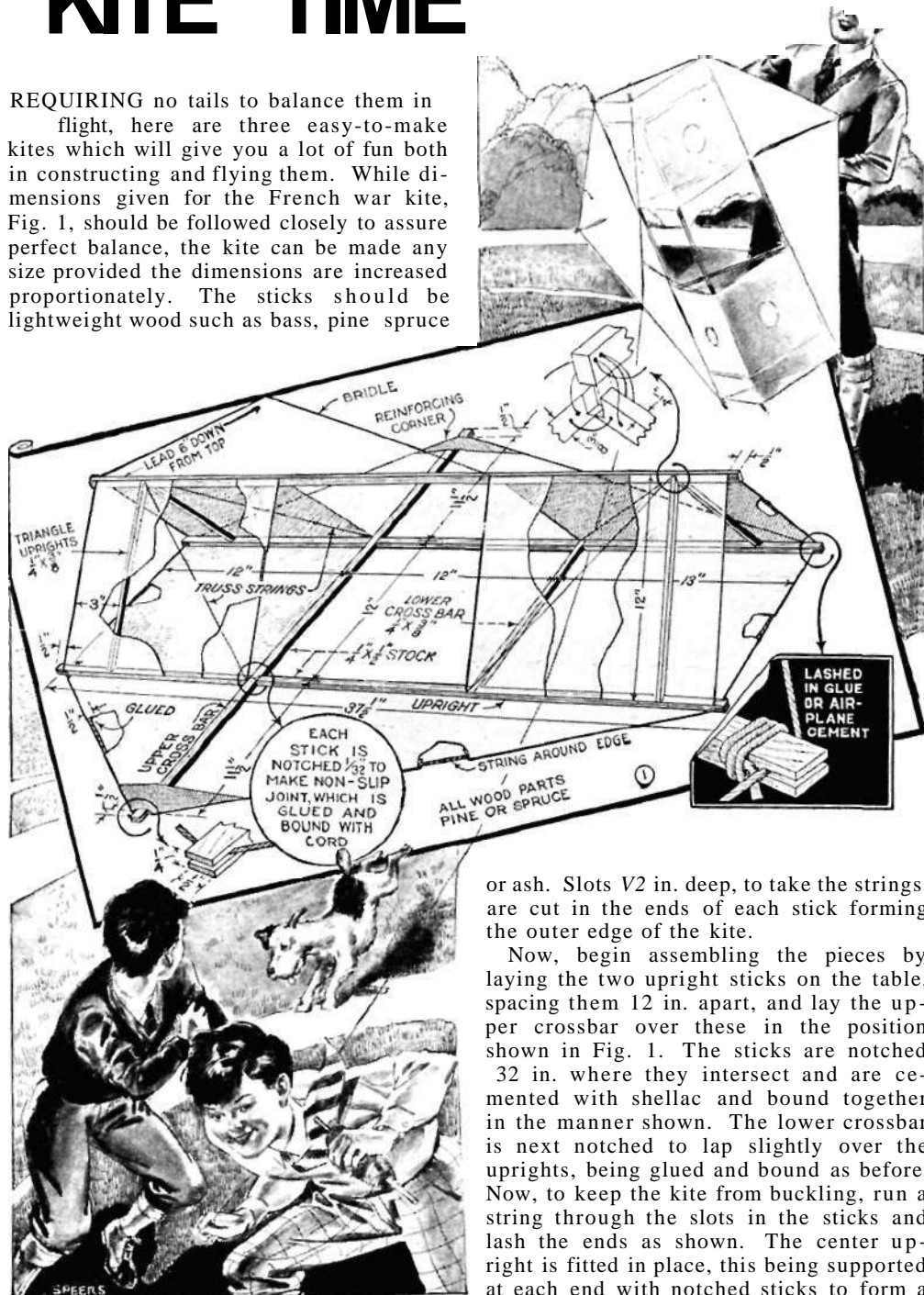


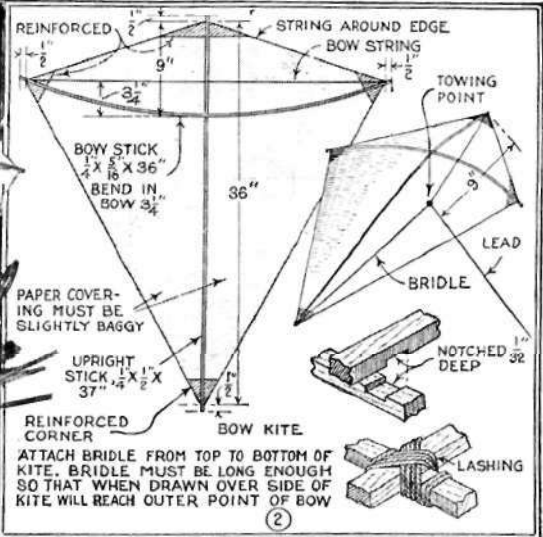
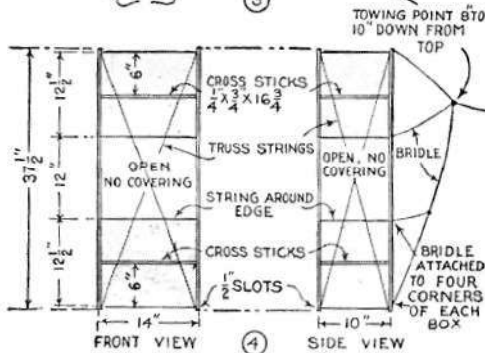
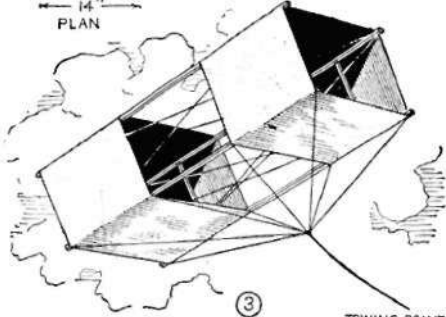
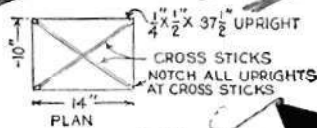
KITE TIME

REQUIRING no tails to balance them in flight, here are three easy-to-make kites which will give you a lot of fun both in constructing and flying them. While dimensions given for the French war kite, Fig. 1, should be followed closely to assure perfect balance, the kite can be made any size provided the dimensions are increased proportionately. The sticks should be lightweight wood such as bass, pine spruce



or ash. Slots $\frac{1}{2}$ in. deep, to take the strings, are cut in the ends of each stick forming the outer edge of the kite.

Now, begin assembling the pieces by laying the two upright sticks on the table, spacing them 12 in. apart, and lay the upper crossbar over these in the position shown in Fig. 1. The sticks are notched 32 in. where they intersect and are cemented with shellac and bound together in the manner shown. The lower crossbar is next notched to lap slightly over the uprights, being glued and bound as before. Now, to keep the kite from buckling, run a string through the slots in the sticks and lash the ends as shown. The center upright is fitted in place, this being supported at each end with notched sticks to form a



lower triangle is made $\sqrt{2}$ in. wider than that on the upper one. This is done to correct balancing. The capacity of the wing surface should be smaller than the surface covering of the triangle. This prevents the kite from diving. The ends and center, you will notice, are left open. The wings are covered next, turning and gluing the edges over the strings as before. Do not pull the covering tight, but allow it to bag slightly to catch all the air currents. Protect the corners of the wings by reinforcing with an extra covering of paper. The bridle should be attached to the top and run to a point two-thirds the way down. The towing point should be 4 to 6 in. from the top.

The simplicity of the bow kite, shown in Fig. 2, makes it very easy to construct. Here a cross strip, bowed $\frac{3}{16}$ in. with a cord stretched through slots made in the ends, is notched $\frac{1}{2}$ in. at midpoint as shown, to fit a similar notch cut in a center upright. When these two are joined a string is run around the outside of the kite and then the covering is applied as before.

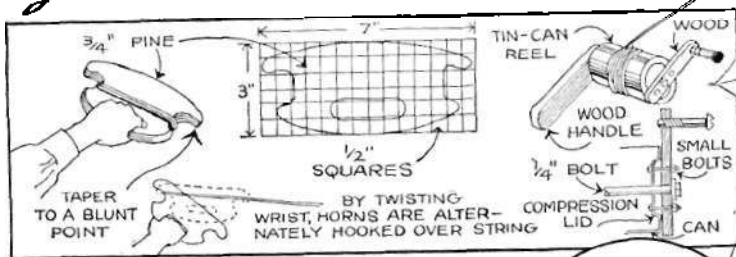
To make the box kite in Fig. 3, four slotted uprights of identical size are assembled into two pairs of corresponding units by notched cross sticks. The units are joined then, into box-shape, and truss strings are stretched from the corner slots to keep it rigid and straight. The paper covering is made $\sqrt{2}$ in. wider on the lower box than on the upper. The towing point should equal the length of the kite.

triangular shaped assembly. When dry, run a string around the inner edges of the triangles to support the covering and, then brace them with several cross strings stretched on each side. Parchment or heavy-grade kite paper is the best covering material. Cellophane can be used also.

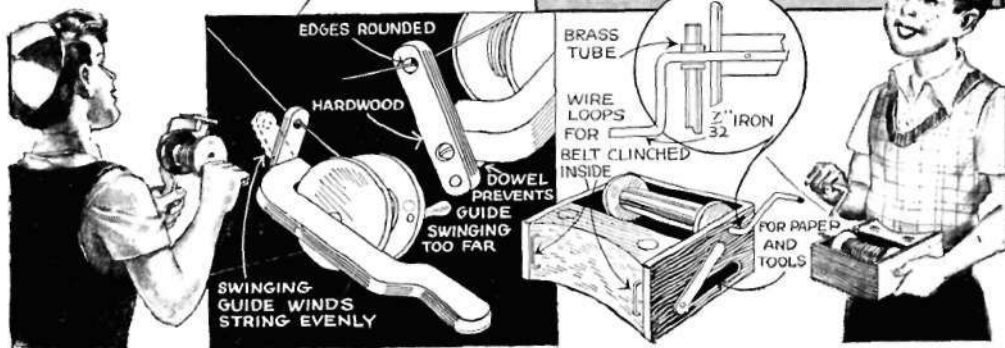
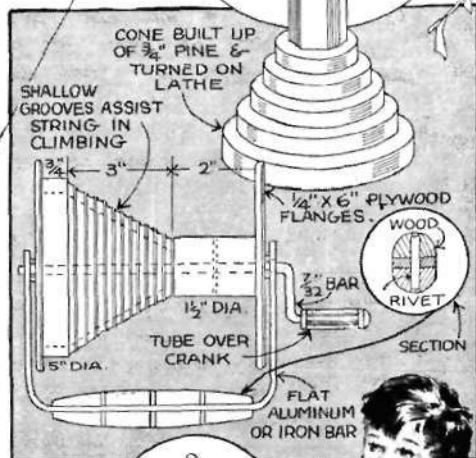
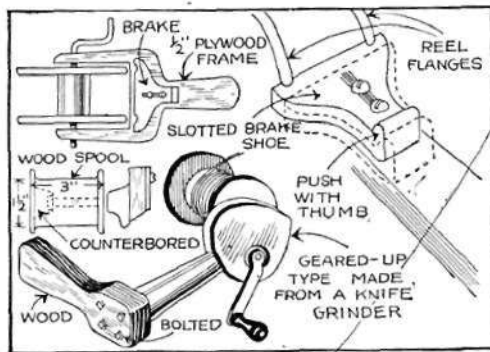
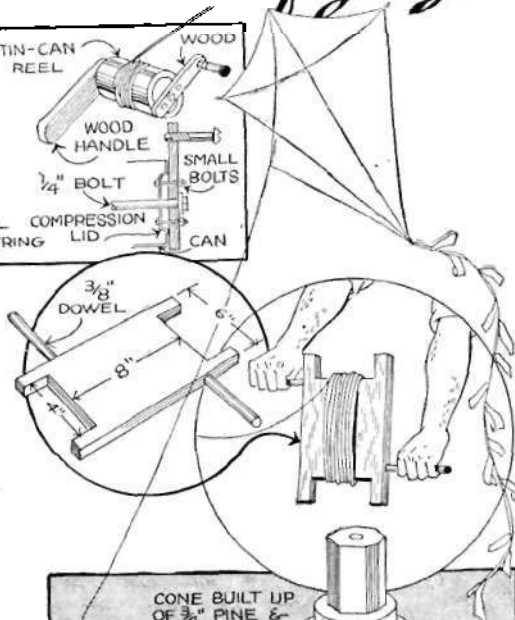
Cover the three sides of the two triangles and fold and glue the edges of the paper over the string. The covering of the

FAST-WINDING REELS

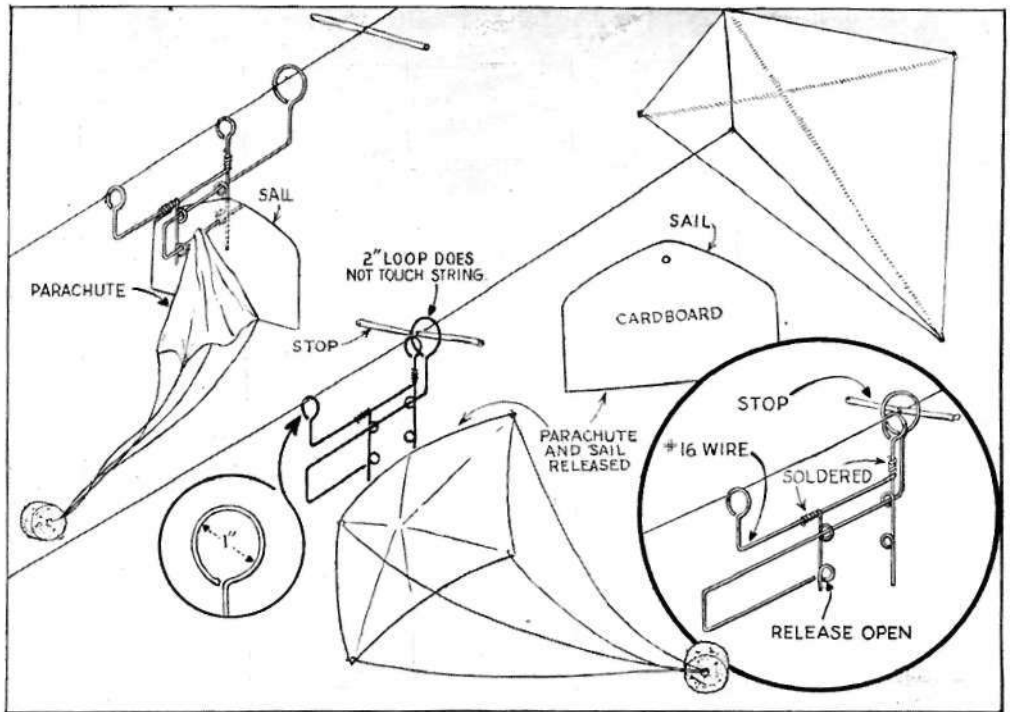
give new thrills to kite flying



ANYONE can make the flat horn-type string winder shown above, which works by a simple twisting motion of the hand. Another one, which is quickly improvised, is the two-handle affair at the right; it is merely a piece of pine recessed at both ends and drilled for dowels. Below, are shown several other types that are more elaborate and have been designed especially for speed, even winding and ease of handling.



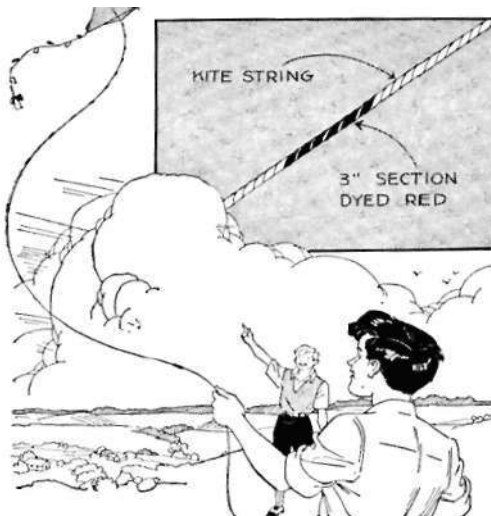
Dropping Parachutes Adds Zest to Kite Flying



Parachutes carried up to a lofty kite and automatically released when the carrier hits a cross stick tied in the kite line, will keep up a lively interest. The carrier must be lightweight and there should be very little friction on the line so that ascent of

the carrier will not be impeded. A cardboard sail and a parachute are held on a sliding member, which is pushed back when it strikes the cross stick, releasing sail and parachute. By going over the details you will see how the device -works.

Scale Markings on Kite String Aid in Measuring Distance



When a group of boys are flying kites in neighborhood competition meets to see who can pay out the most string and fly the greatest distance, it will help to mark the string with red ink at intervals of 25, 50 or 100 ft. This is much better than the usual method of tying small ribbons to the string to serve as markers. Red is also highly visible and the marks can be seen for quite a distance, although the marks can be counted as the string is let out.

Novel Holder for Kite String

A wooden cleat riveted to a belt to go around your waist provides a novel holder for kite string. The string is wound on the cleat and is unwound as desired. If the end is tied to the cleat, there will be no danger of the kite getting away.