

Among the specimens of gold obtained, Mr. Marsh noticed three isolated crystals which resembled in general appearance those brought from California. The mines at Tangier are on government lands; a claim of 30 by 33 feet is rented at \$20 per annum, and during last August 700 men were working on the claims, and a large amount of gold had been taken, but at least one-third was lost by the rude mechanism used for its extraction. One apparatus used consisted of two large granite boulders attached by short ropes to a horizontal beam on either side of an upright shaft, and two horses dragged them round about, as in the old horse gin. The quartz was put on a paved floor, and kept wet, and was crushed by the two boulders as they were dragged over it.

At Lunenburg, about seventy miles west of Halifax, and about one hundred and thirty from Tangier, the gold also occurs in quartz veins, traversing the clay slate. This locality has yielded large quantities of gold with very little labor. These mines are upon the sea shore. Mispickel is abundant, and its presence makes gold washing among sand very troublesome. "While at Lunenburg," says Mr. Marsh, "I was informed of a circumstance connected with the discovery of gold, which illustrates the utility of even a little scientific knowledge, and the need of its more general diffusion. Some years since, a farmer living in the neighborhood of Chester, thought he had discovered a valuable copper mine on his land, and at great expense he sunk a shaft about 80 feet in depth. Finding little copper to repay his labor, and having exhausted all his means, the work was finally abandoned. In his exertions he had cut through a large quartz vein richly stored with gold, which he had noticed, but supposed it was merely copper pyrites. The present owner works this copper mine for gold."

The Tangier gold of 18.95 specific gravity, as analyzed by Mr. Marsh, contains, gold, 98, 13 parts; silver, 1.76; copper, .05; iron, a trace. The Lunenburg gold is very similar in composition. The metamorphic strata of Nova Scotia are similar to the gold-bearing rocks of other countries, and are of vast extent. The extraction of the gold at these mines by quicksilver had not been commenced hence all the finest gold was lost in the washing. The total amount of gold hitherto obtained has not been ascertained.—*Scientific American*.

INKS.

Black Permanent Ink.—Nitrate of silver 2 parts; distilled water 28 parts; sap green 1 part. Dissolve.

For the Mordant.—Common soda 2 parts; gum arabic 1 part; soft water 8 parts. Mix, and moisten the linen with this fluid, and well dry before using the ink.

Yellow Ink.—1. French berries 1 pound; alum 2 ounces; water 1 gallon. Boil and strain, then add gum arabic 4 ounces.

2. Water 30 parts; Avignon berries 7 parts; gum and alum each 5 parts. Boil for one hour, and strain.

Blue Ink for Ruling.—Take 4 ounces of vitrol, best quality, to 1 ounce of Indigo; pulverize the indigo very fine; put the indigo on the vitrol, let

them stand exposed to the air for six days, or until dissolved; then fill the pot with chalk, and add half a gill of fresh gall, boiling it before use.

Black Ink for Ruling.—Take good black ink, and add gall as for blue; do not cork it, as it will prevent it from turning black.

Red Ink for Ruling.—One pound of Brazil wood to one gallon of the best vinegar; let the vinegar simmer before you add the wood, then let them simmer together for half an hour, then add three quarters of a pound of alum to set the color; strain it through a woolen or cotton cloth, cork it tight in a stone or glass bottle. For ruling, add half a gill of fresh gall to 1 quart of red ink, then cork it up in a bottle for use.

Indian Ink.—1. Take finest lamp-black, and make it into a thick paste with thin isinglass; size, then mould it; attach the gold leaf, and scent with a little essence of musk.

Carbon Ink.—Dissolve real India Ink in common black ink; or add a small quantity of lamp-black, previously heated to redness, and ground perfectly smooth with a small portion of the ink.

Gold and Silver Ink.—Fine bronze powder, or gold or silver leaf, ground with a little sulphate of potash, and washed from the salt, is mixed with water and a sufficient quantity of gum.

Gluten Ink.—Dissolve wheaten gluten, free from starch, in weak acetic acid of the strength of common vinegar; mix 10 gr. of lamp-black and 2 gr. of indigo with 5 oz. of the solution, and a drop or two of oil of cloves.

Ink for writing on Zinc Labels—Horticultural Ink.—1. Dissolve 100 gr. of chloride of platina in a pint of water. A little mucilage and lamp-black may be added.

2. Sal-ammoniac 1½ dr., verdigris 1 dr., lamp-black 1 dr., water 10 dr. Mix.

Chrome Ink.—Extract of logwood ½ oz; gum ½ oz; water a pint. Dissolve also in 12 oz. of water ½ oz. of yellow chromate of potash (or ¼ oz. each of bichromate of potash). Mix the two solutions. The ink is ready for immediate use.

Ink for writing on Steel, Tin Plate, or Sheet Zinc.—Mix 1 ounce of powdered sulphate of copper and ½ ounce of powdered sal-ammoniac, with 2 ounces of diluted acetic acid; adding lamp-black or vermilion.

Indelible Ink for Marking Linen.—1. The juice of sloes 1 pint; gum ½ ounce. This requires no mordant, and is very durable.

2. Nitrate of silver 1 part; water 6 parts; gum 1 part. Dissolve. If too thick dilute with warm soft water.

Autographic Ink for Lithographers.—White soap 25 parts; white wax 25 parts; matton suet 6 parts; lamp-black 6 parts; shell-lac 10 parts; mastic 10 parts. Mix with heat, and proceed as for lithographic ink.

To restore writing effaced with Chlorine.—1. Expose it to the vapour of sulphuret of ammonia, or dip it into a solution of the sulphuret.

2. Ferrocyanide of potass 5 parts; water 85 parts Dissolve, and immerse the paper in the fluid, then slightly acidulate the solution with sulphuric acid.