

THE THAI-TIE

A Powerful, Simple Inexpensive Connector

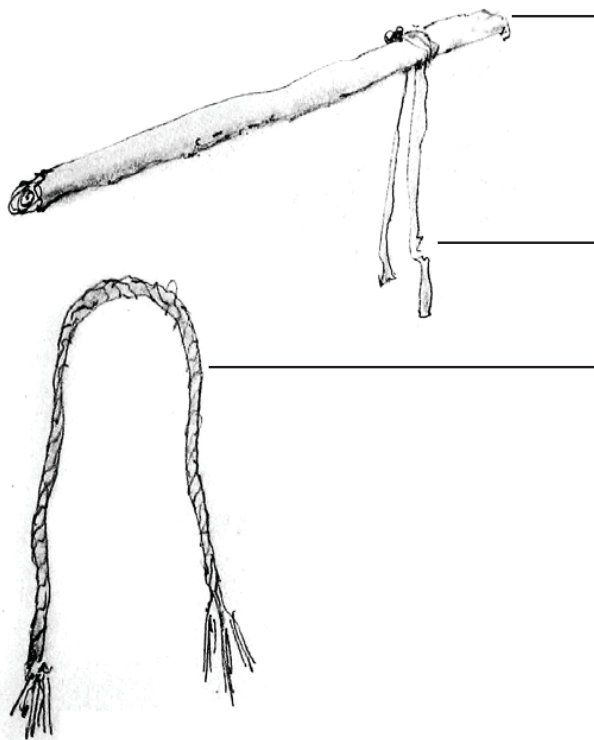
Scaffold builders in Thailand (and elsewhere no doubt) use an extraordinarily useful connector to tie their structures together. The elegance and utility of this simple device is marvelous, and it is a mystery why it is not more widely known. Our own desire at CAST for simple, elegant and powerful ways of building draws us to this little invention with great admiration. We call this connector the “Thai-Tie”, and with a kind of builder’s evangelical spirit, recommend it to you as an excellent trick and a really useful part of any builder’s tool kit. This device is readily adaptable to a wide variety of construction assemblies. We use it at CAST for both temporary structures and permanent assemblies. It is our go-to connection when tying “anything to anything”.



The Thai-Tie consists of a stick, a rope, and a small piece of ribbon or string. In Thailand these connectors come to the job in a large plastic basket with each individual tie prepared and stored as a small self-contained bundle that can be tossed to workers on the scaffolding.

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THE PARTS THE METHOD



The Stick

Any convenient short (approx. 30 cm / 12 in) rod will do. A cylindrical shape is preferred. Square edges are to be avoided as they will tend to cut into the rope. The Thais use short lengths of small tree branches. Lengths cut from broom handles, for example, also work well.

The String

The Thais use a light polypropylene ribbon. We use a light nylon string or twine.

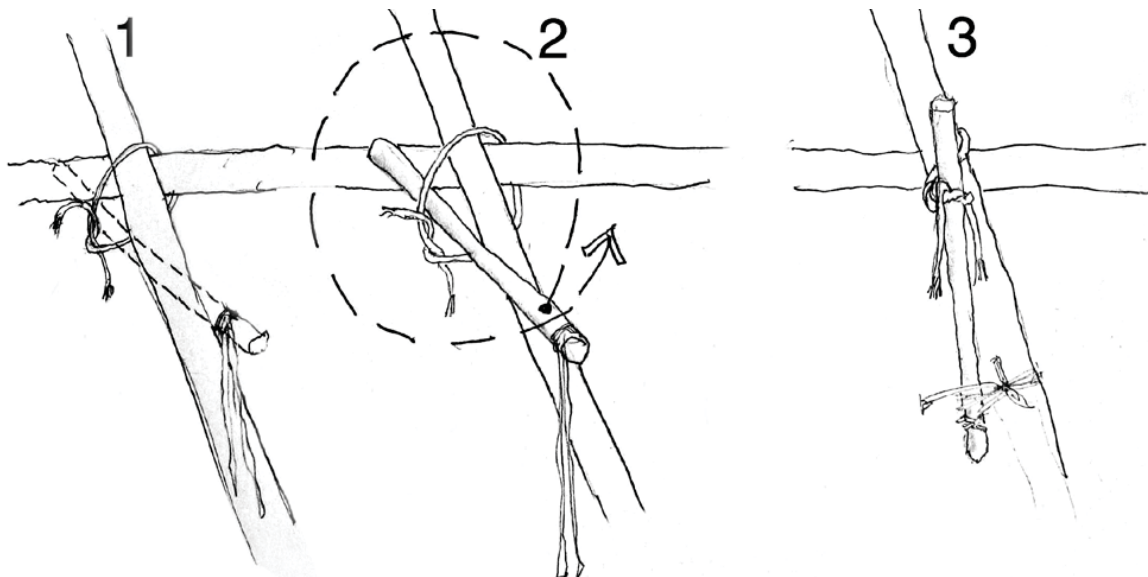
The Rope

Any flexible rope can be used. The Thais tend to use an inexpensive polypropylene 3-strand twist rope. We use Nylon or Polyester rope.

Proportion

The proportion between the diameter of the stick and the diameter of the rope is important. If the rope slips when tightened, its diameter is too small in relation to the diameter of the stick. The photos on the next page give a picture of the general proportions required.

- 1: The rope is looped around the members to be connected with a single, loose, "overhand knot". The stick is slipped under the overhand knot.
- 2: The stick is rotated, causing the rope to twist and constrict. It is important to keep the overhand knot *positioned over the stick* so that it "cinches-up" and hardens against the stick.
- 3: The connection is tightened by twisting until it is firm. With a strong rope and stick, the connection can be extraordinarily stiff. The string is then tied off, preventing the stick from unwinding.



ADVANTAGES OF THE THAI-TIE

- “Zero-capital” construction tool.
- Connects a wide variety of materials and/or structural sections to each other, making easy work of constructions with heterogeneous parts.
- Eliminates the need for nails or screws that can weaken or damage material.
- Both strong and flexible, making for a very robust connection.
- Rapidly disassembled with little or no damage to any of the materials involved.



Left Above: Thai-Ties used at the CAST Lab/Studio to connect steel pipe to a scaffolding frame.

Below Left, Right: Scaffolding in Bangkok built from a combination of steel scaffolding frames, pipes, bamboo and wooden planks. The only connection used is the “Thai-Tie”.

