(No Model.)

C. S. HEBARD.

FOLDING LANDING NET.

No. 440,568. Patented Nov. 11, 1890.

Fig. 1.

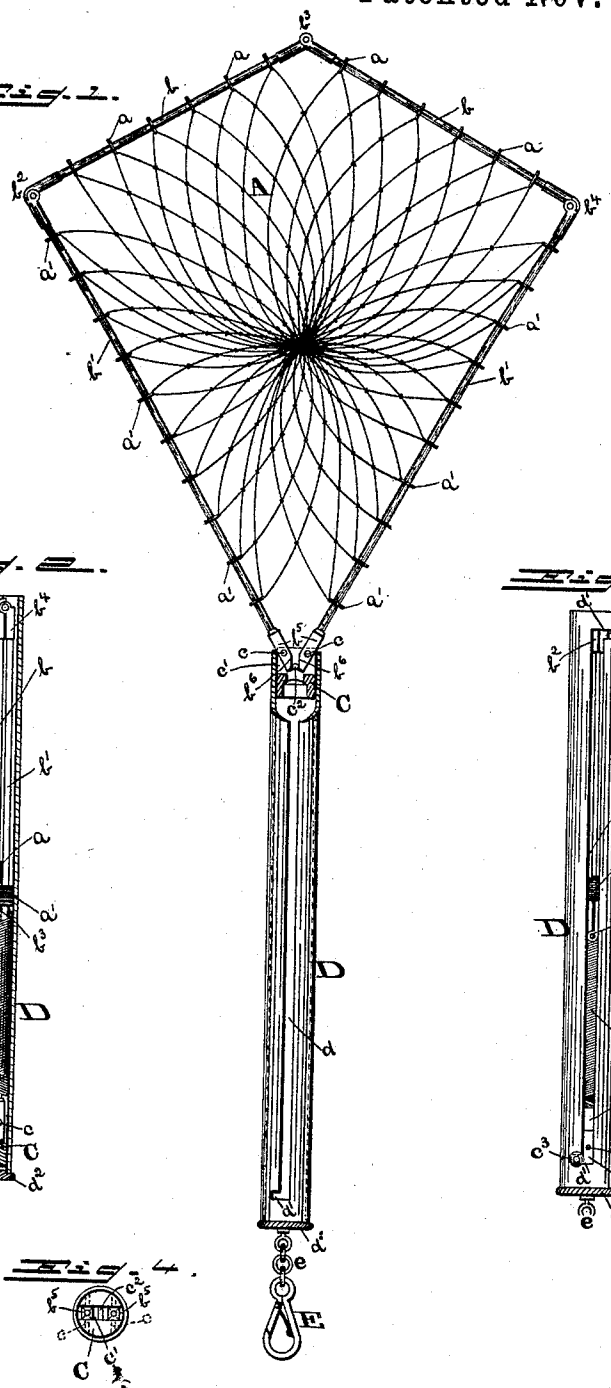


Fig. 2.

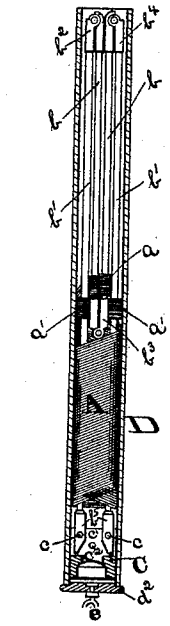


Fig. 3.

Fig. 4.

WITNESSES.

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FOLDING LANDING-NET.

SPECIFICATION forming part of Letters Patent No. 440,568, dated November 11, 1890.

Application filed May 2, 1890. Serial No. 350,265. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. HEBARD, a citizen of the United States, residing at Pequaming, in the county of Baraga and State of Michigan, have invented certain new and useful Improvements in Folding Landing-Nets, of which the following is a specification.

My invention has relation to fishing-tackle, with reference particularly to landing-nets, and has for its object the provision of novel, simple, and efficient means whereby such nets with their appurtenant parts—such as the frame or hoop and the handle—may, for convenience of carriage when not in use, be all reduced to the compass or bulk of the said handle without necessitating the detachment or separation of any of the parts from their operative relation.

My invention consists in certain details of construction and in the combinations of parts as hereinafter more fully described and claimed, having reference particularly to the provision of a hollow handle of ordinary length provided with a longitudinal slot of approximately even length with the handle and having at each end an offset or L-shaped extension, in which slot slides a button sustained in a round plug of slightly less diameter than the inner diameter of said handle, in order that the said plug may slide to and fro in the handle under the impulse of the button and be locked against movement in either direction by the engagement of the latter with one of the aforesaid offsets. Pivoted in said plug is a pair of arms of such length that when the plug is withdrawn to the bottom or closed end of the handle such arms will rest wholly within said handle, and when the plug is projected to the open end of the handle with the arms in advance said arms are free to be distended into a V shape, in which position they are maintained by a knuckle-jointed rod, which is hinged at each of its ends to the outer ends of the aforesaid arms, and by the spring of the arms is maintained at an angle whose apex is higher than such ends, thus forming a rigid frame for the net, which latter is secured to rings which slide freely on the rod and arms, according as the same are manipulated. When this frame is folded in a manner the reverse of the above-described opening operation, bringing the arms and rod-sections side by side, the net is wound snugly around the same and the bulk of the whole is slightly less than the inner diameter of the handle, and when the plug is withdrawn will be drawn wholly within said handle and locked against accidental projection by the engagement of the button with the offset at the lower end of the slot.

The details of my invention will be more particularly described and claimed hereinafter, and will be clearly understood upon reference being had to the accompanying drawings, wherein—

Figure 1 is a plan view of my improvements in position for use, the plug which supports the net-frame being in section, as is also part of the handle. Fig. 2 is a longitudinal section of the handle and plug with the net and frame folded and within said handle. Fig. 3 is a plan view of the parts in the position shown in Fig. 2, the handle showing in full lines. Fig. 4 is an end view of the handle and plug.

A represents the net, which is secured to the rings a a', the latter loosely encircling the frame-sections b b', said sections being hinged or coupled to each other by the knuckle-joints b^2 b^3 b^4, secured to their contiguous ends, the joints b^2 b^4 having their shoulders facing outwardly from the frame and the joint b^3 having its shoulders facing inwardly, as shown in the drawings. The inner ends of the sections b', or the ends opposite to those on which are secured half of the knuckle-joints, are provided with elongated heads b^5, which are square in cross-section and are beveled or wedge-shaped at their lower ends on their opposite faces, as shown at b^6. Said heads are pivoted on pins c in a slot or kerf c' in the end of a round plug C, which slot passes clear through from side to side of said plug transversely of its axis, affording a clearance for the swing of the heads b^5 on their pins and having therein a transverse pin c^2 midway between said heads and receiving the impact of their beveled portions b^6 when in the position shown in Fig. 1 of the drawings, limiting the outward swing of said heads and avoiding strain on any part other than this pin. As shown, the lower portion of the

plug C is bored out, which is for the purpose of reducing the weight only and takes no part in my invention.

D represents the hollow tubular handle, which may be of any suitable material, and has therein a longitudinal slot *d*, with oppositely-disposed offsets or recesses *d'* at each end, such slot affording a slideway for the shank of the button c^3, which is secured in the side of the plug C, and affords means for the actuation of said plug, the diameter of the plug being of such size relatively to the inner diameter of the handle as to permit of its sliding easily therein without being so loose as to cause it to slide unassisted, and the dimensions or proportions of the arms or sections of the net-frame are such that when folded and the net wound around them the entire bulk will be at greatest as small as the diameter of the plug, so that when the plug is drawn into the handle from its open end the frame and folded net will be free to enter said open end. The lower or inner end of the handle D is closed by the cap d^2, in which is swivelly secured the chain *e*, which sustains the snap-hook E, which chain and hook are provided for convenience in carrying when temporarily out of use, being hooked in a button-hole to a belt or elsewhere.

The operation is as follows: Starting at Figs. 2 and 3, the button c^3, which is in the lower offset of the slot *d*, and thereby locks the plug C to which it is attached against unintentioned longitudinal movement, is grasped and pushed to the right, turning the plug and its appurtenant parts correspondingly until in alignment with said slot, whereupon it is further pushed upwardly in the slot until it strikes the other end thereof, carrying the plug to the position shown in Fig. 1. Finally, the button is pushed laterally into the upper offset of slot *d*, thus locking plug C in this position, in which position the frame-sections *b b'* will still be in the close relation shown in Fig. 2, while projecting wholly beyond and outside the open end of the handle D. Now, the net A is unwound entirely until it merely hangs unstretched from the rings *a a'*, thus leaving the sections *b'* free to be distended in a V shape until their heads b^5 at the beveled portions b^6 contact with the pin c^2, which pin limits the distension above mentioned and prevents the strain on the end of the handle, which would result if this pin were not provided. In this position the normal distance between the outer ends of the sections *b'* is considerably less than a distance equal to the combined lengths of the sections *b*. Consequently the outer ends of the sections *b'* must spring outwardly sufficiently to allow of bringing the sections *b* from a position the reverse of to the position occupied by said sections in Fig. 1, which they do in response to an outward thrust exerted thereon, which thrust is limited by the shoulders on the knuckle-joints. After the joint b^3 has passed the plane of the outer ends of the sections *b'*, such sections spring inwardly again and exert a strong pressure against any inward tendency of the sections *b* of such degree as to wholly prevent accidental collapsing of the frame, the rings *a a'* being of such size as to freely slide on the sections in the opening and closing operations without binding thereon.

To place the parts in their original positions, the sections *b* are pushed inwardly against the spring-pressure of the arms *b'* until they pass the plane of the ends of the latter. Said arms *b'* are then drawn inwardly toward each other, causing the same action on the part of sections *b*. When the sections have all come into close relation, the rings will occupy the positions shown in Fig. 2, whereupon the net is wound around them as snugly as possible, the button c^3 released from the upper recess and slid along the slot and into engagement with the lower recess, and the plug C thereby drawn into the handle and clear to the lower end thereof, drawing in after it the arms or sections and the net in their folded conditions wholly within the confines of said handle. Thus the net is protected from injury and all the parts are in operative connection and ready for use after the frame is opened at all times and occupying little space when so folded.

What I claim as my invention is as follows:

1. The combination of a hollow handle, a folding net-frame, and a sliding plug in the handle for the support of said frame in its open condition and drawing the same within said handle in its folded condition, substantially as shown and described.

2. The combination of a folding frame for the support of a landing-net, composed of two sections pivoted at their inner ends in a handle and at their outer ends diverging and connected by knuckle-joints to two other sections which converge and are connected at their adjacent ends by a knuckle-joint, substantially as shown and described.

3. The combination of a hollow handle having therein a sliding plug pivotally supporting two sections of a folding frame for the support of a landing-net, said sections at their outer ends diverging and are connected by knuckle-joints to two other sections which converge and are connected at their adjacent ends by a knuckle-joint, substantially as shown and described.

4. The combination of the net A, supported on the sections *b b'*, the interposed knuckle-joints b^2 b^3 b^4, the heads b^5 on the sections *b'*, the pins *c* for the support of said heads, and the pin c^2, interposed between the latter, said pins being supported in a plug adapted to slide in a hollow handle, substantially as shown and described.

5. The combination of a hollow handle having therein a longitudinal slot *d*, with oppositely-disposed offsets *d'* at each end, a sliding plug provided with a knob or button whose shank rests in said slot, and a folding

frame for the support of a landing-net supported by said plug, substantially as shown and described.

6. The combination of a hollow handle having therein a longitudinal slot d, with the offsets d' at its ends, a sliding plug with a slot c', the pins c, and the pins c^2 therein, the sections b', with their heads b^5 pivoted on the pins c, the joints b^2 b^4, the sections b, connected by the joint b^3, and the rings a a' on said sections for the support of a landing-net, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of April, A. D. 1890.

CHARLES S. HEBARD.

Witnesses:
WM. H. POWELL,
R. DALE SPARHAWK.