(No Model.) 2 Sheets—Sheet 1.

A. F. & W. MEISSELBACH.

NET FRAME.

No. 452,381. Patented May 19, 1891.

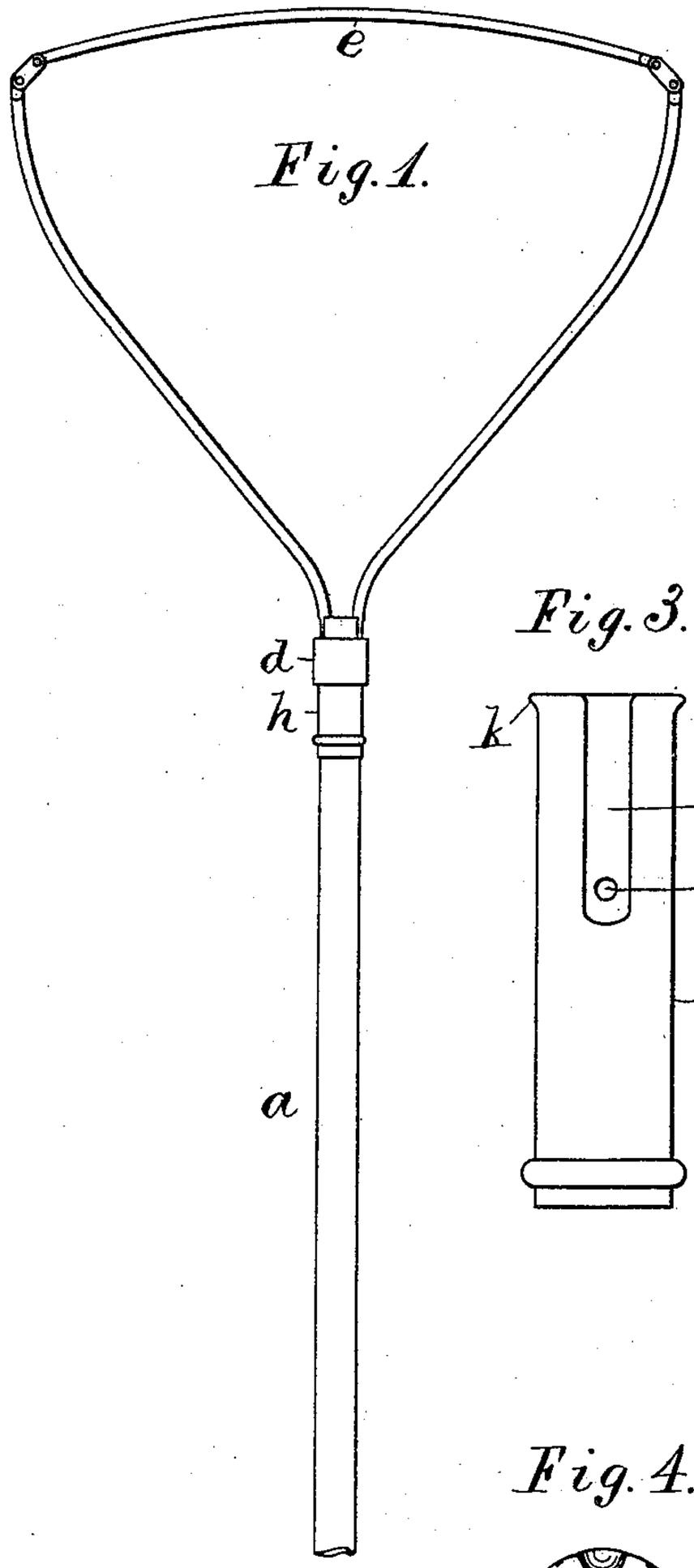

Fig. 1.

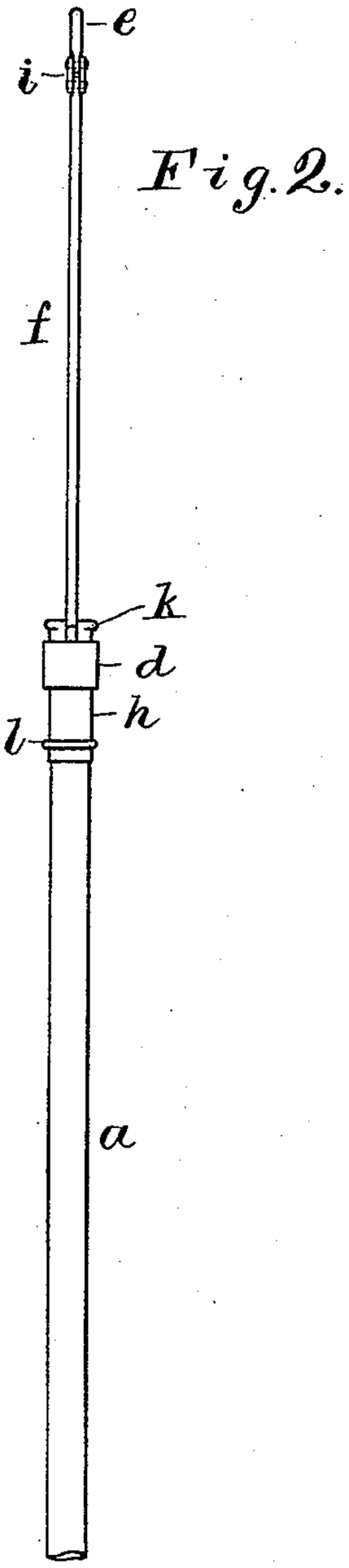

Fig. 2.

Fig. 3.

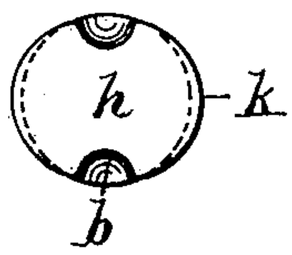

Fig. 4.

Attest:
L. Lee.
F. C. Fischer.

Inventors.
A. F. Meisselbach
and W. Meisselbach,
per Crane & Miller, attys.

(No Model.) 2 Sheets—Sheet 2.

A. F. & W. MEISSELBACH.

NET FRAME.

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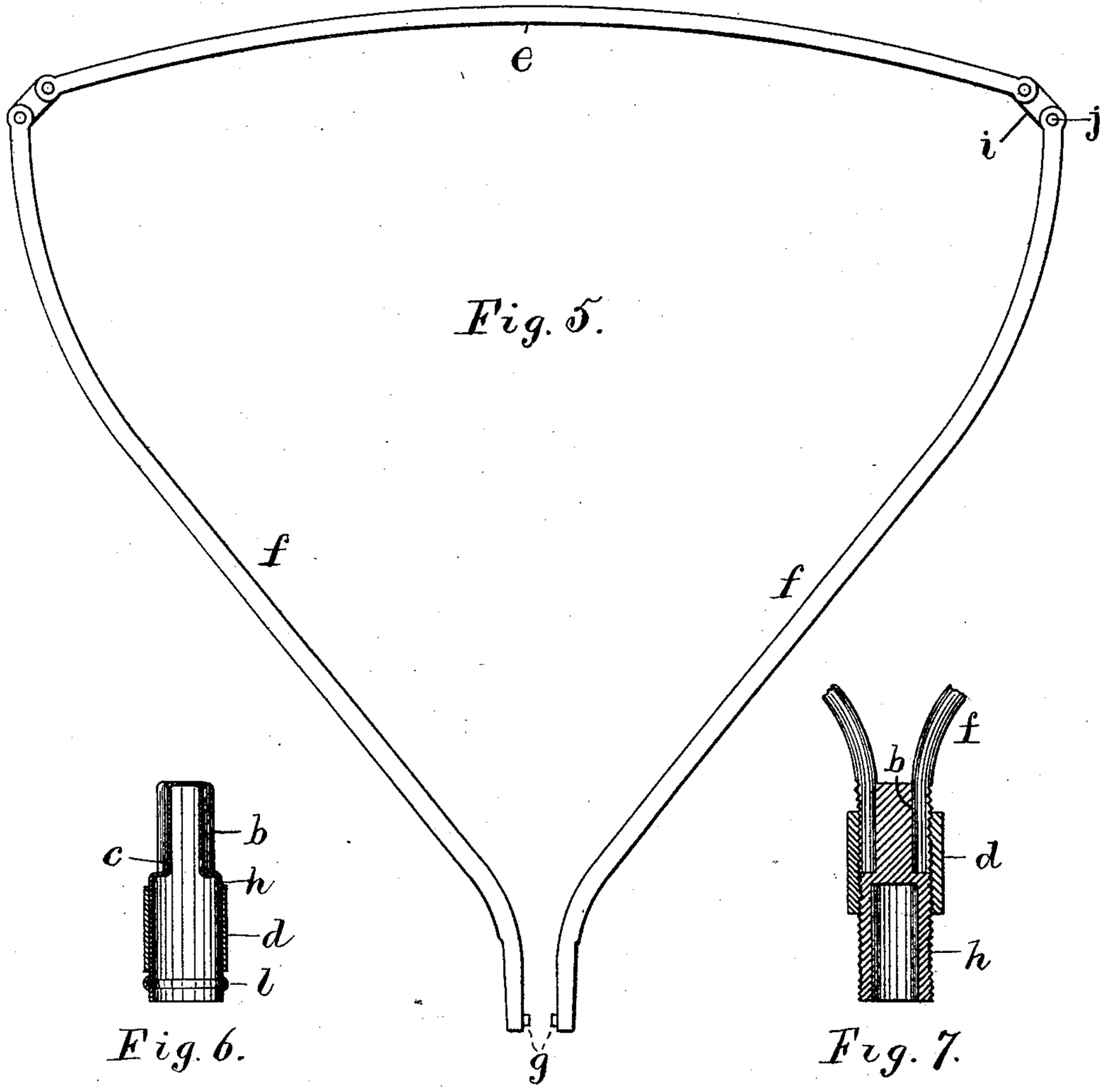

Fig. 5.

Fig. 6.

Fig. 7.

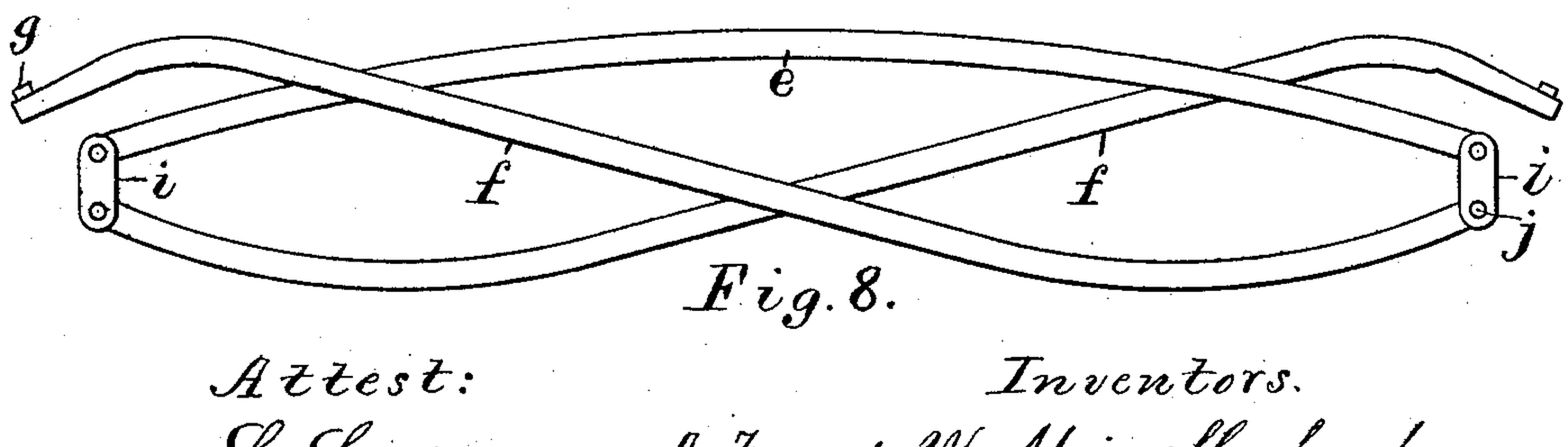

Fig. 8.

Attest:
L. Lee.
F. C. Fischer.

Inventors.
A. F. and W. Meisselbach, per
Crane & Miller, attys.

UNITED STATES PATENT OFFICE.

AUGUST F. MEISSELBACH AND WILLIAM MEISSELBACH, OF NEWARK, NEW JERSEY.

NET-FRAME.

SPECIFICATION forming part of Letters Patent No. 452,381, dated May 19, 1891.

Application filed December 8, 1890. Serial No. 373,879. (No model.)

To all whom it may concern:

Be it known that we, AUGUST F. MEISSELBACH and WILLIAM MEISSELBACH, citizens of the United States, residing at Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Frames for Fishermen's Nets, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of this invention is to furnish a folding frame for a fisherman's net and to furnish a simple and expeditious means of attaching the same to the pole.

Heretofore collapsible frames have been formed by dividing the frame into several parts and connecting each with a rigid hinged joint, which has commonly been made larger than the wire of which the frame was formed. In slipping such a frame into the hem of the net the hinges present considerable obstruction by their projection aboye the sides of the wire.

In our invention we obviate such projection of the hinges by flattening the wire at the joints and applying thin links to the flattened sides to form a link-joint but little larger than the wire itself. To attach the ends of the wire frame quickly to the pole we fit the two ends of the wire into longitudinal grooves formed at the opposite sides of the head of the pole and hold them in the grooves by a ferrule slipped or screwed over the outsides of the wires.

The invention will be understood by reference to the annexed drawings, in which—

Figure 1 is a side view, and Fig. 2 an edge view, of the frame attached to the end of the pole. Fig. 3 is a side view, and Fig. 4 a plan, of the head of the pole, upon a larger scale. Fig. 5 is a side view of the frame detached from the head of the pole, and Fig. 6 a section of the head of the pole. Fig. 7 is a side view of the frame and head of the pole in section and the ferrule furnished with an internal screw-thread, and Fig. 8 shows the frame folded up for convenience in packing and transportation.

a is the handle of the pole, and *h* its head. (Shown formed of sheet metal.)

b are longitudinal grooves extended inward from the end of the head upon its opposite sides, with a hole *c* formed in the bottom of the groove near its inner end.

d is the ferrule, (shown in Figs. 1 and 6,) with a smooth bore adapted to fit the head *h*.

The frame is formed of a cross-bar or wire *e* and two side bars or wires *f*, the ends of which are bent parallel to one another to form shanks, which are fitted to the grooves *b*.

Short pins *g*, adapted to fit the holes *c*, are shown upon the inner sides of the shanks in Fig. 5.

The contiguous ends of the wires *e* and *f* are flattened, as shown in Fig. 2, and perforated for rivets, and thin links *i* are fitted to the flattened ends and jointed thereto by rivets *j*. The proportions of the links and the flattened ends of the wires are made such as to render the joint only a little larger than the wire itself, while the rounded ends of the links greatly facilitate the passage of the net over the same. The outer corners of the links are rounded, so as to offer scarcely any obstruction to the net when its hem is slipped over the wires. The pins *g* in like manner are made very short for the same reason.

The frame is attached to the pole by applying the shanks of the wires *f* to the grooves *b* in the head *h*, with the pins *g* in the hole *c*, and slipping the ferrule upward over the shanks, as shown in Figs. 1 and 2.

The ferrule is constructed to press elastically upon the shanks of the wires *f* when it is pushed forward in its operative position, as shown in Fig. 1, and the frame is thus locked upon the pole in a manner suitable for use, while the mere slipping of the ferrule downward, as shown in Fig. 5, operates to release the shanks instantly from the head.

To promote the clamping of the shanks by the ferrule the shanks may be tapered externally toward their ends, as shown in Fig. 5, which also operates to diminish the total thickness through the shank and pins *g*, and thus diminishes the obstruction offered by the pin to the movement of the shank through the hem of the net.

A collar *l* is formed upon the head to limit the downward movement of the ferrule, and

to prevent the loss of the ferrule the upper end of the head is provided with a projecting flange or lug *k*, which thus retains the ferrule in place while permitting its movement within the desired range.

In order to form a frame of the desired stiffness, in which the greater portion is attached rigidly to the handle, and to avoid forming acute corners in such frame, we construct the same of three pieces, the cross-bar *e* being curved to form a chord of twenty-five to thirty degrees, and the side bars, which are attached rigidly to the handle, being curved convexly adjacent to the same to form an angle of about ninety degrees with the cross-bar.

We are aware that a quadrangular net-frame has heretofore been constructed with its two outer sides of curved form; but we are not aware that a triangular frame has ever been formed with each of its sides curved convexly to form a suitable angle with the adjacent side. We therefore disclaim the said former construction.

When the frame is detached, it may be folded into a very narrow compass, as shown in Fig. 8, and packed with the handle in a suitable case.

The entire construction furnishes a very simple and convenient device, and furnishes the utmost facility for applying the net to the frame and applying the frame to and removing it from the handle.

Instead of using the pins *g* upon the shanks to retain the shanks in the grooves *b*, the head and the outer sides of the shanks may be threaded and the inside of the sleeve threaded to fit the same, as shown in Fig. 7.

When the sleeve is screwed over the outsides of the shanks, it also retains its hold upon the thread on the head, and thus prevents the shanks from drawing out of the grooves.

Having thus set forth the nature of the invention, what is claimed herein is—

1. In a fisherman's net, the combination, with the handle having its head provided with the grooves *b* and ferrule *d*, of a jointed frame provided with shanks fitted to such grooves, substantially as herein set forth.

2. In a fisherman's net, the combination, with the handle having its head provided with the sliding ferrule and with the grooves *b*, having holes *c*, of the jointed frame provided with shanks fitted to such grooves, and having pins fitted to the holes *c*, as and for the purpose set forth.

3. The combination, with the handle *a*, of the head *h*, having the collar *l* and lug *k*, and formed with the grooves *b* upon its opposite sides, the ferrule *d*, fitted to slide over the grooves between the collar and the lug *k*, and the jointed frame provided with shanks fitted to the grooves *b* and locked therein by the ferrule, as and for the purpose set forth.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

AUGUST F. MEISSELBACH.
WILLIAM MEISSELBACH.

Witnesses:
HENRY J. MILLER,
FREDERICK C. FISCHER.