

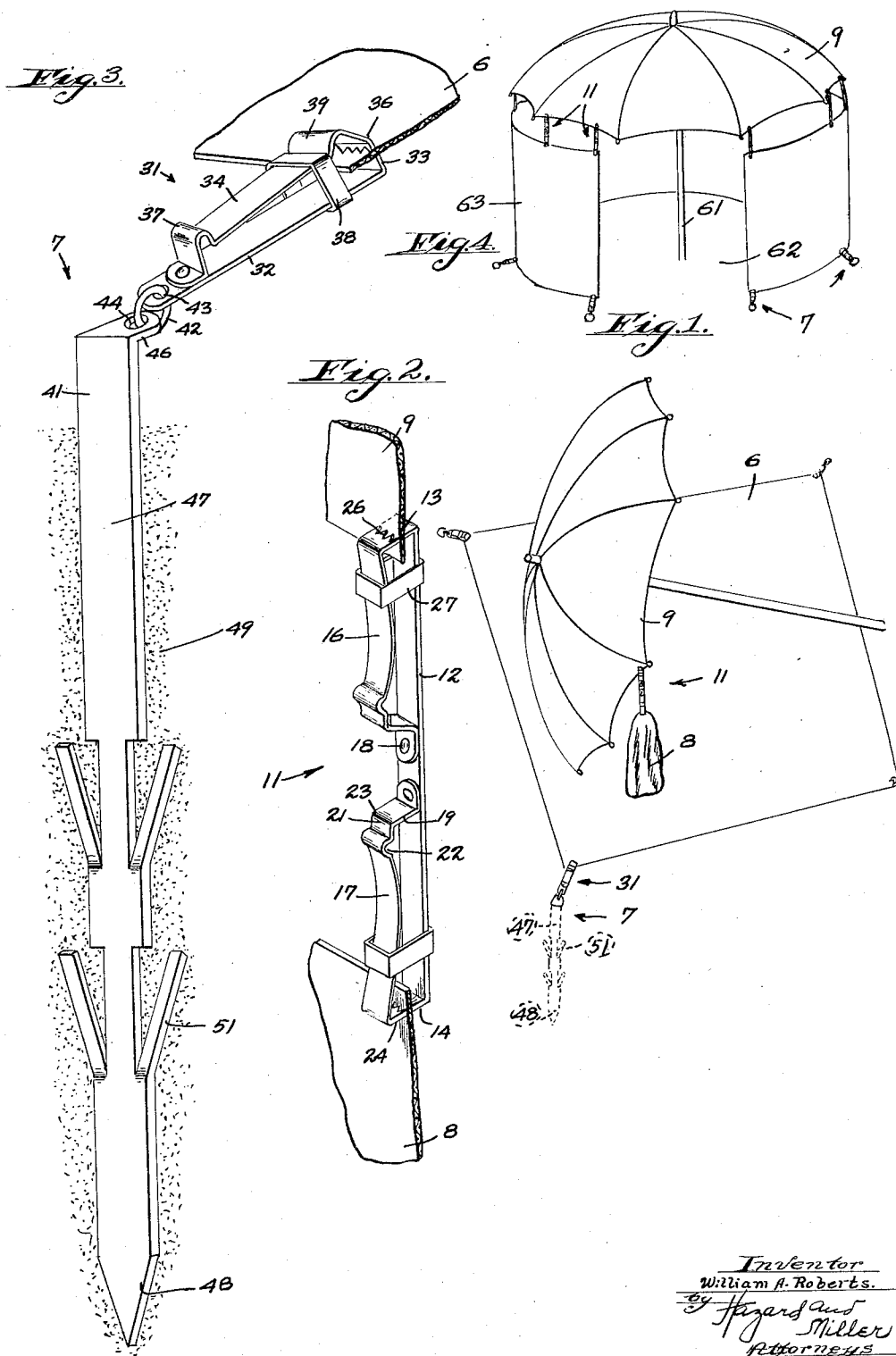
April 19, 1932.

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1,854,671

COMBINATION ANCHOR AND FASTENING DEVICE

Filed May 31, 1930



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COMBINATION ANCHOR AND FASTENING DEVICE

Application filed May 31, 1930. Serial No. 457,825.

This invention relates to attaching devices, and has for an object the provision of a novel, unusually simple and easily operable device for attaching one article to another.

5 A more detailed object is the provision of an attaching device including a clamp which may be instantly attached to, or released from any suitable article by sliding a loop longitudinally thereof in the direction of
10 divergency of the arms of the clamp, these arms being provided with opposed jaws co-operative with each other in engaging the article gripped when the arms are pressed together.

15 A further object is to provide means which are formed integrally with one of the arms of the clamp, for limiting the sliding movement of the loop in each direction, thereby preventing inadvertent removal and possible
20 loss of the clamping loop.

A further object is to provide attaching means on the end of the above described clamping device, whereby the article gripped by the clamping member may be securely engaged with another article whereby the two
25 articles are attached or anchored in predetermined relationship to each other.

The invention possesses other objects and advantageous features, some of which, with
30 those enumerated, will be set forth in the following description of the invention's particular embodiments which are illustrated in the drawings accompanying and forming a part of the specification.

35 Referring to the drawings:

Figure 1 is a perspective view showing one modification of the attaching device of my invention, used for anchoring a blanket to the surface of the ground, and another modification used for attaching a towel or analogous
40 article to the edge of an umbrella;

Fig. 2 is an enlarged, perspective view of the modification of my invention used for attaching a towel to the umbrella;

45 Fig. 3 is an enlarged, perspective view showing that modification of my invention which is used for anchoring the corner of the blanket to the surface of the ground;

Fig. 4 is a perspective view showing a different manner of using each of the two illus-

trated modifications of the attached device of my invention.

Whereas the attaching device of the present invention has an extremely wide range of utility inasmuch as it may be employed to
55 interconnect many different types of articles, the two modifications herein shown and described, are illustrated as being used to suspend a towel from the edge of a beach umbrella, and to anchor the corners of a blanket,
60 mat or the like, to the surface of the ground, as, for example, a blanket placed upon the beach to be used by bathers in reclining thereon, and which is apt to be disturbed from that
65 position in which it is placed, by the movements of the bathers thereon, and by the action of the wind. A beach umbrella is most commonly used in conjunction with a blanket or pad so positioned upon the beach to shield the bathers from the direct rays of the sun,
70 and it is most convenient to have a towel, handkerchief or the like, so secured to the umbrella, that it is available for instant use; and hence, the first modification is of extreme utility in retaining such an article where a bather
75 may quickly locate it, even if partially or completely blinded by having his eyes filled with water.

Fig. 1 shows both modifications of the device in actual use. The blanket, pad, sheet
80 of canvas or analogous article indicated at 6, is shown anchored at each corner, to the sand of the beach, by means of one modification of my attaching device which is indicated in its entirety at 7; and a towel, handkerchief or
85 the like, indicated at 8, suspended from the edge of a conventional beach umbrella 9, by means of another modification which is indicated in its entirety at 11.

That form of my attaching device which is
90 indicated at 11, is best shown upon Fig. 2, and comprises an elongated metal strip 12 having each end 13, 14 deflected substantially into perpendicularity with the body of the strip 12, to form a clamping jaw. The strip 12
95 is made preferably of metal, and is sufficiently rigid to prevent its being flexed during normal use of the device. A laterally resilient strip 16, 17, is associated with each of the ends 13 and 14 respectively, each of the
100

resilient strips being securely and permanently attached to the elongated strip 12, as by a rivet 18 at a point spaced from the associated end 13, 14 of the elongated strip. Each of the resilient strips 16, 17, is preferably constructed of spring steel, die-stamped or otherwise pressed to shape, as is the elongated strip 12, also making it possible to produce the attaching device in quantities at an extremely low cost.

Each of the strips 16, 17 rises abruptly from its point of attachment to the elongated strip 12, as indicated at 19. At the upper end of the rising portion 19, the strip is deflected toward the associated end 13, 14 of the strip 12, as indicated at 21; and a hump 22 is formed in each resilient strip in the deflected portion 21, but adjacent the bend 23 between the deflected portion 21 and the rising portion 19. From the hump 22, each strip 16, 17 curves slightly toward the elongated strip 12, and then flares from the elongated strip 12 toward its outer end 24 which is deflected inwards toward the associated jaw 13, 14 of the elongated strip and in the plane thereof, so that this deflected end of each resilient strip, serves as a jaw opposed to the associated jaw of the strip 12.

Preferably each of the jaws 13, 14, and 24, is provided with teeth 26, the teeth of the associated jaws, being staggered with respect to each other so that when a resilient strip 16, 17 is pressed toward the elongated strip 12, the teeth 26 thereof will interfit and thereby establish a firmer grip upon any article engaged therebetween, particularly if that article is flexible and capable of being pressed between the teeth of one jaw by the teeth of the other jaw. If desired, the teeth 26 may be relatively sharp, whereby they tend to penetrate the material with which they are engaged, and thus establish a still firmer grip thereupon.

Means are associated with each of the resilient strips 16, 17, for pressing it toward the elongated strip and retaining it in such position until purposely released. Each of these pressing and retaining means, comprises a loop 27 conveniently constructed of a band of metal bent into substantially rectangular configuration, encircling the associated resilient strip 16 and the elongated strip 12. Each of the loops 27 is slidable upon the strips engaged thereby, between the hump 22 of the associated resilient strip and the associated jaws. The total height of the jaw 24 formed on the associated resilient strip, and the jaw 13 or 14 as the case may be, on the elongated strip, is greater than the inside dimension of the loop 27, as is also the distance between the top of the associated hump 22 and the distal face of the elongated strip 12. Hence, each loop 27 is permitted free sliding movement upon its associated resilient strip and the elongated strip, but this

movement is limited in each direction so that the loop 27 can not be removed thereby, preventing loss of the loop. However, inasmuch as each resilient strip diverges from the elongated strip 12 toward the outer ends thereof, movement of the associated loop 27 thereupon, toward the outer ends, will press the jaws 24 and 13 or 14, as the case may be, toward each other, whereby they may be securely engaged upon any desired article such as an edge of the umbrella 9. Similarly, manipulation of the flexible strip at the other end of the elongated strip 12, permits firm engagement with an article such as the towel 8, whereby the towel is suspended from the umbrella 9 in a predetermined position, but can be quickly released therefrom simply by sliding the associated loop 27 toward the point of attachment of the associated flexible strip, to the elongated strip, permitting the jaws to separate and release the towel 8.

The modification 7, which is employed for anchoring the blanket 6 to the beach, is shown in enlarged form upon Fig. 3. This modification includes a clamping member indicated in its entirety at 31, which is similar in construction to either of the two clamping devices of the modification 11 previously described, in that it comprises a rigid strip 32 having a jaw 33 formed at its outer end, and a resilient strip 34 permanently attached thereto and having a jaw 36 formed at its outer end in opposition to the jaw 33. A hump 37 similar to the hump 22 as previously described, is provided adjacent the point of attachment of the strip 34, to the strip 32 to limit inward movement of the loop 38, whereby the jaws 36 and 33 are pressed together. Adjacent the jaw 36, the strip 34 is deflected inwards, forming another hump 39 which limits outward movement of the loop 38.

However, instead of having another clamping member formed on the other end of the strip 32, an anchoring stake 41 is attached thereto through the expedient of a ring 42 passing through holes 43 and 44 respectively, formed in the inner end of the strip 32 and in a flange 46 formed by deflecting the upper end of the stake 41.

This stake 41 is constructed of a piece of strap iron, and comprises a shank 47 upon the upper end of which the flange 46 is formed, and the lower end 48 of which is pointed to facilitate its being thrust into the sand 49 of a beach, or into the surface of the ground of any other type. Barbs 51 are formed on the shank 47 by striking portions of the edges of the strip therefrom, into angularity therewith, wherein these struck-out portions diverge laterally from the strip, in a direction away from the pointed end 48. Preferably a plurality of these barbs 51 are formed on each lateral edge of the shank 47, and are bent so as to extend from opposite faces thereof, as clearly shown upon Fig. 3.

The stake 41 may easily be pushed or driven into the surface of the ground, particularly into a sandy beach, but removal of the stake therefrom, is more difficult owing to the engagement of the barbs 51 with the sand 49 or other material in which they are embedded. When so positioned, the corner or the lateral edge of the blanket 6, or an analogous article, may be firmly connected to the stakes 41, by placing the edge or corner of the blanket between the extended jaws 33 and 36, and then sliding the loop 38 theretowards, to force the jaws together into gripping engagement with the blanket 6. In this manner, the blanket 6 may be firmly secured to the sand 49 of the beach, after having been laid thereupon; and inasmuch as the shank 47 of the stake 41 may be driven or pushed all of the way into the sand 49, that portion of the blanket 6 which is engaged by the clamping device 31, will be held closely adjacent the sand, to preclude the possibility of tripping over the edge of the blanket, and to prevent the wind from blowing between the blanket and the beach.

Whereas each of the two above described modifications of the attaching device of my invention, is capable of affording convenience in practically innumerable associations, it should be pointed out that unusual convenience is afforded by applying them as illustrated upon Fig. 4. Here the beach umbrella 9 has been placed in erect position by thrusting the central shaft or handle 61 thereof, into the sand 49 of the beach. A screen 63 may then be suspended from the peripheral edge of the umbrella 9, by means of a plurality of the modifications 11 of my attaching device. One of the clamping members of each of these clamping devices 11, is engaged with the material of which the top of the umbrella 9 is composed; and the other clamping member is engaged with the upper edge of the screen 63. Then the lower edge of the screen 63 may be anchored to the beach by means of a plurality of the modifications 7 of my attaching device, by engaging the clamping member 31 of each, with the lower edge of the screen 63 after the shank 47 of each, has been thrust into the beach. In this manner, the area below the top of the umbrella 9, may be either partially or completely closed to shelter persons thereinside.

It is to be understood that the details of the invention as herein disclosed, are subject to alteration within the spirit or scope of the appended claims.

I claim:

1. In an attaching device, a rigid strip having one end deflected perpendicularly with respect thereto to form a jaw, a resilient strip secured to said rigid strip at a point spaced from said jaw, said resilient strip rising abruptly from adjacent its point of at-

tachment and having a hump thereon, and said resilient strip flaring with respect to said rigid strip from adjacent said hump and having its outer end deflected inwards to form a jaw opposed to the jaw on said rigid strip, and a loop slidable on said strips between said hump and said jaw.

2. In an attaching device, a rigid strip having one end deflected perpendicularly with respect thereto to form a jaw, teeth formed on the outer edge of said jaw, a resilient strip secured to said rigid strip at a point spaced from said jaw, said resilient strip rising abruptly from adjacent its point of attachment and having a hump thereon, and said resilient strip flaring with respect to said rigid strip from adjacent said hump and having its outer end deflected inwards to form a jaw opposed to the jaw on said rigid strip, teeth formed thereon in staggered relationship with those on the other jaw, a loop slidable on said strips between said hump and said jaws, and attaching means associated with the other end of said rigid strip.

3. In an attaching device, a rigid strip deflected at each end to form a jaw, a resilient strip associated with each end of said rigid strip and secured to the rigid strip at a point spaced from the associated jaw, each of said resilient strips having a hump thereon adjacent its point of attachment and flaring from said hump with respect to said rigid strip, and each resilient strip having its outer end deflected to form a jaw opposed to the associated jaw on the rigid strip, and a loop slidable on each resilient strip, each of said loops also engaging said rigid strip.

4. In an attaching device, a rigid strip deflected at each end to form a jaw, a resilient strip associated with each end of said rigid strip and secured to the rigid strip at a point spaced from the associated jaw, each of said resilient strips rising abruptly from said rigid strip and flaring with respect thereto from adjacent its point of attachment and having its outer end deflected to form a jaw opposed to the associated jaw on the rigid strip, and a loop slidable on each resilient strip, each of said loops also engaging said rigid strip.

In testimony whereof I have signed my name to this specification.

WILLIAM A. ROBERTS.