Feb. 19, 1957 E. F. SCHMANK 2,781,899

LAST HINGE SET

Filed Aug. 6, 1954

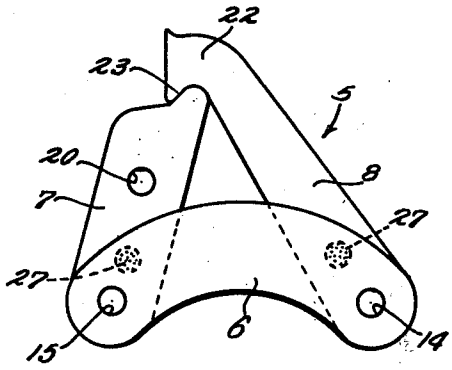


Fig. 1

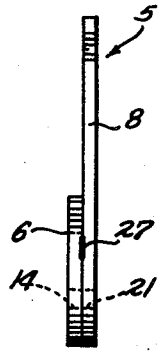


Fig. 2

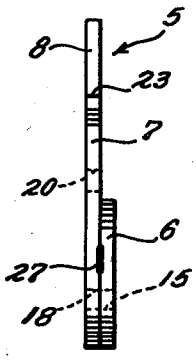


Fig. 3

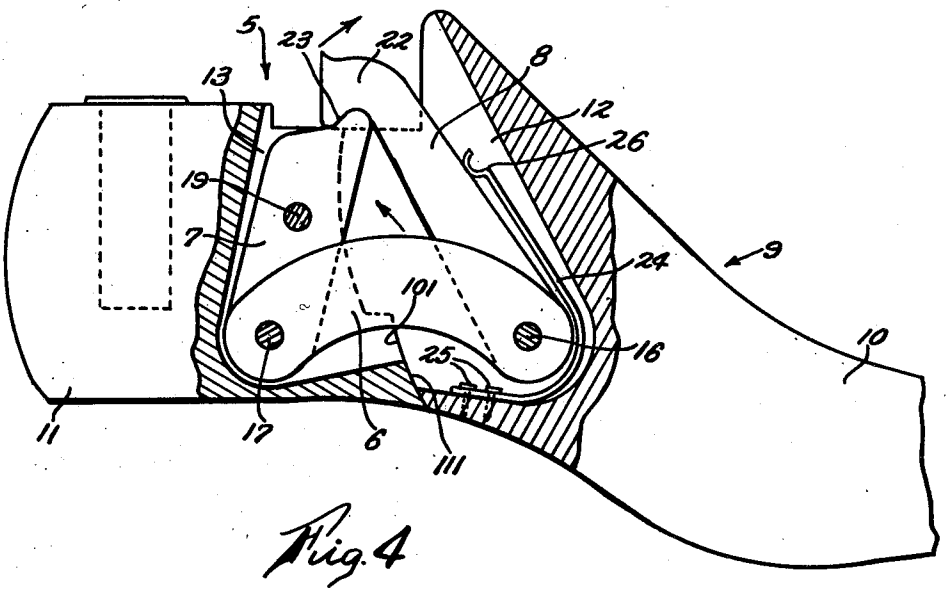


Fig. 4

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LAST HINGE SET

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2 Claims. (Cl. 206—46)

The present invention relates to a novel shoe last hinge set and is particularly directed to the provision of such sets by fixedly securing together by severable means the component parts thereof in units for shipment and storage and in operative conditions for their installations into shoe lasts.

Heretofore the metal parts for last hinges were supplied to shoe last manufacturers in heterogeneous bulk lots. Some of the parts in these lots were either lost or were improperly counted so that the number of complete last hinge sets in the lots usually fell short of the number requisitioned. Secondly present day last hinge sets generally have at least three parts, one of which is spring biased in the completed last, thus requiring consirable time and skill to manipulate the parts into operative positions in the routs of the last parts to be articulated by the sets.

It is therefore an object of this invention to provide a novel means for overcoming the two foregoing objections to the present day last hinge parts which is extremely simple in its application and effective in operation.

Another object of the invention is to provide a last hinge set whose component parts are severably secured together in a unitary condition for shipment and storage and in which condition they are more quickly and easily mounted in a shoe last.

Other objects and advantages of the invention will become apparent from the following specification taken in conjunction with the accompanying drawing wherein:

Fig. 1 is a front elevational view of my last hinge set.

Fig. 2 is an elevational view taken from the right side of the set depicted in Fig. 1.

Fig. 3 is an elevational view taken from the left side of the set shown in Fig. 1.

Fig. 4 is a side elevation of a shoe last shown partly in section, illustrating the operative position of the hinge set in a shoe last.

The embodiment of this invention is illustrated in the drawing as incorporated in a three part shoe last hinge set **5** comprising a last part link **6**, a catch plate **7** and a latch lever **8**. With reference to Fig. 4 it will be noted that a collapsible shoe last **9** has two members that are commonly referred to as a forepart **10** and a heel part **11** secured together by the hinge set **5** which is located in aligned routs formed in the last parts. The last parts are articulated by the set for relative swinging movements from the expanded operative last position shown in said Fig. 4 to a collapsed, foreshortened and angularly disposed position and return. The forepart **10** has a stepped convex meeting face **101** complementary with a stepped concave meeting face **111** on the heel part **11** which together establish the normal operative position of the parts and also permit relative movement between the parts to collapse the last.

The hinge parts are preferably flat metal stampings and each end of the link **6** has a hole **14** and **15** (Fig. 1)

formed through it to receive the central portions of pins **16** and **17**, respectively, that are anchored in the body of the respective last parts. The catch plate **7** is provided with a pin receiving hole **18** in alignment with the hole **15** in the link **6** and is fixed in the said part by another pin **19** anchored in the body of the part and passing through a hole **20** formed in the central part of the plate. The latch lever **8** is pivotally mounted on the hinge pin **16** and to this end it is provided with a pin receiving hole **21** positioned in alignment with the hole **14** in the link **6**. The latch lever has a rearwardly extending lug **22** which normally engages the upper edge **23** of the catch plate **7** to maintain the last parts in operative, expanded condition. Disengagement of the latch lever from the catch plate causes the last parts to collapse by permitting the forepart **10** to rock upwardly on link **6** and rotate on pin **16** to bring the parts into last collapsed position. The latch lever **8** is biased toward the catch plate by a spring **24** fixed at one end to the forepart by nails **25** and bearing at its opposed end **26** against the lever. All of the foregoing structure is conventional as evidenced by patents to Clausing No. 2,622,253 dated December 23, 1952 and No. 2,641,783 dated June 16, 1953, and has been heretofore described merely as an illustrative setting for my invention.

In accordance with this invention the component parts **6**, **7** and **8** of the last hinge set **5** are fixed together in last articulating positions for shipment and/or storage by means of severable or shearable securing means disposed within localized areas between adjacent faces of the component hinge parts of the last hinge set. The severable securing means most suited for my purpose is presently thought to be spots **27** of a fast drying, synthetic resin applied between the adjacent faces of the catch plate and link and between the adjacent faces of the latch lever and link when the parts are in operative positions with the pin holes of the several hinge parts in axial alignment and the latch lever lug in engagement with the upper end of the catch plate. In this position the said spots are permitted to dry thus securing the parts together for shipment or storage and also maintaining them in prefixed positions for installation of the hinge set in the receiving routes **12** and **13** of a last **9** so that the respective hinge pins **16**, **17** and **19** may be driven into operative hinge engaging positions in the last. In the latter respect it will be seen that the last hinge set will remain in its operative position by reason of the securing spots **27**, it being necessary to insert the set in the last part routes and drive the pins **16**, **17** and **19** through the aligned holes to complete the installation of the hinge set in the last. To then articulate the last, a slight forward blow or pressure on the lug **22** of the latch lever **8** will shear or sever the fastening spot between the lever and the link **6**, whilst upward pressure on the forepart with the lever and catch plate disengaged will cause shearing or severing of the connecting spot **27** between the link and catch plate thereby permitting the set to normally function thereafter to articulate the last parts.

I have hertofore specified that the securing means or spots **27** could be a fast drying, synthetic resin but other adhesive means could be employed such as various glues, pressure sensitive, synthetic resins, light spot welds, or the like, it being only essential to the carrying out of my invention that the means be strong enough to withstand usual packing and shipping pressures and the faces upon the parts incident to installing the hinge sets in shoe lasts and yet be readily severable by a shearing stress exerted on the hinge parts of the set after it has been installed in a shoe last.

What is claimed is:

1. An article of manufacture adapted for use as a

hinge set package for installation in the articulated members of a collapsible shoe last comprising three component elements consisting of a last part link, a catch plate and a latch lever all predisposed in a triangularly shaped arrangement with the respective end portions of said elements overlapping and in surface contact at two corners of the arrangement, and element securing means between the end portions of the elements forming the two corners of the triangular arrangement, said means being characterized by the fact that they are each severable by a shearing force exertive on adjacent elements after installation of said hinge set package in a shoe last.

2. An article of manufacture adapted for use as a hinge set package for installation in the articulated members of a collapsible shoe last comprising three component elements consisting of a last part link, a catch plate and a latch lever all predisposed in a triangularly

shaped arrangement with the respective end portions of the elements in surface contact at the corners of said arrangement, the end portions of the lever and plate being in overlapping relationship with the end portions of the link, and element securing means between the said overlapping end portions and characterized by the fact that each of said means is severable by a shearing force exertive on adjacent elements after installation of said hinge set package in a shoe last.

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