

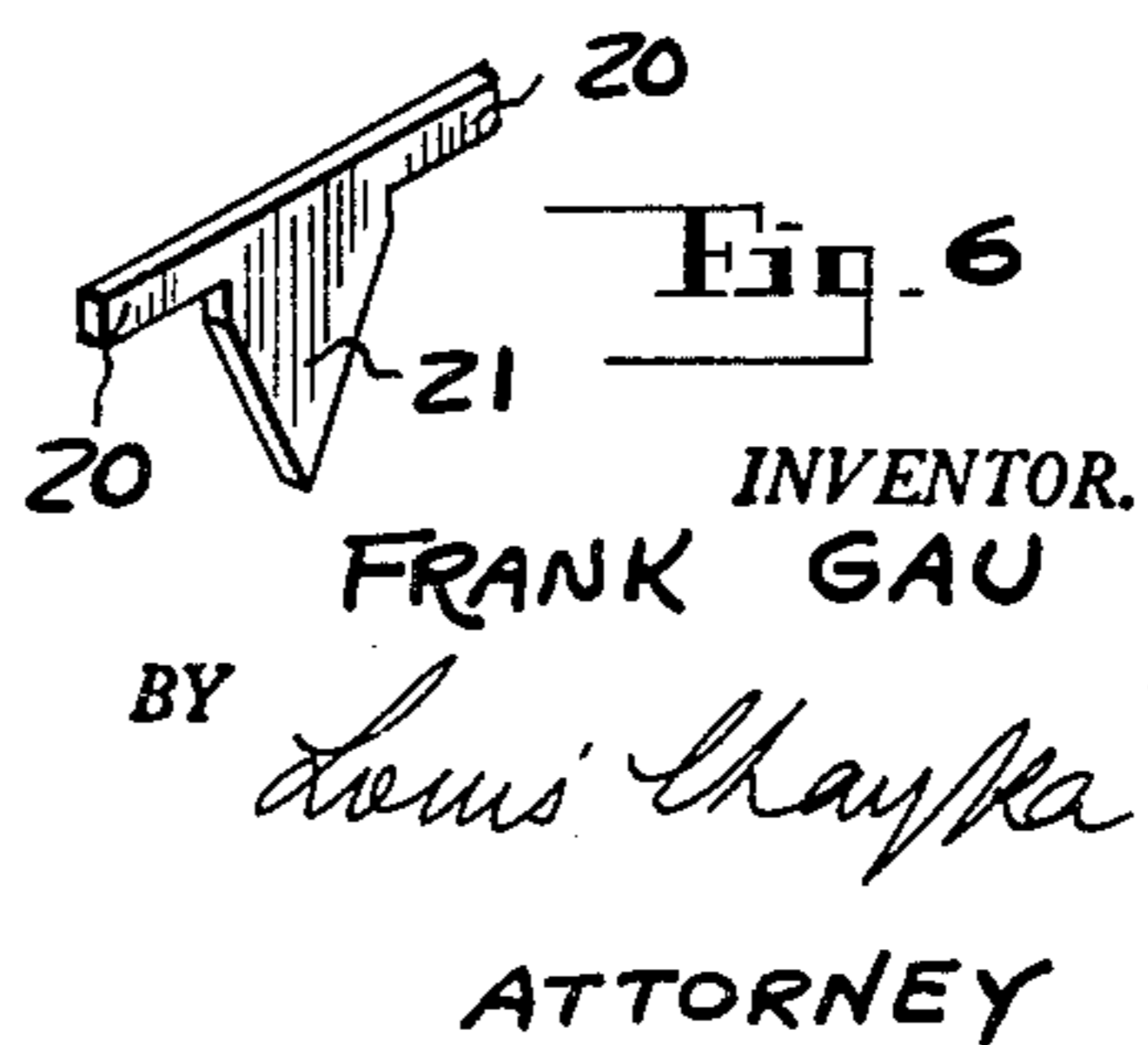
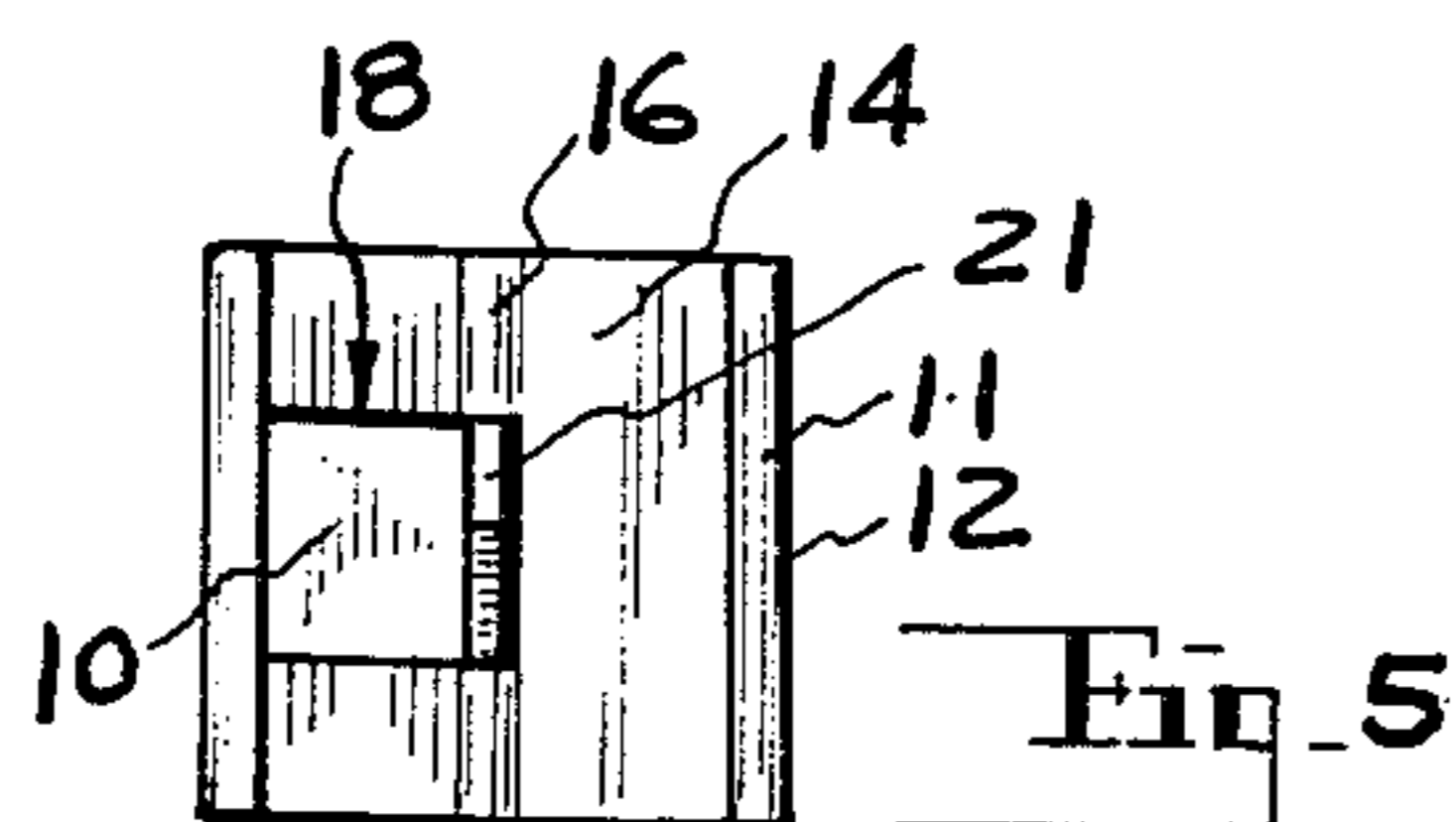
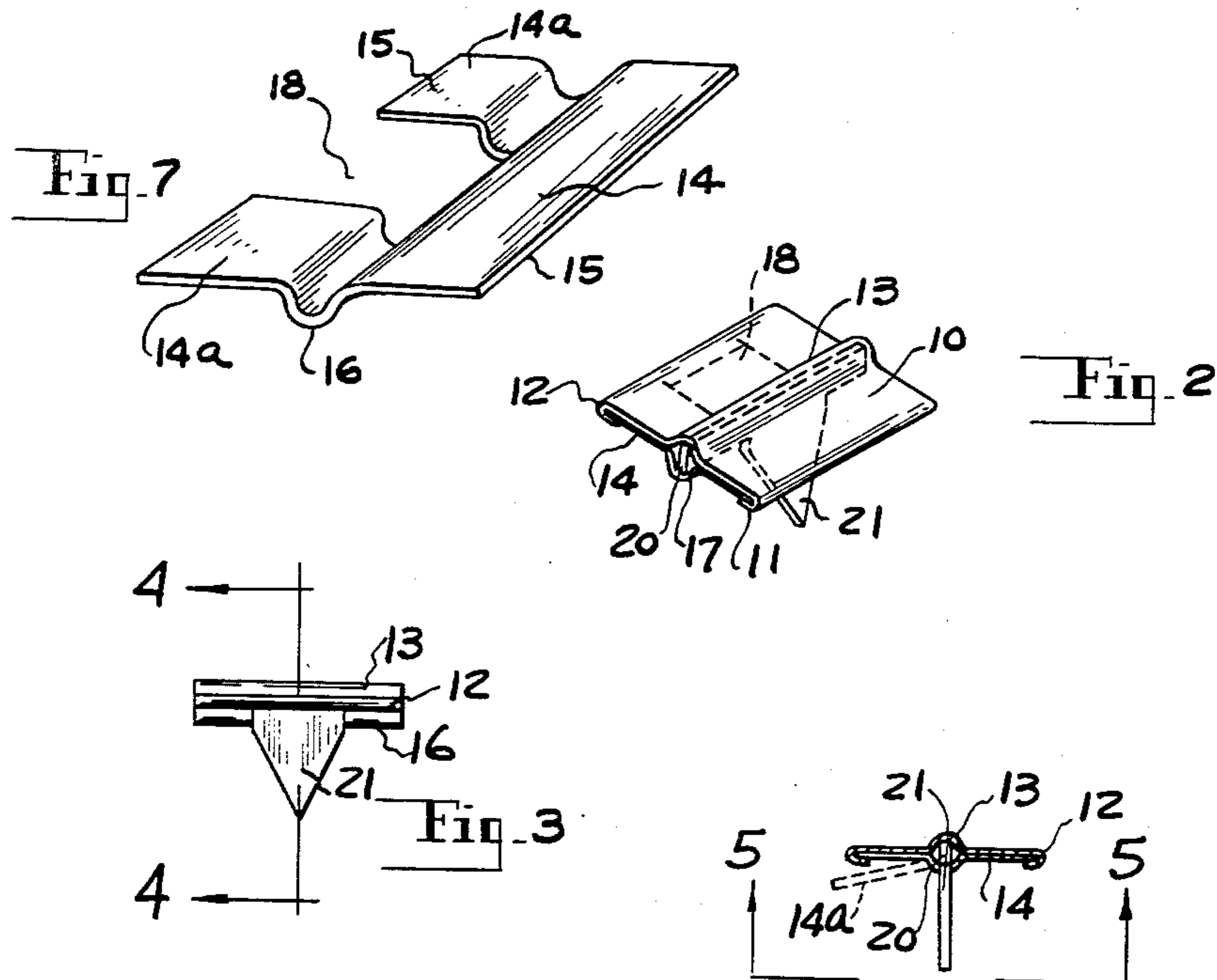
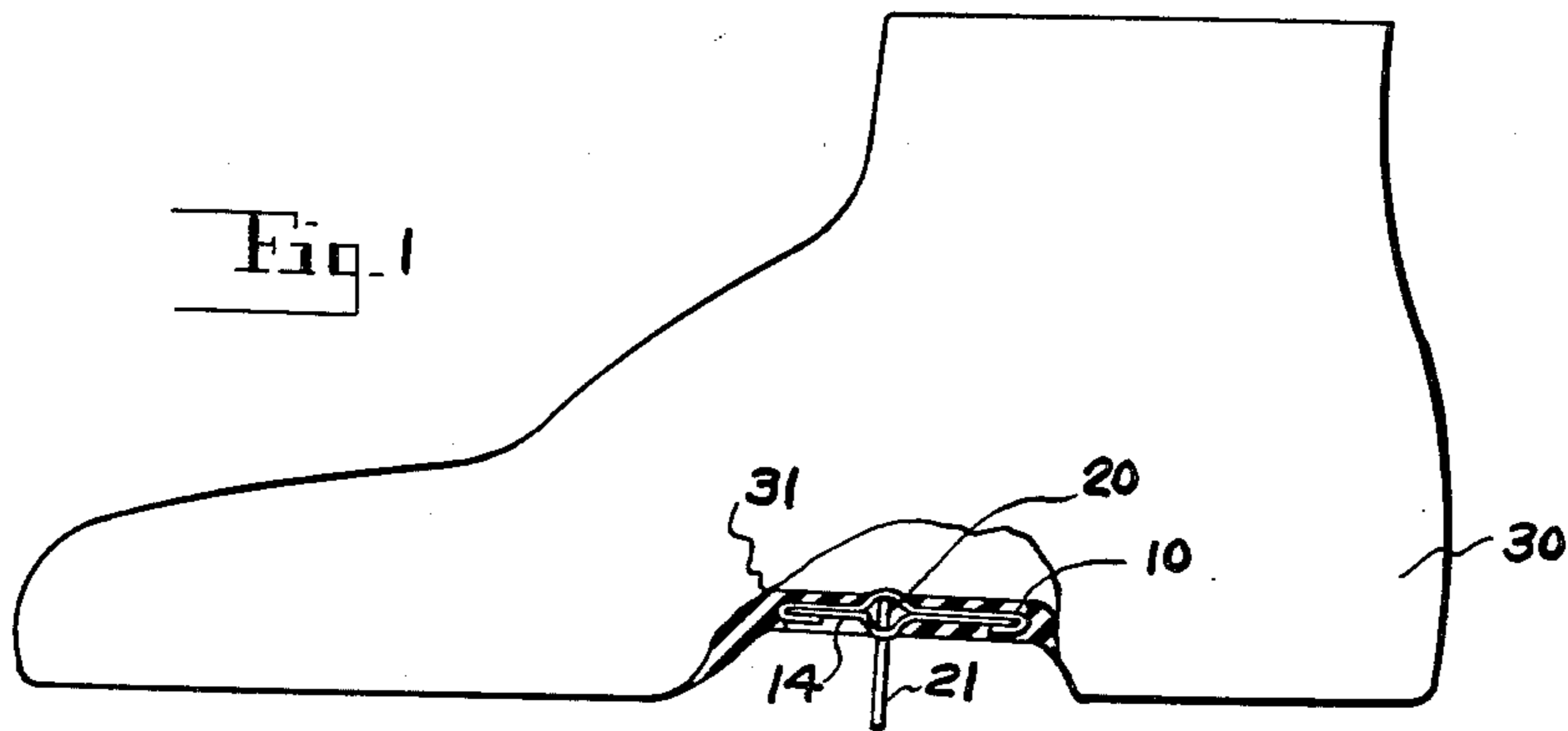
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F. GAU

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ICE CREEPERS

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## ICE CREEPERS

Frank Gau, 25320 Cathedral St., Detroit 39, Mich.

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2 Claims. (Cl. 36—61)

The invention pertains to an ice creeper which may be built into the sole of a rubber overshoe, the creeper including a substantially flat mounting base and a foldable spur projecting therefrom, the structure being such that normally the spur is in its inoperative position but may be swung manually into its operative position.

The mounting base is composed of a top plate and a lower plate which is in a yielding parallel position with said upper plate, and disposed therebetween is a portion while the main body of the spur projects downwardly through a slot in said lower plate. Said main body serves also as a lever whereby the position of the spur may be changed from the operative to the inoperative position or vice versa as the case may be.

The object of the invention is to provide a creeper of simple construction, one which is so imbedded in the sole of a shoe that only the spike is visible and one which in spite of its simplicity is fully practical in use.

I shall now describe my improvement with reference to the accompanying drawings in which:

Fig. 1 is a side elevational view of a rubber overshoe of which a part is broken off, the view disclosing the creeper in its position in the sole of the shoe;

Fig. 2 is a perspective view of the creeper with the pointed spur turned downwardly to its operative position;

Fig. 3 is a side view of the creeper as seen in the direction shown by the arrow in Fig. 2;

Fig. 4 is a sectional view on line 4—4 of Fig. 3;

Fig. 5 is a bottom view of the creeper as seen in the direction of arrows 5—5;

Fig. 6 is a perspective view of the spur forming a part of the creeper;

Fig. 7 is an enlarged perspective view of a component member of the base of the creeper.

Similar numerals refer to similar parts throughout the several views.

The creeper as a whole is of a substantially flat structure in order that it may be built into the sole of a shoe, which sole may be molded over and about the base of the creeper. The base consists of two plates, both of them being made of thin and resilient metal sheet stock such as steel. One of the plates marked 10 has the form of a rectangle which along each of its two opposed sides includes a flange 11. Each flange is looped in a hairpin turn to a parallel position with the main portion of said plate, the looped portion of each flange being marked 12. Said plate 10 is what will be called the upper plate. Midway between said flanges the plate includes an upward curl 13 in the form of an inverted letter U, said curl extending from one end of the plate to the other.

Disposed immediately below said upper plate is another plate, the lower one, marked 14, which is also rectangular and of the same length as the plate 10 but which is narrower to the extent that its marginal side portions 15 fit into the interior spaces of the loops 12. To put it differently, the side portions of the upper plate 10 are looped over the side edges of the lower plate 14,

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the opposed surfaces of the plates being disposed parallel to each other.

The lower plate is also formed so as to include a curl 16 but this one has the form of a trough which is U-shaped in cross section. The curl extends from one of the plates to the other midway the sides of said plate so as to be alined with the upwardly turned curl 13 of the upper plate. As a result thereof the two curls, one being opposed to the other, provide an enclosure 17 therebetween.

A portion of the lower plate 14, laterally to one side of the trough 16, is cut out so that a slot 18 is formed in said plate as shown in Fig. 7, the slot being flanked by the remaining portions 14a of said plate 14.

The enclosure 17 between the curl 13 and the trough 16 serves for reception of a part of the spur shown in Fig. 6. The spur is made of metal sheet stock preferably of steel and includes a flat bar 20, and a substantially triangular integrally formed blade 21 extending from the midportion of the bar, the bar and the blade being disposed in the same plane.

It is said bar 20 which fits into said enclosure 17 defined by the upper curl 13 and the lower curl 16. The height of the bar when the spur is in its vertical position as shown in Figs. 1 and 4 is such that it will spread apart said plates whereupon the tension of said plates at the curled portions thereof, will hold the spur against a turn from its said vertical position. The adjacent portion of the shoe sole is slotted as shown in Fig. 1 to receive said spur. However on manual pressure against the face of the spike, the grip of the plates may be overcome to allow the spur to assume a slanting position with respect to said plates as shown in Fig. 4. It will be noted that in said slanting position of the spur, its point would be located above the level of the underside of the shoe, that is, above the level of the surface on which the shoe rests. When the spur has been turned to its slanting position as shown in dotted lines in Fig. 4, the plates because of their spring action will bear against the side surfaces of the bar to prevent the spur from assuming its vertical or operative position. When the spur is in its slanting position it will partly fit into said slot 18.

Fig. 1 shows a rubber overshoe 30, the broken off part disclosing the creeper imbedded in the sole 31 of the shoe.

It will be understood that the creeper may as well be built into soles made of other material than rubber and that it may find useful application in other structures.

After having described my improvement, what I wish to claim is as follows:

1. An ice creeper adapted to be built into the sole of a shoe, the creeper including a flat base consisting of two resilient plates, an upper one and a lower one, the upper plate including two parallel side flanges turned about the edges of the corresponding sides of the lower plate, the plates being in a resiliently parallel relation to each other, the upper plate including an upward curl intermediate its flanged sides, the lower plate having a trough-like depression in opposed alinement with said curl, said curl and said trough defining a channel-shaped enclosure, the lower plate having a rectangular slot extending laterally from said trough, and a spur secured to said base, the spur including a flat bar fitting into said enclosure lengthwise and a flat, integrally formed pointed blade adapted to project normally from said base through said slot, in a horizontal position but being adapted to be swung to a vertical position causing the bar within the enclosure to pry the plates from each other, said sole being slotted to cooperatively receive said blade.

2. An ice creeper for rubber overshoes, the creeper having a flat base adapted to be imbedded in the sole of the shoe, the base being composed of two metal plates,

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an upper one and a resilient lower one, each being defined in part by two parallel sides, the top plate including a flange along each parallel side, the flanges being turned over the corresponding edges of the lower plate, the top plate including an upward curl intermediate said flanged sides, the lower plate having a trough in opposed alignment with said curl to form a longitudinal enclosure between said two plates, the lower plate having a portion cut out laterally from said trough to form a slot, a spur secured pivotally to said base, the spur including a flat 10

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bar fitting into said enclosure and disposed therein in a slanting sharp angle relation to the base, and a pointed, flat blade integrally formed with said bar in the plane thereof, the blade projecting outwardly through said slot, 5 said blade being adapted to be swung manually to a vertical position overcoming the pressure of the two plates from opposite sides against said bar, said sole being slotted to cooperatively receive said blade.

No references cited.