(No Model.)

F. G. GROVE.

LINK LIFTER.

No. 417,023. Patented Dec. 10, 1889.

Fig 1

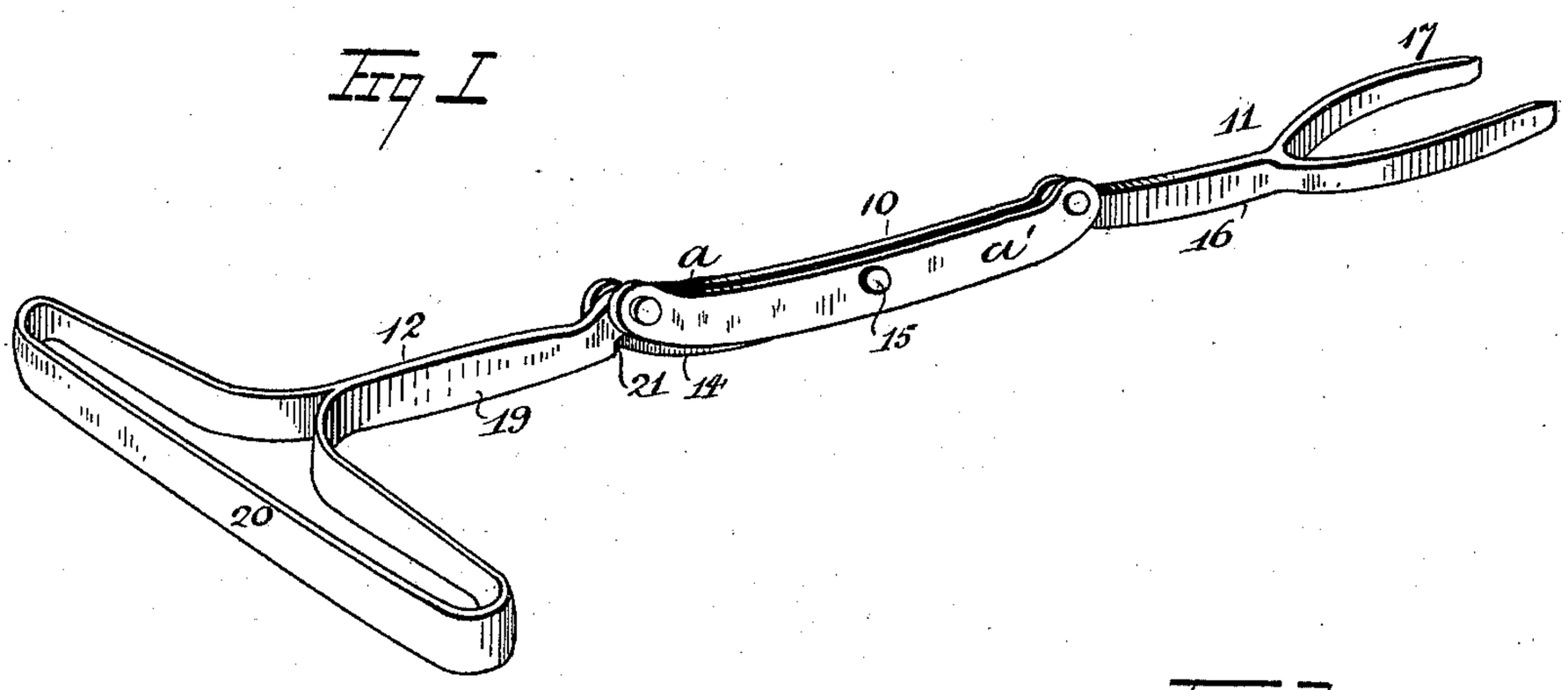
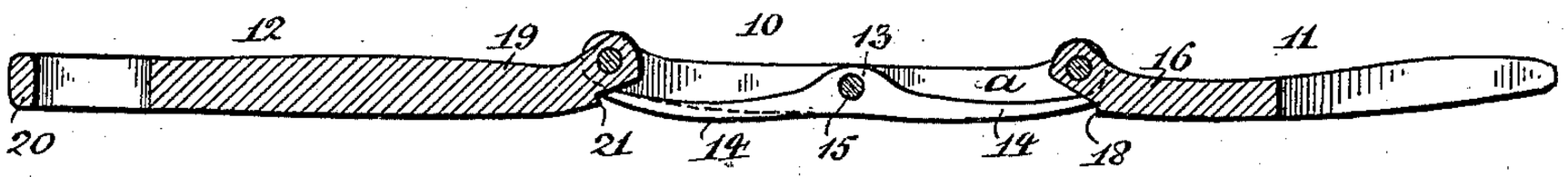


Fig 2



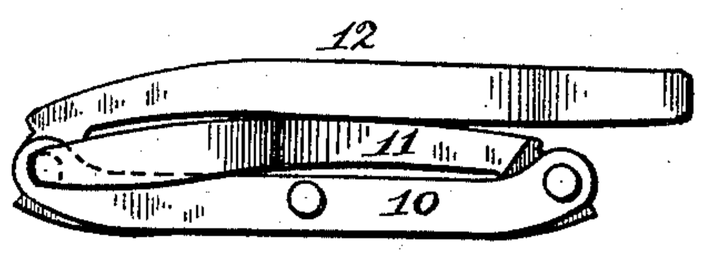


Fig 3

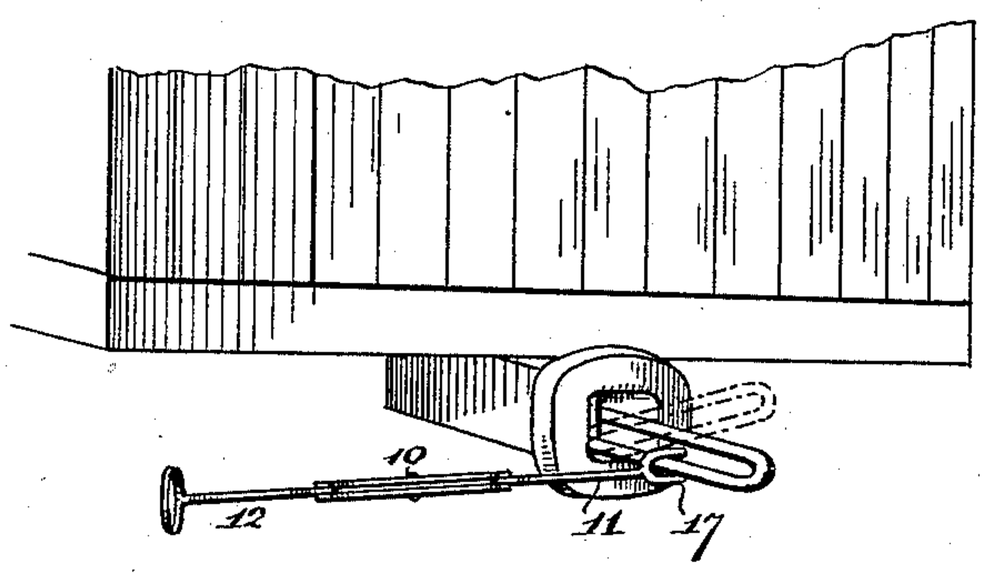


Fig 4

WITNESSES:

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FRANK G. GROVE, OF LURAY, VIRGINIA.

LINK-LIFTER.

SPECIFICATION forming part of Letters Patent No. 417,023, dated December 10, 1889.

Application filed October 1, 1889. Serial No. 325,665. (No model.)

To all whom it may concern:

Be it known that I, FRANK G. GROVE, of Luray, in the county of Page and State of Virginia, have invented a new and useful Link-Lifter, of which the following is a full, clear, and exact description.

My invention relates to a device for lifting and manipulating the coupling-links of railroad-cars, and has for its object to provide a simple and economic device capable of being folded up and carried in the pocket, and by means of which a coupling-link may be elevated or otherwise moved to enter an opposed draw-head without necessitating the operator standing or going between the cars.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the device folded out for use. Fig. 2 is a central longitudinal section through the same. Fig. 3 is a side elevation of the device when folded up, and Fig. 4 is a side elevation of the device folded out and in position for use.

The device is constructed of a series of bar-like sections, preferably three in number—namely, an intermediate section 10, a grip-section 11, and a handle-section 12. The intermediate section 10 is constructed of two parallel side pieces *a* and *a'*, held a slight distance apart by a central projection 13, forming an integral portion of a spring 14, which spring constitutes the back of said section. The ends of the side pieces or plates *a* and *a'* of the central section are preferably curved upward, and the spring 14 is of such length as to extend practically from end to end of the section. The spring is attached at one point only and by means of a rivet 15, passed through the center of the side pieces or plates *a* and *a'* and the central spring projection 13, as best shown in Fig. 2.

The grip-section 11 comprises a shank 16, having an outer forked or bifurcated extremity 17. The inner end of the shank 16 is upturned and provided with a shoulder 18 in the under side of the upturned end, the said end being pivoted between the members of one extremity of the central section 10.

The handle-section 12 comprises a shank 19, formed at its outer extremity with a head 20, the said head being preferably made to extend at a right angle beyond each side of the shank, whereby said shank presents, essentially, the appearance of the letter T. The inner end of the shank is upturned and provided with a shoulder 21, corresponding with the shoulder 18 of the grip-section, and the shouldered upturned end of the handle-section is pivoted in the extremity of the intermediate section 10 opposite to that connected with the grip-section. The shoulders 18 and 21 of the outer sections of the device bear against the respective ends of the spring 14, and the said spring 14 acts upon the shoulders of the outer sections in similar manner to the action of the spring of a knife-handle upon its blades.

By means of the arrangement above described it is evident that when the sections are opened out in a horizontal plane, which is the position for use, they will be held essentially in a rigid position, and that each outer section is capable of being folded over upon the intermediate section, as illustrated in Fig. 3, in which the grip-section is first folded over, contacting with the intermediate section, and the handle-section is folded down upon the grip-section. The folding of the sections so reduces the length of the device that the operator may conveniently carry the said device in his pocket.

When the device is folded up for use and cars are to be coupled—for instance, cars having draw-heads of different heights—the forked end 17 of the grip-section is made to contact with the link, as shown in Fig. 4, and the device is slightly turned or twisted, thereby obtaining a firm hold upon the link, whereupon the operator, standing a considerable distance from the draw-head, may expeditiously and most conveniently elevate, depress, or otherwise manipulate the link, as occasion may demand.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improved article of manufacture, a link-lifter consisting of a central section having a spring secured thereto, a grip-section pivoted in one end of the central section and contacting with the spring, and a handle-section pivoted in the opposite end of the central section, also contacting with the spring, substantially as shown and described, whereby the said sections may be arranged in a horizontal plane or folded one upon the other, as and for the purpose specified.

2. In a link-lifter, the combination, with a central section having a spring secured in one longitudinal edge, of a grip-section comprising a shank having a bifurcated or forked outer end and a shouldered inner end, said inner end being pivoted in one extremity of the central section, and a handle-section comprising a shank shouldered at one extremity and pivoted in the opposite extremity of the central section, the said handle-section being provided with an offset at its outer end, and the said shoulders of both the handle and grip sections being made to contact with the ends of the said spring, substantially as shown and described.

FRANK G. GROVE.

Witnesses:
E. T. BOOTON,
C. T. HOLTZMAN.