

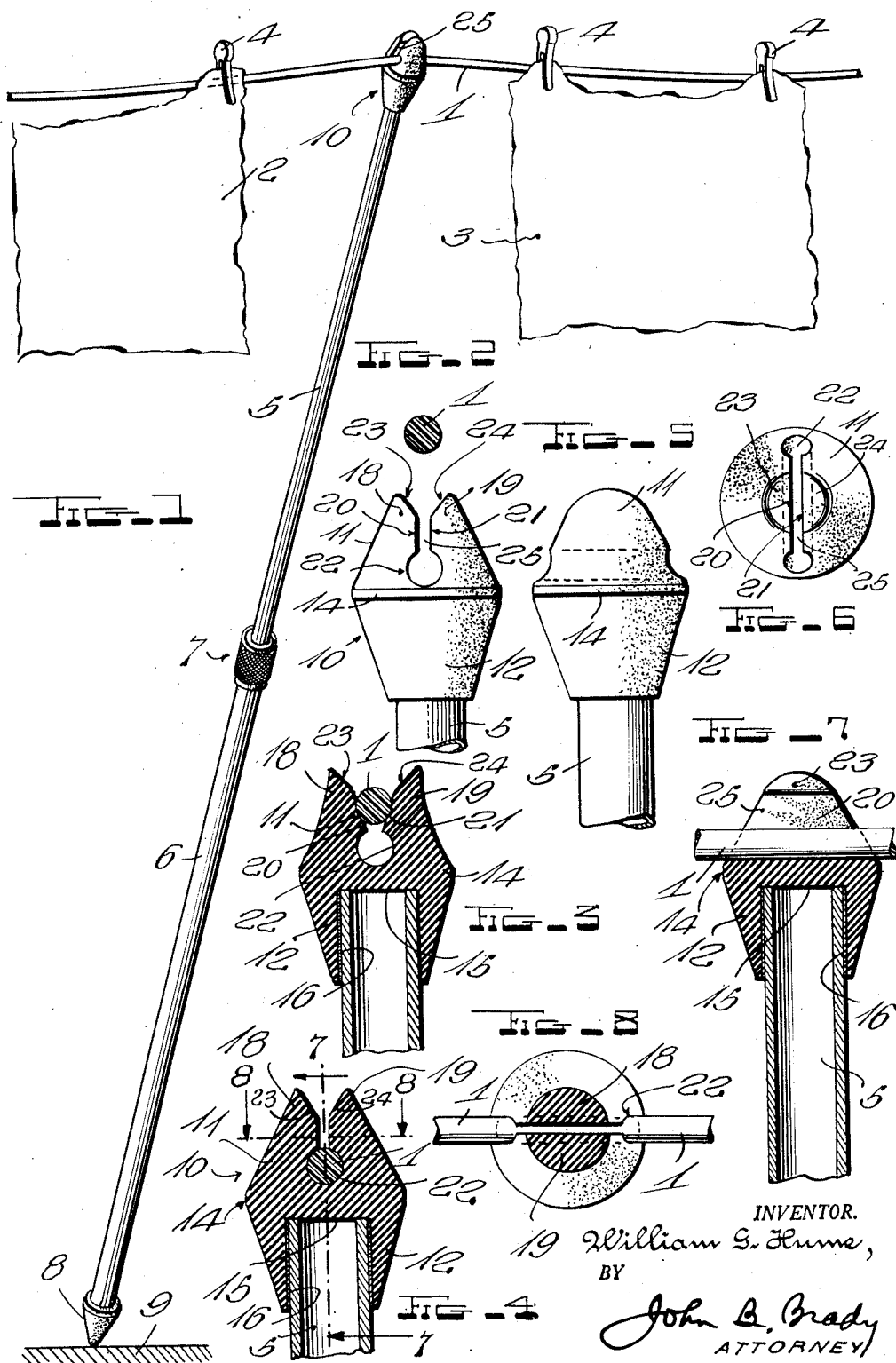
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W. G. HUME

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LINE-GRIPPING DEVICE FOR PROPS

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LINE-GRIPPING DEVICE FOR PROPS

William G. Hume, Lancaster, Pa., assignor, by
mesne assignments, to Quaker State Metals
Company, a corporation of Pennsylvania

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2 Claims. (Cl. 24—81)

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My invention relates broadly to props for lines and more particularly to a grip for facilitating the supporting of a line by a prop.

One of the objects of my invention is to provide a construction of pliable grip carried by a prop for supporting a line and for holding the prop with respect to the line to prevent slippage of the prop from beneath the line.

Still another object of my invention is to provide a construction of pliable grip of compact construction which is readily mounted on the end of a prop for engagement with a line.

Still another object of my invention is to provide a construction of resilient slotted terminus for application to the end of a prop and forming a non-slipping grip for the line including means for interlocking the line with the terminus.

A still further object of my invention is to provide a construction of pliable head in the form of a double frustum of a cone having upper and lower parts extending in opposite directions from a circular transverse section through the head, the upper part thereof including a line-gripping portion and the lower part thereof including a prop-engaging means for facilitating the support of a line by a prop.

Other and further objects of my invention reside in the construction of resilient tip for props forming a line-gripping means as set forth in the specification hereinafter following by reference to the accompanying drawing, in which:

Figure 1 is a pictorial representation of the line-gripping means of my invention carried by the upper end of an adjustable prop, the prop being illustrated in position for supporting a clothesline; Fig. 2 is a side elevational view of the line-gripping head of my invention and illustrating the line-gripping head in a position immediately below the line and about to be moved to a position for engaging and supporting the line; Fig. 3 is a fragmentary vertical sectional view showing the next progressive operational step from that illustrated in Fig. 2, in which the line is engaged between the pliable parts of the bifurcated resilient head of the line-gripping device of my invention; Fig. 4 is a fragmentary vertical sectional view similar to the view shown in Figs. 2 and 3 but illustrating the next progressive step in interlocking the line and the pliable slotted head constituting the gripping device of my invention; Fig. 5 is a side elevational view of the pliable head shown in Figs. 2-4, the view being taken from a position revolved 90° in a transverse plane from the position illustrated in Figs. 2-4; Fig. 6 is a top plan view of the pliable head shown

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in Fig. 5 and illustrating the vertically extending slot therein and the interlocking recess at the base of the slot; Fig. 7 is a vertical sectional view taken substantially on line 7-7 of Fig. 4; and Fig. 8 is a transverse sectional view taken substantially on line 2-3 of Fig. 4 and illustrating the line interlocked in the pliable head.

My invention is directed to a pliable grip for the head of a prop particularly applicable as a clothesline prop for forming a resilient grip and interlock with the line for facilitating the engagement and detachment of the prop with respect to the line. The pliable head is compactly formed in the shape of a double frustum of a cone having upper and lower parts extending in opposite directions from a circular transverse section through the head, the upper part including a line-gripping portion and the lower part including a prop-engaging means. The upper part of the head includes a vertically extending slot forming a bifurcation for the pliable head terminating in flat parallel extending faces separated by a gap having a linear dimension less than the section of an enlarged recess provided at the base of the vertically extending slot. A line engaged between the spaced portions of the pliable head is gripped between the flat parallel extending faces and as the head is forced toward the line the pliable head is distorted in section and the bifurcated parts thereof spread to a sufficiently open position to enable the line to be interlocked in the recess at the base of the slot. The line may thus be securely engaged by the prop against slippage.

The prop of my invention is of a telescopic adjustable tubular type, including means for maintaining the parts in a particularly extended or retracted position. The lower end section of the tubular prop is provided with solid resilient tip at the bottom thereof for engaging the lawn or pavement to prevent slippage of the prop under a loaded line.

The construction of my invention illustrated herein has proven highly efficient in operation and practical production and while I have disclosed my invention in certain preferred embodiments I realize that modifications may be made and desire that the description herein be regarded in the illustrative sense and not in the limiting sense.

Referring to the drawings in more detail, reference character 1 designates a clothesline which in the particular embodiment illustrated is a plastic line, although it will be understood that any type of line may be engaged and supported

by the head carried by the prop of my invention. The line 1 is shown loaded with articles of clothing being aired and dried, as represented at 2 and 3, the clothing being suspended on the line by suitable pins represented at 4. The clothesline prop which carries the gripping head of my invention is represented as comprising a pair of adjustable tubular sections 5 and 6 which may be telescopically extended or contracted and maintained in a desired adjusted position by suitable locking means illustrated at 7. The lower tubular section 6 is provided with a pointed resilient tip 8 which engages the supporting surface 9, such as the lawn or pavement, for preventing slipping of the prop. The top of the upper tubular section is engaged by the gripping head of my invention represented generally at 10. The gripping head 10 is formed from pliable material constructed in the shape of a double frustum of a cone having an upper pliable part 11 and a lower pliable part 12 extending in opposite directions in a circular transverse section 14 through the pliable head. The belt formed by the circular transverse section of the head resists the stresses to which the head is subjected insuring the restoration of the head to its original position after being subjected to distorting forces.

The lower part 12 has an axially extending bore 15 therein for receiving the upper end of the tubular section 5. In attaching the pliable head 10 to the upper tubular section 5 a layer of cement or strong glue 16 is applied to the end of the tubular section and the pliable head 10 forced frictionally over the upper end of the tubular section 5 by distortion and stretching in order to securely position the pliable head on the upper section of the prop with the aid of the cement or glue 16.

The upper part of the pliable head 10 is bifurcated forming a pair of pliable portions 18 and 19 terminating in flat parallel extending faces 20 and 21 extending upwardly from a transverse diametrically extending enlarged recess represented at 22. The linear distance between the flat parallel extending faces 20 and 21 is less than the diameter of the diametrically extending enlarged recess 22. The pliable portions 18 and 19 of the head 10 are each tapered at their extremities, the inner tapered portions 23 and 24 being angularly disposed to and contiguous with the flat parallel faces 20 and 21 to facilitate the entry and engagement of the line 1 with respect to the pliable head.

I have successfully produced the slotted pliable tip 10 in rubber which is sufficiently soft and resilient to be readily distorted and restored to its original shape when effecting an interlocking with a clothesline. I have successfully employed the slotted rubber tip on the top of the clothes prop to fit over any solid or twisted wire clothesline or plastic clothesline of, for example, .145" diameter, that is #9 gauge, for holding the prop with respect to the clothesline and for preventing sidewise slipping. Even with the secured grip thus provided the prop may be readily pulled off the line since the material of the tip is pliable and distortionable while holding the line with one hand and pulling the top off with the other hand. The prop is adjustable in length as for example from 4½' to 8' in height. The adjustment means 7 forms the subject matter of my copending application Serial No. 84,992, filed April 1, 1949, now Patent 2,546,157, dated March 27, 1951, to which reference is made to the details of construction of the means for securing the

sections 5 and 6 in various extended or retracted positions.

Due to the telescopic construction of the prop and the fact that the sections are formed from aluminum tubing the prop is extremely light in weight, weighing for example only 17 oz. in the size heretofore mentioned. Inasmuch as the construction is collapsible the prop can be carried to the basement without difficulty and put away in a small space. Inasmuch as all parts are made of aluminum, except the head 10 and the tip 8, both of which may be formed from relatively soft pliable rubber, the parts will not rust, and will have almost indefinite life.

The progressive steps of engaging the prop beneath the clothesline, as shown in Figs. 2, 3 and 4, involve first the movement of the head 10 to a position aligning the central slot 25 with the clothesline 1 as shown in Fig. 2. The head 10 is then advanced upwardly to grip the clothesline 1 between the inclined faces 23 and 24 and the contiguous flat parallel faces 20 and 21 as shown in Fig. 3. The pliable material of the bifurcated portions 18 and 19 is distorted out of normal position as illustrated in Fig. 3, enabling the line 1 to pass through the central slot 25 and to be engaged within the transverse diametrically extending recess 22 as shown in Fig. 4. The pliable bifurcated portions 18 and 19 spring back into a position tending to close the linear gap in the slot 25 and forming an interlock of the material of the bifurcated portions 18 and 19 around the line 1, as represented in Fig. 4.

Because of the pliable nature of the head 10 the distortion process just explained is readily reversed in pulling the prop off the line.

While I have described the resilient head as particularly adapted for a clothes prop it will be understood that the head is equally adaptable to adjustable props used under trees for supporting the loaded branches thereof, such as orange trees, fruit trees, nut trees, etc.

While I have described my invention in certain of its preferred embodiments I realize that modifications and changes may be made and I desire that it be understood that no limitations upon my invention are intended other than may be imposed by the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. A line-engaging means for a prop comprising a resilient distortionable and restorable body having at its base a stretchable socket for supporting said body on the top of a prop, said body tapering upwardly and outwardly from the stretchable socket in the form of an inverted frustum of a cone to a circular transverse section and tapering upwardly and inwardly from said circular transverse section to the tip of the body in the shape of a frustum of a cone complementary to the aforesaid inverted frustum, said body having an approximately circular opening extending transversely thereof and having a pair of substantially parallel walls contiguous with the transverse opening appreciatively spaced from each other for the passage of a line into or out of gripping engagement with the transverse opening and a pair of angularly inclined guide jaws on the inside of the tips of said walls for guiding a line into the space between said walls into engagement with the transverse opening, said walls being resiliently displaceable for allowing the passage of the line into the transverse opening and restorable to normal position over the line for maintaining the line in the transverse open-

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ing, said circular transverse section of the body resisting the distortion forces to which said walls are subjected.

2. A line-engaging means for a prop as set forth in claim 1 in which said approximately circular opening which extends transversely of said resilient distortionable and restorable body is positioned within said second-mentioned frustum of a cone and located above the belt formed by said circular transverse section.

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WILLIAM G. HUME.

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