

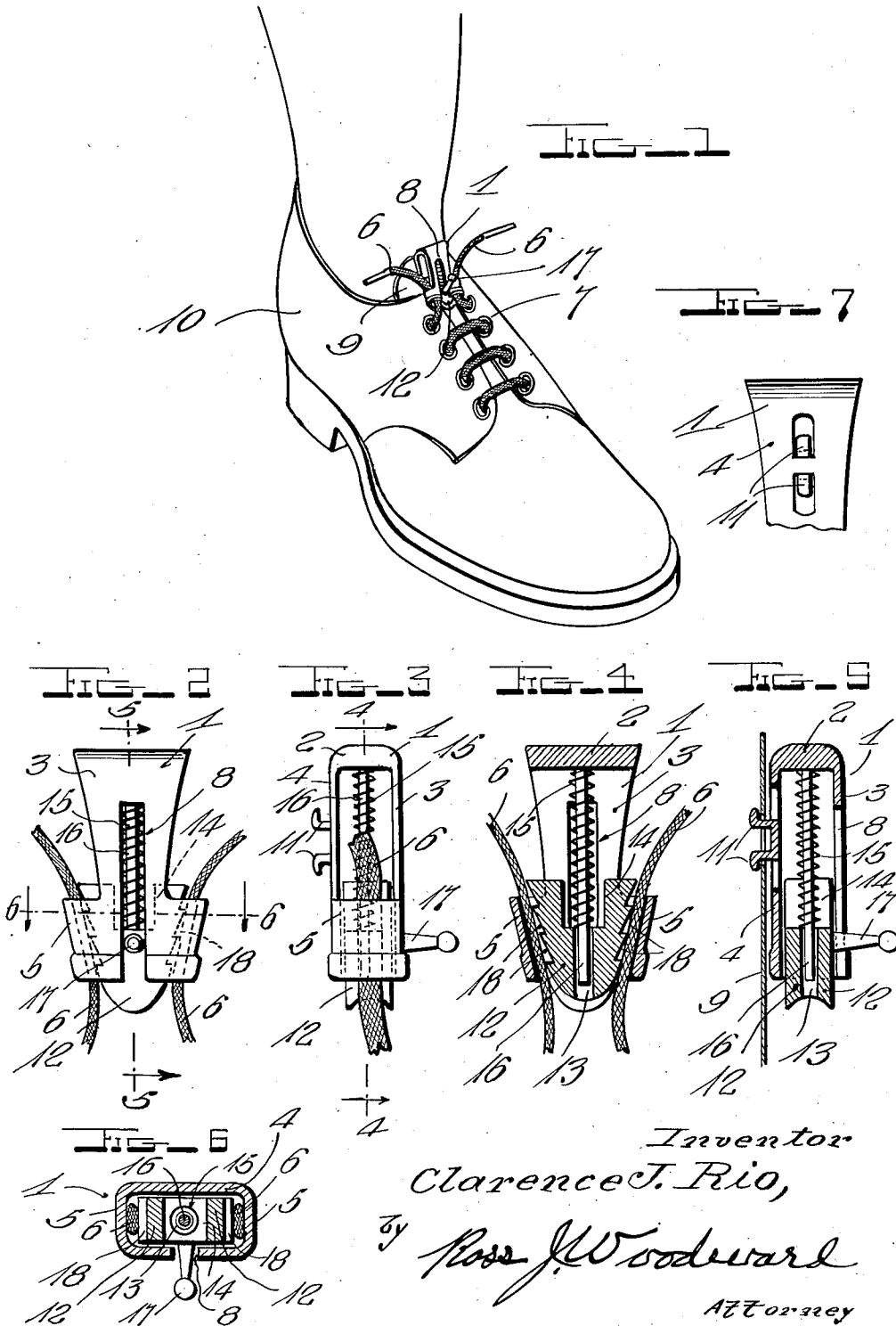
May 14, 1940.

C. J. RIO

2,200,895

SHOESTRING FASTENER

Filed Sept. 13, 1939



UNITED STATES PATENT OFFICE

2,200,895

SHOESTRING FASTENER

Clarence J. Rio, Tyler, Pa.

Application September 13, 1939, Serial No. 294,728

5 Claims. (Cl. 24-117)

This invention relates to a shoestring fastener and it is one object of the invention to provide a device of this character having a shell or stationary jaw in which a wedge or movable jaw is mounted, the shell having wall portions cooperating with the movable jaw for gripping portions of a shoestring passing through the shell and the movable jaw being urged into position for wedging fit between said wall portions but being shiftable to a releasing position when pull is exerted to tighten the shoestring.

Another object of the invention is to provide the shell with a pin serving as a guide for the movable jaw and also as a carrier for a spring which urges the movable jaw toward gripping position.

Another object of the invention is to provide a movable jaw having a bore through which the pin passes and a recess in its upper portion constituting a seat for the spring.

Another object of the invention is to provide a shoe string fastener wherein the shell or stationary jaw is provided with means for securing the same to the tongue of a shoe in such position that the end portions of the lace may be easily passed through the same and tightened. It will thus be seen that the fastener will be securely held to the tongue in its proper position and will not be lost.

Another object of the invention is to provide a fastener which will be neat in appearance and not be unsightly when in use.

The invention is illustrated in the accompanying drawing, wherein:

Fig. 1 is a perspective view showing the improved shoestring fastener applied to the tongue of a shoe and in use.

Fig. 2 is an enlarged front elevation of the fastener.

Fig. 3 is a side elevation of the fastener.

Fig. 4 is a sectional view taken vertically through the fastener on the line 4-4 of Fig. 3.

Fig. 5 is a sectional view taken vertically through the fastener on the line 5-5 of Fig. 2.

Fig. 6 is a sectional view taken transversely through the fastener on the line 6-6 of Fig. 4.

Fig. 7 is a fragmentary rear elevation of the fastener.

This improved shoestring fastener has a stationary jaw 1 in the form of a shell which is of substantially U-shaped formation and has a thick bridge 2 and front and rear walls 3 and 4, lower portions of the front and rear walls being connected by edge walls 5 constituting gripping members. The stationary shell or jaw 1 is open

at its lower end and also open at its sides between the gripping members or edge walls and its upper end, thus permitting the end portions 6 of the shoestring 7 to be passed upwardly through the shell and out through the side openings thereof. A slot 8 is formed in the front wall longitudinally thereof with its lower end open and, in order that the fastener may be secured to the tongue 9 of the shoe 10, the rear wall has been shown cut to provide prongs 11 which are passed through the tongue 9 and bent into clinching engagement therewith, as shown in Fig. 5. It is to be understood that other means for securing the fastener to the shoe tongue may be employed instead of the prongs 11.

The movable jaw 12 consists of a wedge shaped block which tapers downwardly in conformity to the taper of the edge walls 5 of the shell, as shown in Fig. 4, and is of such dimensions that when it is moved downwardly, it will have wedging fit between these edge walls. A bore or passage 13 is formed longitudinally through the wedge or movable jaw 12 with its lower end terminating at the lower end of the jaw and its upper end opening into a recess 14 formed in the upper end portion of the jaw. This recess constitutes a seat for the lower portion of a spring 15 coiled about a pin 16 which extends downwardly from the thick bridge 2 of the shell 1 with its lower portion engaged in the passage 13. The pin 16 serves as a guide for the movable jaw and also as a carrier for the spring which serves to urge the movable jaw downwardly for wedging fit between the edge walls or gripping members 5 of the stationary jaw. A stem or finger engaging member 17 projects forwardly from the movable jaw through the slot 8 in order that the movable jaw may be shifted upwardly when it is desired to release the end portions 6 of the shoestring 7 and allow the string to be loosened and a shoe removed. Teeth 18 are formed on the side edge faces of the wedge or movable jaw in order that when the shoestring is tightened, the movable jaw will very firmly grip the portions of the string passing through the shell and prevent slipping and loosening of the shoestring.

When this shoestring fastener is in use, it is applied to the tongue 9 of the shoe and held in engagement therewith by the prongs 11 or other means provided for the purpose. The free end portions 6 of the shoe string are passed upwardly through the shell between the movable jaw and the gripping portions or edge walls 5 and out through the side openings of the shell. After the shoe has been put on, the protruding end portions

of the shoestring are grasped and pull exerted to tighten the shoestring. As the portions 6 of the shoestring are drawn upwardly through the shell or outer jaw, the wedge or inner jaw will be carried upwardly with them. When the shoestring has been sufficiently tightened, the end portions are released and the spring 15 moved to move the movable jaw downwardly so that it has wedging fit between the edge walls or gripping members 5 of the shell and causes the portions 6 of the shoestring to be firmly gripped, as shown in Figs. 4 and 6. When it is desired to loosen the shoestring for removal of the shoe, the stem 17 is grasped and upward thrust exerted to raise the movable jaw. This will release the portions 6 of the shoestring and the shoestring may be easily loosened and the shoe removed. In view of the fact that the pin 16 passes through the bore 13, movement of the jaw 12 will be guided and it will always move into proper wedging position between the gripping members 5 of the shell and the pin will also serve to prevent buckling of the spring.

Having thus described the invention, what is claimed is:

1. A shoestring fastener comprising a shell open at one end and along opposite sides and adjacent its open end having opposed jaw portions, a movable jaw slidable longitudinally in said shell between said jaw portions, said movable jaw being formed with a longitudinally extending passage, a pin carried by said shell and passing through said passage to guide movement of the movable jaw, and a spring about said pin urging the movable jaw between the opposed jaw portions into position for gripping shoe strings passed through the shell between the movable jaw and the opposed jaw portions and out through the side openings of the shell.
2. A shoestring fastener comprising a substantially U-shaped body having an upper bridge portion and front and rear walls and being open along its sides, webs connecting lower portions of the front and rear walls across the open sides of the body and constituting stationary jaws, a wedge slidable longitudinally in said body between the front and rear walls and between the stationary jaws and having teeth confronting the stationary jaws for gripping shoestrings passed between the wedge and the stationary jaw and out through the side openings of the body, said

wedge having a longitudinally extending passage, a pin carried by the bridge of said body and extending downwardly therefrom through the passage to guide sliding movement of said wedge, and a spring about said pin between the bridge and wedge serving to urge the wedge downwardly between the stationary jaws.

3. A shoestring fastener comprising a hollow outer member having opposed jaw portions, an inner member slidable longitudinally in the outer member between the opposed jaw portions and constituting a movable jaw for gripping portions of a shoestring passing through the outer member between the opposed jaw portions and the movable jaw, a pin carried by said outer member and passing through a passage formed longitudinally through the movable jaw to guide movement of the movable jaw, and a spring about said pin urging said movable jaw toward a string-gripping position between the stationary jaw portions of the outer member.

4. A shoestring fastener comprising a hollow stationary jaw having an open lower end and side openings for passage of end portions of a shoestring therethrough, a wedge in said stationary jaw constituting a movable jaw shiftable therein into and out of position for clamping a shoestring against portions of the movable jaw below the side openings thereof, a pin carried by the stationary jaw and engaged through a passage formed longitudinally in the movable jaw, and a spring about said pin urging said movable jaw downwardly into position for gripping a shoestring.

5. A shoestring fastener comprising a hollow stationary jaw having opposed downwardly converging gripping members, a movable jaw in said stationary jaw shiftable into and out of gripping position between the opposed gripping members of the stationary jaw, said movable jaw having a recess in its upper end and a passage leading therefrom to its lower end, a pin carried by the stationary jaw and extending longitudinally therein through the recess and the passage of the movable jaw, and a spring about said pin with its upper end bearing against the stationary jaw and its lower portion disposed within the recess and bearing against the movable jaw about the passage, said spring urging the movable jaw downwardly toward its gripping position.

CLARENCE J. RIO.