

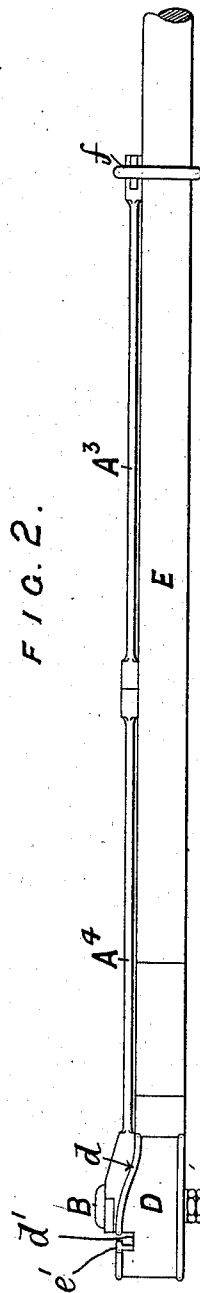
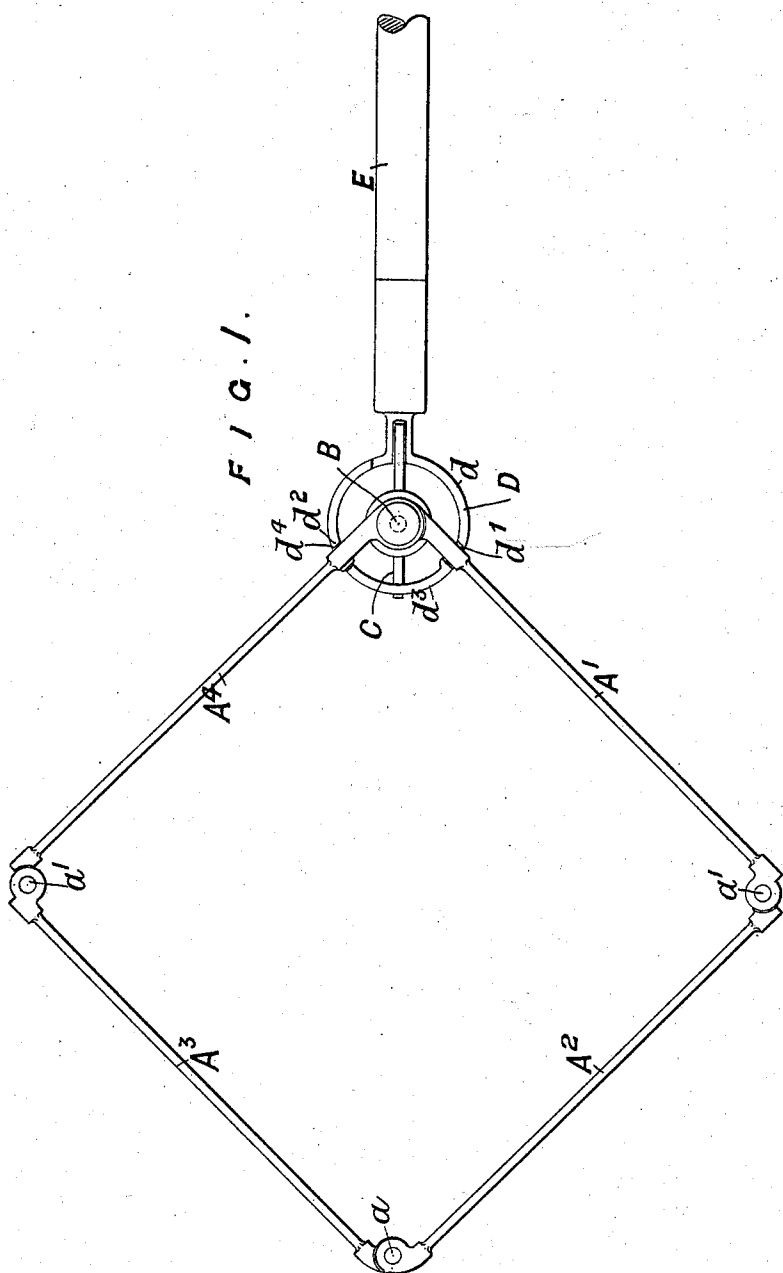
(No Model.)

A. HOLMES.
LANDING NET.

3 Sheets—Sheet 1.

No. 577,684.

Patented Feb. 23, 1897.



WITNESSES.

A. Lurcott
A. H. Davis

INVENTOR:

A. Holmes.

BY

[Signature]

ATTORNEYS.

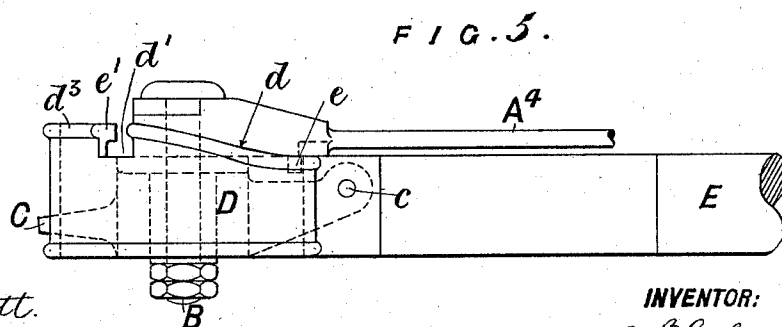
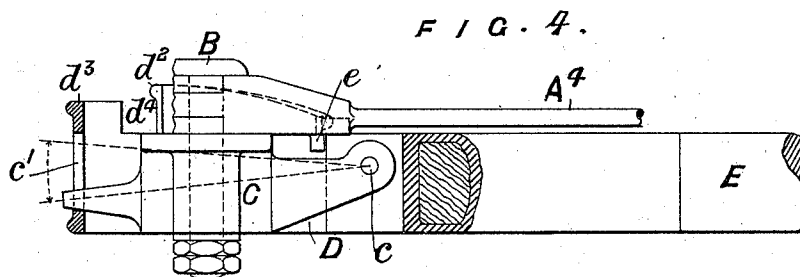
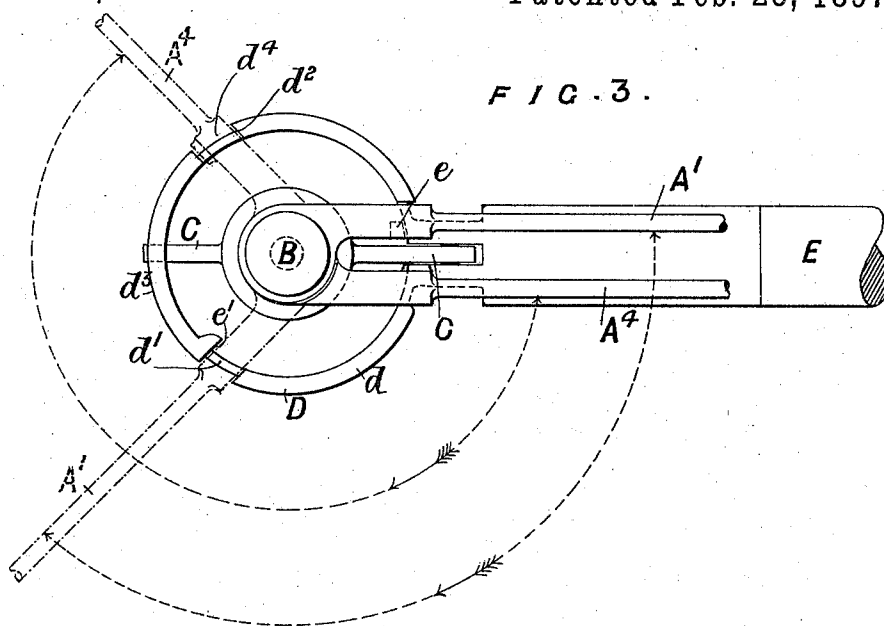
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Munn & Co.
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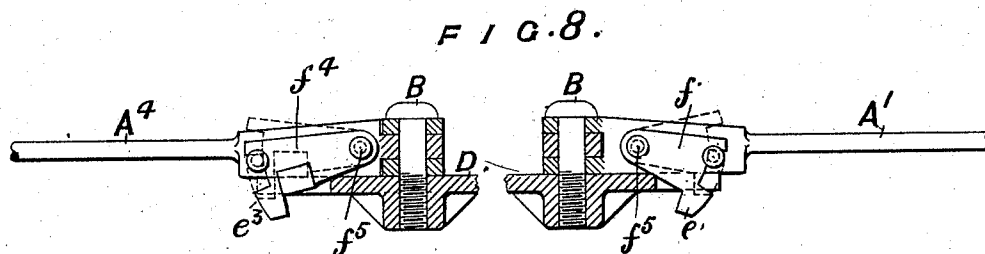
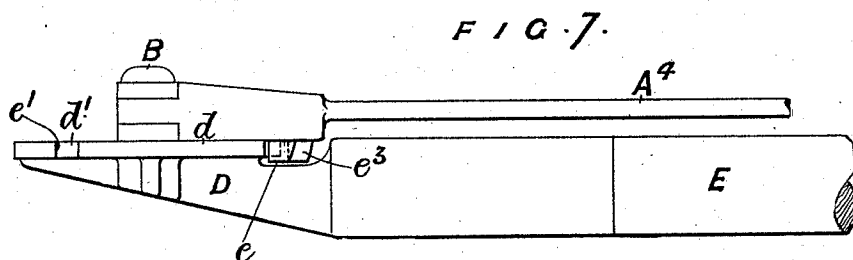
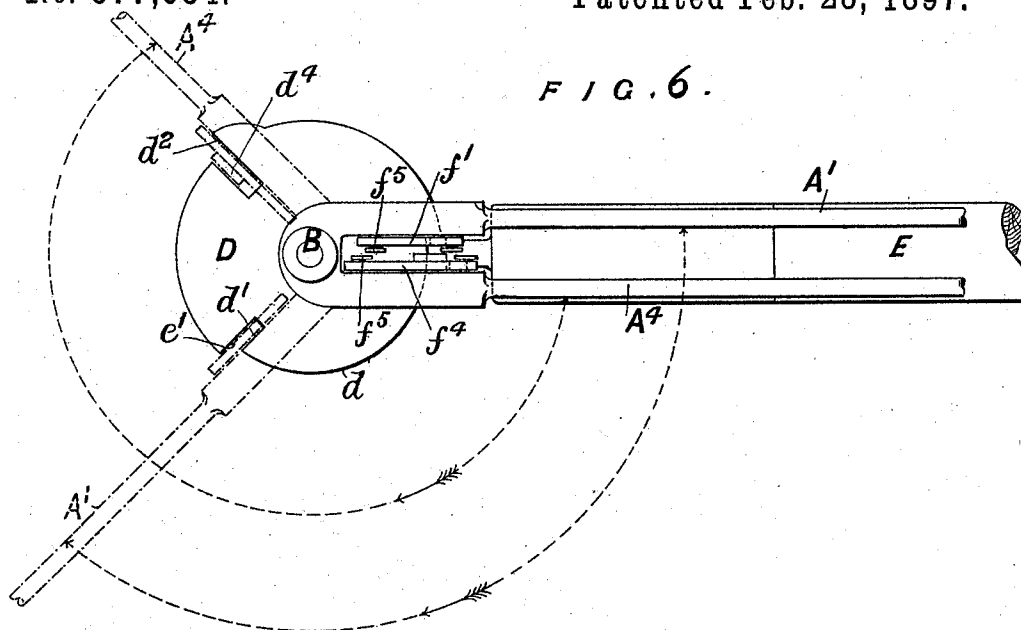
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3 Sheets—Sheet 3.

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INVENTOR:

A. Holmes

BY

Munn

ATTORNEYS

UNITED STATES PATENT OFFICE.

ALLAN HOLMES, OF DUNEDIN, NEW ZEALAND.

LANDING-NET.

SPECIFICATION forming part of Letters Patent No. 577,684, dated February 23, 1897.

Application filed September 12, 1896. Serial No. 605,610. (No model.)

To all whom it may concern:

Be it known that I, ALLAN HOLMES, solicitor, of Dunedin, in the British Colony of New Zealand, have invented new and useful Improvements in Landing-Nets, of which the following is a full, clear, and exact description.

My invention relates to anglers' landing-nets of the kind wherein the net-holding frame is adapted to be collapsed and folded along the handle for carrying and to be distended and locked in position for use, the change of form and position of the frame being produced by a swinging movement of the frame substantially in its own plane and the locking and release of the locking devices being effected automatically by the action of gravity.

I will describe the improvements with reference to the accompanying drawings, forming part of this specification, wherein—

Figure 1 is a plan view of the net-frame distended, and Fig. 2 is a side view of the net-frame collapsed and folded back upon the handle. Fig. 3 is a plan, Fig. 4 a side view, and Fig. 5 a central longitudinal section, of the preferred means of locking the frame in the distended position, the parts being shown in full lines in the collapsed and in dotted lines in the distended and locked positions. Fig. 6 is a plan, and Fig. 7 a side view, of a modified means of locking the net-frame, also showing the parts in the collapsed and distended positions in full and dotted lines, respectively. Fig. 8 shows details.

The net-frame is composed of four members $A^1 A^2 A^3 A^4$, (which are represented as straight, but which might be segments forming a circular frame,) jointed together at $a a'$, the joints a' being in the form of rule-joints to prevent inward or reverse flexure at those joints when the frame is in the straightened or collapsed position, Fig. 2. The two members $A^1 A^4$ terminate in knuckles intersecting like those of a hinge, which are pivoted upon the same pin or stud B. In Figs. 1 to 5 this stud B is fixed to a pivoted support permitting of a combined angular and bodily motion of the stud, for a purpose hereinafter explained, the stud-support being a tongue C, pivoted at c in a head D, rigidly fixed to the handle E, the tongue C being capable of lim-

ited motion about its pivot. The head D is a ring concentric with the stud B and carried by a ferrule or other attachment to the handle E, its upper edge being formed with two notches $d' d^4$, respectively adapted to receive the members $A^1 A^4$ of the net-frame or, as the case may be, sockets in which the heel ends of those members are fixed. This annular head D serves both to lock and to support the net-frame when in the distended position, so as to relieve the center pin B of racking strain.

The edge of the ring is formed with a cam-like incline d , rising gradually from the plane of the upper side of the handle E, on which the net-frame lies when in the collapsed position, said incline d leading up to and terminating at the notch d' , which receives the member A^1 , while the edge of the ring at the opposite side d^2 is elevated above the level of the portion d^3 intermediate of the notches $d' d^4$, so as to act as a stop to arrest the member A^4 of the net-frame at the proper moment to cause it to engage in the notch d^4 . The end of the tongue C plays in a slot c' in the ring, which permits sufficient angular motion of the tongue C and stud B about the center c and therefore sufficient motion of the stud B in a plane perpendicular to the plane of the ring D to allow the members $A^1 A^4$ of the frame to ride up the incline d and to fall into the notches $d' d^4$. The pivot c of the tongue being at the opposite side of the head to the notches, the net-frame is rigidly supported when in the distended position.

It is to be observed that the members $A^1 A^4$ are oppositely tangential to the center stud B and that the notches $d' d^4$ are correspondingly tangential, so that as the member A^4 passes over the notch d' the two do not correspond in tangential direction, and the member A^1 is thus able to pass over that notch without falling into it, whereas the member A^1 is provided with a lug e , which projects downward within the ring D in position to come against a stop e' , fixed within the ring, so as to arrest the member A^1 immediately it coincides with the notch d' , the operations of distending and locking the net-frame and of unlocking and collapsing it being as follows:

Assuming the net-frame to be in the collapsed form shown in Fig. 2, if the handle be

held with the head D somewhat downward, the notched edge of the head being uppermost but inclined laterally, so that the side at which the notch d' is situate is somewhat lower than the other side, the net-frame (as soon as it is released from the retaining-loop f or other device which keeps it in position along the handle while carrying) will swing as a whole about the pivot B in the direction of the arrow. The members $A^4 A'$ ride up the incline d , the one member, A' , being arrested by the stops $e e'$ when it comes over the notch d' , while the member A^4 passes on over that notch d' (the jointed net-frame meanwhile opening out to its distended form) until it meets the stop d^2 , whereupon the members $A' A^4$ respectively coincide with and fall into their corresponding notches $d' d^4$ and become locked. The unlocking is effected by inverting the net-frame, so as to bring the notched edge of the head D downward, and so holding and moving the handle as to cause the frame to swing in the reverse direction, as will be readily understood. It will be obvious that the engagement of the member A^4 with the notch d' might be equally well prevented by making it and its corresponding notch d^4 rather broader than the notch d' .

The modification shown in Figs. 6, 7, and 8 is substantially similar in operation, but differs, inasmuch as the head D in this case is a flat disk D, having notches $d' d^4$ and stops $e' d^2$, the center stud B being fixed to the disk and the members $A' A^4$ having themselves no rising and falling motion, but being provided with pawls $f' f^4$, loosely pivoted to them at f^5 , so as to rise and fall in planes perpendicular to the disk D. The pawl f^4 of the member A^4 merely rests on the disk D and is adapted (by its tangential position and, if necessary, also by its breadth relatively to that of the notch d') to pass clear over the notch d' without engaging in it, while the pawl f' has a lug e , adapted to drop past the edge of the portion d of the disk of reduced radius, so as to meet the projecting stop-like side e' of the notch d' and so cause the member A' to be arrested and the pawl to fall into engagement with said notch. The stop d^2 is

so placed that when lug e^3 , projecting from the pawl f^4 , meets it the pawl f^4 will exactly coincide with and fall into the notch d^4 , or the notch d' may be shorter than the notch d^4 and the pawl f^4 , provided with a heel adapted to slide on the plate D and pass clear of the inner end of the notch d' , but fall into the notch d^4 . In other respects the operations of distending and locking and of unlocking and collapsing the net-frame are performed as before.

I claim—

1. A collapsible net-frame constructed of jointed segments and pivoted to swing in its own plane as a whole about a center pin, in combination with a frame supporting and locking ring or head having notches normal to the plane of the net-frame and adapted to receive and engage with the pivoted members of the net-frame when the latter is distended, and with stops limiting the swinging motion of the frame so as to insure coincidence of the frame members with the notches, the center pin being carried by a pivoted support so as to be capable of limited movement in a plane perpendicular to the plane of the ring or head in order to permit of the net-frame engaging in the said notches, the locking and unlocking being effected by the gravity of the moving parts, substantially as specified.

2. A collapsible net-frame constructed of jointed segments pivoted to swing in its own plane as a whole about a center pin, fixed to a supporting and locking disk or head, in combination with pawls pivoted to the pivoted member of the net-frame, and with notches in the disk or head adapted to receive and engage with the said pawls when the net-frame is in the distended position, and with stops for limiting the swinging motion of the frame so as to insure coincidence and engagement of the pawls with the notches, the locking and unlocking being effected by the gravity of the pawls, substantially as specified.

ALLAN HOLMES.

Witnesses:

J. R. SINCLAIR,
W. A. STUART.