

Chapter 2

THE METAL THREADS

Terminology

When referring to the materials used in modern metal thread embroidery, the term "metallic" would be more inclusive than that of "metal". This broader term would include any of the following:

1. Material which is made of either base metal or alloy, producing the only actual "metal thread"—includes some Japanese metals and all the embroidery materials plated with precious metal, such as purl, smooth passing, and crinkle.
2. Material which is made of metal, a synthetic substance, and a coloring pigment, together producing the physical appearance of metal—includes some Japanese metals, these containing a polyester film metallized with silver or aluminum, and a few of the Lurex threads, these containing a polyester film metallized with aluminum.
3. Material which is made of synthetic substance coated with a coloring pigment, producing the physical appearance of metal—includes most of the Lurex threads, these containing a polyester film.

The term "thread" is used loosely in metal thread embroidery for there are materials which are not passed through fabric by means of a needle. These non-threads include purl, plate, and flat braid. However, most metallics do have a core of actual thread—of silk, rayon, cotton, or nylon—around which a flat strip of metallic is wound, this core producing a material which then can be passed through fabric.

In metal thread embroidery, the term "gilt" refers to those materials which have been plated, first with silver and then gold. In relation to the metal onto which the precious metals are plated, the quantity of silver is now only about two and a half percent and that of gold seldom more than three-tenths to five-tenths of one percent.

The term "drawn-wire" refers to the base material used to produce such metallics as purl, smooth passing, and all other plated materials used in metal thread embroidery. Briefly, using a process developed during the Middle Ages, a block about the size of a small brick is formed, this made of copper. After being plated with precious metal, this brick is drawn, by three men using only a pulley and chain for assistance, through a series of draw-plates, reducing the metal brick to a fine, round wire. (A draw-plate is a sheet of metal with a round hole in the middle, the series of plates having holes which can vary by only one-hundredth of an inch.) For many metallics produced from drawn-wire, the round wire is next flattened. Finally, the drawn-wire is wound about either a needle or a thread core.

Materials produced from drawn-wire have been used by the Western embroiderer since the twelfth century. It was not until possibly as late as the middle of the nineteenth century that oriental threads produced from gilded- or silvered-paper began to be used.

Do metallics tarnish? Tarnishing, a darkening of the finish's color, occurs when some metals are exposed to the oxygen in air—a film is created on the metal's surface as a result of a chemical alteration referred to as oxidation. Metallics produced from synthetic substance do not tarnish. Those produced from aluminum or containing a high percentage of gold are extremely resistive to this oxidation process. The metallics highly subject to oxidation are those containing a base with a high percentage of copper.

Can metallics be cleaned? According to manufacturers' statements, the metallics made from either aluminum or synthetic substance can usually be dry cleaned and some hand laundered. However, both the metallics made from other metals and all the Japanese metal, regardless of content, should not be subjected to either type of cleaning process.

Description

Knowledge of the properties of the basic metallics is the beginning of awareness as to how these materials can be handled. For example, Japanese

metal is quite fragile and must be handled with care, due to the use of not only a particularly thin layer of metallic but also the paper backing. On the other hand, a metallic made of drawn-wire wound around a silk or nylon thread core can be quite durable; when smooth and rather fine, this type of metallic can even be sewn repeatedly in and out of fabric.

The metallics described are manufactured in a gilt or gold-colored finish, most in a silver or silver-colored finish, and some, such as Lurex threads and some purls, in such colored finishes as copper, red, blue, and green. Most of these metallics are available in several sizes, usually supplied by the length or the spool.

JAPANESE METAL: This metallic is produced by adhering a thin sheet of leaf—made of pure gold or silver, aluminum alloy, or metallized polyester—to a thin paper. This paper is then cut into narrow strips, each strip wound around a thread core, usually of silk or rayon. This metallic is usually couched in two side-by-side strands.

PASSING THREAD: Historically the term "passing" referred to a metal thread which was passed over the surface of the fabric and then was couched in position. Today the term can refer also to those metallics which are durable enough to be sewn repeatedly in and out of fabric.

Smooth Passing: This smooth, pliable metallic is produced by winding a flat strip of wire, made of either plated copper alloy or aluminum, around a thread core, typically of silk. Usually couched in two side-by-side strands, this type of passing thread can also be sewn repeatedly in and out of fabric with care.

Wavy Passing: This rather fine, wavy metallic is produced as the smooth passing, except that it is also slightly crimped.

Tambour: This very fine metallic is produced by winding a flat strip of plated copper alloy, aluminum alloy, or polyester around a cotton, rayon, or nylon thread core. Too fine to be couched itself, this type of passing thread is best used as a thread to sew repeatedly in and out of the fabric, such as to couch other metallics.

TWIST: This metallics is produced by twisting together two or more plies of a passing thread. Each ply is produced by winding a flat strip of plated copper alloy, aluminum alloy, or polyester around a thread core, typically of cotton. Usually attached in a single strand, using a variation of the basic couching technique, the small sizes can also be sewn repeatedly in and out of fabric with

care. A twist of large diameter is frequently referred to as a Cord.

CRINKLE: Also referred to as Rococo and Frizzle, this wavy metallic is produced by winding a flat strip of plated copper alloy around a thread core, usually of cotton or rayon. Until crimped, it is a smooth passing thread. This metallic is couched in a single strand.

BRAID: This plaited metallic, manufactured in several variations, is attached in single strand, using a variation of the basic couching technique.

Tubular Braid: This metallic is produced by the plaiting of many plies of a fine passing thread, each ply containing a flat strip of aluminum alloy wound around a nylon thread core. In addition to being attached by a variation of couching, the smaller sizes can be sewn repeatedly in and out of fabric.

Flat Braid: One variation of this type of braid is produced by only the plaiting of several flat strips of either plated copper alloy or synthetic substance. Another variation, referred to as Russia Braid or Soutache, is produced by plaiting either of these same strips around two or more side-by-side cotton threads.

Braided Cord: This metallic is produced by the plaiting of several flat strips of plated copper alloy or synthetic substance around a single, but heavy, cotton thread.

PURL: Also referred to as Bullion, all variations of this metallic are produced by winding a plated copper-alloy wire around a needle, thereby creating a hollow coil.

Jaceron: Also referred to a Pearl Purl, this stiff coil is produced by winding a rather heavy, round drawn-wire about a round needle. This metallic is couched in single strand, with the stitches falling between the coils.

All the following variations are usually cut into short lengths and attached like a bead.

Frize Purl: Also referred to as Check Purl, this flexible, faceted coil is produced by winding a fine, flattened drawn-wire about a triangular needle.

Smooth Purl: Also referred to as Shine Purl, this flexible, smooth coil is produced by winding a fine drawn-wire about a round needle, its bright, shiny finish resulting from the use of flattened wire.

Rough Purl: Also referred to as Matte Purl, this flexible, smooth coil is

also produced by winding a fine drawn-wire about a round needle, its rather dull finish resulting, instead, from the use of a round wire.

PLATE: This narrow strip of metallic is produced by flattening a heavy plated copper-alloy wire. It is usually couched in single strand.