

No. 708,476.

Patented Sept. 2, 1902.

W. H. HIGGINS.  
FENDER FOR BOATS.

(Application filed Jan. 27, 1900.)

(No Model.)

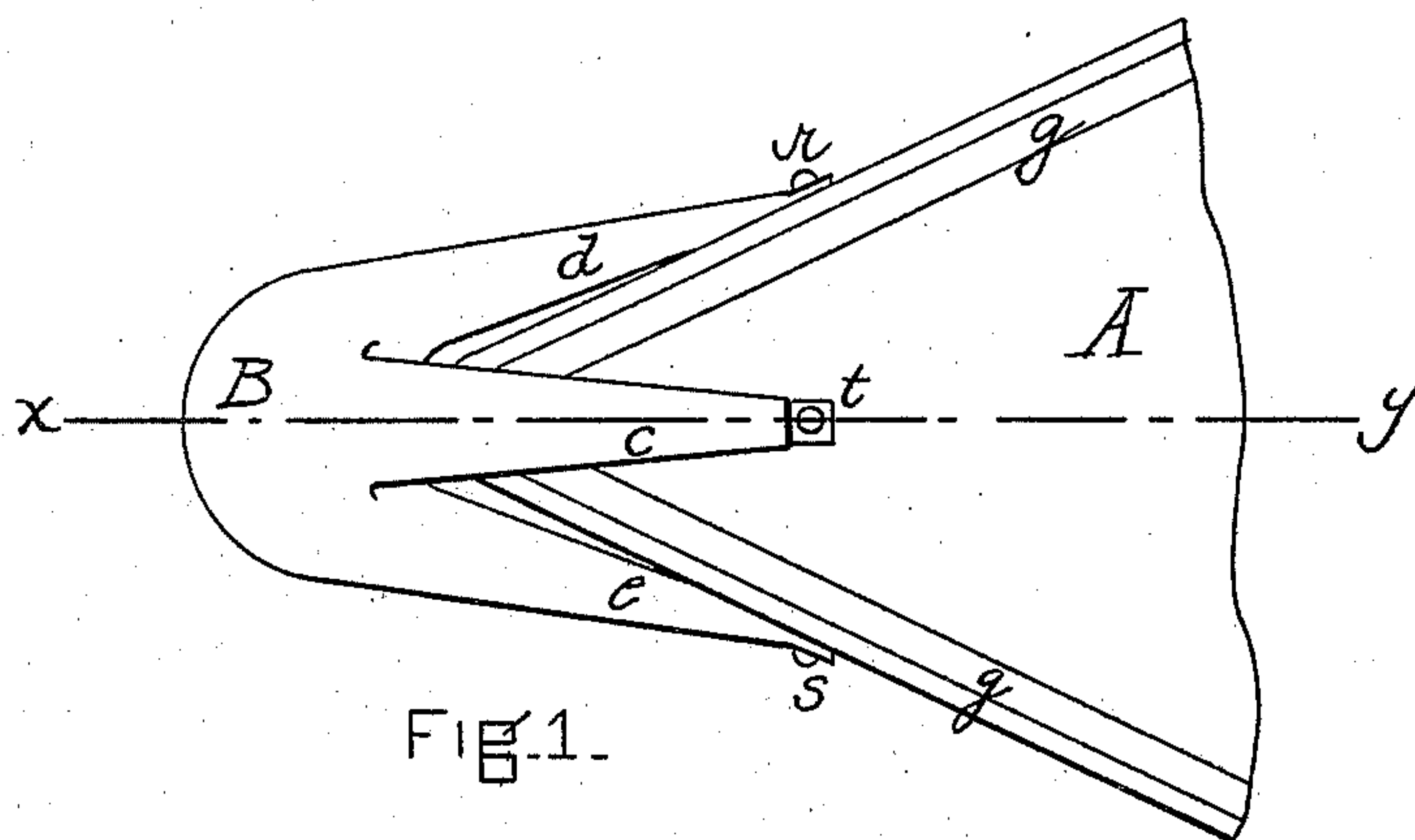


FIG. 1.

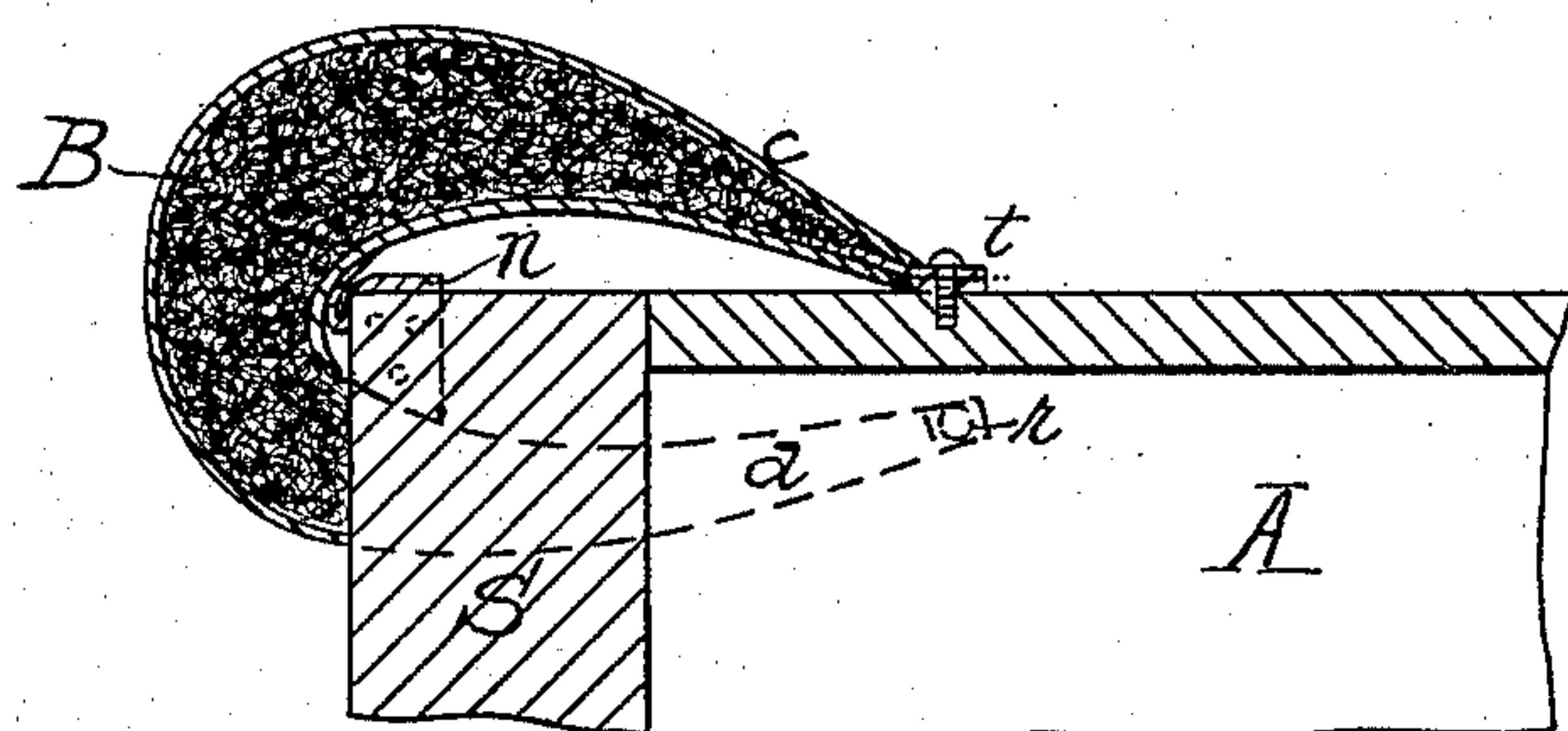


FIG. 2.

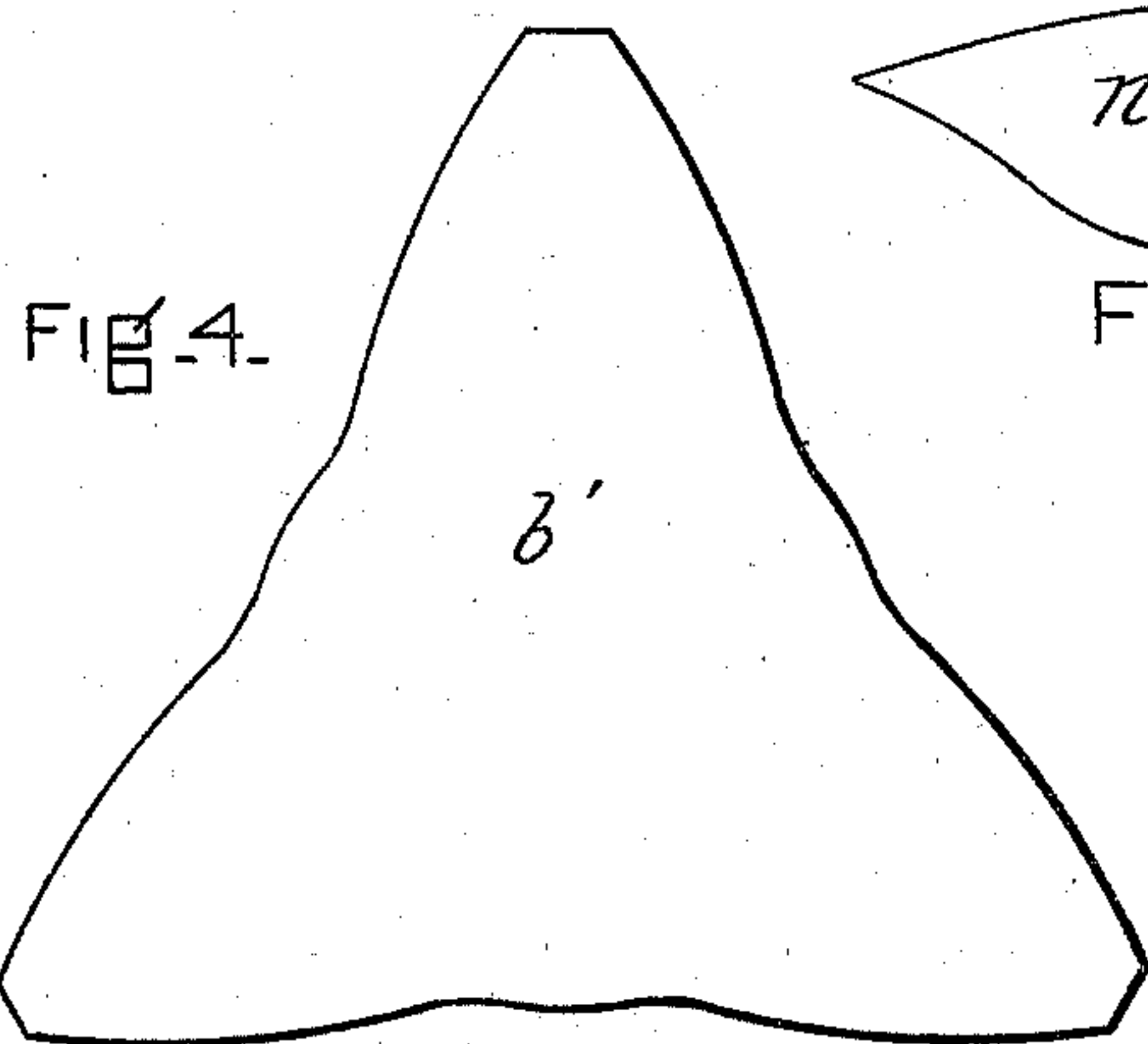


FIG. 4.

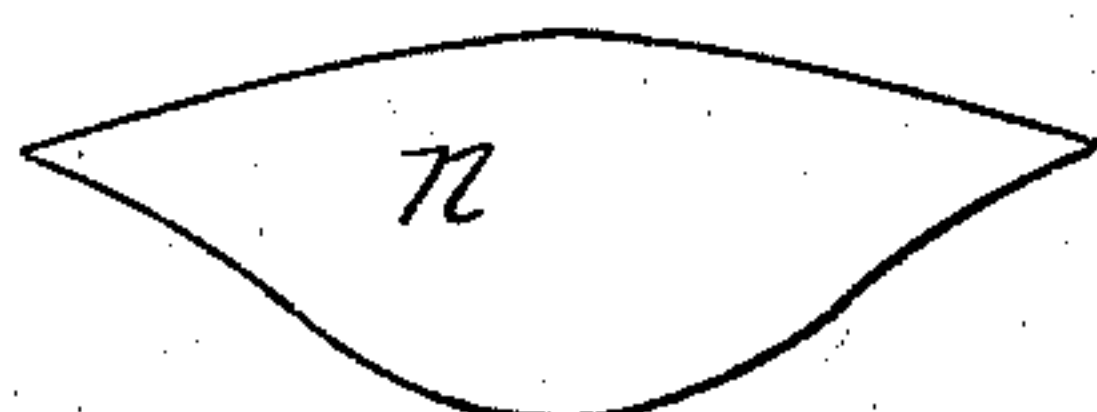


FIG. 5.

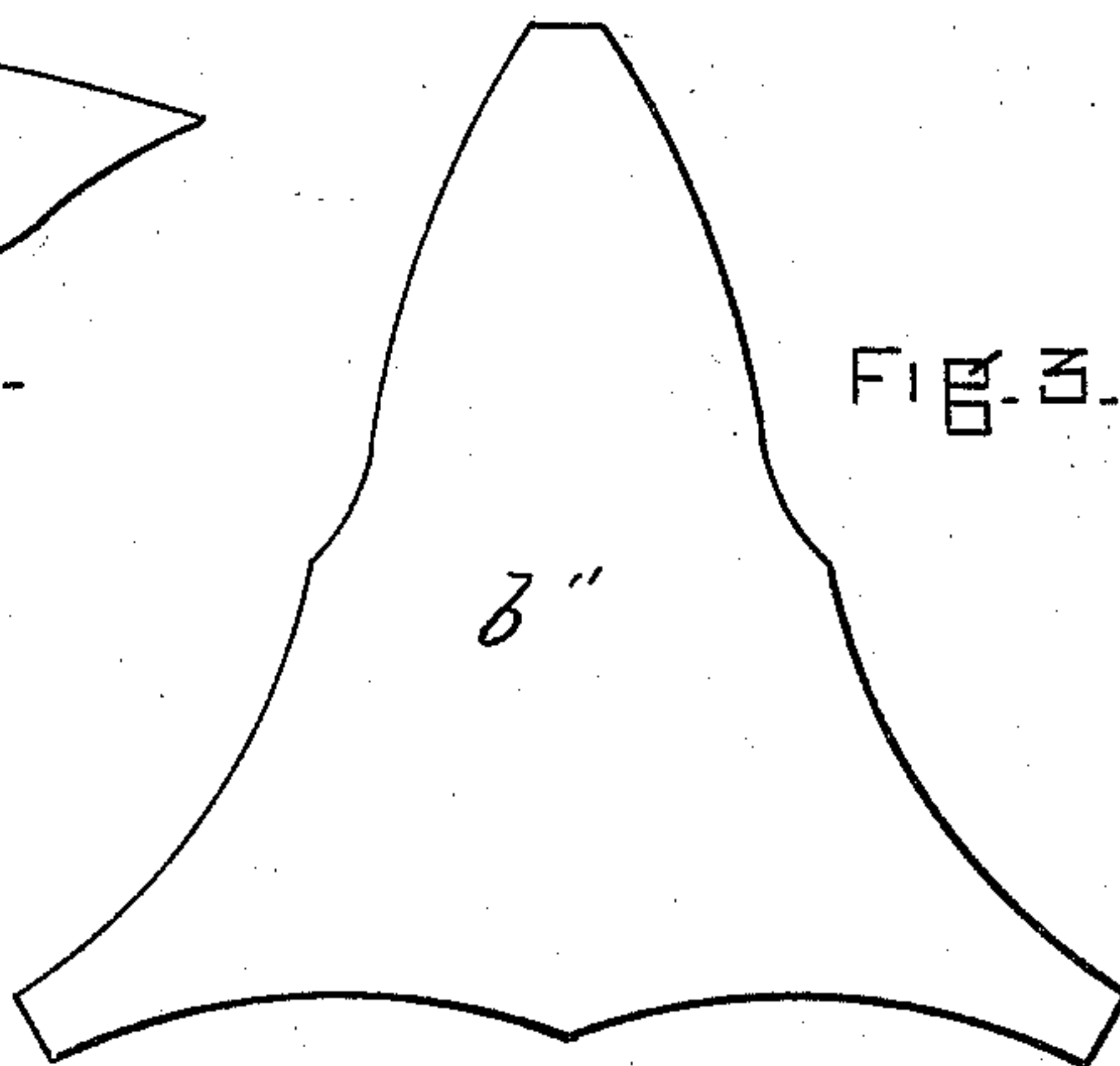


FIG. 3.

WITNESSES.

C. H. Barnett  
H. A. Dugan.

INVENTOR.

William H. Higgins,  
By  
Joseph A. Harris  
Att'y.

# UNITED STATES PATENT OFFICE.

WILLIAM H. HIGGINS, OF BOSTON, MASSACHUSETTS.

## FENDER FOR BOATS.

SPECIFICATION forming part of Letters Patent No. 708,476, dated September 2, 1902.

Application filed January 27, 1900. Serial No. 2,972. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. HIGGINS, a citizen of the United States of America, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fenders for Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in fenders for boats, and is designed to be fastened or attached to the top and front of the stem of a boat to protect the nose of the boat from injury or from doing damage to any vessel or other object with which it may come in contact.

The accompanying drawings fully illustrate the object and purpose of the same.

Figure 1 represents a top view. Fig. 2 is a section on the line  $xy$ , Fig. 1, of my improved head or fender. Figs. 3 and 4 represent the rawhide material as it has been cut to form the body, which is in tripod shape, designed as a covering for the fender,  $b'$  showing the form used when the prongs are of the same dimensions, and  $b^2$  being the form as shown in Figs. 1 and 2. Fig. 5 shows the tongue or web  $n$ , which is applied to the tripod or which may be cut with the piece of rawhide which forms a covering for the same, and it is used as a fastening to secure the appliance to the front or forward side of the stem of the boat at its top.

In the use of my invention I attach the above-described appliance to the top of the stem or nose of the boat. It is composed of rawhide cut into suitable form, as described, and stuffed, preferably, with curled hair, as is shown in Fig. 2, the rawhide or material being cut according to the patterns  $b'$  or  $b^2$ , as described, and when sewed together in the form of a tripod and stuffed with curled hair forms the fender B, as above described, and shown in Figs. 1 and 2. The prong  $d$  of the tripod I turn back and fasten against the gunwale of the boat at  $r$ , and the prong  $e$  is fastened at  $s$  to the opposite gunwale of the boat by any suitable means. The top leg or prong of the tripod is generally and preferably larger than those at the sides and is turned

back over the top of the stem  $s$ , Fig. 2, and made fast by suitable means to the top or bow of the boat. The rawhide material may be cut to accommodate the fastenings, or suitable fastenings may be attached to the ends of the tripod. The leg or prong  $c$  is of more importance in the operation of my invention than the others, as the blow or contact is more frequent there, owing to the upward and onward motion of the boat by the waves. The lug or tongue  $n$  being firmly stitched and attached to the said tripod between the prongs  $d$  and  $e$  at the center affords a most convenient means of making my appliance secure to the nose or front of the stem of a boat, and this, as I have before described, may either be attached or cut in the same pattern or piece with that which forms the tripod. This web or tongue is an important feature of my invention, as it affords the most secure and easy means of applying my invention to the nose of a boat by means of nails, tacks, or other suitable fastening and gives to the appliance a better resiliency or yielding contact.

The flexible materials of which my fender is composed and put together and the shaping of the flexible covering in form to approximate an isosceles triangle having one of its apexes thrown back or brought over the top or nose of the stem of the boat or vessel and the other two arms or corners bent back upon the sides thereof comprise the important elements of my invention. Any boat or tender provided with my said fender may strike or be shoved against any yacht, vessel, or other object without injury either to the stem of the boat or to the object with which it may come in contact. The combination of the materials used renders my fender of great service to yacht-tenders and other boats as being more durable and more impervious to the weather than any appliances hitherto in use, at the same time affording the best resiliency and impact.

Having thus described my said invention, I claim as new and desire to secure by Letters Patent—

1. A fender for boats consisting of two flexible triangular members sewed together around their edges, stuffing between them, means for securing the prongs to the boat, and a web



for attaching the center of the device to the boat, as and for the purpose set forth.

2. A fender for boats consisting of a flexible body portion, three arms or prongs of equal  
5 length, means for securing the ends of said prongs to the sides and top of the boat respectively, a lug or tongue attached to the center of the body portion and connected with the nose of the boat, and a yielding stuffing  
10 material thicker in the body of said covering than in said prongs, as and for the purpose set forth.

3. A fender for boats, consisting of a flexible body portion, a plurality of prongs of equal  
15 length, a web for securing the body portion to the boat, means for securing the ends of

said prongs to the sides and top of the boat respectively, and a yielding stuffing material thicker in the body of said covering than in said prongs, as and for the purpose set forth. 20

4. As a new article of manufacture, the head or fender in tripod form composed of curled hair and rawhide and provided with the lug or tongue to be attached to the stem of a boat, substantially as described. 25

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. HIGGINS.

Witnesses:

IRA D. BRONSON,  
CHARLES E. FOLSOM.