

No. 634,975.

Patented Oct. 17, 1899.

W. S. G. BAKER.

CAR AXLE BOX.

(Application filed Feb. 24, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 2.

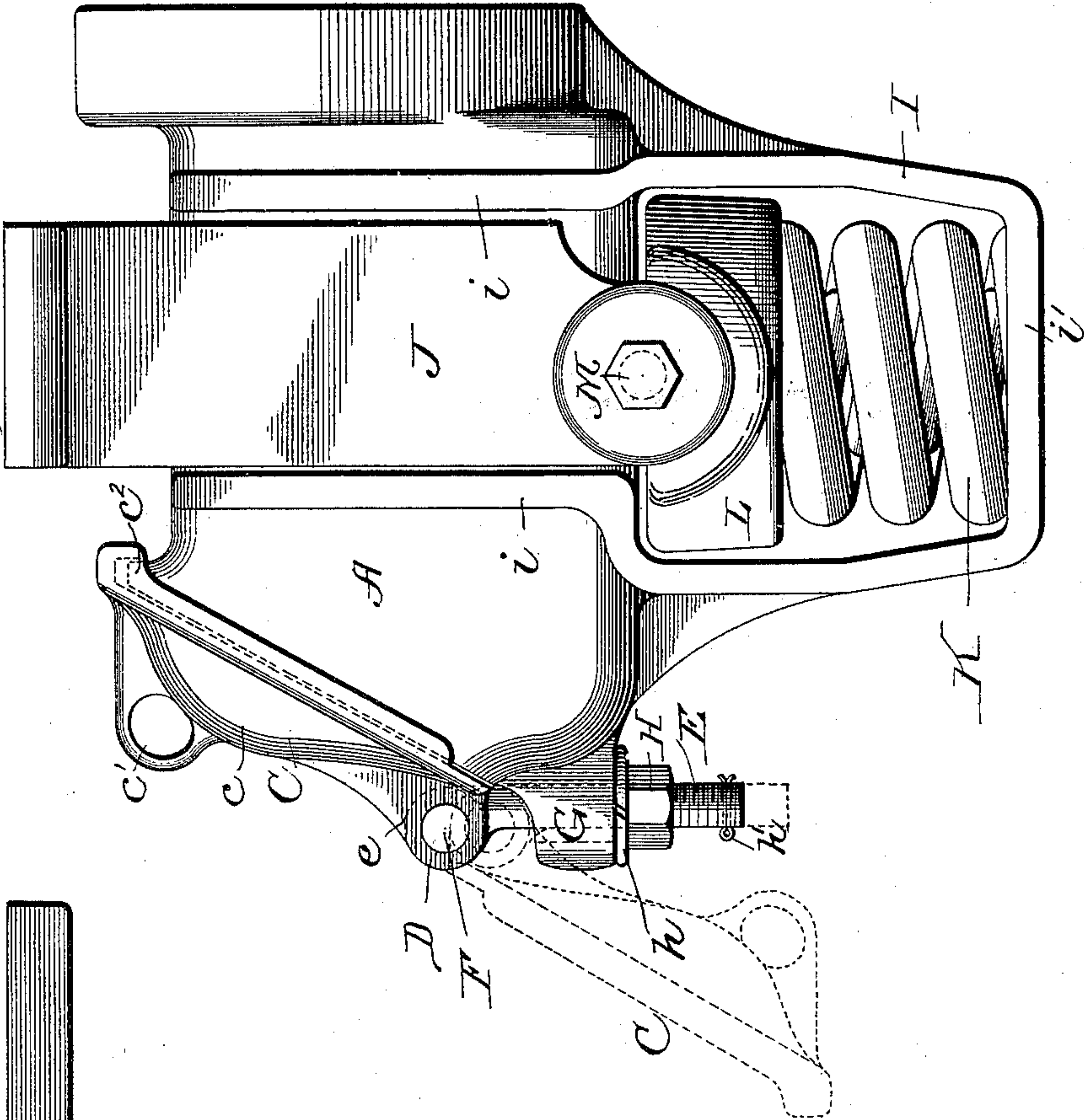
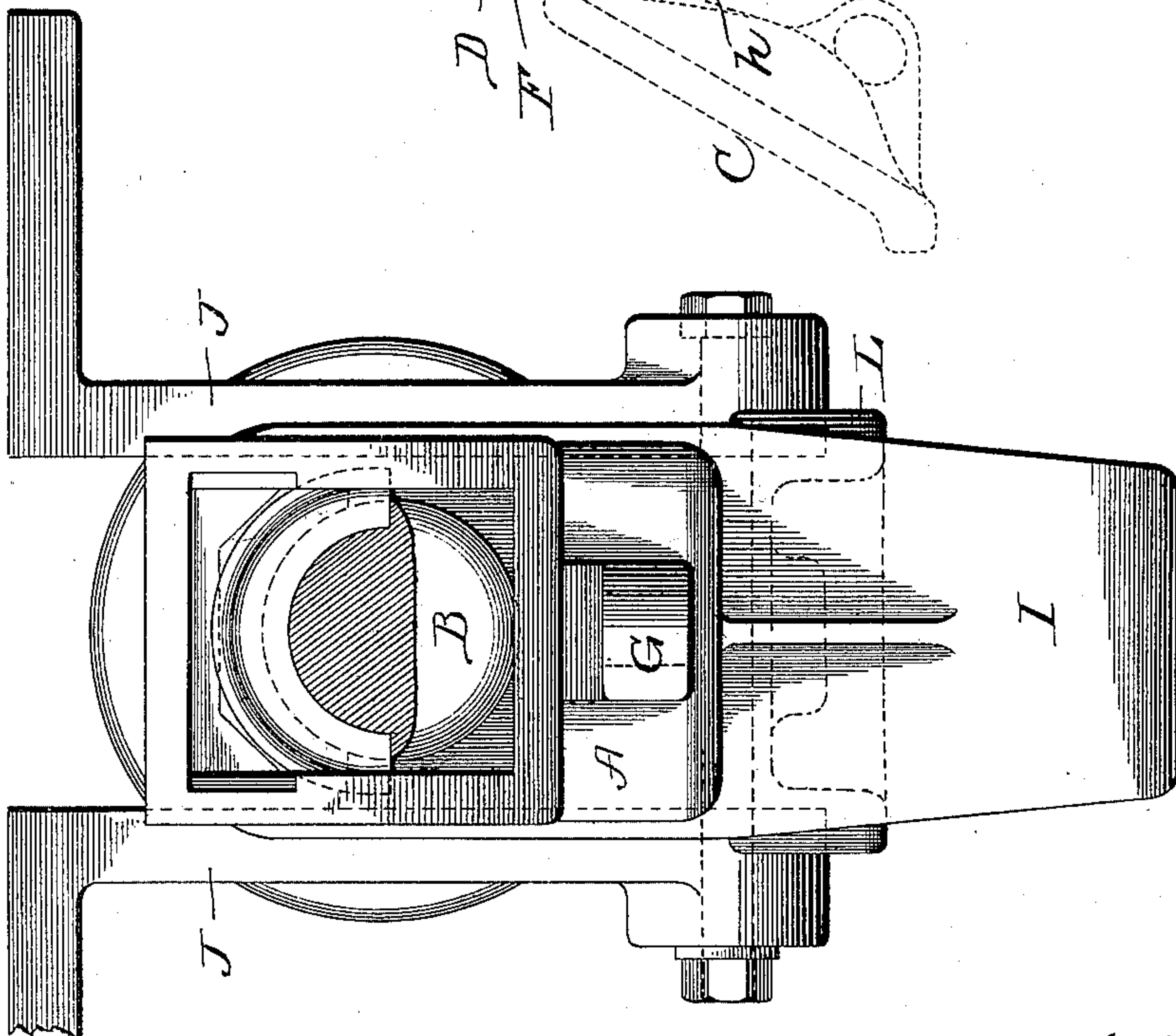


Fig. 1.



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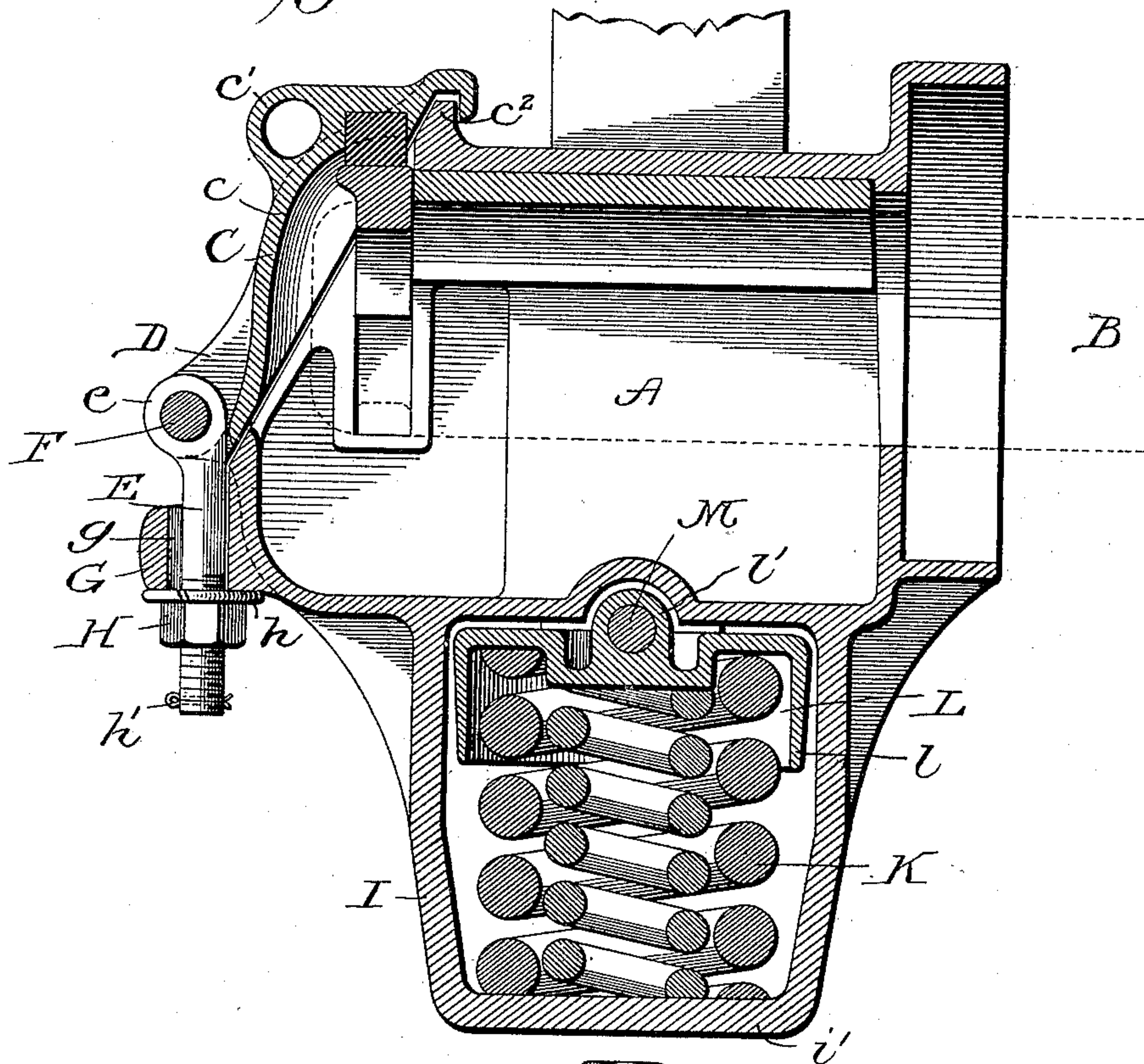
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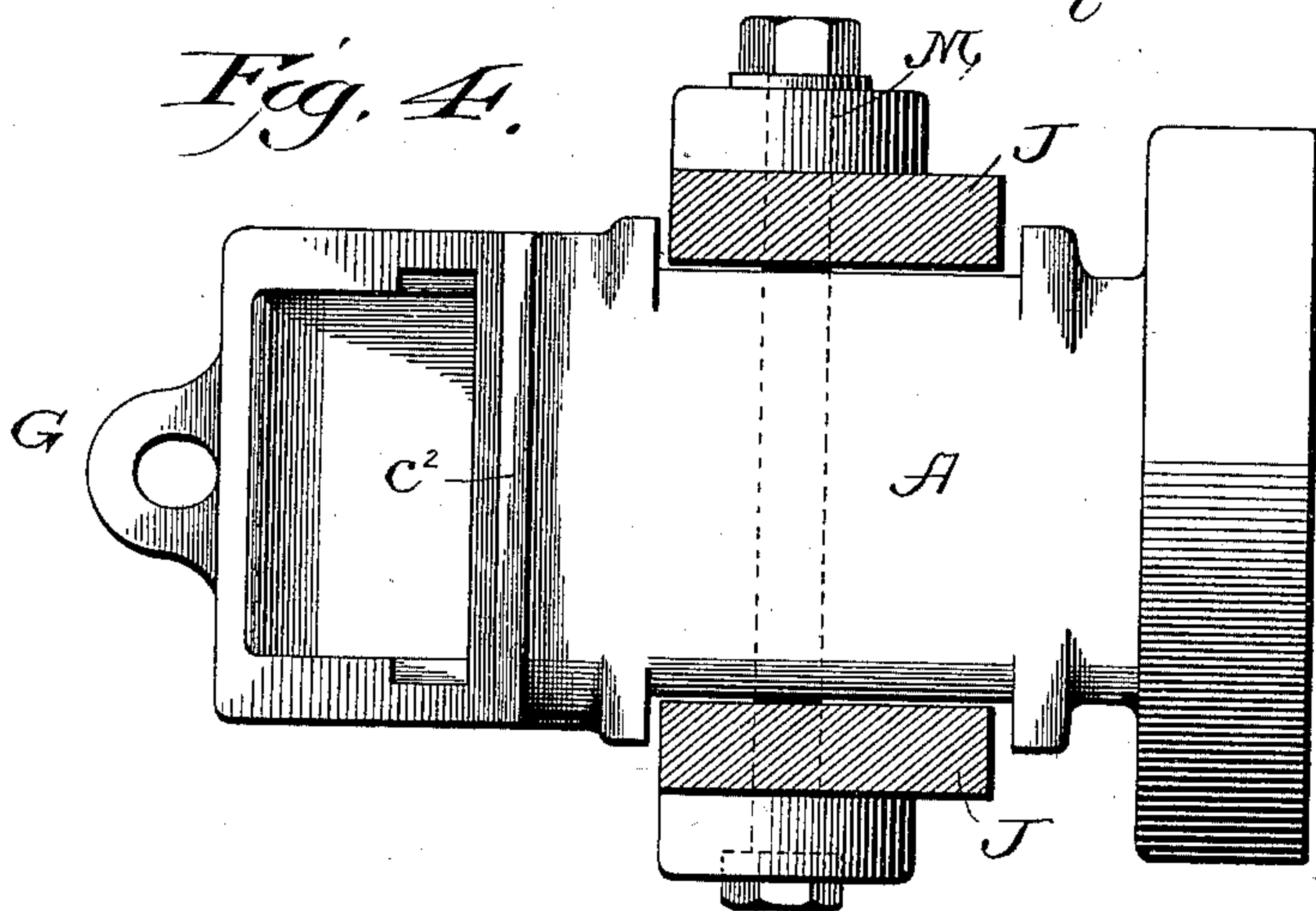
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*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

WILLIAM SEBASTIAN GRAFF BAKER, OF BALTIMORE, MARYLAND.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 634,975, dated October 17, 1899.

Application filed February 24, 1899. Serial No. 706,754. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM SEBASTIAN GRAFF BAKER, a citizen of the United States, residing in Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Car-Axle Boxes, of which the following is a specification.

In my Patent No. 292,399, of January 22, 1884, I have shown a car-axle box which is provided with a lid, hinged at its lower end to ears projecting from the box and provided at its upper end with a flange or rib that interlocks with a rib or shoulder on the box. The hinge connection at the lower end of the lid is loose, so that the lid can rise vertically at the hinge. The hinge-pin carries a swinging frame, which is provided with a set-screw or cam that can be operated to engage with the lid and hold it firmly in place. By my present invention I simplify the construction of the lid-securing devices and render them more secure.

In the accompanying drawings, Figure 1 is a front elevation of an axle-box constructed in accordance with my invention with the lid removed and some of the parts broken away the more clearly to illustrate other parts. Fig. 2 is a side elevation of my improvements. Fig. 3 shows a central transverse section through an axle-box provided with my improved lid. Fig. 4 shows a plan view of the box, the axle-box yoke being in horizontal section and the lid removed.

The box proper, A, may be of any suitable construction, and the axle B has suitable bearings within the box. These form no part of my present invention.

The lid C is similar in some respects to that shown in my patent before mentioned. It is concaved at *c* and provided with a handle *c'*. Along both sides and at its upper edge the lid is flanged, so as to overlap the edges of the opening in the box, as illustrated in Figs. 2 and 3, thus forming a dust-guard. Any suitable packing may be interposed between the lid and the edge of the opening. As clearly shown in both Figs. 2 and 3, a ridge or shoulder *c<sup>2</sup>* is formed on the top of the box over the opening therein, and the top flange of the lid fits over this shoulder. At its lower end the lid is formed with two ears D, arranged a sufficient distance apart to accommodate

the eye *e* of an eyebolt E, which is connected with the ears by a transverse pin or bolt F. The bolt E projects downwardly through a lug G, formed on the box below its opening. The opening *g* in the lug is somewhat larger than the diameter of the bolt, so as to permit the bolt to move freely vertically and also to have a small amount of lateral play. Below the lug G the bolt is provided with a nut H, and between this nut and the lug is interposed a washer *h*. A key *h'* limits the downward movement of the nut.

Figs. 2 and 3 show the lid locked to the box. It will be observed that the upper flanged end of the lid engages the shoulder *c<sup>2</sup>* on the box, and the nut and washer on the eyebolt are close to the lug G. The lid cannot separate from the box as long as the parts are in this position, inasmuch as it is necessary for the lid to be raised vertically before it can clear the shoulder *c<sup>2</sup>* and swing back; but this is prevented by the nut H. If, however, the nut H be loosened and moved downwardly on the screw-bolt, the lid can be lifted vertically, so as to clear the shoulder *c<sup>2</sup>*, and may then be swung back in the manner indicated by dotted lines in Fig. 2.

It will be understood that when the lid is lifted the eyebolt and the nut and washer which it carries will also be first lifted; but when the lid is swung back and dropped the eyebolt will drop with the lid, as indicated by dotted lines, and will rest on the lug G. These securing devices are very easily operated, and they are very secure. The parts are few and simple. Eyebolts are of very common construction and are thus easily obtained or made. An eyebolt such as employed in my present improvements is much simpler, is stronger, and more easily operated than the swinging frame shown in my before-mentioned patent. It is also better and more secure than the cam-locking device shown in my said patent.

My improved lid is shown as applied to a box in which a spring-supporting frame I depends from the box. The front and rear limbs of the U-shaped frame I are cast integrally with the box, the opposite ends of the two wings being prolonged upwardly at *i*, forming ribs on the box which not only increase the strength, but also provide guides



for the two members of the axle-box yoke J. The supporting-spring K is arranged on the bottom piece *l'* of the spring-supporting frame, and the upper end of the spring is arranged  
5 within a cap L, which is cup-shaped, closed at the top, and provided with an annular downwardly-projecting flange *l*, which incloses the upper end of the spring. The cap is provided with a lug *l'*, through which ex-  
10 tends a transverse horizontal bolt M, which is secured to the two members of the axle-box yoke or pedestal J, which in turn may be secured in any suitable way to the truck-frame.

15 I claim as my invention—

1. The combination of an axle-box formed with a front opening and with a perforated lug below the opening, a bolt extending through the perforation in the lug, a lid hinged to the  
20 upper end of the bolt and adapted to swing thereon to open the box, and a nut on the bolt below the lug.

2. The combination of an axle-box having a front opening and formed with a rib or

shoulder at its upper end above the opening, 25 and provided with a vertically-perforated lug below the opening, a bolt extending through the perforated lug, a lid hinged to the upper end of the bolt and provided with a flange at its upper end adapted to fit over the shoulder 30 on the box, and a nut on the bolt below the perforated lug.

3. The combination of an axle-box having a front opening and provided with a rib or 35 shoulder above its opening, and with a vertically-perforated lug below the opening, an eyebolt extending through the perforated lug, a lid provided with a flange extending over the rib or shoulder on the top of the box, and also with ears at its lower end, a hinge con- 40 nection between the ears and the eyebolt, and a nut on the bolt below the perforated lug.

In testimony whereof I have hereunto subscribed my name.

WILLIAM SEBASTIAN GRAFF BAKER.

Witnesses:

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