Sept. 17, 1935. S. KURLAN 2,014,575

ADJUSTABLE CONNECTING DEVICE FOR USE IN MANUFACTURING SHOE LASTS

Original Filed June 23, 1932

Fig. 1.

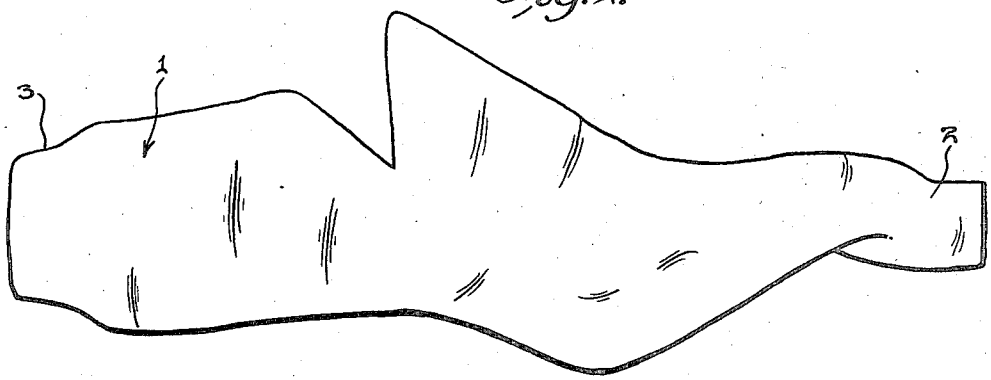


Fig. 2.

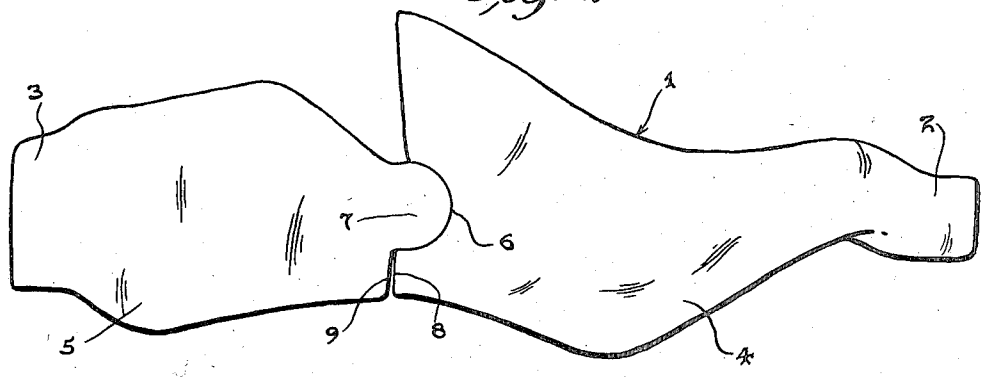
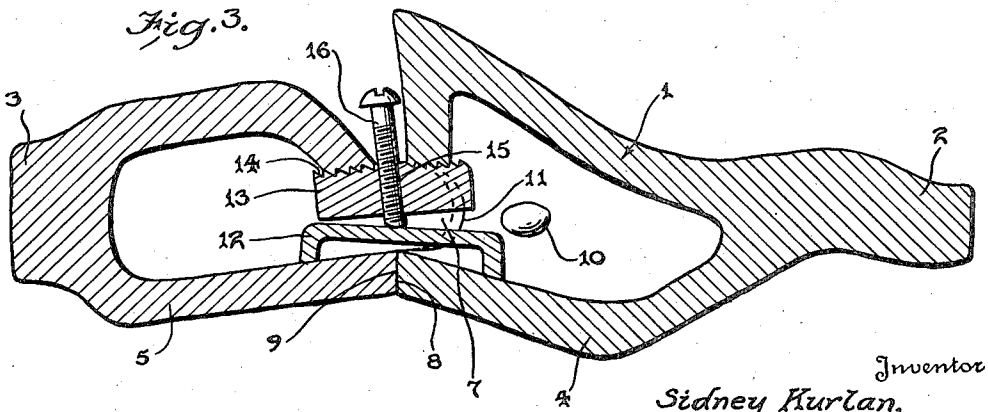


Fig. 3.



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ADJUSTABLE CONNECTING DEVICE FOR USE IN MANUFACTURING SHOE LASTS

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Original application June 23, 1932, Serial No. 618,982. Divided and this application June 18, 1934, Serial No. 731,174

2 Claims. (Cl. 82—1)

The invention relates to foot wear manufacture and more particularly to shoe lasts and the method of manufacturing the same and is a division of an application filed by me June 23, 1932, Serial No. 618,982.

The object of the present invention is to provide a simple, practical and efficient adjustable connecting device of strong, durable and comparatively inexpensive construction adapted to be readily applied to hollow sectional metal last blanks with hinge joints and capable of securely locking the hinged sections of such a last rigid with each other while the last is being turned to the required shape in a last turning or other woodworking machine.

A further object of the invention is to provide an adjustable connecting device of this character capable of firmly and detachably engaging simultaneously the two sections of a last blank and adapted after the shaping of the last has been completed to be easily and quickly removed from the last without injuring the same and without necessitating any alteration in the construction of the sections of the last for accommodating the adjustable connecting device.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawing and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—

Figure 1 is a side elevation of a magnesium alloy block or blank from which a last is made.

Fig. 2 is a similar view showing the block or blank cut transversely to form two sections with a hinge joint or connection.

Fig. 3 is a longitudinal sectional view of the same illustrating the adjustable connecting device for rigidly holding the sections in fixed adjustment or position while turning the block or blank into the desired last shape.

In the accompanying drawing in which is illustrated the preferred embodiment of the invention 1 designates a block or blank of magnesium alloy having substantially the shape of a shoe last and possessing sufficient material to enable a shoe last of the desired shape and size to be formed of it. The blank 1 is preferably formed of the magnesium alloy of the said application but other metals may of course be employed and while metals of a character adapted to permit the blank to be turned in a shoe last turning machine or profile machine of the type employed for shaping shoe lasts of wood are preferable, other metals may of course be used for last blanks.

Before shaping the blank in a lathe or last turning machine or the like it is cut transversely into two sections 4 and 5 with bearing recesses 6 and bearing lugs 7 at the lower portions of their adjacent ends to form a hinge joint or connection to enable the last to break in the usual manner. The sections 4 and 5 which are front and rear sections are provided below the bearing recesses 6 and bearing lugs 7 with abutting shoulders 8 and 9 which limit the swinging movement of the sections on each other in one direction and which support the heel portion of the rear section at the desired elevation when the sections are locked in operative position in the usual manner.

Any suitable means may, of course, be employed for locking the sections and for permitting the same to break, and the front section may be provided with interior bosses 10 for the attachment of such locking means. Instead of forming the front and rear sections from a single block it will be obvious that the sections may if desired be cast separately to form a rough blank to be placed in the lathe or last turning machine for forming the last.

Prior to placing the front and rear sections in a machine for shaping the blank into the desired last form the sections are rigidly locked in fixed adjustment or relation with the heel portion of the rear section at the desired elevation. The elevation of the heel portion of the rear section is determined by the abutting shoulders 8 and 9 which may be trimmed out or otherwise cut away to arrange the heel portion of the rear section in proper position when the front and rear sections are assembled in operative position.

The locking of the front and rear sections in fixed relation for shaping or turning the same in a woodworking or last turning lathe or machine is effected by means of the adjustable connecting device consisting of a lower approximately inverted U-shaped member 12 and a substantially straight upper adjustable jaw member 13.

The jaw member 13 consists of a straight bar provided at its upper face with teeth 14 and having a vertical threaded opening 15 located approximately midway between the ends of the adjustable jaw 13 and receiving an adjusting screw 16.

The inverted U-shaped member 12 bridges the joint formed by the front and rear sections of the last and has its legs engaging respectively the front and rear sections 4 and 5 at the bottom of the interior thereof. By this construction the lower member 12 is adapted to straddle the apex which may be formed by the oppositely inclined lower walls or surfaces of the hollow sections of the blank as clearly illustrated in Fig. 3 of the drawing. The jaw also extends across the joint of the front and rear sections and the teeth 14 at the upper face of the jaw engages each of the sections 4 and 5 interiorly of the same at the top thereof. The screw 16 extends through the block or bar of the jaw member 13 and engages the inverted U-shaped member at the top thereof centrally of the same and it is adapted to be adjusted by a screw driver or other tool for separating the members of the connecting device for forcing the same firmly into engagement with the top and bottom walls of the hollow front and rear sections 4 and 5. The lower end of the adjusting screw by bearing against the top of the lower member forms a fulcrum for the latter and permits relative annular adjustment of the upper and lower members. The connecting device will rigidly maintain the last sections in position while the blank is being operated on by the shaping means of a lathe and the alloy block or blank formed by the sections is adapted to be shaped to the minutest dimensions by a woodworking or last turning lathe similar to a block of wood employed for making an ordinary wooden shoe last.

When the last is removed from the lathe or other woodworking machine the terminal portions or lugs are trimmed off and the last is then in its completed form.

What is claimed is:—

1. An adjustable connecting device for holding rigid with each other two hollow contiguous sections of shoe last blanks having a hinge joint at the adjacent ends of the sections and which blanks may have their sections disposed at varying angles with the interior bottom surfaces of the sections disposed at an angle to each other and forming an apex at the joint of the blank, said adjustable connecting device comprising upper and lower members bridging the joint and engaging the said sections of the blank interiorly of the same at the top and bottom walls thereof, and adjustable means for separating the upper and lower members to maintain the same rigidly in engagement with the sections of the blank, said adjustable means forming a fulcrum for the lower member to permit relative angular adjustment of the members, said lower member being provided at the bottom with a recess to permit the bottom member to straddle the apex of two angularly disposed surfaces.

2. An adjustable connecting device for holding rigid with each other two hollow contiguous sections of shoe last blanks having a hinge joint at the adjacent ends of the sections and which blanks may have their sections disposed at varying angles with the interior bottom surfaces of the sections disposed at an angle to each other and forming an apex at the joint of the blank, said adjustable connecting device comprising an upper member consisting of a toothed block for engaging the sections of the blank at the top walls thereof, an inverted substantially U-shaped lower member engaging the bottom walls of the sections of the blank and forming a bottom recess for straddling the apex formed by two angularly disposed surfaces, and an adjusting screw mounted in the threaded opening of the upper member and having its lower end bearing on the lower member for separating the upper and lower members to maintain the same rigidly in engagement with the sections of the blank, said screw forming a fulcrum for the lower member and permitting relative angular adjustment of the upper and lower members.

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