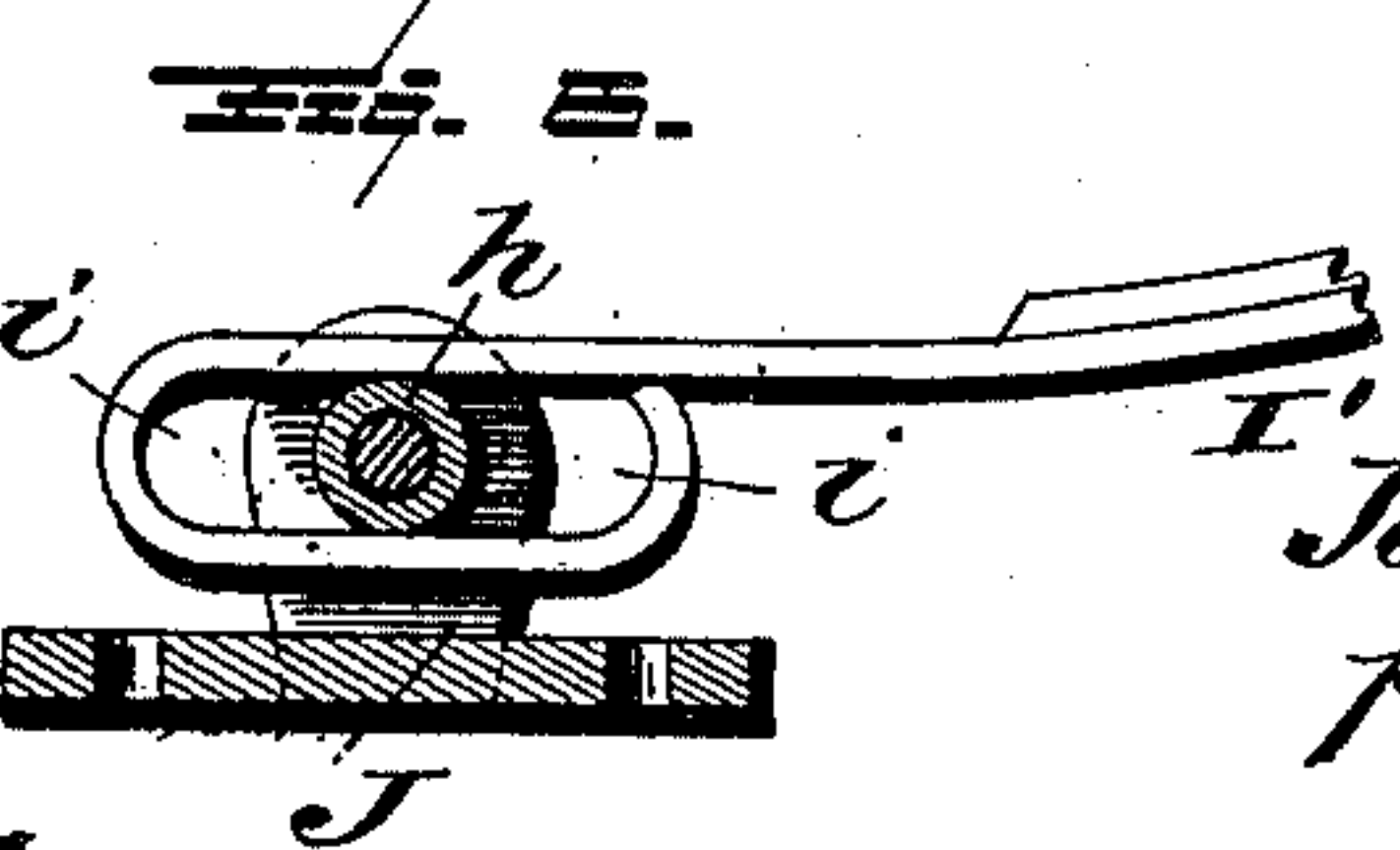
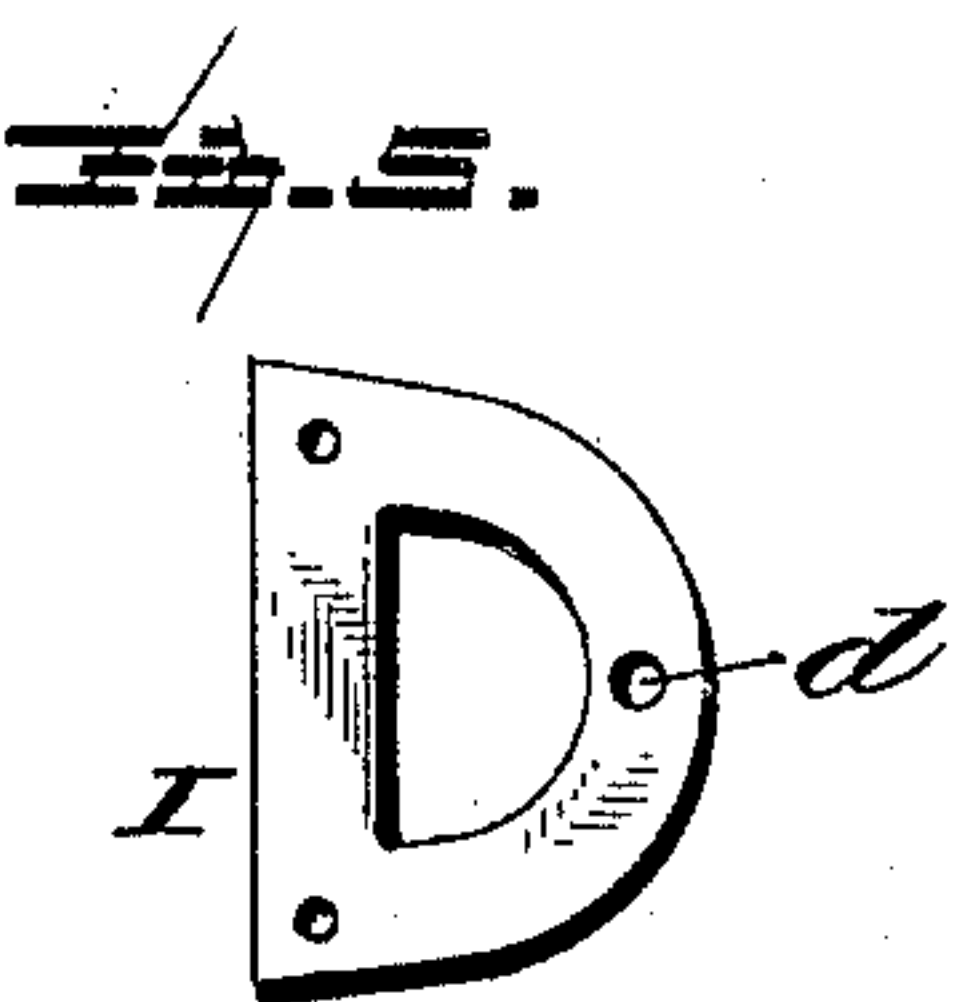
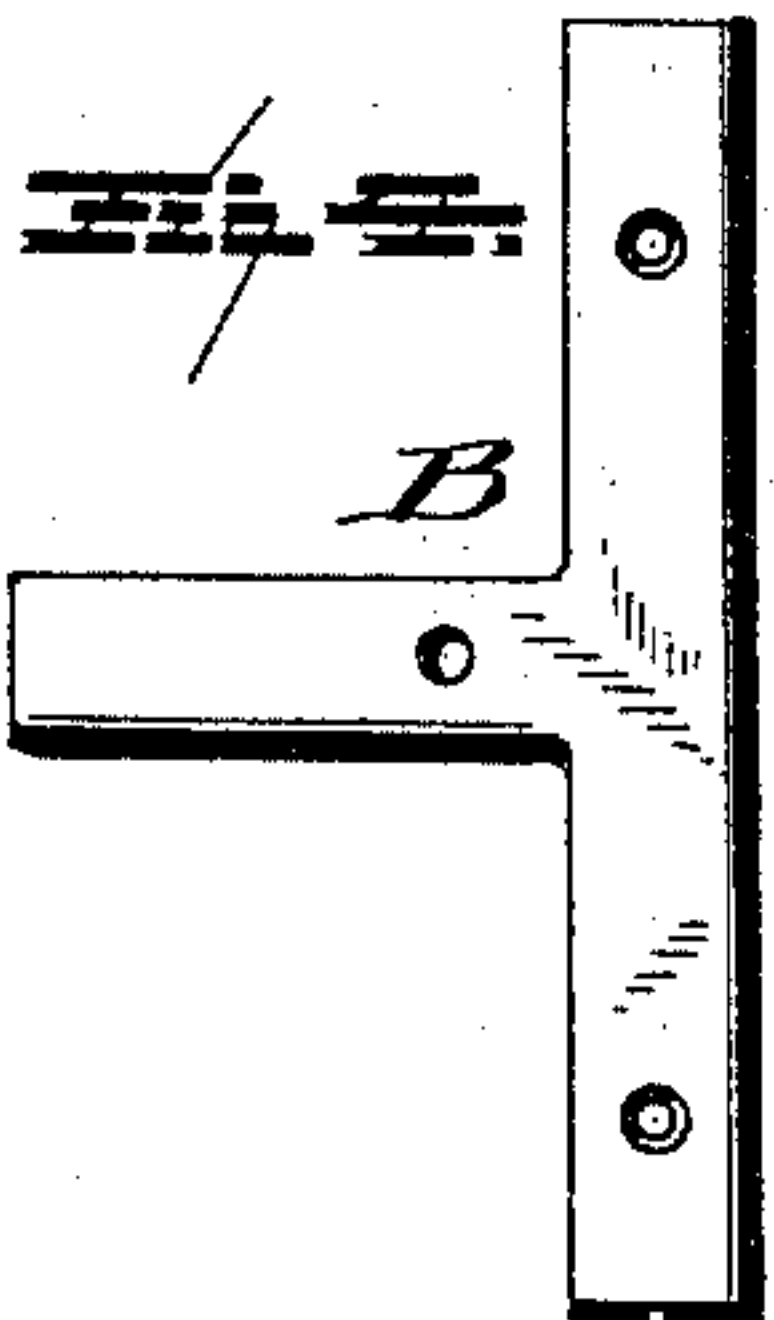
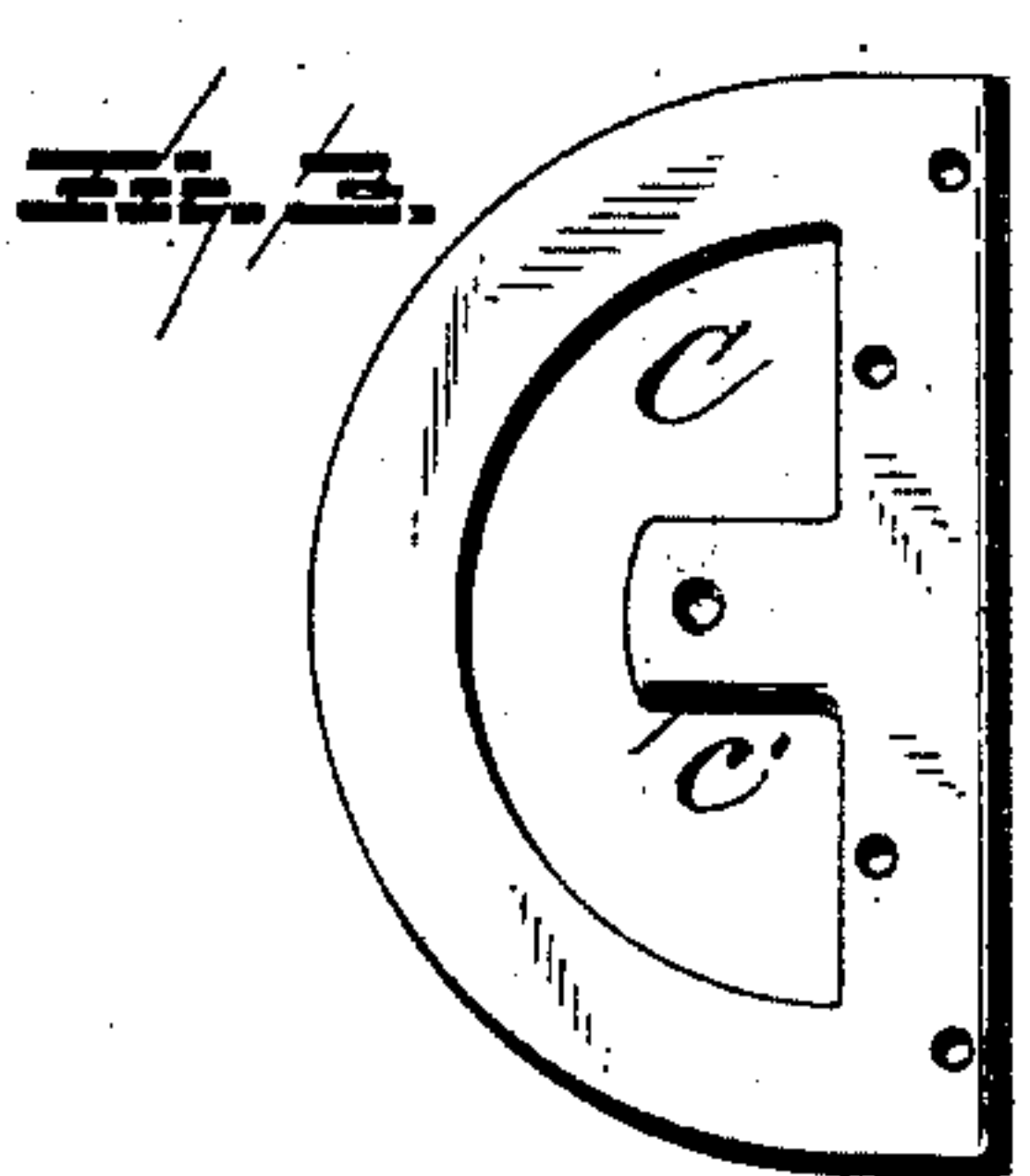
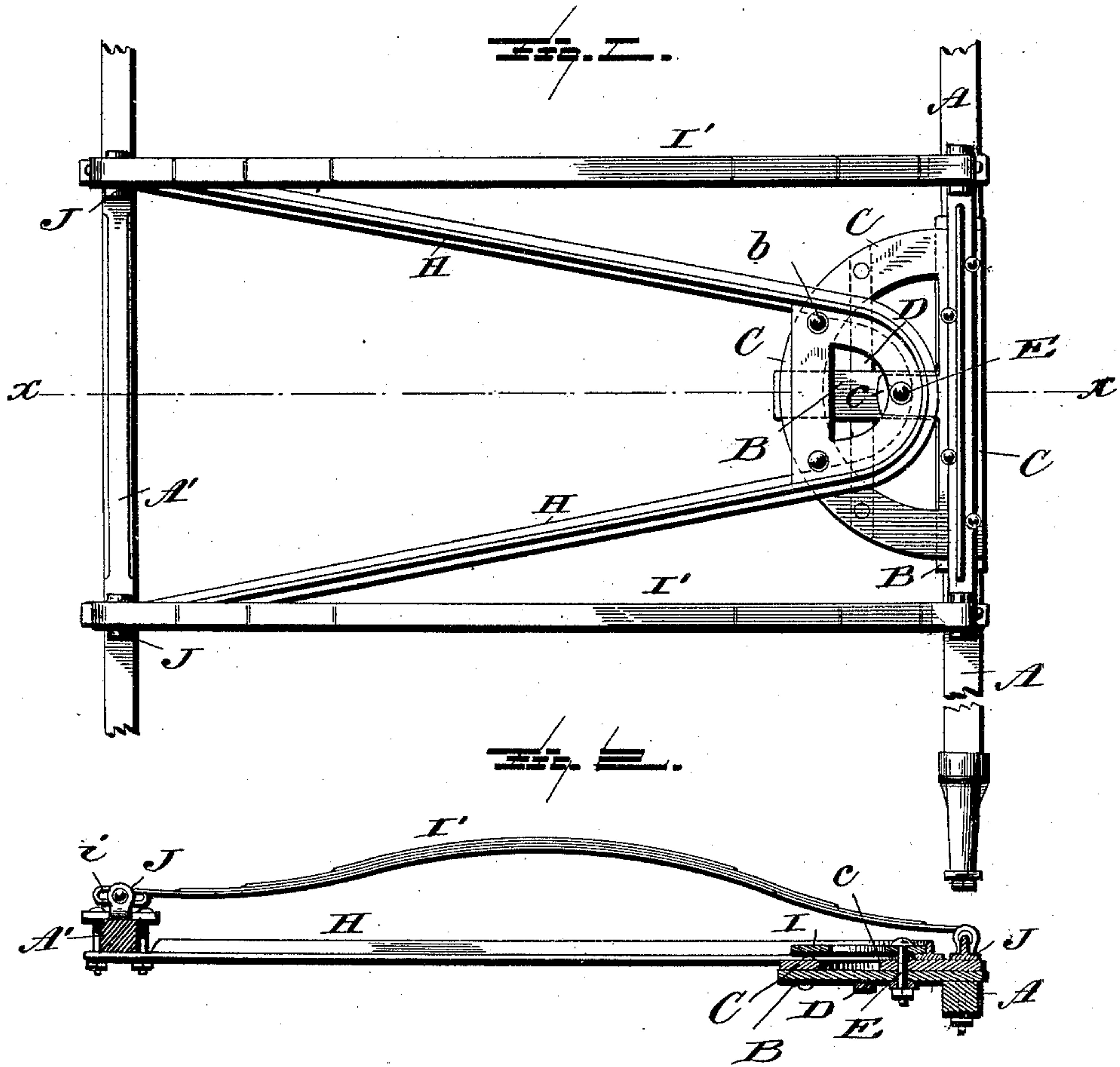


(No Model.)

J. W. VORWICK.
RUNNING GEAR FOR VEHICLES.

No. 466,813.

Patented Jan. 12, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH W. VORWICK, OF MONMOUTH, ILLINOIS.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 466,813, dated January 12, 1892.

Application filed March 16, 1891. Serial No. 385,261. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. VORWICK, a citizen of the United States, residing at Monmouth, in the county of Warren and State of Illinois, have invented certain new and useful Improvements in Running-Gear; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in running-gear for vehicles; and it has for its objects among others to provide an improved running-gear in which the parts shall be simple, cheap, and durable, the fifth-wheel and reach being of novel construction, the side springs being capable of endwise movement, and the device as a whole rendered easy riding. The springs lengthen and shorten as the weight comes on them when in use. I provide a continuous reach of angle-iron and a fifth-wheel so constructed that I am enabled to employ a king-bolt to the rear of the axle.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a top plan illustrating my invention. Fig. 2 is a longitudinal vertical section through the line *xx* of Fig. 1. Fig. 3 is a top plan of the top part of the fifth-wheel removed. Fig. 4 is a like view of the bottom part of the fifth-wheel removed. Fig. 5 is a like view of the cap for the reach. Fig. 6 is an enlarged detail partly in vertical section and partly in side elevation, showing the loose connection of the side spring.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the front and A' the rear axle.

To the upper side or face of the front axle I secure the substantially T-shaped plate B, the longitudinal portion of which extends toward the rear, and upon this plate is secured

the semicircular plate C, the transverse portion of which rests upon the axle and upon the plate B, being braced by the transverse bar or keeper D, which is secured to the under side of the plate C, as seen in Figs. 1 and 2. The plate C has a central rearwardly-extending portion *c*, as seen best in Fig. 3, and through this portion and through a corresponding hole in the rearwardly-extending portion of the plate B passes the king-bolt E, as seen best in Fig. 2.

H is the reach, formed of a continuous piece of T-shaped iron or steel, with the base downward and resting upon the plate C, as seen in Figs. 1 and 2. The rear ends of the reach are secured to the rear axle in any suitable manner.

I is a cap for the reach. It conforms to the curvature thereof at the forward end and is seated thereon, being supported by the base portion thereof, as shown in Fig. 2, and secured to the curved portion of the plate C in any suitable manner, as by the bolts *b*, as indicated in Fig. 1. The center of the forward or curved portion is provided with a hole *d*, through which the king-bolt passes, as seen in Fig. 2. The vertical portion or rib of the reach serves to keep the cap-plate for movement in a forward direction, as will be understood from Fig. 2.

To the rear axle the rear ends of the side springs I' are secured. I have shown such connection as consisting of the shackles J, (seen best in the detail in Fig. 6,) between the ears of which is journaled a horizontal roller *h*, which extends parallel with the axle, and the rear ends of the springs are provided with elongated loops or slots *i*, which embrace these rollers, as seen in Figs. 2 and 6, the forward ends of the springs being connected with the front axle in any suitable manner.

It will be seen that I am enabled to use a common bolt for the king-bolt, as shown in Fig. 2. The substantially U-shaped reach, being formed of angle or T iron or steel, provides a very strong and yet light reach. The springs having a longitudinal play give with the weight and thus provide an easy-riding vehicle. The parts are easily assembled, and when in position are not liable to get out of order or to be broken.

What I claim as new is—

In running-gear for vehicles, the combination, with the front and rear axles, of the substantially T-shaped bottom part of the fifth-wheel secured to the front axle, the semicircular upper part of the fifth-wheel formed with cross-bar resting on and secured to the cross-bar of the lower part and formed with the central rearwardly-extending portion c' ,
10 arranged between the cross-bar and curve, the U-shaped reach, the reach-cap having cross-bar and curved portion fitting the curve of the forward end of the reach and supported thereby, the king-bolt passed centrally

through the curve of the reach-cap and through 15
the longitudinal portion of the lower part and through the extension c' of the upper part of the fifth-wheel, and the transverse keeper D beneath the lower part of the fifth-wheel and secured thereto, substantially as specified. 20

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH W. VORWICK.

Witnesses:

M. B. WEBSTER,
F. W. HARDING.