

No. 651,855.

Patented June 19, 1900.

S. A. HASELTINE.

TIRE TIGHTENER.

(Application filed Jan. 15, 1900.)

(No Model.)

Fig. 1.

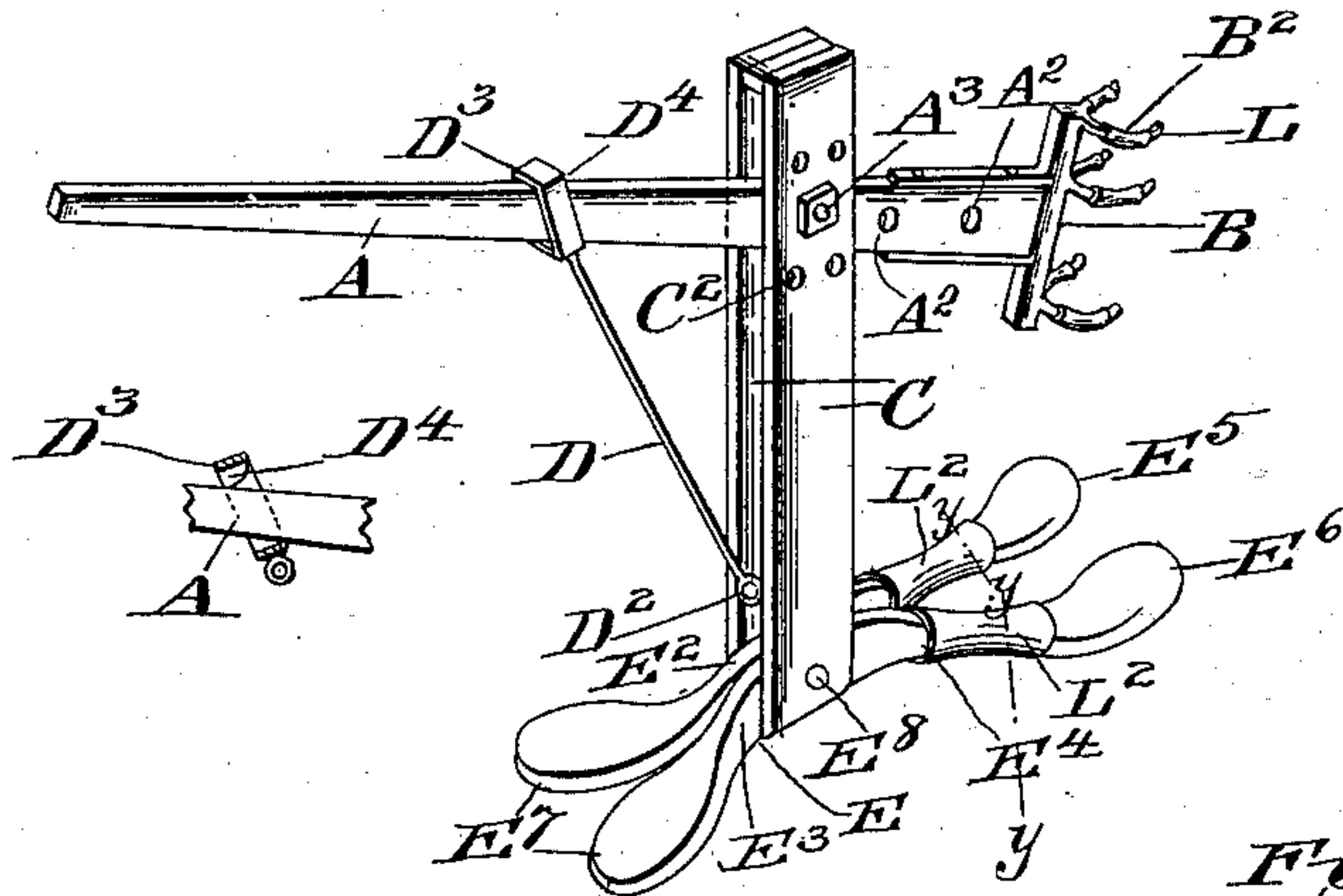


Fig. 2.

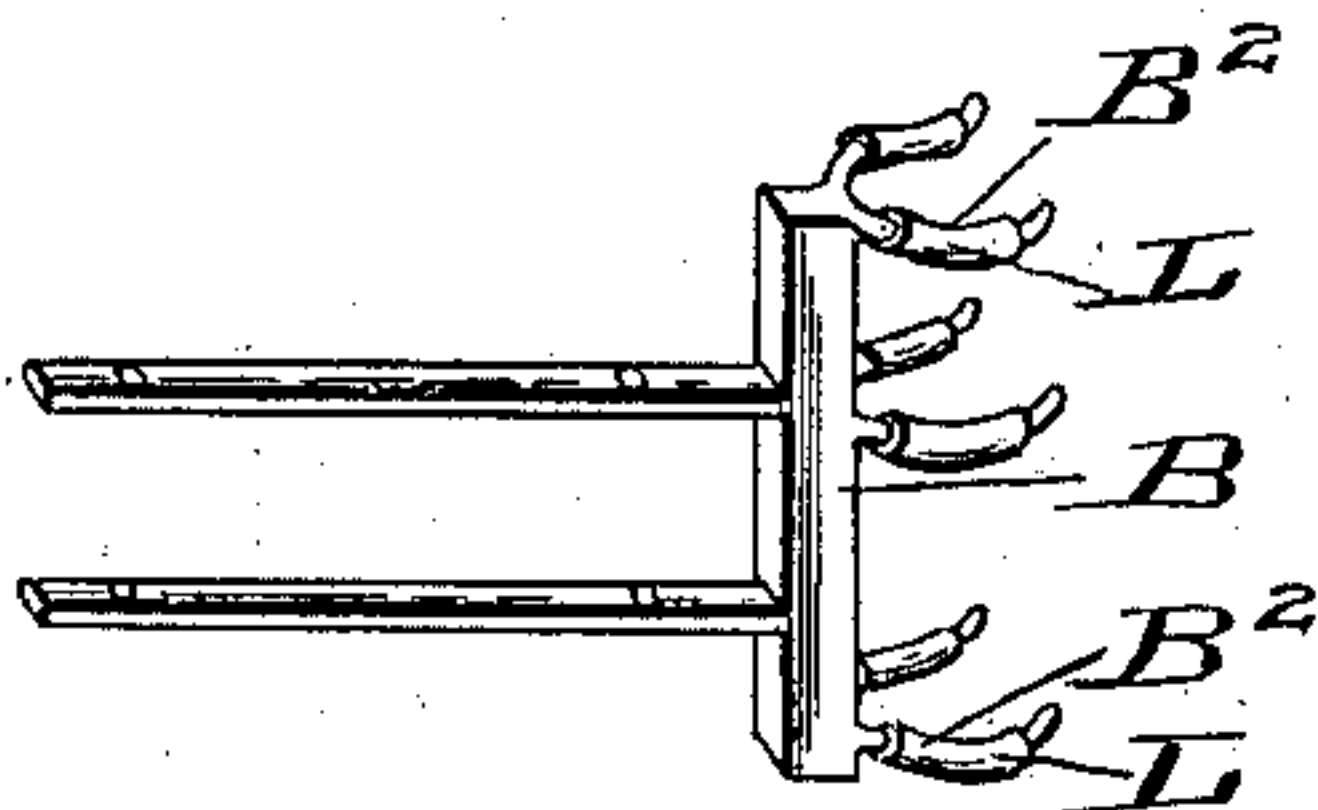


Fig. 3.

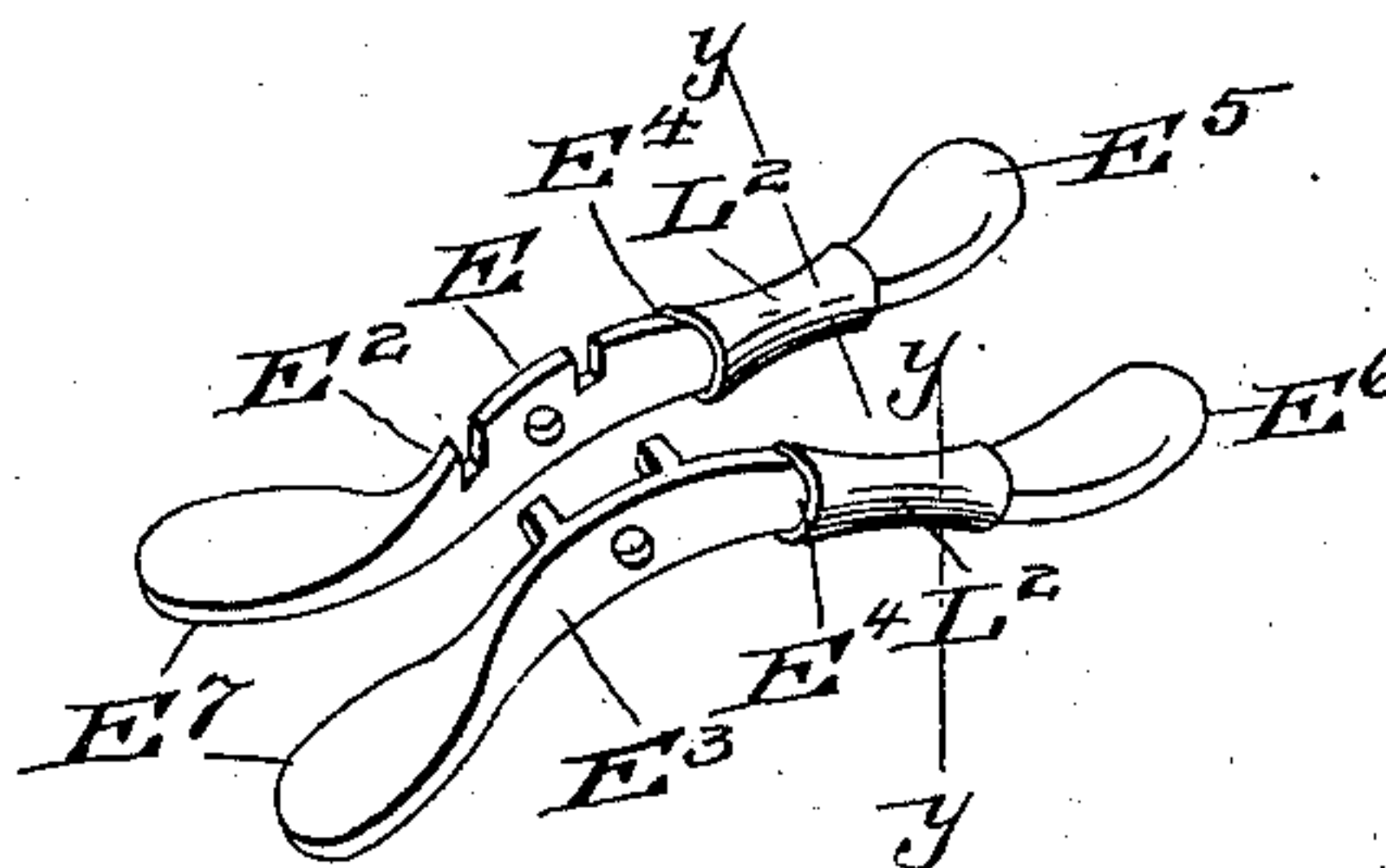


Fig. 5.

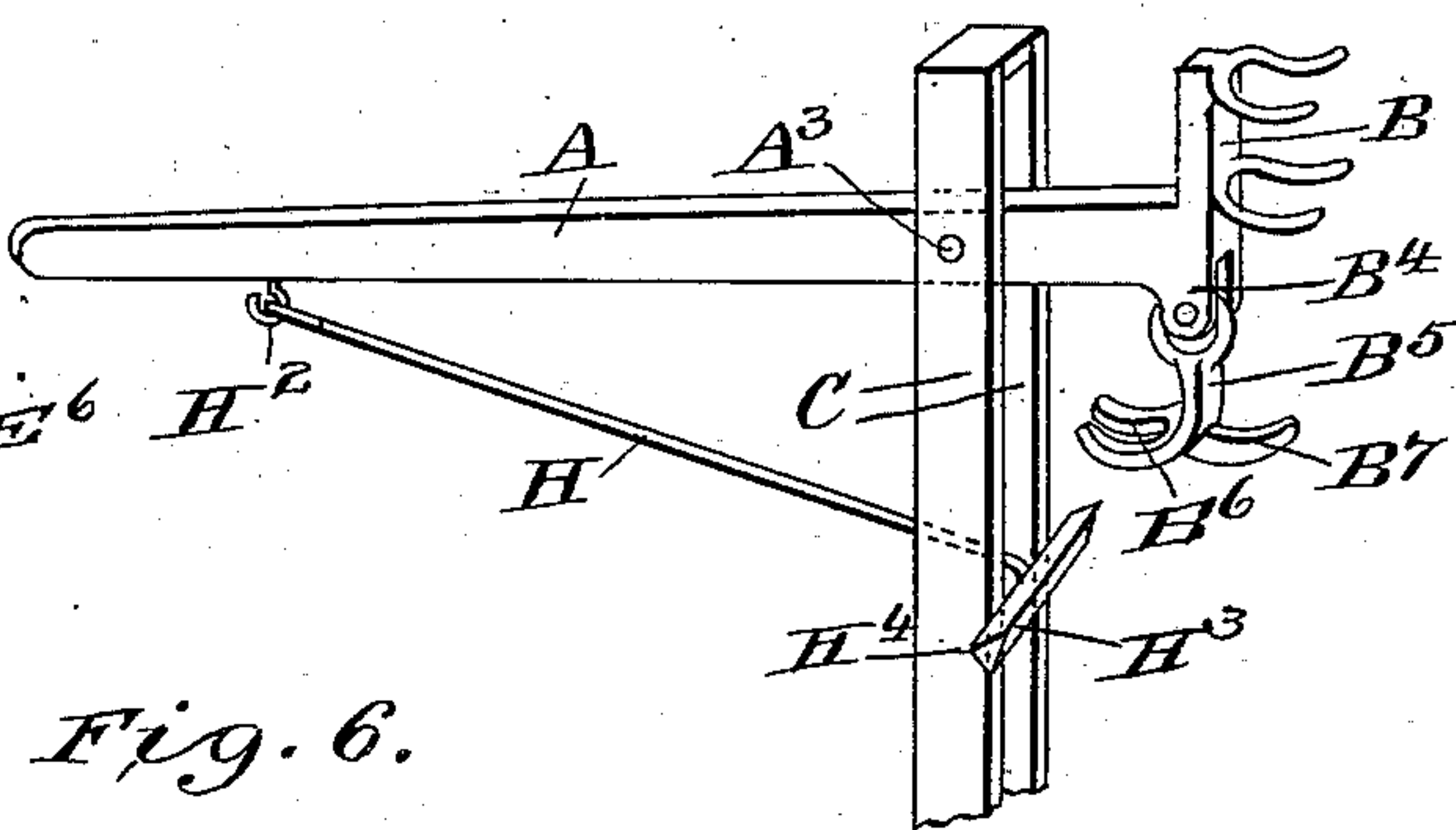


Fig. 4.

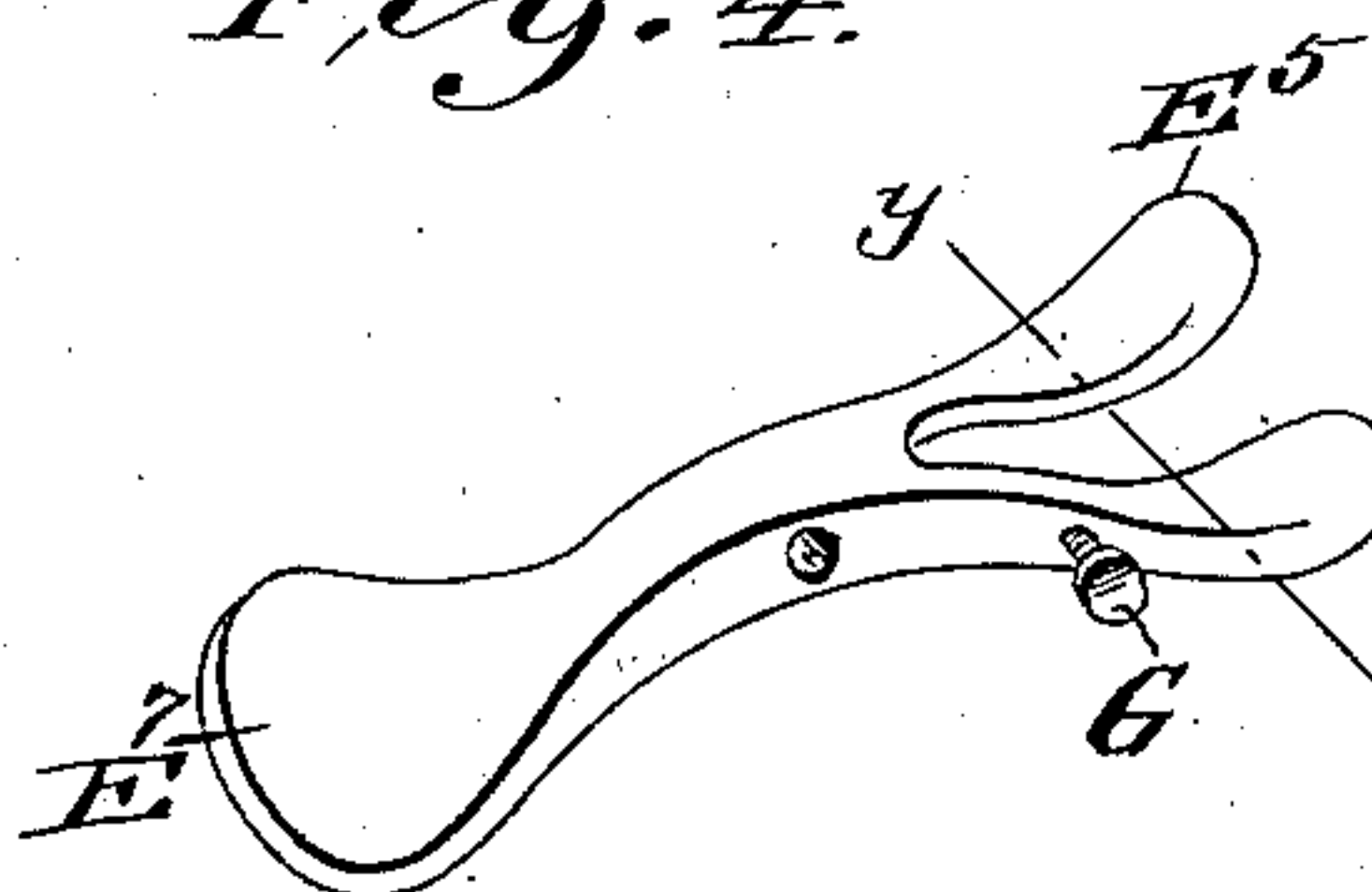


Fig. 6.

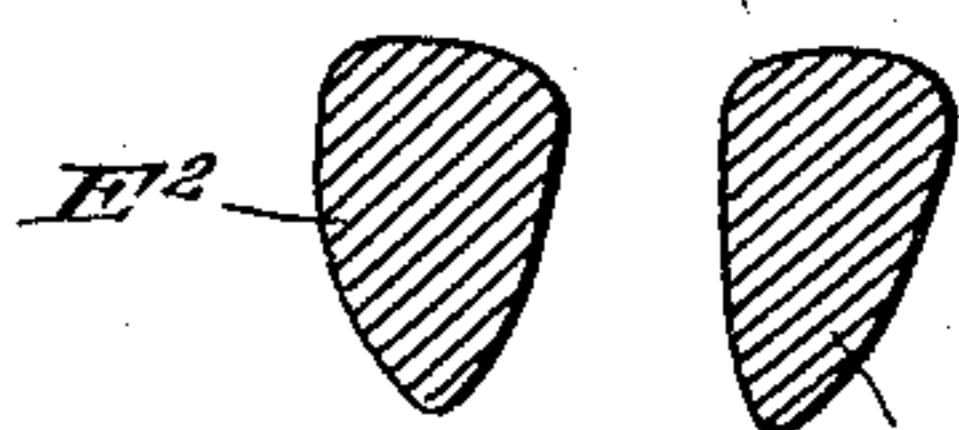


Fig. 7.



Witnesses

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SEWARD AUGUSTUS HASELTINE, OF SPRINGFIELD, MISSOURI.

TIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 651,855, dated June 19, 1900.

Application filed January 15, 1900. Serial No. 1,589. (No model.)

To all whom it may concern:

Be it known that I, SEWARD AUGUSTUS HASELTINE, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented certain new and useful Improvements in a Combined Wagon-Jack and Tire-Tightener; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in tire-tighteners.

The object of the invention is to provide a cheap, simple, and durable device for easily and quickly tightening wagon, buggy, or other vehicle tires without removing them. This object I attain by means of the device illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a view in elevation of the entire device. Fig. 2 is a view of the lifting-iron on the end of the lever. Fig. 3 is a view of the footpiece in two parts. Fig. 4 is a modification of the same in one piece. Fig. 5 is a view in elevation of a modification of the device. Fig. 6 is a view of one of the washers. Fig. 7 is a vertical cross-sectional view on the line *y y* of the footpiece where it presses between the spokes.

Similar letters represent corresponding parts in the several figures.

A is a lever, any desired size, having holes A^2 for a bolt A^3 . There may be two or more of these holes for adjusting the stroke of the lever.

B is a lifter, any desired size and shape, placed on the front end of the lever A for engaging the felly of the wheel. Said lifter is provided with one or more U-shaped projections B^2 to pass around the upper or outer end of the spoke and receive the felly. For the purpose of receiving and holding the felly the upper surface of the U-shaped projections B^2 are made concave, and to prevent the rubbing or marring of the paint the U-shaped projections may be covered with leather or rubber L.

C is the upright or uprights for supporting the lever. I prefer two, with the lever pivoted between them on a bolt A^3 . For the purpose of adjusting the height of the lever

the uprights C are provided with two or more holes C^2 .

D is a stay-rod to hold the lever A at any desired position. For this purpose the stay-rod D may be hinged at one end D^2 and be provided with a link or sleeve D^3 at the other to pass around the lever A and be so arranged with a sharp edge D^4 or a cam as to hold it in any desired position.

E is a footpiece made to fit between the spokes at the hub of the wheel, so as to press down on the spokes to prevent them from being lifted from or loosened in the hub while lifting the felly from the shoulder of the spoke-tenon by the lifter B. For this purpose the footpiece E may be made of one piece, as shown in Fig. 4, and provided with a set or thumb screw G to tighten the footpiece to be operated upon; but I prefer to make the footpiece E of two pieces $E^2 E^3$ and secure them to the bottom of the uprights C, one to each of the said uprights, so as to give the feet $E^2 E^3$ a little lateral or side motion, so they can set themselves between the spoke being operated upon and the one on either side. For holding the spoke firmly down the feet $E^2 E^3$ are wedge-shaped, as shown in Fig. 7, enlarging from the lower edge or side next to the hub upward or outward for giving strength to the feet and to fill the space between the spoke being operated upon and the one on either side for holding the spoke operated upon down in the hub as the lever raises the felly from the shoulder of the spoke at the upper or outer end.

The object of raising the felly from the shoulder of the spoke at its outer end is to insert an open washer X (see Fig. 6) around the upper or outer tenon of the spoke, so that the tire may be tightened without removing it. Leather washers may be used, but I prefer zinc washers.

The front ends $E^5 E^6$ of the footpieces $E^2 E^3$ are made flat and any desired size to serve as a base when used as a wagon or lifting jack, and for the same purpose the back ends E^7 of the feet are made flat and any desired size.

In tightening a tire the large ends $E^5 E^6$ are placed between the spokes where they are far apart, one on each side of the spoke to be operated upon, and then slipped down, so that

the wedge-shaped part at *y y* will fit down between and upon the base of said spoke and the spoke on either side. To prevent the footpiece from injuring the wood or paint on the wheel, the wedge-shaped part of the foot-
 5 piece may be covered with leather or rubber L^2 . Said footpieces are made concave on the lower side, so that the ends E^7 may rest down upon the hub of the wheel. When the foot-
 10 piece is thus in position, one of the U-shaped projections of the lifter B is placed around the spoke at its outer end, and by means of the lever A the felly is lifted, and the sleeve D^3 on rod D by means of the sharp edge D^4
 15 holds the lever down and the felly up while the washer is placed in position. I have also used a T-shaped stay-rod H, hinged to the lever A, with a T-shaped head H^3 on the opposite side of the uprights C, between which
 20 the rod H passes, said T-shaped head having a sharp edge H^4 to prevent slipping. This modification is shown in Fig. 5.

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

1. In a tire-tightener a footpiece, E, having wedge-shaped parts to fit between the spokes of a wheel at the hub to prevent the spoke from being raised while the felly is
 30 lifted from its tenon at its outer end substantially as shown and described for the purpose specified.

2. In a tire-tightener a footpiece E com-

posed of two parts E^2, E^3 , for adjusting themselves between the spokes of a vehicle-wheel
 35 made concave on the lower side and wedge-shaped between the spokes substantially as and for the purpose specified.

3. A tire-tightener consisting of a lever, A, lifter, B, uprights, C, wedge-shaped foot-
 40 pieces, E^2, E^3 and rod, D having a link D^3 , substantially as shown and described.

4. In a tire-tightener the combination of a lever, A, having a lifter, B, with uprights, C, and wedge-shaped concave footpieces E^2, E^3 ,
 45 all substantially as shown and described.

5. A tire-tightener consisting of a lever, A, having a lifter, B, combined with uprights, C; stay-rod, D, having a link D^3 ; and foot-
 50 pieces, E^2, E^3 , made wedge-shaped where they pass between the spokes and a concave projection E^7 , for fitting the hub substantially as and for the purpose specified.

6. In a tire-tightener the combination of a lever, A; lifter, B; uprights, C; rod, D; foot-
 55 pieces E^2, E^3 , said footpieces made to fit between the spokes and upon the hub of a wheel all substantially as shown and described for the purpose specified.

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

SEWARD AUGUSTUS HASELTINE.

Witnesses:

CHANCELLOR HASELTINE,
 EDNA HASELTINE,
 MILDRED LIVINGSTON.