Dec. 8, 1925. 1,564,616

S. X. PANTSOS, KNOWN AS S. X. PANTCHEFF

ASSEMBLING FRAME FOR COVERED STRUCTURES

Filed Feb. 24, 1923

Fig. 1.

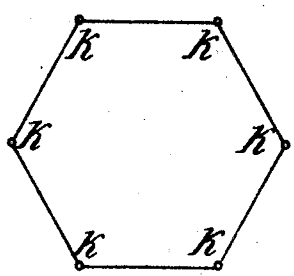


Fig. 2.

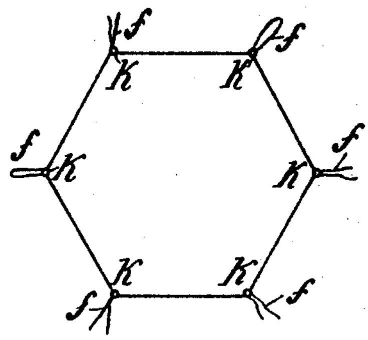


Fig. 3.

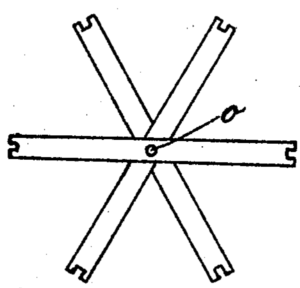


Fig. 4.

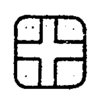


Fig. 5.

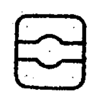
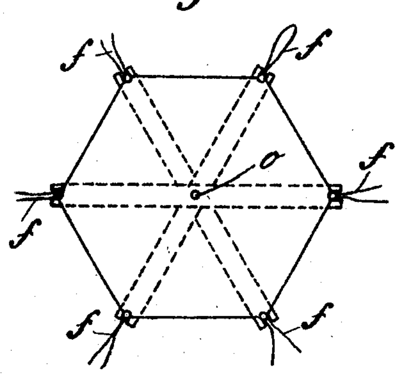


Fig. 6.



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UNITED STATES PATENT OFFICE.

SOPHOCLES XENOPHON PANTSOS, KNOWN AS SOPHOCLES X. PANTCHEFF, OF KINROSS, ENGLAND.

ASSEMBLING FRAME FOR COVERED STRUCTURES.

Application filed February 24, 1923. Serial No. 621,063.

To all whom it may concern:

Be it known that I, SOPHOCLES XENOPHON PANTSOS, known as SOPHOCLES XENOPHON PANTCHEFF, a subject of the King of Bulgaria, residing at Kinross, 16 Victoria Road, Buckhurst Hill, in the county of Essex, England, have invented certain new and useful Improvements in Assembling Frames for Covered Structures, of which the following is a specification.

This invention relates to frames for covered structures of the type comprising compression members and flexible tension members, such as are used in the manufacture of kites, toy aeroplanes, screens, tents and the like, and has for its object a new, very simple way for securing together the compression and tension members and the covering of said structures, in such a manner as to provide an efficient fastening of the said elements, of a rapid and easy erection and dismantling, with a view particularly to combined strength and lightness.

According to this invention, I provide the end of each compression member, spar, rib or the like constituting the framework with two cross cuts, such as saw cuts, grooves, notches, indentations or the like, and the tension member or members with arresting members, such as knots, pegs, cross pieces or other suitable projections, adapted to engage said cross cuts. The compression members may be fastened together in any known manner at their point or points of crossing, or pivoted, or entirely independent, in which latter case they are maintained in position solely by the said tension member.

I will describe particularly this invention as applied to the construction of a kite structure.

A kite constructed according to this invention comprises the following three main elements:—

1. Compression members, spars, ribs or the like, of any suitable cross section, forming the skeleton of the kite.

2. A peripheral tension member or members of suitable material, such as string, cord, thread, wire tape-like material of the like, to which a cover is or can be secured by pasting, sewing, or otherwise.

3. Knots or the like at suitable points along the peripheral tension member or at the joints of the several tension members, sunk or deposited in cross cuts, saw cuts, notches, grooves, indentations or the like cut in the end of the ribs forming the skeleton of the kite, by means of which joints the extremities of the ribs are connected together through the medium of the peripheral string, cord, thread or the like, under tension.

Instead of cutting the cross slots or the like above mentioned directly in the ribs, fittings of suitable material, of the same description may be used fitted to the ends of the ribs or thereabouts.

Several covers or parts of covers may be used instead of a single cover, or any number of covers can be used singly, one at a time, with the same skeleton or frame, to vary the visual effect for the purpose of signalling, advertising, or similar purposes.

The ribs may be fastened together at their point or points of crossing in any known manner or they may be left entirely independent, in which latter case they are held in position solely by the tension member or members.

The accompanying drawings fully illustrate as an example the construction of a kite according to this invention, in the particular case of a hexagonal kite constructed and covered according to this invention. Other kites can be improved by this construction.

Fig. 1 is a loop of thread showing the peripheral tension members of this hexagonal kite having six knots, *k*, or the like, at certain points upon the loop;

Fig. 2 illustrates a similar loop made in sections, fishing ends *f* are left for the purpose of fishing out the peripheral tension members and the covering from the skeleton of the kite;

Fig. 3 is a plan of the skeleton of the kite showing the notches (cross saw cuts or the like) at the extreme ends of the ribs;

Fig. 4 is an end view of a rib having cross saw cuts at the ends;

Fig. 5 illustrates end view of a rib having a saw cut at the end and a groove on each internal face of the saw cut formed by boring a hole or otherwise longitudinally in the wood;

Fig. 6 is a plan of the kite skeleton, with the peripheral tension members and cover on, showing the joints. The knots inserted in the cross saw cuts or the like, and the ten-

sion of the peripheral string or the like, prevent the ribs from slipping along the periphery and keep the ribs in position.

I am aware that it has been proposed to cut a notch in the end of the ribs or spars forming the skeleton of covered structures for the purpose of receiving the tension members.

Claim—

In a kite, in combination, a frame comprising a plurality of sticks adapted to have a radiating crossing relation, slits at the end of said sticks to receive a binding cord, a medial cavity at the end of said sticks to receive a knot in the binding cord, a multi-sided cover for said frame, a cord binder on the periphery of said cover exposed at the corners of the said cover, said binding cord having knots and projecting portions or ends, the said cord lying in the slots at the ends of the sticks and said knots lying in the medial cavities, said projecting portions or ends of the binding cord forming means whereby the said binding cord can be pulled over into position on the sticks.

In testimony whereof I affix my signature.

S. X. PANTCHEFF.