H. W. KARN.

ARTIFICIAL FOOT.

APPLICATION FILED APR. 18, 1910.

981,090.

Patented Jan. 10, 1911.

Fig. 1.

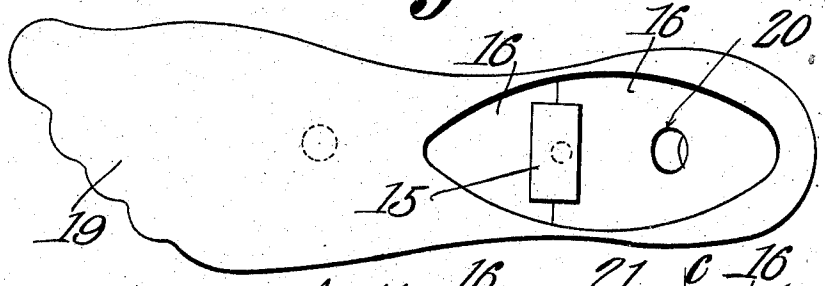
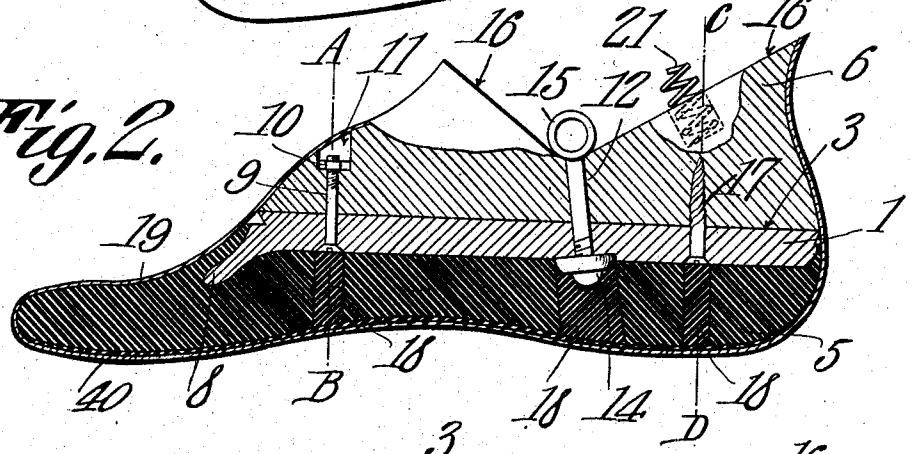


Fig. 2.



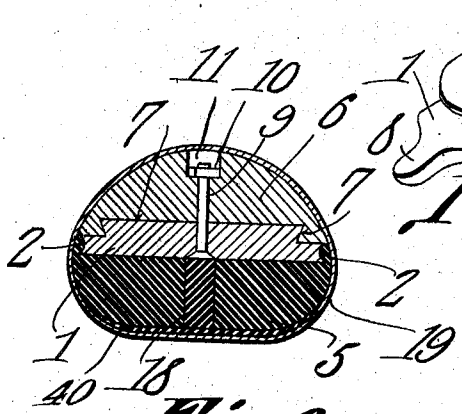


Fig. 3.

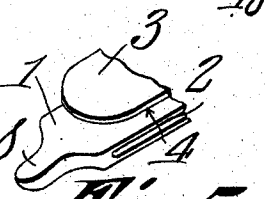


Fig. 5.

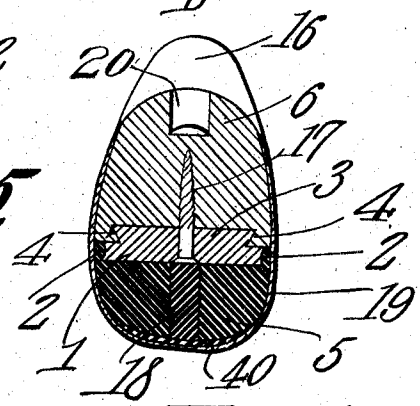


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

HARRY W. KARN, OF PITTSBURG, PENNSYLVANIA.

ARTIFICIAL FOOT.

981,090. Specification of Letters Patent. Patented Jan. 10, 1911.

Application filed April 18, 1910. Serial No. 556,007.

To all whom it may concern:

Be it known that I, HARRY W. KARN, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Artificial Foot, of which the following is a specification.

It is the object of this invention to provide a novel means for uniting the component portions of a composite artificial foot.

Another object of the invention is to improve generally, devices of the class to which this invention appertains, and to increase their efficiency.

The drawings show but one form of the invention, and it is to be understood that changes properly falling within the scope of what is claimed, may be made, without departing from the spirit of the invention.

In the drawings,—Figure 1 is a top plan; Fig. 2 is a vertical longitudinal section; Fig. 3 is a transverse section on the line A—B of Fig. 2; Fig. 4 is a transverse section on the line C—D of Fig. 2; and Fig. 5 is a detail perspective of one end of the base member.

In carrying out the invention, a base member 1 is provided. Broadly speaking, this base member 1 is in the form of a flat plate, at the forward end of which there is an inclined, depending projection 8. In the longitudinal edges of the base member 1, there are grooves 2, and upon the upper face of the base member there is a longitudinally extended tongue 3, the side walls 4 of which diverge to undercut the tongue.

A tread portion 5 is provided, the same being preferably fashioned from rubber. This said portion 5 is engaged in the grooves 2 of the base member 1, and terminates flush with the upper face of the base member.

The upper portion 6 of the device is grooved upon its lower surface as seen most clearly in Fig. 3 of the drawings, the groove 7 being adapted to receive the tongue 3 which upstands from the upper surface of the base member 1. The parts 1 and 6 are thus dove-tailed together for sliding movement longitudinally of the foot.

The parts 1 and 6 are preferably fashioned from well seasoned wood, and by dovetailing them together, after the manner shown, a secure union between the parts may be effected, it being thus possible to dispose the grain in the parts 1 and 6 in different directions, thus greatly increasing the strength of the device.

The outline of the structure is defined principally by the tread 5 and by the upper portion 6, these two parts being so fashioned as to outline the foot, the part 1 being a connecting element between the portions 5 and 6, serving to provide a firm means for attaching the tread 5.

In order to secure the upper portion 6 against sliding movement upon the base member 1, a plurality of securing devices are employed. A headed screw bolt 9 is extended upwardly through the base member 1 and into a recess 11 in the upper face of the portion 6, a nut 10 mounted upon the bolt 9 within the recess 11 serving to complete the securing structure. Another bolt 12 is extended downwardly through the portion 6 and through the base member 1, a nut 14, bearing against the lower face of the base member 1 serving to hold the bolt 12 in position, there being a tubular bearing 15 upon the upper end of the bolt 12, this tubular bearing being located transversely of the foot, in the angle defined by the downwardly slanting upper faces 16 of the portion 16. The exact form of this tubular bearing 15 may be varied to suit the particular securing means with which it is designed to be assembled.

Adjacent the heel of the foot, a common wood screw 17, or the like, may be upwardly extended through the base member 1 and into the upper portion 6. If desired, openings may be left in the lower face of the tread 5, to provide for the mounting of the members 9, 12 and 17, these openings being subsequently filled by plugs 18, fashioned from rubber.

The portions 5 and 6 may be surrounded by a covering 19 of leather or the like, an elastic web, preferably of rubber and denoted by the numeral 40 being interposed between the covering 19 and the bottom of the tread 5. Located in that slant face 16 of the portion 6 which is adjacent the heel, is a seat 20, adapted to receive the spring 21, commonly employed to give the desired resiliency to the step. When the tread portion 5 becomes worn, the several retaining elements 9, 12 and 17 may be removed, whereupon the upper portion 6 may be slid

longitudinally, to free the same from the base portion 1, whereupon a new base portion 1 and tread 5 may be slid into place upon the upper portion 6 thus renewing the foot.

The upper ends of the retaining elements 9 and 17 are housed within the contour of the upper portion 6, and by reason of the fact that the lower headed ends of these members are housed within the contour of the base member 1, the tread 5 will not be torn or injured by the heads of these members, should the tread 5 become slightly loose in its mounting. Obviously, the extension 8, projecting at an angle into the rubber tread 5, serves to make more secure the union between the base member 1 and the tread.

A foot fashioned as hereinbefore pointed out will have the rigidity and wearing qualities of a wooden foot, without subjecting the wearer to the jar incident to the use of a rigid structure, and without subjecting him to the attention attracted by the thumping sound of a rigid, unyielding structure, the rubber tread 5 likewise yielding and simulating the action of a natural foot.

Having thus described the invention, what is claimed is:—

1. An artificial foot consisting of superposed members dovetailed together for free longitudinal sliding movement in opposite directions; and means independent for securing said members against sliding movement.

2. In an artificial foot structure, a base member having grooves in its edges; a yieldable tread engaged in the grooves and terminated flush with the upper face of the base member; an upper portion united slidably by a dovetailed connection with the base member; and securing devices inserted through the base member and the upper portion and terminally housed within the contour of the upper portion and the base member.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HARRY W. KARN.

Witnesses:
JNO. F. SCHMUNK,
JAMES DOUGHERTY.