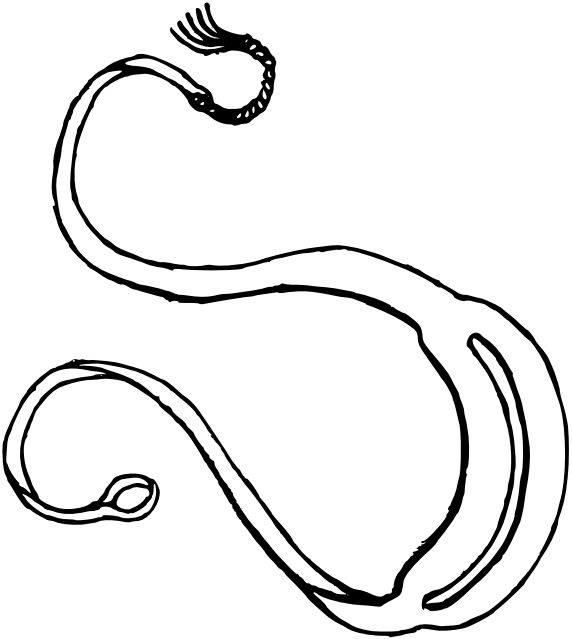
KHERMADION

Issue 1



Parts of a sling

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The first issue of Khermadion gives an overview of the various parts a sling consists of and describes their function.

Contents

1 Overview

A sling is a long flexible strap featuring a widened section in the middle where a projectile can be seated. Both of its ends are held in one hand, and when one is let go of, the sling unfolds, releasing the projectile.

While the appearance of slings from different periods and cultures can vary greatly, all slings share this basic structure and working principle. Figure 1 shows a typical sling with its components labeled.

When referring to the dimensions of a sling, usually not its full length is stated, but its folded length, from the finger loop to the middle of the pouch. Sling lengths commonly range from about half a meter to well over one meter. While short slings are generally believed to be more accurate, longer slings tend to allow for greater distances. At the same time, the weight of a sling can be as low as $10\,\mathrm{g}$ for thin slings made of synthetic materials, or up to $100\,\mathrm{g}$ for more traditional slings made of natural materials.

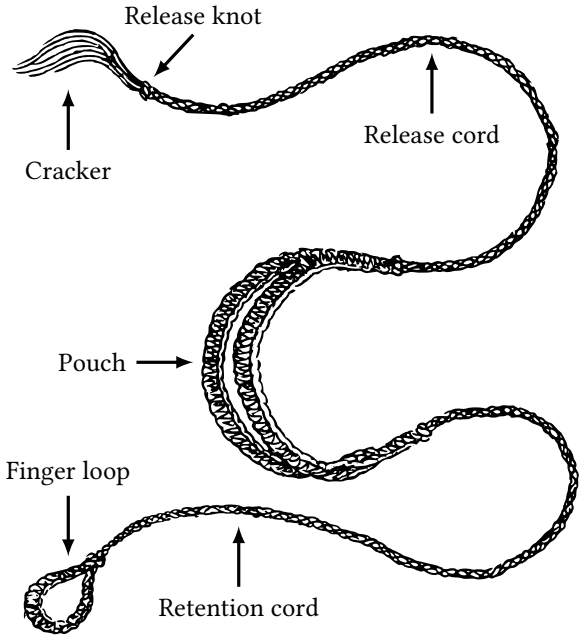

Figure 1: Basic structure of a sling.

2 Finger loop

The finger loop is slid over a finger and fixes one end of the sling to the throwing arm. It often is a simple loop at one end of the sling. Sometimes, there may be two loops next to each other, allowing the sling to be held with two fingers. A wrist loop or a rigid handle, which can be held with the entire hand, allows to sling more heavy projectiles.

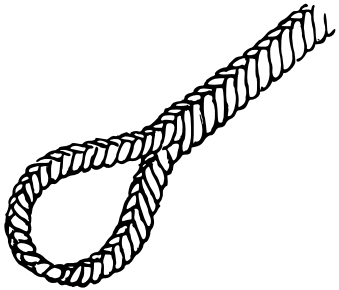

Figure 2: A simple finger loop.

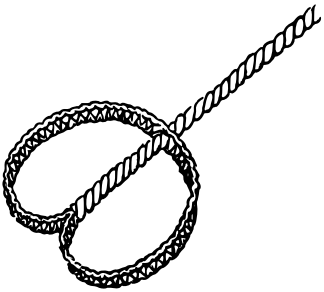

Figure 3: A double finger loop.

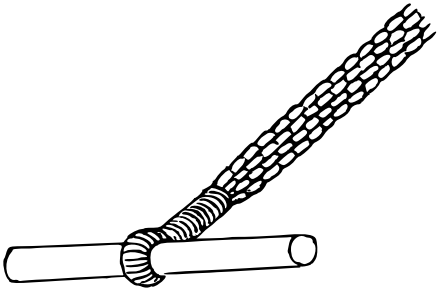

Figure 4: A handle.

3 Retention cord

The strap connecting the finger loop with the pouch is called the retention cord, because it stays affixed to the throwing hand when slinging. To allow better control over of the pouch orientation, retention cords sometimes have a rectangular cross-section, where the wide edge is in line with the surface of the pouch. This makes the cord stiffer along the short edge, and more flexible along its wide edge.

4 Pouch

The pouch holds the projectile during the throw. For a sling to release well, the weight of a pouch relative to its length should not be smaller than that of the sling's cords. Depending on the method of construction and the materials a sling and its pouch are made with, their appearance can vary greatly. Overall, there are three main categories: closed pouches, split pouches and netted pouches.

4.1 Closed Pouch

Closed pouches consist of a flat or slightly cupped strap of leather or woven textile. They often have a rectangular, oval or rhombic shape. Closed leather pouches tend to bulge over time, which leads to an unclean release. To prevent this, holes or slits are often cut into the leather.

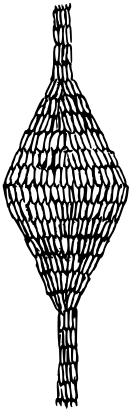

Figure 5: A closed pouch.

4.2 Split Pouch

Split pouches consist of two or more flat straps running in parallel. Other than closed pouches, they can adapt to a larger variety of differently-sized projectiles but in turn struggle with too small projectiles. They rely on sufficient lateral stiffness and friction to hold a projectile securely.

Figure 6: A split pouch.

4.3 Netted Pouch

Netted pouches feature a net or a closed pouch with staggered slits in parallel with the sling. Like split pouches, they can conform to a large variety of projectile sizes, while still being able to hold small projectiles well.

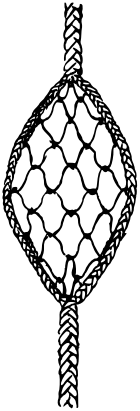

Figure 7: A netted pouch.

5 Release cord

The release cord is usually lighter than the retention cord to facilitate the release of the projectile at the end of the throw. It may even be tapered, being thicker at the pouch, and thinner at the end. The reason for this is twofold. On the one hand, depending on how the sling is constructed, the retention cord starts thicker at the pouch, usually because of additional material that was added for the pouch to increase its weight. Tapering allows to reduce the weight of the release cord without sudden changes. On the other hand, when the sling opens up upon release, a tapered release cord can snap like a whip, allowing a cracker at its end to dissipate the remaining energy efficiently.

6 Release knot

The end of the release cord is pinched between the fingers of the same hand which holds the retention cord. Some slings feature a knot, bead or a tab at this point to provide more grip and thus allow to sling heavier projectiles. The location of the release knot is chosen so that, when the sling is held, the pouch folds evenly around the projectile.

7 Cracker

Often, the release cord of a sling ends in a tassel of loose fibers, which produce a loud crack when the projectile is released. A tapered release cord greatly facilitates the whip crack, but is not strictly necessary. The crack only occurs when the sling unfolds correctly. Therefore, a cracker is particularly useful when practicing.

Furthermore, a cracker decelerates the release cord, which supports a clean release of the projectile. Especially for shorter slings where the release cord on its own has not enough drag to act as a brake during release, a cracker is beneficial.

The loose fibers are prone to wear, as they briefly break the sound barrier on each crack. To increase the lifespan of a cracker, it is often made out of synthetic material, and sometimes constructed in a way to make it easily replaceable.

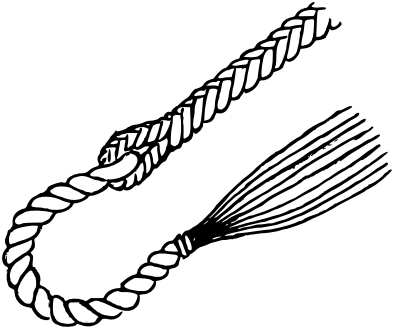

Figure 8: A cracker.