

(No Model.)

H. L. YOUNG.
TOE CLIP.

No. 589,988.

Patented Sept. 14, 1897.

Fig. 5.

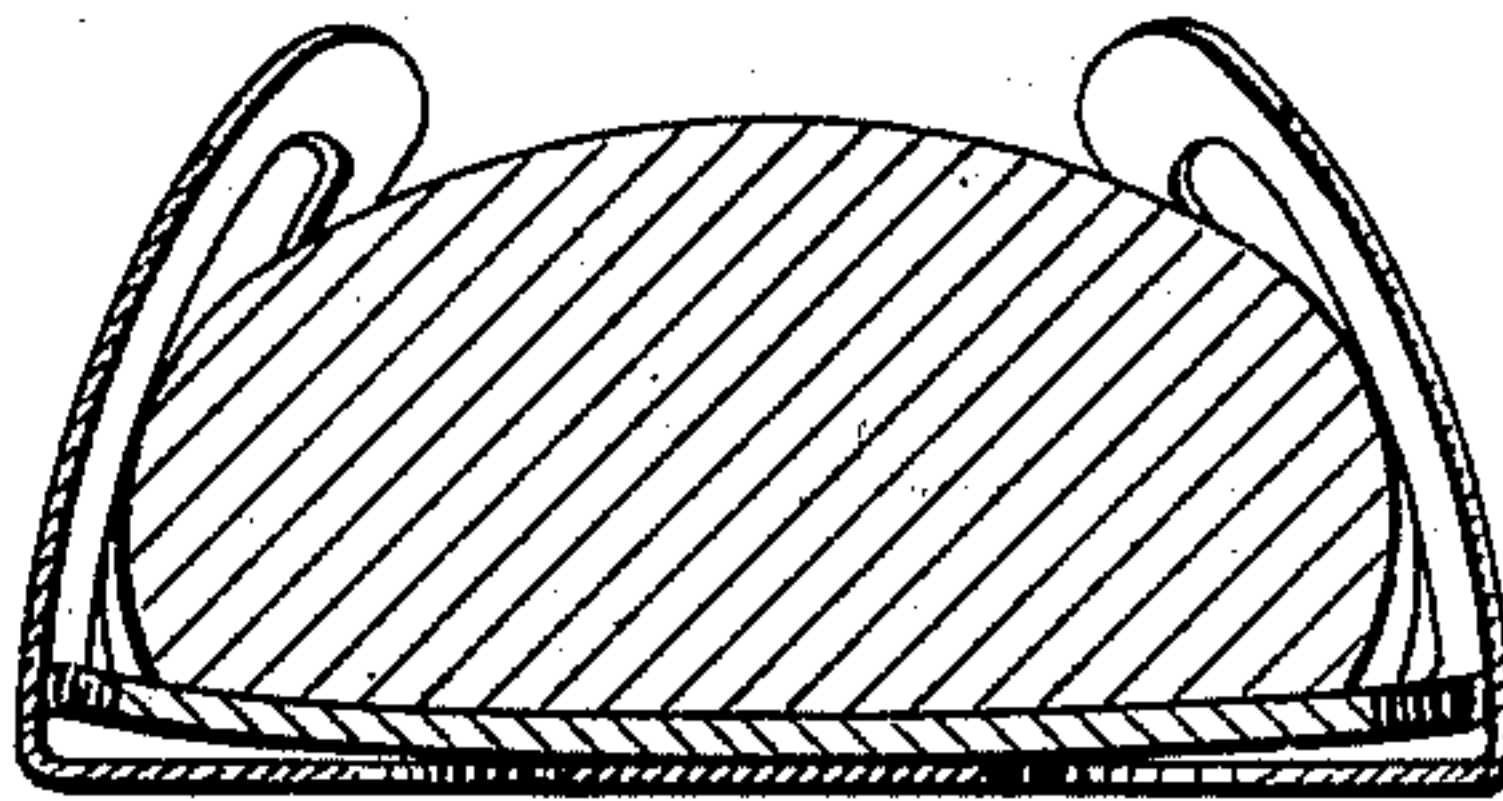


Fig. 1.

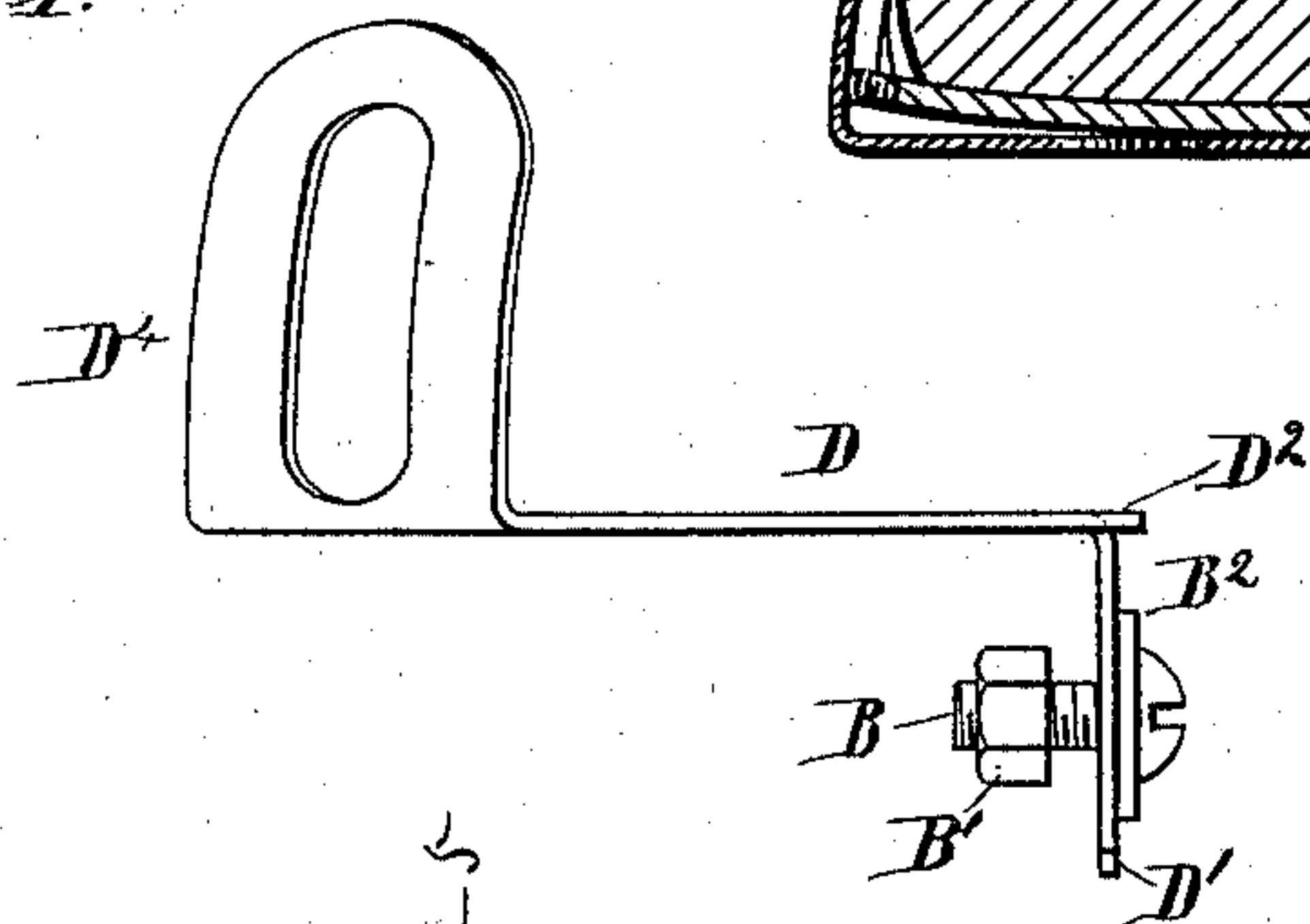


Fig. 2.

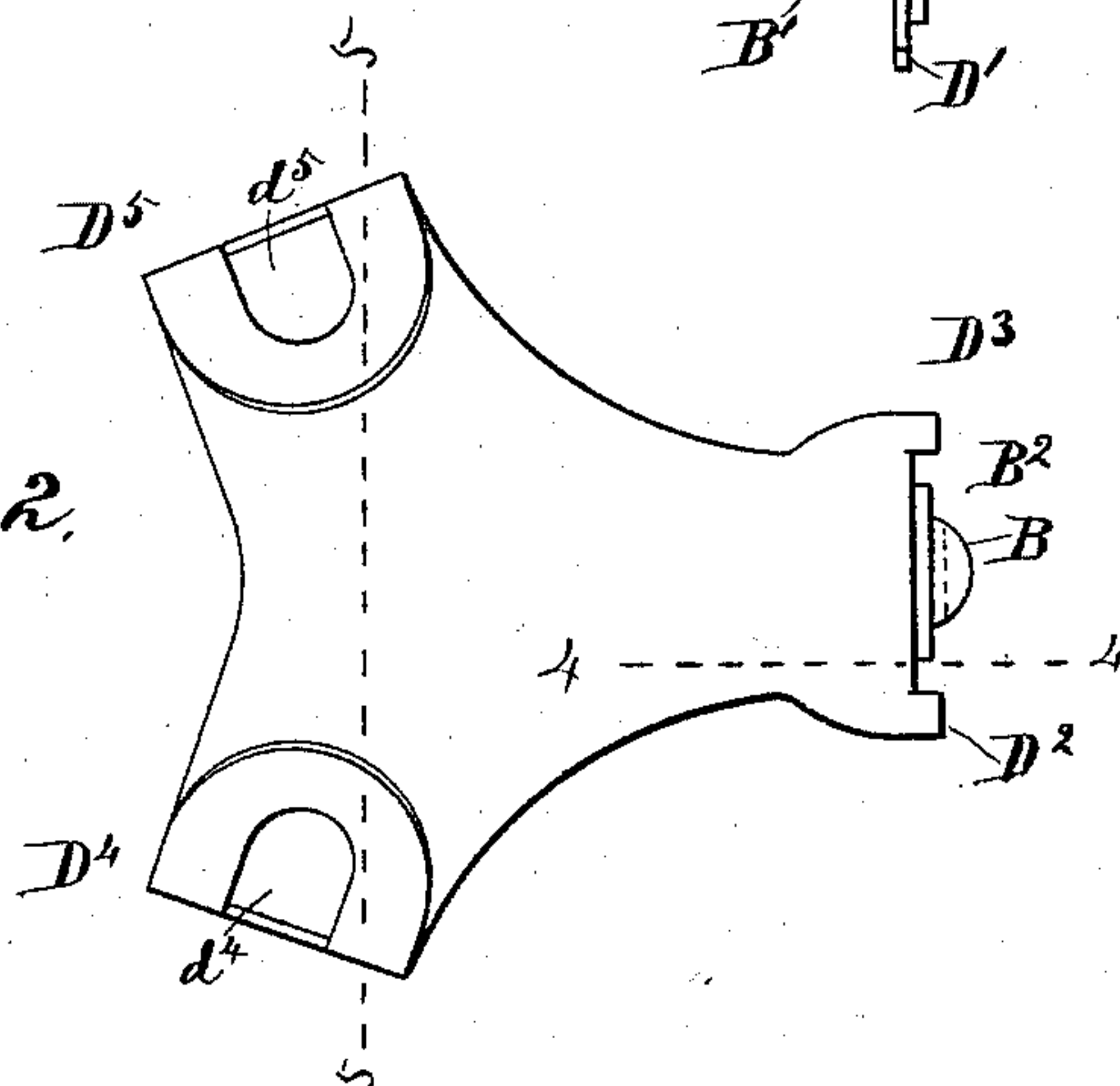


Fig. 4.

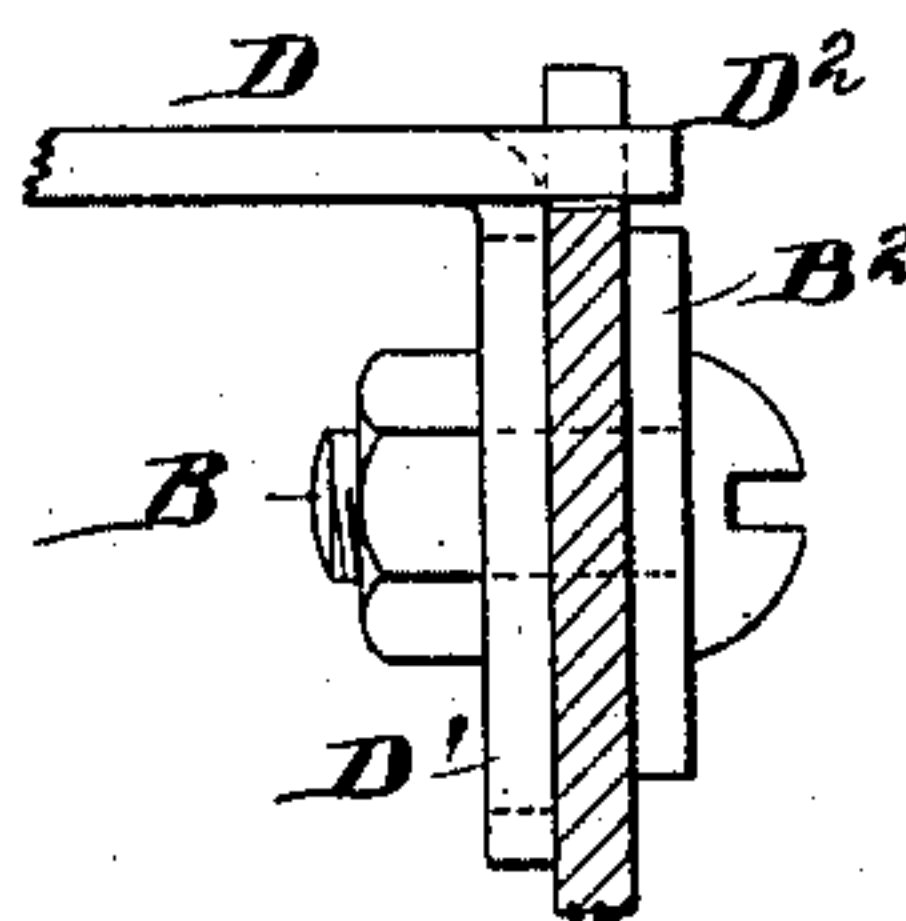
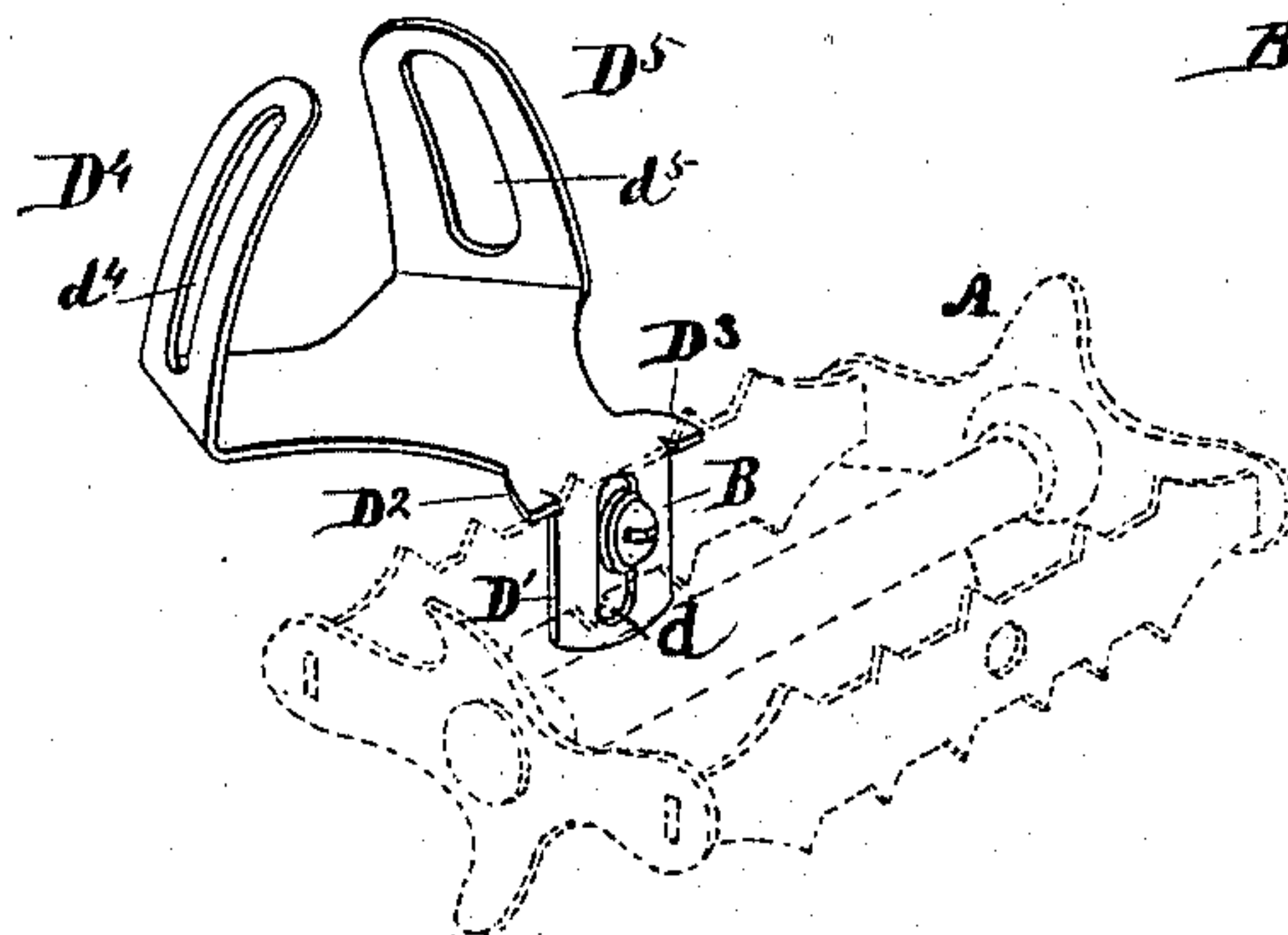


Fig. 3.



Witnesses:

Charles R. Searle.
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Inventor:

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UNITED STATES PATENT OFFICE.

HENRY LEE YOUNG, OF ELKHART, INDIANA, ASSIGNOR TO THE BUESCHER MANUFACTURING COMPANY, OF SAME PLACE.

TOE-CLIP.

SPECIFICATION forming part of Letters Patent No. 589,988, dated September 14, 1897.

Application filed March 23, 1897. Serial No. 628,807. (No model.)

To all whom it may concern:

Be it known that I, HENRY LEE YOUNG, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented a certain new and useful Improvement in Toe-Clips for Pedals, of which the following is a specification.

The improvement is more especially intended for cycles, and will be described as applied to a bicycle-pedal of the style known as "rat-trap." It can be easily applied and removed at will and is effectually guarded against being revolved out of position, even if the attachment becomes slightly loosened. It receives the toe of the shoe between wings which extend upward, one on each side of the toe, and are curved inward at the proper angle to serve efficiently. This end is attained by having the wings rise from the base at the proper distance apart to press fairly against the edges of the sole and thereby hold the toe in position under all ordinary conditions, and extend upward and bend inward above the foot, so as to protect the foot without pressing on it. The inward bends of the wings lie above the foot and out of contact with it under ordinary conditions, but when the foot is lifted it engages with the upper portions of the wings. The construction allows the toe-clip to serve all its ordinary functions, including the vigorous lifting on the pedal by the foot, which is sometimes required in mounting hills or passing through soft places, but does not induce compression on the foot in ordinary riding.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a side elevation. Fig. 2 is a corresponding plan view. Fig. 3 is a perspective view of the clip, with dotted lines indicating the pedal in the proper relation thereto. Figure 4 is a vertical section of a portion on a larger scale. It is a section on the line 4 4 in Fig. 2. Fig. 5 is a cross-section on the line 5 5 in Fig. 2 with the foot in position therein.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is a bicycle-pedal, which may be of an ordinary and long-approved form, having the usual hole, receiving a screw-bolt B, which is engaged by a nut B', and with a washer B² serves as the holding means for the toe-clip.

My toe-clip may be formed from a single piece of sufficiently stout sheet metal. I will designate it by the letter D, using supernumerals when necessary to indicate special parts.

D' is a portion bent downward at right angles, forming a rigid lug, which applies against the pedal A, and is provided with a vertical slot *d* to receive the bolt B.

The toe-clip is formed with horns D² D³, which are allowed to remain unbent, and extend rearward in the plane of the body and engage over the upper edge of the adjacent portion of the pedal A. They determine the height at which the toe-clip is fixed and especially prevent the toe-clip from tilting to the right or the left. Instead of depending only on the strong friction induced by the grip of the bolt B and nut B' to resist such displacement these horns D² promote this end.

On each side near the front of the clip are upwardly-extending wings (marked D⁴ D⁵) curved inwardly. I have shown them as provided each with a considerable opening *d*⁴ *d*⁵ and prefer that they be so formed. They are joined to the main body D at a taper matching to the contour of the corresponding part of an ordinary shoe and press laterally against the edges of the sole without inducing any pressure on the top of the foot, except in the rare cases when great effort is made and the foot is lifted in the clip.

I can form my clip of various materials, including hard rubber, but propose ordinarily to make it of steel, copper-coated and nickel-plated. I propose to make the clips of two or more sizes and styles. It is easy to make the engagement of the shoe with the clip and to instantly disengage it by the natural backward movement.

I claim as my invention—

1. A toe-clip provided with rearwardly-projecting horns to engage the upper edge of the pedal adapted to serve as herein specified.
2. In a toe-clip for a bicycle-pedal, the rearwardly-extending horns formed integrally

with the clip and adapted to engage the pedal and to serve therewith, and with fastening means B, B', substantially as herein specified.

3. A toe-clip for bicycle-pedals comprising
5 the main body portion and side wings for the toe extending upwardly and inwardly, so set and shaped as to engage only the sole of the shoe under ordinary conditions, the downwardly-bent lug having the slot to receive
10 the fastening-screws, and the rearwardly-projecting horns, the whole formed integral, substantially as herein specified.

4. The within-described toe-clip comprising the main body portion tapering forward

provided with upwardly and inwardly curved 15 wings D⁴, D⁵, set in correspondingly oblique positions, the rear portion of the clip having the extended horns D², D³, and downwardly-extending lug D' having the slot d, the whole
formed integral, substantially as herein specified. 20

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

HENRY LEE YOUNG.

Witnesses:

CHARLES S. HENDERSON,
CHARLES E. SILVERS.