(No Model.)

W. C. WINFIELD.

TUBE BENDING DEVICE.

No. 379,750. Patented Mar. 20, 1888.

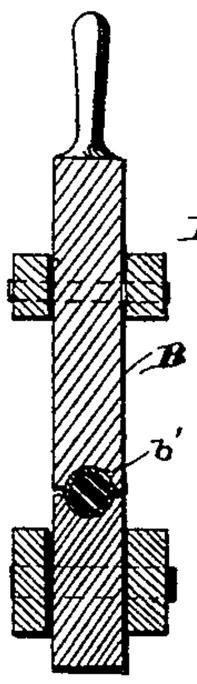


Fig. 3.

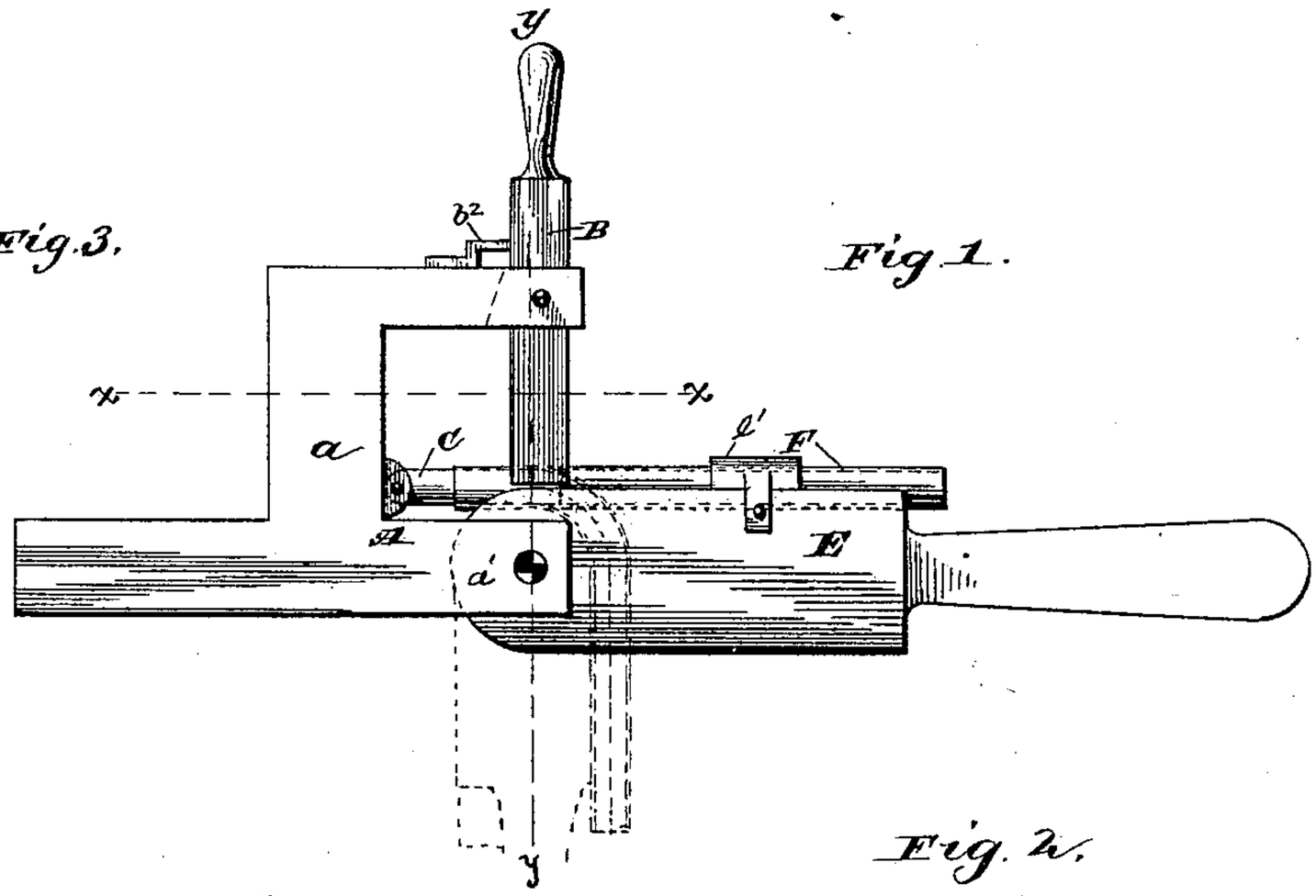


Fig. 1.

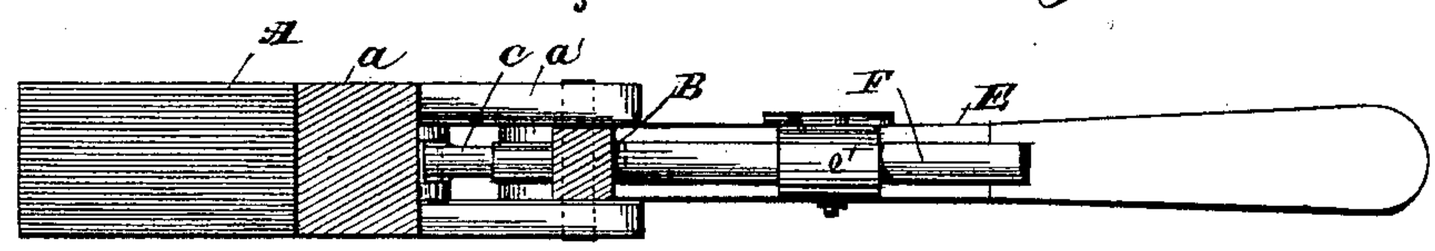


Fig. 2.

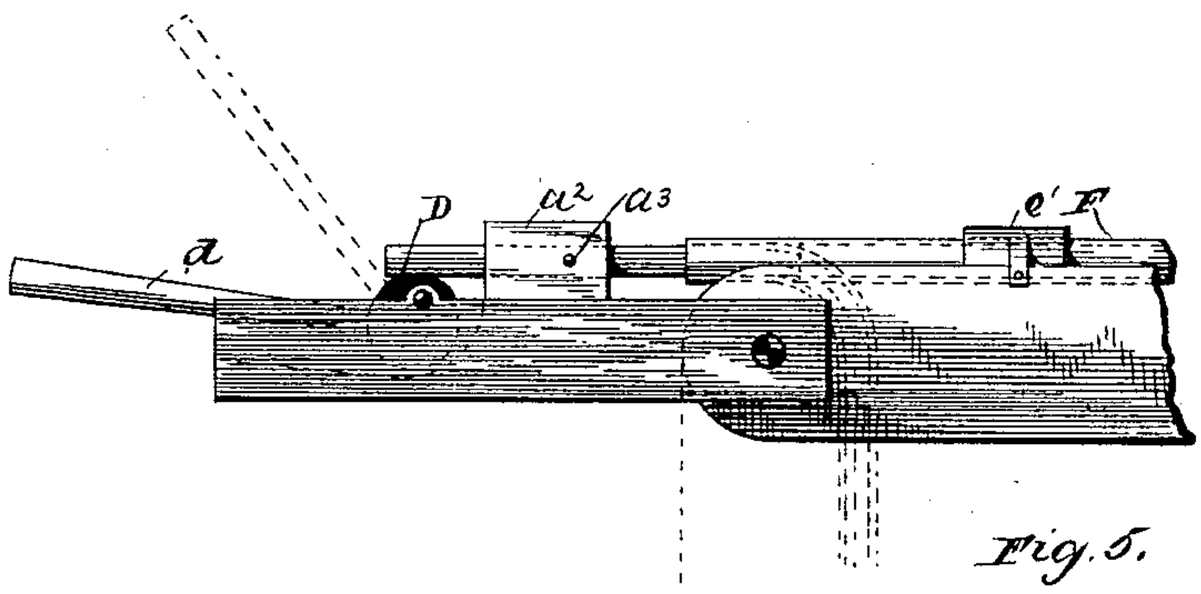
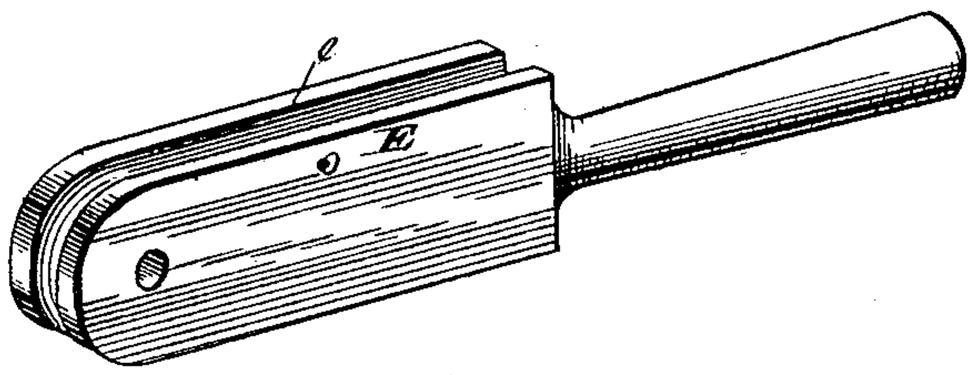


Fig. 4.

Fig. 5.



Witnesses
Wm. M. Morrow
Irene L. Corey.

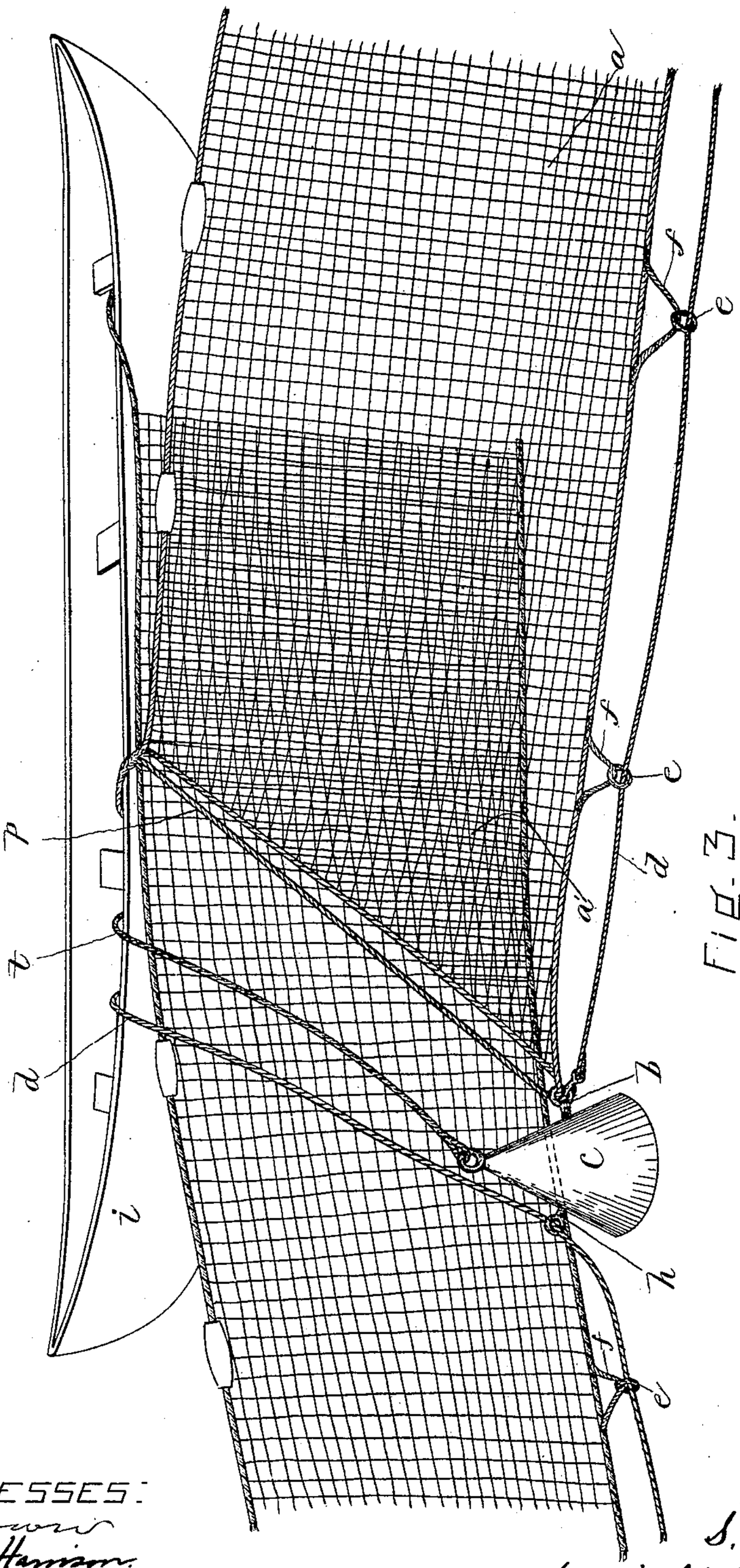
Inventor
Wm. C. Winfield
H. J. Fisher
Attorney

(No Model.) 3 Sheets—Sheet 2.

S. T. WINSOR.

SEINE.

No. 379,751. Patented Mar. 20, 1888.



WITNESSES:
A. Brown
A. D. Harrison.

INVENTOR:
S. T. Winsor,
by Wright, Brown & Crosley,
Attys.

(No Model.) 3 Sheets—Sheet 3.

S. T. WINSOR.

SEINE.

No. 379,751. Patented Mar. 20, 1888.

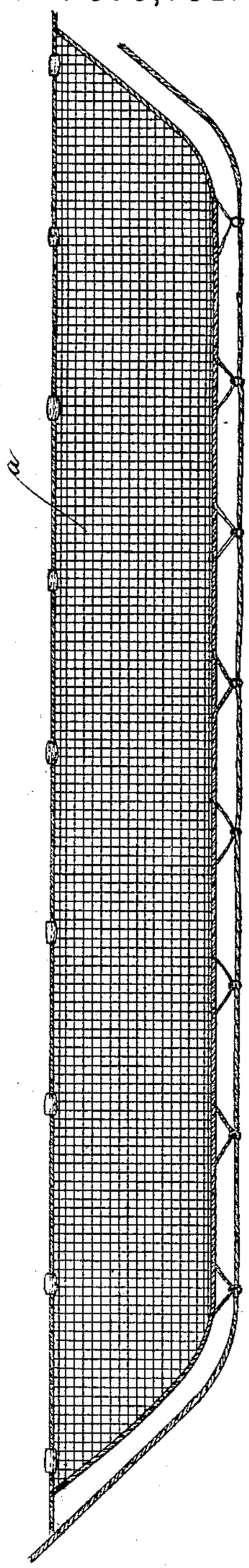


Fig. 4.

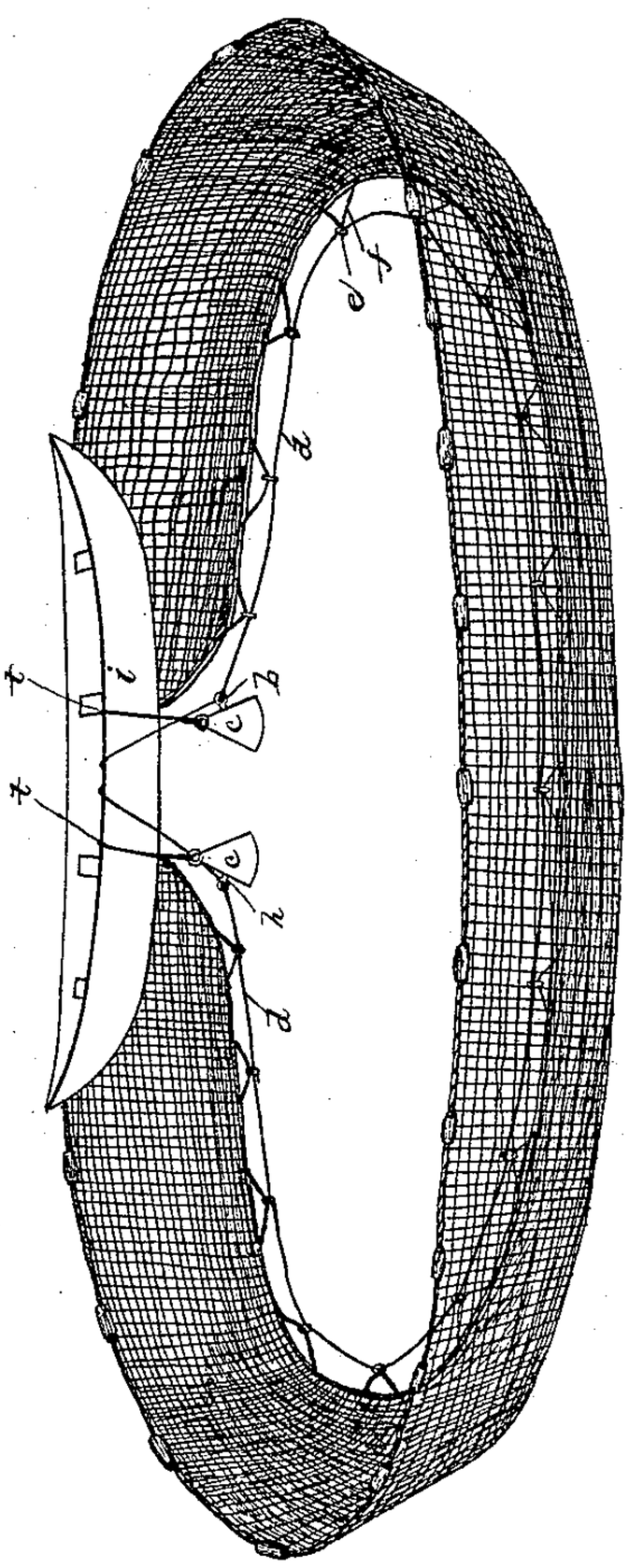


Fig. 5.

WITNESSES:
H. F. Brown.
A. D. Harrison.

INVENTOR:
S. T. Winsor.
by Wright, Brown & Crosley.
Attys.

UNITED STATES PATENT OFFICE.

SPENCER T. WINSOR, OF DUXBURY, MASSACHUSETTS.

SEINE.

SPECIFICATION forming part of Letters Patent No. 379,751, dated March 20, 1888.

Application filed January 6, 1888. Serial No. 259,983. (No model.)

To all whom it may concern:

Be it known that I, SPENCER T. WINSOR, of Duxbury, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Seines, of which the following is a specification.

This invention has for its object to so improve the form and construction of seines as to prevent the escape of fish between the ends of the seine during the operation of "pursing" or gathering in the lower edge of the seine by the pursing-line. Heretofore the ends of the seine have been of such form that when the seine is set and is being pursed an opening exists between the ends of the seine immediately under the seine-boat, through which opening the fish are liable to escape.

My invention consists in a seine formed with a triangular extension at one end, combined with a line connecting the point of said extension with the head of the seine, and a weight which is free to slide on said line, and a purse-line engaged with the weight and seine, the arrangement being such that the extension is drawn by the action of the purse-line across the opening which has heretofore existed between the ends of the web, and is drawn up to the weight, so that when the purse-line is drawn in the lower edge of the seine will be practically continuous, there being no opening between its ends, as I will now proceed to describe.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side view of my improved seine laid flat. Fig. 2 represents a perspective view of the seine and seine-boat, the net being supposed to be set in the water (which is not shown) and supported by the usual floats or buoys. Fig. 3 represents an enlarged view of portions of the net and seine-boat. Figs. 4 and 5 represent a seine of ordinary form.

The same letters of reference indicate the same parts in all the figures.

In carrying out my invention I construct a seine, *a*, of a strip of netting of suitable length, and extend the lower edge thereof beyond the upper edge at one end of the seine, thereby forming a triangular extension, *a'*. To the apex or lower corner of said extension is attached a cord, *p*, passing through an eye, *b*, on the weight *c*, and secured at its upper end to the head or upper edge of the net, the weight being adapted to slide on the cord *p* from the upper edge or head of the net to the lower edge. *d* represents the purse-line, which is attached at one end to the eye *b* of the weight and extends through a series of rings, *e*, secured to the lower edge of the seine by loops *f*, in the usual manner. Said line after leaving the last ring on the seine passes through another eye, *h*, on the weight *c*, and from thence upwardly to the seine-boat *i*.

It will be seen by reference to Figs. 1, 2, and 3 that the cord *p*, secured, as shown, to the upper and lower edges of the net and free between its ends, so that the weight *c* can slide down upon it, enables the weight *c* to be dropped after the net is set and to stand close to the point of the extension *a'*. After the weight is dropped the pulling in of the purse-line will draw the extension *a'* taut across the opening between the ends of the net. When said line is drawn in, the seine will be practically continuous and without any opening under the boat; consequently the fish originally inclosed are retained and cannot escape during the pursing operation. The weight *c* may be raised by the usual line, *t*, provided for that purpose.

A seine as ordinarily made is shown in Figs. 4 and 5, by reference to which it will be seen that the lower edge of the seine is shorter at both ends than the upper edge, and there is no provision for making its lower edges continuous, so that there is a considerable opening between the ends of the seine, through which the fish are very liable to escape during the pursing operation. This objection is entirely avoided by my improvement.

The end of the net to which the line *p* is attached may be at right angles to the length of the net, instead of diagonal; but I much prefer the diagonal form.

I claim—

1. A seine having the extension *a'* at one end, and the line *p*, secured at its ends to the upper and lower edges of the net, combined with the weight adapted to slide on said line, and the purse-line *d*, engaged, as described, with the weight and seine.

2. A seine having the line *p*, secured to the

upper and lower edges of the net at one of its ends, combined with the weight having the eye *b*, adapted to slide on said line, and the purse-line *d*, engaged, as described, with the weight and seine.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 28th day of December, A. D. 1887.

SPENCER T. WINSOR.

Witnesses:
C. F. BROWN,
A. D. HARRISON.