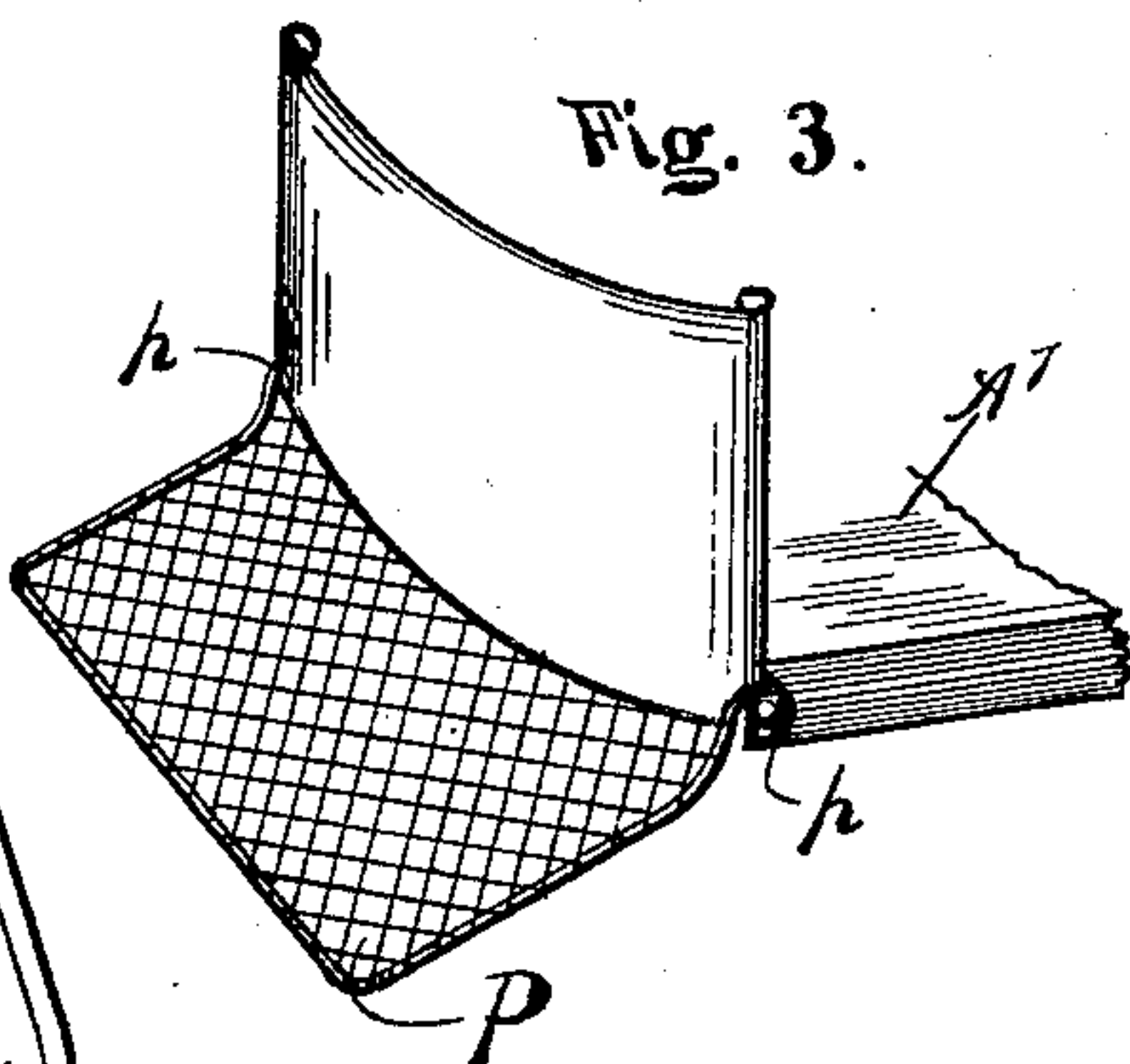
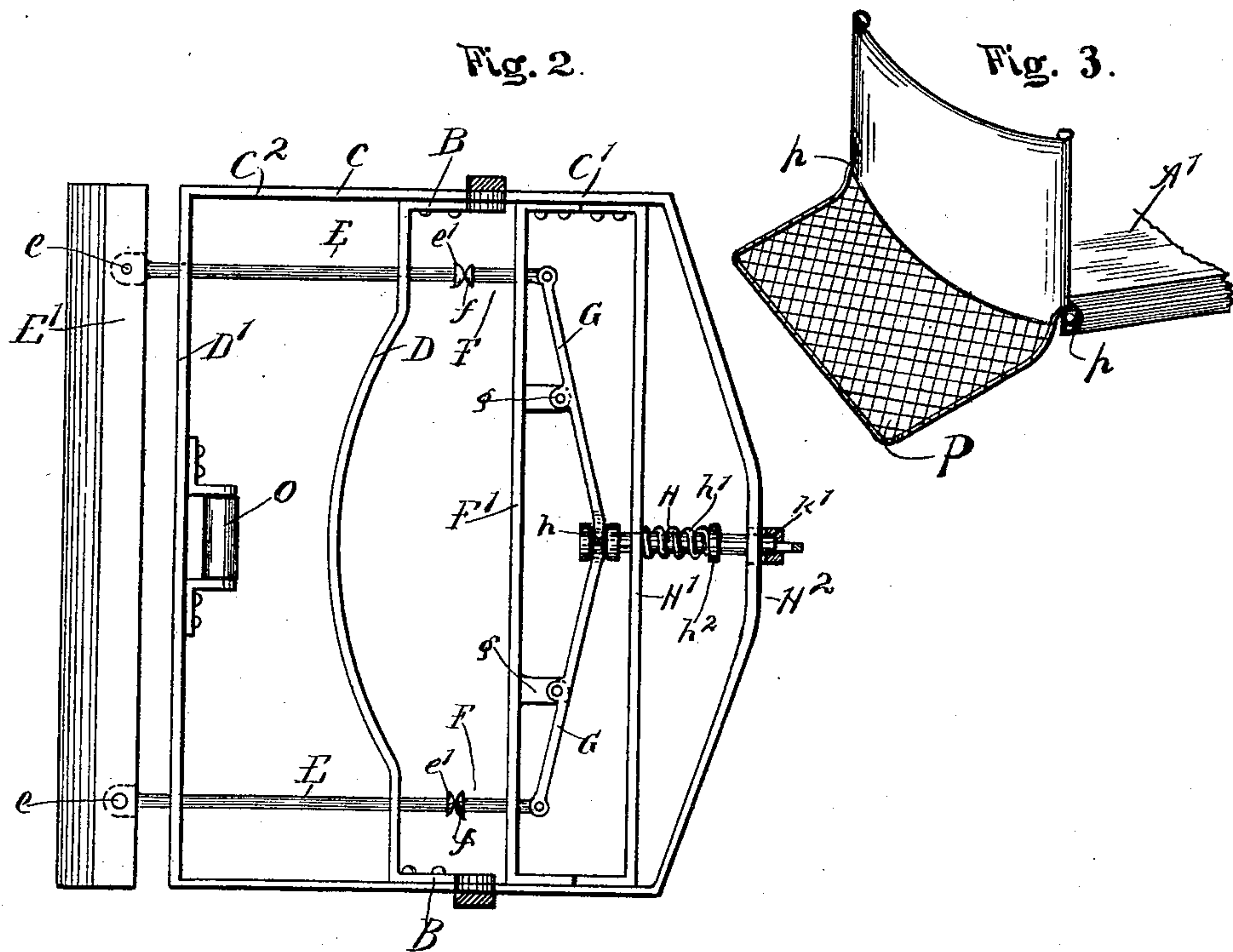
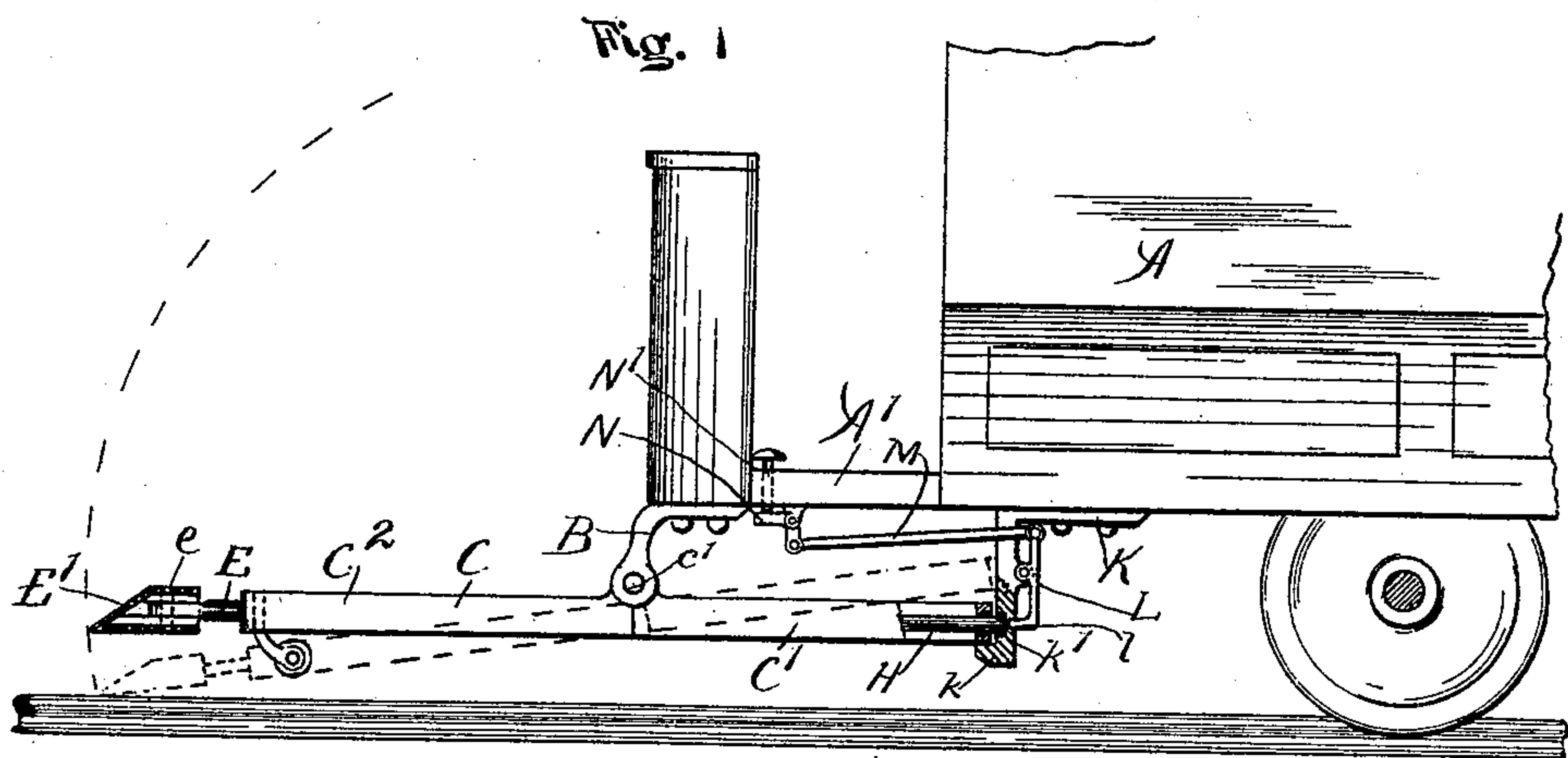
No. 614,654.

Patented Nov. 22, 1898.

J. D. HODGES.
CAR FENDER.

(Application filed Feb. 8, 1898.)

(No Model.)



Witnesses:

G. S. Noble
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Inventor.

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Att'y.

UNITED STATES PATENT OFFICE.

JOHN D. HODGES, OF CHICAGO, ILLINOIS, ASSIGNOR OF FIVE-SIXTHS
TO JAMES BELLEW, FRANK H. REPETTO, AND PATRICK J. KING,
OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 614,654, dated November 22, 1898.

Application filed February 8, 1898. Serial No. 669,554. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. HODGES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

In Letters Patent of the United States granted to me on the 27th day of August, 1895, and numbered 545,290, I have described and claimed a fender for street-cars in which the buffer is normally held at a certain elevation above the rails, but upon meeting an obstruction is caused to automatically trip the fender, which thereupon drops upon its hinges to present an incline.

The present invention relates to improvements in fenders of such type, and has for its object to simplify the construction of the tripping mechanism, reduce the number of parts, and render the action more reliable and accurate, to insure the operation of the trip irrespective of the point along the length of the buffer at which it meets an obstruction and obviate any possible jamming, and in general to make the construction of the fender more economical and efficient.

In the drawings, Figure 1 is a side elevation, partly in section, of a fender embracing my improvement attached to the front or advancing platform of a car. Fig. 2 is a top plan view of said fender detached, and Fig. 3 is a detail of a modification.

A indicates a portion of a car-body, and A' the platform thereof, which is supposed for the time to be the front or advancing platform. To brackets B, depending from the forward corners of the platform, is pivoted the fender-frame C, which is formed in two sections, one of which C' extends rearwardly from the pivotal point underneath the platform, while the other section C² extends forwardly in advance of the platform, their connection with the pivot-bolts c being in the nature of a rule-joint, as at c', so that if the rear section is depressed and locked in a horizontal or other position it will hold the forward section up in line with it, while the forward section may be independently turned up and folded over against the dashboard of the car, as indicated by the curve in broken

lines, should it not be in use, as when it is at the rear of the car.

The front section of the frame is braced by a cross-bar D, slightly in advance of the pivotal connections, and through this bar and the front bar D' of the section play parallel bearing-rods E, flattened at their forward ends and secured to the buffer E' by vertical pivot-pins e, as shown, so that the buffer will be permitted a slight hinging movement upon them in case it meets an obstruction near one end or the other. The rear ends of these rods have rounded heads e', that bear against the rounded heads f' of short thrust-rods F, playing through the front transverse bar F' of the rear section of the frame, the contacting points of these heads being in line or about in line with the hinge between the two frame-sections. These thrust-rods in turn are pivoted to the ends of converging levers G, fulcrumed to ears or lugs g, projecting rearwardly from said last-mentioned front bar, and these levers at their meeting points yoke into the annularly-grooved head h of a latch-bolt H, which plays through a transverse brace-bar H' and the rear bar H² of said rear section and centrally thereof. A coiled spring h', seated against a collar h² upon this latch-bolt and bearing against the brace-bar H', normally thrusts the bolt to the rear, drawing upon the converging levers and causing them to press the buffer outward to its fullest extent through the contacting rods.

To the bottom of the car-body, immediately behind the rear section of the fender-frame, is secured a hanger K, having at its foot a ledge k, upon which the rear bar of said rear section normally rests to carry the whole frame in a horizontal position. Immediately above this ledge is a bolt-hole k', into which the latch-bolt takes to lock the fender into such horizontal position. Pivoted to the rear of this hanger, which will hereinafter be termed the "latch-hanger," is a trip-lever L, having at its foot an intumed finger l, which plays through the rear of the bolt-hole to drive the latch-bolt out thereof when it is not automatically retracted by the action of the buffer. The upper end of this lever is connected by rod or link M with a bell-crank N beneath the front of the platform, and a plun-

ger N', operated by the driver's foot, actuates the bell-crank and trip-lever, so as to release the latch-bolt when the overbalancing-weight of the front section of the fender-frame will
 5 swing it downward, lifting the rear section through the rule-joints and causing the whole to assume the position represented in dotted lines.

Any suitable means may be employed for
 10 restoring the fender to its normal position when the transient emergency has passed. Such means are shown and described in my former patent, and I have not deemed it necessary to represent them herein.

15 Mounted on the forward bar of the fender and centrally thereof is a small truck O, which travels upon the side rails of the cable-slot when the fender is down, in case the latter is applied to a cable-car, to cause it to
 20 ride easy and to sustain any weight that may be thrown upon it.

A woven-wire or network fender P is or may be hung by hooks p upon the car-platform over the fender-frame or as a part of
 25 the same.

It will be understood that the apparatus is tripped by the driver whenever he sees occasion therefor, but should his attention be attracted elsewhere the latch-bolt will be automatically withdrawn the moment the buffer
 30 encounters a resistance through the yielding of said buffer, carrying one or both of its bearing-rods backward, and through the thrust rod or rods operating the converging levers to retract said latch-bolt.
 35

It is evident that the tripping mechanism herein described may be applied to other than jointed fender-frames and that in case the buffer is so mounted as to yield in parallelism only but a single one of the two levers
 40 herein described may be employed, operated by a single bearing-rod and thrust-rod. Hence I do not restrict myself to the precise construction herein shown; but

45 What I do claim, and desire to secure by Letters Patent, is—

1. The combination of the fender-frame,

pivots upon which it swings, the latch-hanger, the latch-bolt, a lever engaging with the heel end of said latch-bolt to retract it, a spring
 50 acting upon said latch-bolt to draw it into engagement and rock the lever, the buffer and its bearing-rods, and connections between the lever and the buffer, whereby the buffer is projected by the force of the spring
 55 on the latch-bolt, and acts through the lever to retract the bolt whenever forced back by an obstruction.

2. The combination of the rule-jointed fender-frame, pivots upon which it swings and
 60 which constitute the hinge between its joints, the buffer, its bearing-rods terminating in about a line with said hinge, a thrust-rod in contact with the headed rear end of one of said bearing-rods, and mounted in the rear
 65 section of the fender-frame, a lever actuated by said thrust-rod, a latch-bolt with which said lever engages, a spring acting upon said latch-bolt in opposition to the lever, and a latch-hanger into which said bolt takes.
 70

3. The combination of the rule-jointed fender-frame, pivots upon which it swings, and which constitute the hinge between its joints, the buffer, its rearwardly-extending bearing-rod terminating about in line with said hinge,
 75 the thrust-rods contacting with the rear ends of said bearing-rods, the converging levers with which said rods connect, the centrally-arranged latch-bolt with which the meeting ends of said levers engage the spring upon
 80 said latch-bolt, and the latch-hanger.

4. The combination with the fender and its latch-bolt, and with the latch-hanger, of the trip-lever having an inturned finger acting upon the end of the latch-bolt to thrust
 85 it out of engagement, and connections between said lever and the platform, whereby the lever is operated by the driver.

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

JOHN D. HODGES.

Witnesses:

J. BUEHLER,
 L. DAVIS.