

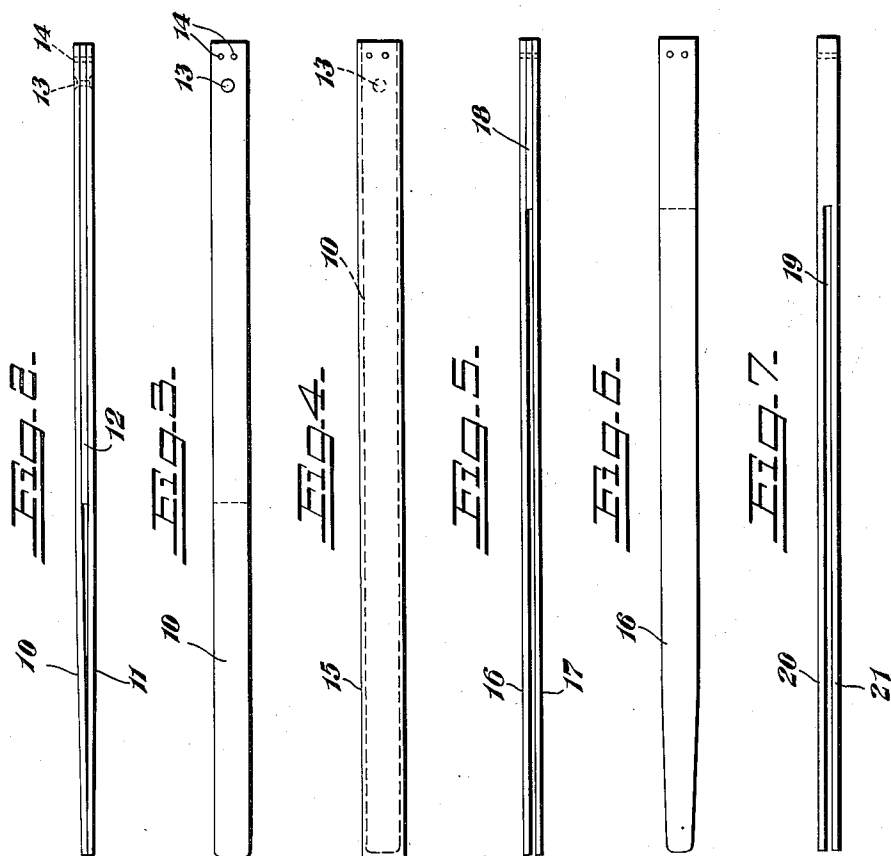
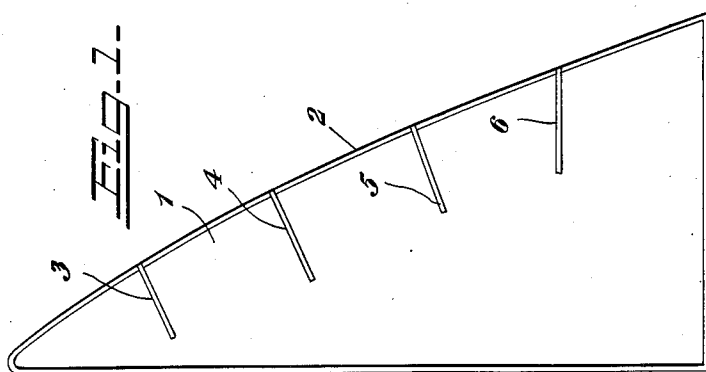
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SAIL BATTENS

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SAIL BATTEN

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Triangular sails having a convexly curved aft bolt-rope (Bermuda rig) are, as is well known, provided with battens inserted in pockets in the sail and serving to compel the aft bolt-rope to follow the desired curve. Such battens must be made sufficiently strong to be able to hold the sail in a spread-out position also in a strong wind but must at the same time have a suitable flexibility which increases from the aft end towards the middle of the sail in order that the batten shall not unduly prevent the sail, particularly in a light wind, from following the wind so as to set in an even bunt, the curvature of which increases from the aft bolt-rope towards the middle of the sail without forming abrupt bends at the inner end of the batten. For said purpose it has been proposed to decrease the thickness of the batten from the aft bolt-rope towards the middle of the sail, yet without success in that it has not been possible to obtain in this manner sufficient flexibility while maintaining the required strength.

The present invention has for its object to provide a sail-batten which combines with sufficient strength a flexibility not hitherto obtained in sail-battens. A sail batten according to the invention having the properties set forth is characterized substantially in that it is composed of two or more blades or laminae of wood or other elastic material, said blades being arranged side by side, fixedly united to each other at one end and so dimensioned as to cause the flexibility of the composite batten to increase from the jointing end towards the other end.

Other objects and features of the invention will appear from the following detailed description of preferred embodiments by reference to the attached drawings, in which:

Figure 1 shows the usual positioning of the battens in a triangular sail having a convexly curved aft bolt-rope.

Figures 2 and 3 show in side view and plan view respectively a first embodiment of the sail-batten according to the invention.

Figure 4 shows the said sail-batten inserted in a flexible protective cover.

Figures 5 and 6 show a second embodiment in side view and plan view, and

Figure 7 illustrates a further embodiment in side view.

The triangular sail 1 shown in Figure 1 is provided with four pockets 3, 4, 5 and 6, each serving to receive a corresponding sail-batten, the said pockets extending transversely to the aft bolt-rope 2. The batten inserted in the pocket 6,

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which is positioned nearest to the boom, may be practically stiff, whereas the other battens should be the more flexible the nearer to the top they are positioned. The top-batten which is to be inserted in the uppermost pocket 3, should thus have the greatest flexibility. Each batten should be most flexible at its innermost end, whereas at the end turned towards the aft bolt-rope 2 the batten may be comparatively stiff.

The sail-batten shown in Figures 2 and 3 is composed of three rectangular and comparatively thin blades or laminae 10, 11 and 12 of wood, Bakelite or other suitable elastic material. The two outermost blades 10 and 11 are approximately of equal length, whereas the intermediate blade 12 is shorter and so positioned that one end thereof will be substantially flush with the corresponding ends of the outer blades. All three blades are held together at said end by a rivet 13. The batten has its greatest stiffness within the right hand portion, when referring to the drawing, which portion consists of three blades, whereas the left hand portion of the batten, which consists of only two blades, has a greater flexibility. At its stiffer end the batten is provided with two holes 14 for cords, not shown, by means of which the batten may be secured to the sail.

To reduce the wear on the sail, the batten according to the invention may be inserted into a protective cover or tube 15 of sail-cloth or other suitable material, as shown in Figure 4.

In the embodiment according to Figures 5 and 6, the batten is also composed of two outer blades 16 and 17 of equal length and of a shorter intermediate blade 18. Said intermediate blade, however, is relatively shorter than the intermediate blade according to Figures 2 and 3 and is glued to the outer blades along its entire length, whereby increased stiffness is obtained at the jointing end. The blades 16 to 18, which suitably are made of wood, taper towards their free ends, where they are rounded off, as will be seen from Figure 6.

The embodiment according to Figure 7 differs from the one just described only in that it has been obtained by sawing a longitudinally extending slit 19 in a wooden batten of ordinary construction, so that at one end two blades or laminae 20 and 21 are obtained which give to the sail-batten increased flexibility at said end.

The invention is, of course, not limited to the embodiments shown on the drawings and described above but modifications of various kind are conceivable without departing from the spirit

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of the invention. Thus, the batten may be made with more than two, three or four blades or laminae and/or with blades shaped otherwise than shown on the drawings. Furthermore, other relative dimensions may be selected to suit the construction of the sail in question.

I claim:

1. A said batten comprising a plurality of rectangular and relatively thin laminae arranged side by side in generally parallel relationship and which are of substantially co-extensive width, one of said laminae being interposed between said plurality of laminae and of shorter length, said interposed lamina having one end substantially flush with the corresponding ends of said plurality of laminae, said laminae being formed of flexible, elastic material and fastened together providing a composite batten for securing said sail whereby the sail is held relatively stiff throughout the length of said interposed lamina.

2. A sail batten comprising three rectangular and relatively thin laminae arranged side by side in generally parallel relationship and which are of substantially co-extensive width, two of said laminae being of substantially the same length, an intermediate lamina of shorter length than said two laminae and therebetween forming a spacer lamina, said spacer lamina having one end generally flush with the corresponding

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ends of said two laminae, said laminae being formed of flexible, elastic material, said laminae being fastened together adjacent their flush ends thereby forming a composite batten which is relatively stiff throughout said intermediate lamina and relatively flexible throughout the remaining portion thereof.

3. A sail batten as claimed in claim 1 wherein said composite batten is enclosed in a fabric cover.

4. A sail batten as claimed in claim 2 wherein said laminae adjacent said spacer lamina taper toward their free ends thereby providing a batten having varying degrees of flexibility.

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