

Scientific Museum.

Useful Information for All.

WOUNDS.

If a person cuts open an *artery*, put the finger on the wound and press it, then send at once for the doctor. If the wound is in the limb, tie a handkerchief twice around it above the cut, and twist it so firm that the blood cannot flow; or, fold a piece of soft rag several times, and put it quickly over the aperture, and secure it in its proper place by a piece of broad tape or rag. People should never go to sleep if they have leech bites bleeding. Bleeding sometimes occur profusely from the nose, mouth, throat, lungs, stomach, etc. Put the patient in bed, with the head raised slightly—keep the room cool, enjoy absolute quiet—give a table spoonful of vinegar in sugar and water every half hour, until a surgeon arrives. When a person receives a simple cut, though severe, it should be treated calmly. Carefully clean the wound from dirt or other matter, and dab, with sponge or rag dipped in cold water, until all bleeding stops. Then bring the edges of the new wound together and secure them with a bandage.

BRUISES AND SPRAINS.

When a person gets a bruised or sprained arm or limb, it should be kept perfectly quiet and at rest. Bruises are often attended with the rupture of small blood vessels, which bleed internally and cause discoloration. Put the patient in bed, cover the injured part with cloth dipped in cold water, or spirits and water, and change the cloth every five minutes, and afterwards make up a poultice of flaxseed meal and warm water. This is one of the best substances for treating bruises and cut bruises (for there are such wounds) that is known.

POISONOUS BITES.

Tie a bandage tightly around the limb, a little way above the point of injury, and only so tightly that it shall favor but not stop the bleeding. Wash with warm water, and place one end of a large quill over the wound and keep sucking at the other, which will produce a vacuum, and act as a cupping glass. Do this until the surgeon arrives, and you have probably saved a life.

Few people however can do this, and snake bites cannot be treated in this way. They should be treated as above directed by tying the limb, then a piece of tobacco chewed and laid on the wound is always on hand with most people, or some strong whiskey. For poisonous bites, there have been a great number of remedies suggested; one thing should at once be done, tie the limb above the wound as fast as possible, and squeeze out the wound:

INFLAMMATION.

External inflammation may be known by the presence of a pain, heat, redness, swelling, throbbing, or the formation of matter; at the commencement of these symptoms, especially injuries, use cold water evaporations by means of a wet rag, for the first thirty-six hours, hot water fermentations, hot water baths and poultices are best adapted.

FAINTING.

In *fainting fits*, the face and lips turn pale, and the pulse is scarcely to be felt. Place the patient flat on his back, and if he can swallow, give brandy and water, if the coldness of the extremities continue, apply bottles filled with hot water, to the feet. For *apoplexy* keep the head well raised; remove the neck cloth; unloose the shirt and clothes; give nothing by the mouth. The above applies to *drunkenness*, but if the extremities turn cold apply warmth; as soon as he can swallow, give an emetic made by mixing a tea-spoonful of mustard in a cup of water.—*Convulsions* frequently occur in children when cutting their teeth; the different parts of the patient are drawn up in different ways. Immerse the sufferer up to the neck in a warm bath.

HYSTERIC.

The patient usually cries or laughs immoderately, the pulse is not much altered; place the head over a basin, and pour water from a jug over the head and chest till the patient becomes chilly and revives; never use any thing

but cold water for the hysterical fit, unless the party turn very cold, when you should discontinue it, and apply warmth to the feet.

THE EYE.

When substances get into the eye, draw aside the eye lid and remove the substance with a piece of moistened paper; should inflammation follow it, then bathe with warm water several times a day. If lime gets into the eye, wash repeatedly with a mixture of a table spoonful of *white* vinegar to a tumbler of water.

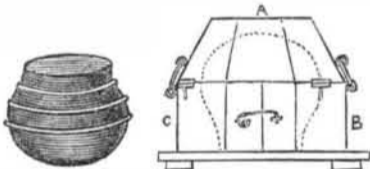
Or else cover the one eye lash inside of the other and rub the outside gently. Inflammation in the eyes of children and adults, which is very common with some, can be cured in a short time, by washing the eye with a weak solution of the sulphate of zinc. It should be dropped into the eye with a quill, it is a little painful, but is soon over.

BURNS.

Parents should be very careful of their children, no pain is so excruciating as that arising from a burn, and if it is not carefully treated, it will leave its direful mark upon the patient for life. Some have deprecated cold water in the treatment of a fire burn, but it is good. For a water burn of steam, or water, both Dally's and McConnel's salves are good, but they may be fairly substituted in every family in country places especially, by melting *burdock* leaves and roots and lard together, then squeezing them through a cotton cloth. This salve should be rubbed on the scalded place at once. Olive oil dissolved in lime water makes a good salve, but we warn people against the use of much lime in any shape for wounds, especially for children—do not use it. Some barbarously chemically ignorant practitioners have taken many lives, by using lime when they should have used cold water; we exhort people to beware of the use of lime in doctoring—some *learned Dons* are totally ignorant of its real nature and effects on the human system. Cover the blisters with cotton moistened with olive oil. Do not break the blister by any means until the new skin is formed well underneath: To finish the healing of severe burns, we know of nothing better than a poultice of flaxseed meal. It is soft soothing and has great healing properties. The above simple directions upon things that sometimes effect every family, should be carefully preserved for reference.

Iron Moulding.—Hollow Work.

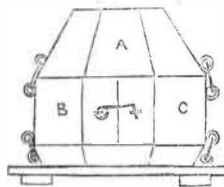
FIG. 1.



Boxes of two, three, or more parts, are sometimes employed. The sample which we select is a pot or goblet. The pattern is the exact model of the article, but is in two halves, divided vertically. The rough cast pattern is turned within and without, in a lathe, to the required thickness; and after this it is smoothed and polished and then cut in equal halves. The pattern is moulded in a box, made of four parts, as represented figures 2 and 3. A is the top; B C are the two cheeks, and D is the bottom. The pattern being moulded in an inverted position, the top, A, is made to enclose the bottom of the pot, as far up as its largest diameter; the cheeks, B C, enclose the rest of the goblet, and the bottom, D, covers up the mouth of it. The two chucks, in the first place, are laid down on a level board and linked together. The pattern is then laid down on its brim, within the chucks. The sand is then rammed round the pattern flush with the cheeks. The surface is then sprinkled with *parting sand*, and the top, A, put on, and sand is then rammed into the level of the mouth of the box. Fig. 2 shows things in this position. The whole is then inverted and the board removed and the surface of the sand round the brim of the pattern is smoothly sloped off to the edge of the box, forming the packing surface, and the bottom is then fixed on. It is then filled with sand. The core of

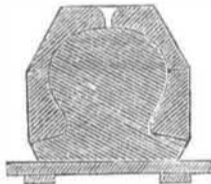
sand filling the interior of the pattern, is pierced in several places with a pricker sent down to the pattern, to form channels for the escape of air when the metal is run in. The whole is then turned over with the bottom, D, underneath, and placed on a flat board with a hole in it to let the air escape. The sand outside the pattern is sometimes pricked.

FIG. 2.



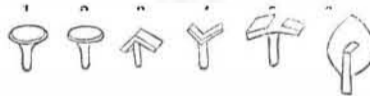
The top, A, is now lifted off; the cheeks, B C, are next separated horizontally, and the two halves of the pattern are carefully withdrawn from the core. The external and internal moulds are then slicked up with appropriate tools, and coal dust is dusted over them, and slicked up. The mouth of the gate (*git*) is then formed and smoothed. The space occupied by the pattern is now left vacant for the metal, as represented in fig. 4—a section showing the parting surfaces. All dishes are cast with their mouths downwards, and sometimes from the smallness of the mouth, compared with the largest diameter of the vessel, it is requisite to bind down the core in the mouldings, as the iron lying in so far below the core, has a tendency to lift it up, by its pressure from the base; and this would spoil the casting, if permitted to take place. The core is made fast by an iron rod in it, (not seen) but has a cross-head in the heart of the core, and is locked to a cross piece which bears on the edges of the box.

FIG. 3.



For hollow moulding, the temperature of the metal should be high, as it cools very quickly, the brim of pots being set before the mould is filled with metal. While yet hot, at a certain stage of the cooling, the casting is taken out of the sand. This is done at a particular moment known to the operative, to break off the *git* clearly, which cannot be done when too hot, and is liable to break part of the bottom when too cold. To prevent the latter accident the vessel is made thicker at the centre of the bottom. Flat *gits* are made for flat iron vessels, like frying pans, and they are made wide at the mouth, tapering towards the moulding, to render them easy of separation from the casting,—flat *gits* conduct the metal more freely to the different parts of the mould.

FIG. 4.



This engraving, fig. 5, represents various slickers employed in hollow mouldings, 1 2 are the concave and convex slickers, for corresponding surfaces of moulds; 3 and 4 are tools of double plane surfaces, set at angles with each other; of these there is a variety; 5 is a slicker for beads, and 6 is to smooth flat surfaces. All these have handles to them.

To Glaze Cutlery.

The glazing of cutlery articles comes after the process of grinding. It is done by emery applied to tools for the purpose. The tool on which the glazing is performed, is termed a glazer. It consists of a circular piece of wood formed of a number of pieces in such a manner that its edge or face may always present the endway of the wood. Were it made otherwise, the contraction of the parts would destroy its circular figure. It is fixed upon an iron axis similar to that of the stone.—Some glazers are covered on the face with leather, some with an alloy of lead and tin; the latter are termed caps. In others, the wooden surface above is made use of. Some of the

leather-faced glazers, such as are used for forks table knives edge tools, and all the coarser polished articles, are first coated with a solution of glue, and then covered with emery. The surfaces of the others are prepared for use by first turning the face very true, then filling it with small notches by means of a sharp ended hammer, and lastly filling up the interstices with a compound of tallow and emery. The emery cylinder has a great speed.

After glazing, the articles are polished, all the articles to be polished are made of cast steel and have been hardened and tempered.—The polisher consists of a circular piece of wood covered with buff leather, the surface of which is covered from time to time, while in use, with the crocus of iron, called also colcothar of vitrol. The polisher requires to run at a speed much short of the stone or glazer.—Whatever may be its diameter, the surface must not move at a rate exceeding 70 or 80 feet in a second.

LITERARY NOTICES.

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Parts 3 and 4, of this superb work by EMIL REUTER, Esq., are just issued from the Press. Part 3 is a continuation of the Drawings of Ross Winans' coal burning Engine in Part 2; and Part 4 illustrates a coal burning Engine, by Messrs. Norris & Brothers, of Philadelphia. Part 4 contains 3 distinct plates—plates which do honor to the artists of old Pennsylvania.—In one Plate there are no less than 8 figures. No work on Locomotives, published in any country, can equal this. No engineer should be without it, and the price per number, (75 cents,) places it within the reach of every mechanic; thus showing, that its author has not only the object in view of presenting an unrivalled work of the kind, but going a step beyond this laudable ambition by desiring to benefit the working mechanics of our country. The drawings are all to scale—accurate, and well defined. John Wiley, Agent for New York.

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