

(No Model.)

M. L. SENDERLING.
SUPPORTING STRAP FOR CARS, &c.

No. 542,838.

Patented July 16, 1895.

Fig. 6.

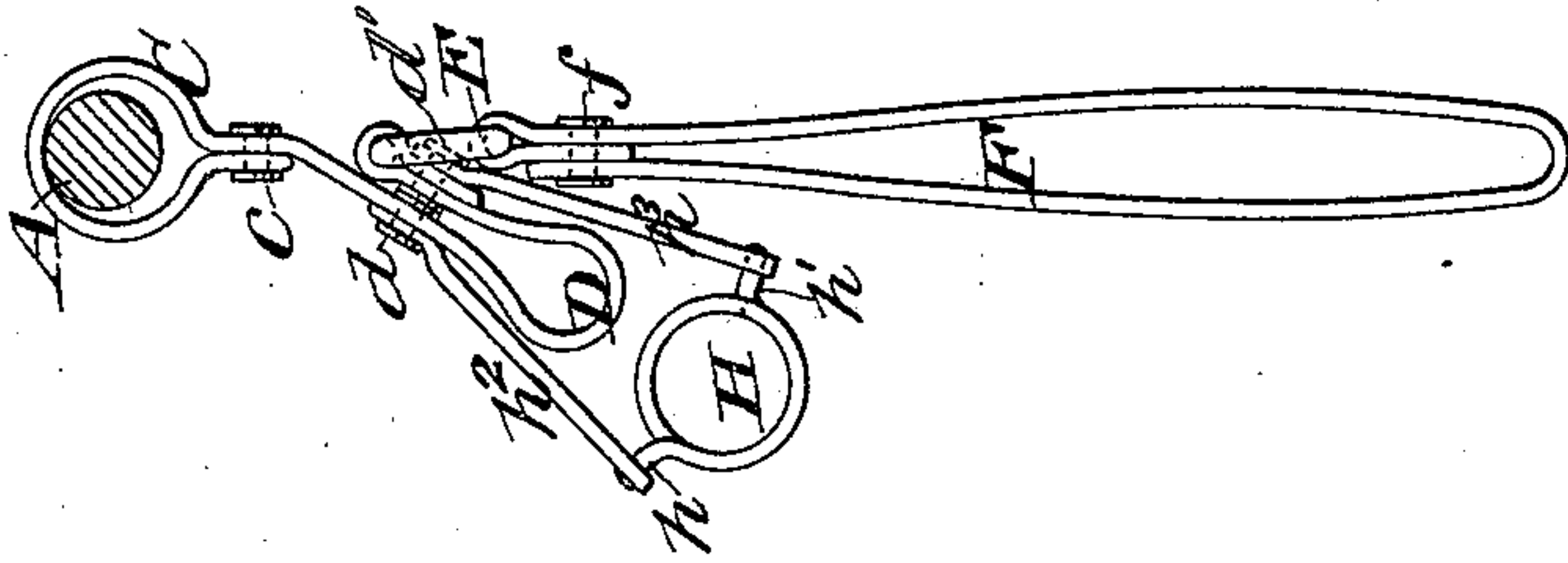


Fig. 5.

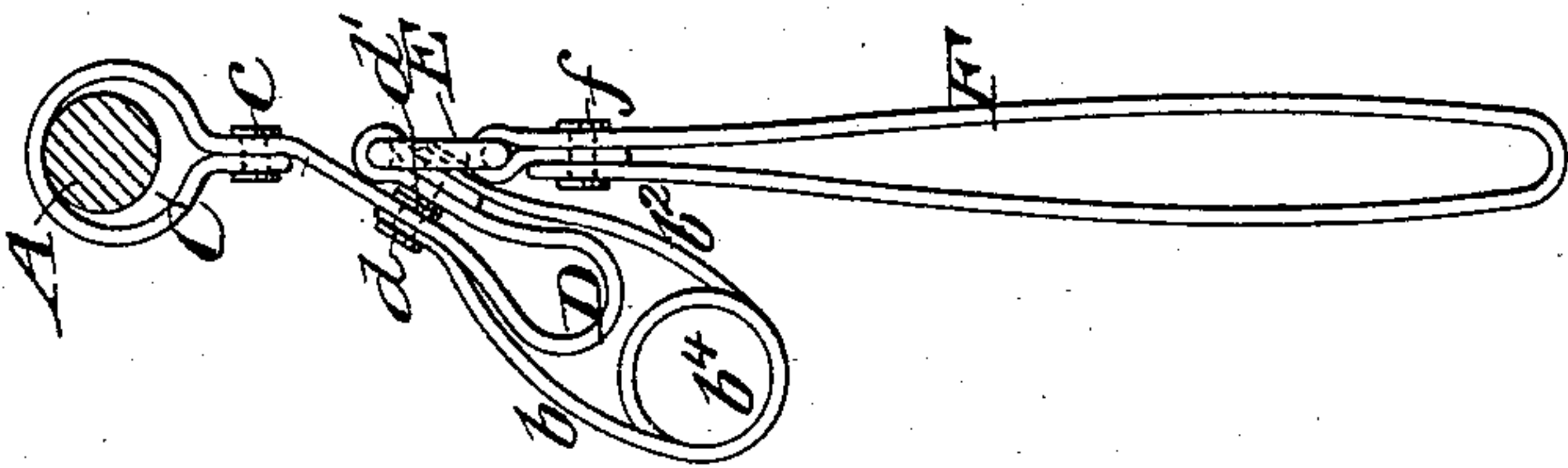


Fig. 4.

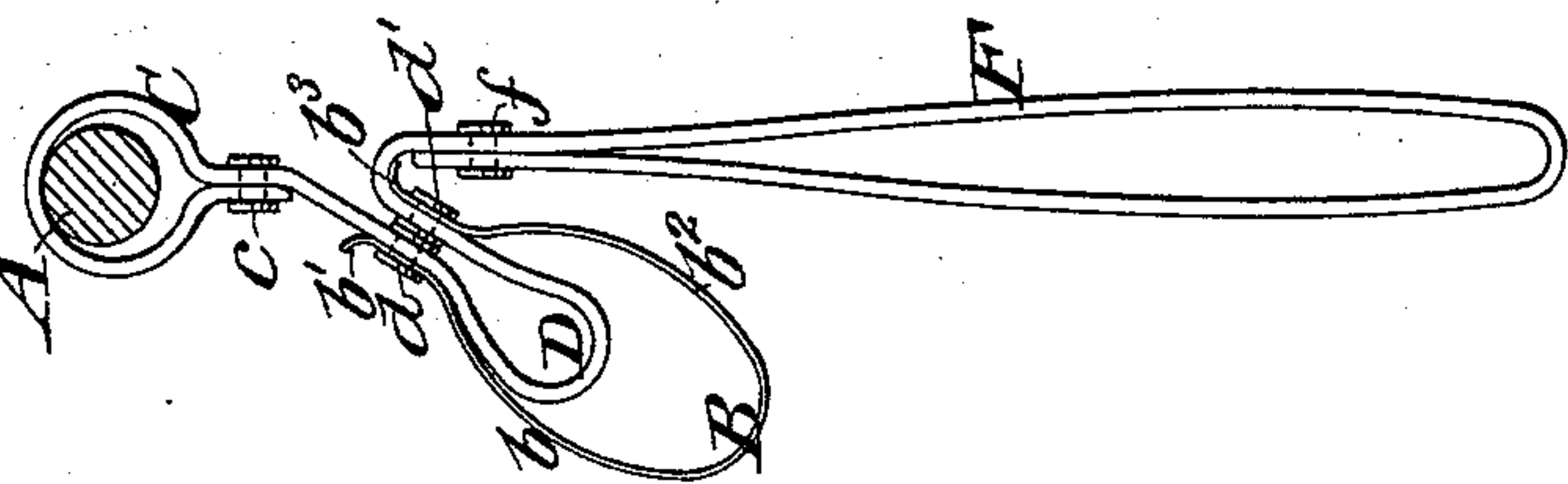


Fig. 3.

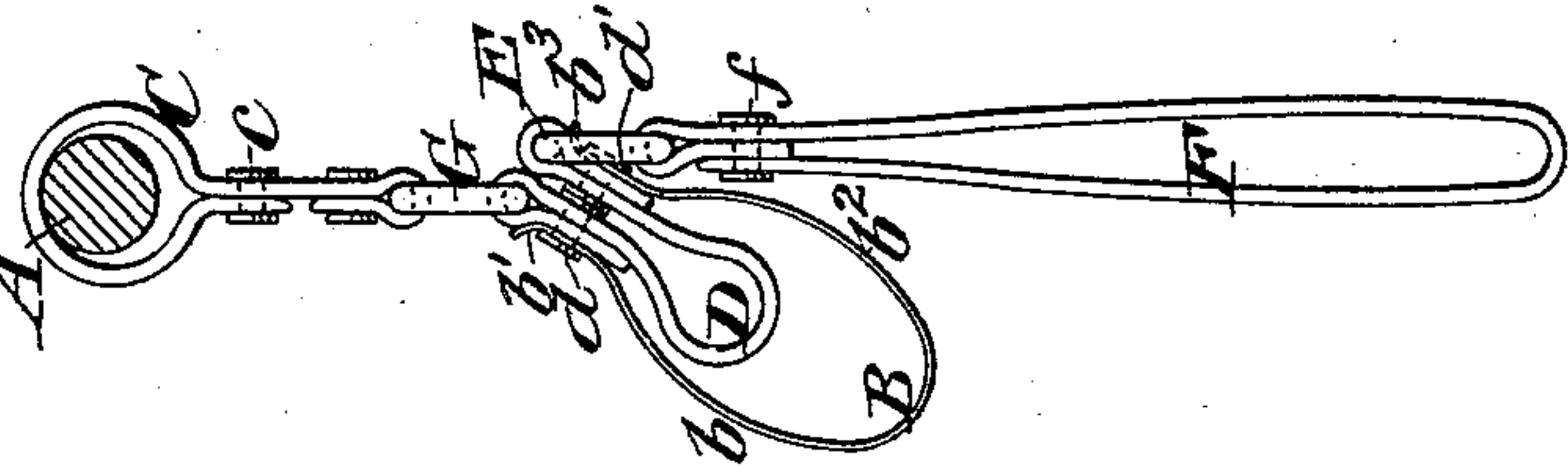


Fig. 2.

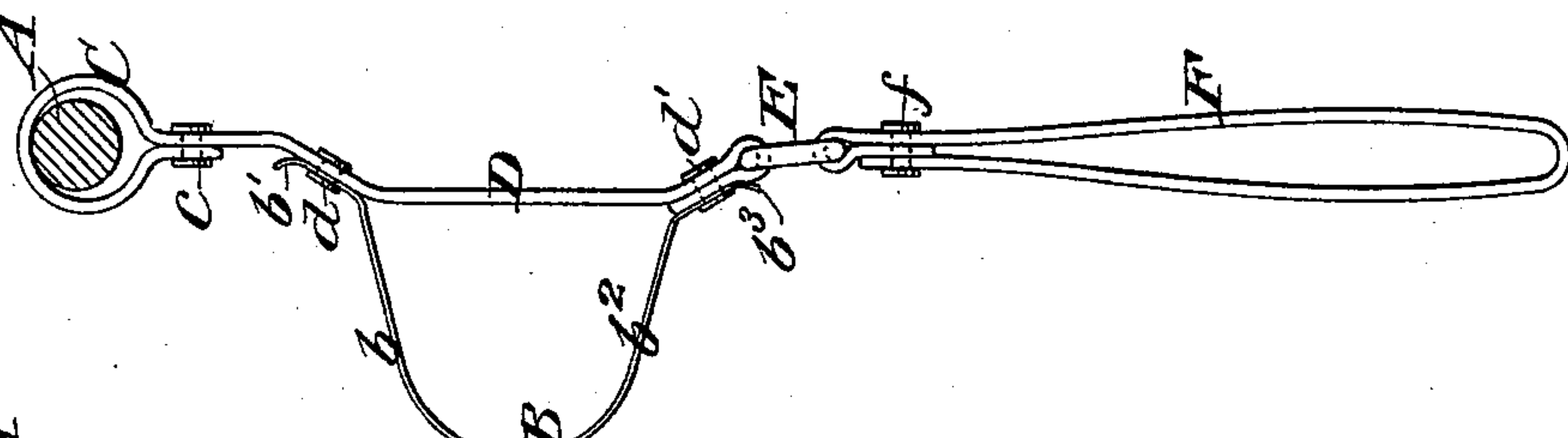
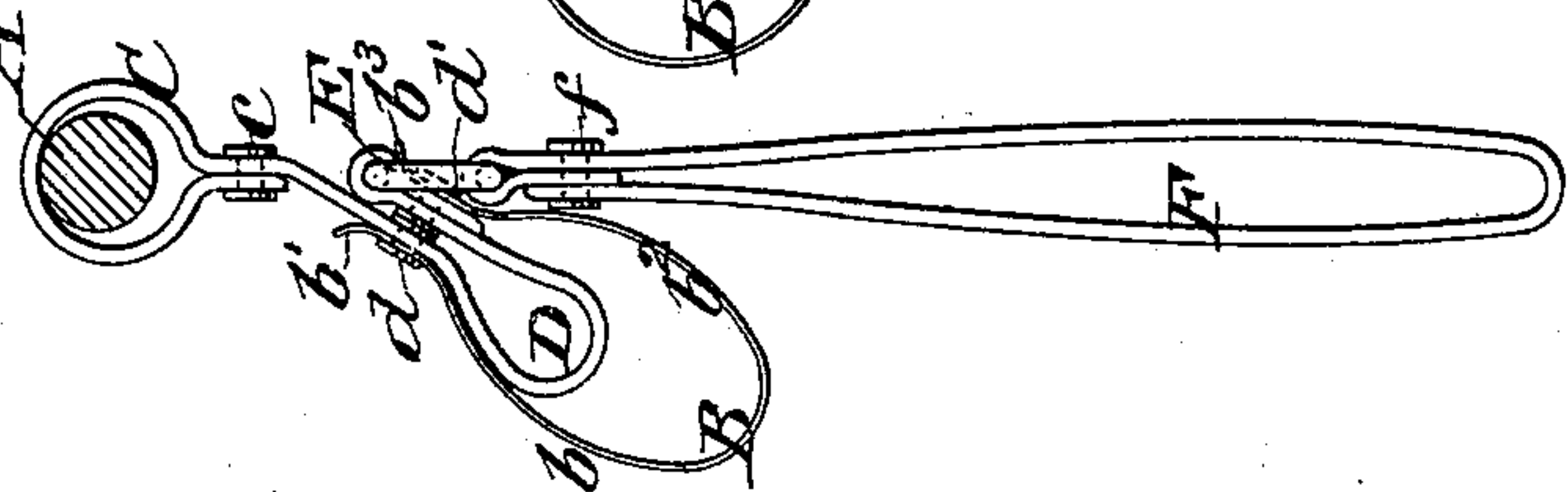


Fig. 1.



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UNITED STATES PATENT OFFICE.

MARTIN L. SENDERLING, OF JERSEY CITY, NEW JERSEY.

SUPPORTING-STRAP FOR CARS, &c.

SPECIFICATION forming part of Letters Patent No. 542,838, dated July 16, 1895.

Application filed November 30, 1894. Serial No. 530,312. (No model.)

To all whom it may concern:

Be it known that I, MARTIN L. SENDERLING, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Supporting-Straps for Cars and other Vehicles, of which the following is a specification.

My invention relates to an improvement in supporting-straps for cars and other vehicles, the object being to provide a strap which can be extended down into convenient position to be grasped and which will be caused to spring back to its normal position when released.

A further object is to provide a supporting-strap of this class in which a stop is in position to prevent the spring from being drawn beyond its elastic limit, so that no matter how much the supporting-strap is used the spring will always return the parts to their normal position.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the strap with the parts shown in their normal position, as when not in use. Fig. 2 is a similar view showing the position of the parts when they are extended, as in use. Figs. 3, 4, 5, and 6 are modified forms of supporting-straps.

A represents the strap-holding bar, which extends longitudinally along the car or vehicle in which the straps are to be used.

Proceeding to describe my preferred form, as shown in Figs. 1 and 2, B designates the spring, which is in this instance of the band-spring type, consisting of a strip of material bent into loop form, the upper arm b being provided with an upwardly-curved end b' and the lower arm b^2 provided with a downwardly-curved end b^3 .

C designates the upper loop-strap, which surrounds the bar or rod A and is secured around the said rod by means of a suitable rivet c . The upper strap C is extended to form a stop D for limiting the extension of the spring B. This stop D, when the spring is in its normal position, extends in loop form within the said spring and forms a slack portion within the said loop.

The spring is secured near its free ends to the stop D by suitable fastening devices, in the present instance by rivets d d' . These rivets

are secured to the stop in such positions that they will cause the stop to fold inwardly when the strap is released by the person holding it and the arms of the spring spring back to their normal positions.

A suitable link E connects the hand-strap F with the outer end of the stop D. The link E is preferably secured to the stop D by passing the end of the stop around the upper portion of the link and securing it by the rivet d' , which secures the stop to the lower branch b^2 of the spring B. By this means the hand-strap F is caused to hang vertically. The hand-strap F is secured to the link, and the loop is formed in the strap by the same fastening device by passing one end of the strap around the lower portion of the link E and bringing the other end up to the end which is passed around the link E, so as to overlap a portion of the said end, and a suitable rivet f secures the three thicknesses together.

In the form shown in Fig. 3 the stop D is formed separately from the upper loop-strap C, and they are connected together by a suitable link G, the connection between the other end of the stop and the under strap being the same as in the preferred form.

In the form shown in Fig. 4 the upper loop portion C, the stop D, and the under strap F are all formed of one piece.

In the form shown in Fig. 5 a coil b^4 is formed in the spring between the arms b and b^2 ; otherwise the construction is the same as that shown in Figs. 1 and 2.

Referring to the form shown in Fig. 6, a coil H is formed and its free ends h h' are securely fastened to substantially rigid arms h^2 h^3 , respectively, the free ends of the said arms being secured to the stop-strap D by suitable fastening devices, as in the previous forms, the said arms h^2 h^3 serving to form prolongations of the ends of the spring.

In the forms shown in Figs. 5 and 6 the forwardly-extending arms are substantially rigid, the elasticity of the spring depending upon the coil in the spring.

In operation, supposing the parts to be in their normal or raised position, the hand-strap F is pulled down, causing the arms of the spring to be drawn apart until the stop D is straightened out, when it will support the weight and prevent the spring from being

further extended. This stop is of such a length as to prevent the spring being extended beyond its elastic limit, so that as the hand-strap is released the spring will fly back
5 to its normal position.

The spring may be made of flat metal, or it may be made of any desired shape in cross-section.

It is obvious that slight changes might be
10 resorted to in the construction and arrangement of the several parts herein described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set
15 forth; but

What I claim is—

1. A supporting strap, comprising an upper portion adapted to be secured to the supporting bar, a hand strap, a stop between the up-

per portion and the hand strap, and a loop 20 spring secured at its ends to the stop, the said stop serving to prevent the arms of the spring from being extended beyond their elastic limit, substantially as set forth.

2. A supporting strap, comprising an upper 25 portion secured to the supporting bar, a hand strap, a stop between the upper portion and the hand strap, a loop spring, the arms of the spring being secured to the stop so as to cause the slack portion of the stop to extend within 30 the loop, the said stop serving to limit the extension of the spring, substantially as set forth.

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Witnesses:

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