

The Technique of Drypoint Engraving and Printing

A Classic Intaglio Printing Technique

A Guide to Implementation

Based on Our Own Method



The Technique of Drypoint Engraving and Printing - A Classic Intaglio Printing Process

Procedure

WARNING: There is a risk of injury when handling cutting, grinding, and engraving tools, printing presses, and their components! Unauthorized persons should not have access to tools, and children and teenagers must not handle tools unsupervised!

Preparing the Copper Plate:

- You will need a piece of copper sheet (e.g., 0.5 mm thick, available at hardware stores, which must then be cut to the desired size. Oliver uses small rectangular formats of approximately 100 x 75 millimeters. Caution: There is a risk of injury! Special protective measures, especially for your fingers, must be taken when handling cutting tools! [Oliver cuts a 0.5 mm thick copper sheet several times with a utility knife against a wooden strip and a rigid ruler. This method must be handled with extreme caution and is not recommended here due to the risk of injury!] Alternatively, ready-made copper plates, e.g., 1mm thick, can be purchased from art supply stores. These are more expensive but come in pre-cut sizes.

Note on using zinc plates: Over the years, zinc plates develop stains that may appear on the print if you decide to print a decade later. But perhaps that has its own charm. We all get stains eventually. Copper plates have remained stain-free for many years. Fingerprints may leave marks on the plate, but these are insignificant for the drypoint printing technique.

- The next step is "grading" the plate. This involves first roughly rounding the corners and edges of the copper sheet with a metal file and then finely sanding them with sandpaper. **WARNING:** Working with a file and sharp-edged copper sheet can cause injury. It is strongly advisable to always have a first-aid kit readily available at your workspace. Workplace regulations must always be observed. Processing note: Deep scratches in the plate will be visible in the print. It is recommended to leave the protective film on the plate initially when working on the corners and edges.

- Sand the plate edges and the plate itself with 600-2000 grit sandpaper. Then remove the protective film from the copper plate. Finally, polish the plate with steel wool and clean it with a cloth.
- Creating the drawing and engraving on the copper plate

WARNING: There is a risk of injury when handling sharp engraving tools.

- The drawing can begin. Awe and apprehension, curiosity and a thirst for new experiences mingle in the mind and heart. Then comes the experimentation, the drawing, and the handling of the sharp etching needle. The standard etching needle has a long steel point and a wooden handle or is made entirely of steel. Other versions have a softer, ball-shaped point. Digging into soft copper requires a bit of practice, but allows for very fine lines and small details, similar to using a sharpened hard pencil.
- Correction options are limited; a special burnishing tool can be used to make lines disappear. However, grinding down botched lines is very tedious, and completely removing them requires a disproportionately long grinding process and is hardly worth the effort. The sketchy nature of the etching is often what makes the drawing so appealing.
- Oliver uses a sharp needle for the lines of his miniature engravings, and often a roulette for areas of tone: a tool that allows point-like structures to be rolled into the copper to modulate areas and shades. The sketchy quality predominates, and there are no corrections. The drawing is done freehand and without detailed preliminary sketches. It is possible to roughly sketch the (human) figure onto the copper sheet with a pencil before hand to establish some basic reference points. Usually, a few sketches of the figure are made on a sketchbook, or figures from a travel sketchbook are used as a reference. You are completely on your own, relying on your intuition. Practice comes with time.

Preparing the copperplate printing paper

- Handmade printmaking papers come in different weights, usually between 150 and 350 g/m². For larger formats, heavier paper is recommended, as it makes placing the paper on the copper plate on the printing table considerably easier. This is because the paper is printed while damp, and a thin, waterlogged paper is much less stable and harder to handle than a heavier 300 g/m² paper. Every handmade laid paper, like a person, has a front and a back. It is recommended to take a closer look at the structure of beautiful handmade papers. A thicker paper is generally less prone to creases and looks more attractive. A paper enthusiast knows that a beautiful laid paper possesses an inherent aesthetic appeal. Oliver exclusively uses copperplate printing sheets from the German quality brand Hahnemühle®.

The procedure

- Cut the copperplate printing sheets to the desired size. Carefully fold and crease the sheet once straight, then cut it, for example, with a not-too-sharp pocket knife. Repeat this process until the sheet reaches the desired size. Be careful not to contaminate or crease the paper, for example, with your fingers. For folding and cutting, you can use a cut strip of copperplate printing paper as a support to keep the paper clean. Don't worry – minor creases will automatically smooth out during the printing process.
- A quick tip regarding paper size: it's always advisable to leave sufficient margin around the copper plate and not to skimp on the paper size. Oliver uses paper sizes for small copper plates where the copperplate printing paper is approximately 4-6 times larger than the plate itself. For example, with a copper plate measuring 98 x 72 millimeters, the paper size is approximately 245 x 195 millimeters. Why not? Printing on tightly calculated formats is considerably more difficult and often results in skewed prints. A slightly more generously sized copperplate printing paper looks better and is also easier to handle on the press.
- Next comes the "soaking" of the paper: the number of sheets is entirely up to you, but keep in mind that the subsequent printing process takes some time. One, two,

five, ten, twenty, even a thousand (?) sheets and more– it all depends on the printer's mood and how much time the person responsible for the stack is willing to diligently work through the next day.

- Any spare paper that has been soaked should be spread out and allowed to dry completely so it can be re-wetted and reused next time.

The cut copperplate printing sheets are moistened once on both sides with a sponge (natural sponge or household sponge) and water, then stacked on top of each other. It's advisable to stack the sheets with either the front or back facing each other so that the front side is placed directly onto the copper plate during printing.

- The sheets should be neither too dry nor too wet to maintain the correct moisture level during the printing process. Paper that is too dry won't absorb the ink properly, while paper that is too wet will result in a muddy and unsightly print. It sounds complicated, but it isn't!

It takes a little practice to find the right amount of "wetting." It's important to work as dust- and lint-free as possible.

- Likewise, any wet paper crumbs that regularly appear on the surface or from the cut edges must be removed from the paper surface, as they will otherwise create gaps in the print and ruin the image, which can be particularly annoying with small, painstakingly engraved details.

- The stack of paper is then wrapped in plastic or cling film to prevent premature drying. The packaging sleeves in which the copperplate printing sheets are delivered are made of plastic film and are well-suited for this purpose. The sheets are then soaked for several hours, ideally overnight. During this time, they absorb almost all the water. Paper soaked for too long, for a period longer than 24 hours, becomes soggy and ruins the print. Soaking paper for too short a time leaves a wet surface, and the print will also fail. Finding the right paper moisture level takes a little practice, but it's not rocket science!

Preparing the printer's ink and applying it to the copper plate

- Oliver uses Encres Taille Douce® printer's ink from Charbonnel®, Paris. It's available in many colors and varying degrees of transparency and opacity. It's interesting to experiment with different shades of black, creating soft warm tones and deep cold tones depending on the desired effect. The mixing ratio of the colors, especially the blacks, ultimately determines the effect of the area and the line. When buying large pots of ink, Oliver prefers to order directly from the manufacturer at the Charbonnel® shop in Paris, as the pots in stores are often long forgotten and dried out. Buying tubes ensures a reliable supply. Alternatively, you can visit the beautiful Charbonnel® shop in Paris yourself, located on the banks of the Seine near Notre-Dame de Paris. [However, when traveling by air, please note, that certain pastes and liquids are not permitted on board].
- An amount of printing ink required for the number of prints is applied to a smooth work surface. A few drops of special copperplate printing varnish are added, and the ink is spread smoothly and evenly with a small spatula to remove any lumps. The amount of varnish determines the viscosity of the printing ink, depending on the desired effect. High-quality copperplate printing varnish produces strong and clear areas and lines even in its liquid state. Oliver uses only products from the aforementioned French manufacturer.
- The copper plate is then warmed. To ensure the ink flows as smoothly as possible, the copper plate is warmed on the back, for example, with a few tea lights or one or two candles, until it is almost too hot to touch. Alternatively, a special heating plate can be purchased from an art supply store, but these are very expensive.
- The printer's ink, mixed with varnish, is then applied to the heated copper plate using a leather pad. You can make your own leather pad by wrapping a ball of fabric or similar material in a piece of leather and tying it. Alternatively, you can buy a leather pad, again for a hefty price. That's entirely up to you, though; we won't interfere!
- The ink is then spread evenly across the plate and rubbed in. Ah! It smears so

nically, and you can immediately see how much or how little varnish the ink has absorbed.

Now comes the exciting part of the event: the individual wiping technique!

- The individual wiping technique, in which the printer's ink is wiped into the copper plate, determines the look of the print. In drypoint engraving, unlike etching with ground or classic copperplate engraving, no depressions are created into which the ink must be placed. Instead, the engraving with the drypoint needle raises ridges onto which the ink is applied. The term "drypoint" means that the engraving is done on the "cold" plate and not heated in an acid bath, as in the [rather unpleasant] etching ground technique. This does not refer to the aforementioned warming of the copper plate for ink application.
- The ink is applied in various ways. One can use gauze or the palm of the hand. Fly screen also works as gauze. Alternatively, one can purchase the more expensive, specialized gauze from an art supply store. With this material, the plate is wiped, brushed, rubbed, and perhaps even dabbed until the lines and areas of the drawing emerge as desired. The nuances of wiping then determine the so-called "plate tone," the base tone of the print. Less wiping results in a dark plate tone. With this, there's a risk of losing detail due to too much black. More wiping can create clear lines with a light to almost no plate tone. However, the lines can also appear too faint if too much is wiped. Still interested? Haha, don't get discouraged!
- You can also use the palm of your hand for wiping. To minimize the amount of plate tone, dip the palm of your hand into a small bowl of Rügen chalk beforehand. The printing ink will then be quickly worked out, creating a clear line with a light plate tone. A rag attached to your dirty work trousers is useful for wiping the ink off your palm.
- The appeal lies in the modulation. The artist can let loose and experiment, as each print has a different effect, and the appeal can be found in the varying nuances of plate tone from print to print. Each design requires a specific wiping technique, and over time, you'll be able to "read" which technique produces the best print. The copper plate is cleaned of ink on the back and edges with a cloth. A colored

back unnecessarily soils the printing table, and colored edges also impair the print.

- Once the printing ink is thoroughly wiped in, the plate is briefly warmed on the back to keep it as fluid as possible for printing.

Printing:

For this, you need a suitable, solidly built metal hand-operated printing press. Simple, makeshift techniques from relief printing, such as using a hand brush to apply pressure to the paper, are unsuitable because they don't generate the necessary pressure. Therefore, using a high-quality printing press is essential.

Procedure:

- The printing roller is first adjusted to the correct pressure: adjust the screws on the sides of the press up or down to create the appropriate pressure. **WARNING: Risk of injury!** The roller's pressure can reach up to 1000 kg. Improper use can result in crushing injuries to the extremities. The components of the printing press can be very heavy; if, for example, the printing table falls, it can cause serious injury.
- A properly adjusted pressure allows the copper plate with the printing felt to rotate through the press with just the right amount of resistance. The indented edge of the copper plate will then be visible on the paper. To adjust the pressure, you can use an unengraved copper plate of the same thickness with the printing felt placed over it.
- The engraved copper plate, prepared with printing ink as described above and warmed, is placed centrally on the printing table using, for example, small plastic spatulas. It is helpful to make certain markings on the printing table or on a piece of paper placed on it to ensure the copperplate is laid flat. Be aware that sliding the plate back and forth on the printing table can create black edges on the support if there are ink residues on the back of the plate or along the edges. This could result in small blemishes next to the image in the print. Annoyingly, guidelines drawn on the printing table with pencil will also show up in the print. Any paper edges that

protrude, even from thin copy paper, will be visible in the finished print because the pressure of the roller is enormous. Ideally, only the copperplate should be on the clean printing table. Carefulness is essential.

- Place the soaked copperplate sheet on the printing table over the copperplate: the stack of soaked papers should be opened beforehand with clean hands. Each copperplate printing sheet is handled using two paper clips, which were previously cut from leftover strips of copperplate printing paper, to avoid soiling the paper. The sheet is inspected again beforehand for dust or paper crumbs, and any impurities are briefly tapped off with the tip of the paper clip. The sheet is then positioned centrally and straight on the printing table above the copper plate. Once the sheet is lowered, it cannot be adjusted, as the printing ink is immediately transferred to the paper. Any further correction would ruin the print.
- The printing felt is then laid over the paper on the printing table. Significant unevenness in the printing felt affects the print: a dent in the felt will show through in the print. Unfortunately, a coin was pressed into our printing felt. This imprint ruined the print; the coin's edge was visible in the image. A good printing felt is essential and comes at a price.

The Golden Moment:

- Once everything is prepared, the printing can begin. The handwheel is turned and the printing plate rolls smoothly and decisively beneath the roller. Tension mounts, and the monkey named Fear sits on the left shoulder, making its silly monkey noises. The felt is lifted, and the printed handmade paper is lifted using the two familiar paper clips. Care is taken to ensure that the copper plate doesn't stick to the paper as it's removed, potentially ruining all the painstaking work.
- The print can now be inspected, still holding the clips, and then placed safely to dry. Upon inspection, one immediately notices what worked well and others that could perhaps be improved. Every print is unique and has its own distinctive character. A detail might be a little too dark and needs less ink, or perhaps a little too faint, requiring a bit more ink for the next print. A particular plate tone looks

fantastic and might be suitable for the next print. With these impressions and thoughts in mind, the work begins anew, full of anticipation.

The pesky monkey on my shoulder has slunk away in disappointment and perhaps has already found someone else to annoy.



Title: China Town Lady Size of Print: 71 x 61 millimeter © OS. 2026

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a happy and successful endeavor!**

See you soon,

Yours truly,

OS.

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