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extensively in Europe; psilomelan in England, France, Belgium and the United States; manganate in Bohemia, Saxony and England. Much of the latter is consumed in the bleacheries of those countries. The United States | by the addition of manganese, and is called and the Provinces have inexhaustible deposits ) a patent dryer for paints and varnishes. of the oxides of manganese. From Vermont, the eastern limit, to Georgia, the southern limit, large supplies were formerly furnished, but in late years West Virginia, North Carolina and California have supplied us to a large extent but not of a high grade of oxidation. While the binoxide of manganese suitable for the manufacturers ought to yield from 80 to + same. 90 per cent of oxygen gas, the product of the 1 9th. The quality of spirits, with or with-last mentioned States has not exceeded 50 to 1 out distillation, is obtained by the use of 77 per cent oxygen. The Provinces of New (manganese. Brunswick and Nova Scotia havo produced (10th. The chameleon mineral use within a few years very superior oxides of (refining is prepared with manganese. manganese, and the specimens I possess in my cabinet excel in richness and beauty those from Ilmuran in Thuringen and Ihlefeld m the Hartz mountains of days gone by. manufacturers of bleaching powders in England have for the last twenty years been supplied by the little Principality of Nassau to the amount of fifty thousand tons per annum, while the United States with all its inexhaustible resources has not exported any, and it is hoped that before long the export of man- gather the following particulars from the pro- a secret, the manufacture of bronze powders ganese may prove lucrative. The quality of gramme issued by the inventors, Messrs. has attained considerable importance, and is the Nova Scotia manganese is, according to Tessie de Motay and Marechal of Metz: "The now practiced in soveral towns in Bavaria Howe, of high per centage, some from \$2.4 manganates are decomposed at a temperature | and Westphalia, and in the capitals of Franco to 89.8 of sesquioxide, and that from Tenny- | of 600 deg. Fah., by the action of a jet of and England. The refuse of goldbeating no cape as high as 97.04. The international manganese mine of New Brunswick contains from 80 to 85 per cent of sesquioxide. We find manganese in the State of Missouri containing much cobalt, while the Vermont manganese is associated with much iron. We also find in California, in the red hill of the bay facing the city of San Francisco, containing millions of tons of psilomelade or compact manganese yielding from 40 to 50 per cent sesquioxide. We also know manganese to be abundant in Canada. A vein of 50 to 60 feet wide is said to exist at Bachawanning Bay on Lake Superior.

22

traverses porphyry and is associated with and the pure oxide is collected into a gas-calespar and baryta. In Vermont, in the ometer. When applied tor the production United States, it is found among crystalline of light, oxygen in combination with com-rocks; in Canada it is accompanied by dolo- mon coal gas permits a reduction in the conmite, and in Nova Scotia it exists in a gray limestone, quartzite, and conglomerite, and giving an equal quantity of light in the proit unquestionably belongs to the new red portion of 16 to 1. sandstone formation. My manganese mines at Pembroke are situated close to the gypsum disinfectant is recommended as a powerful deposits, which would range them with the upper silurian system.

plications in the arts.

oxygen gas in the chemical laboratory, the material of the compound blow pipe and drummond light, for the production of alkaline manganate in order to procure a good and cottons and the papers, not less than one-half cheap light in combination with coal gas.

2nd. Manganese is most extensively used in bleaching liquid or powder, the consumption of which by the paper and cotton manufacturers is unlimited.

3rd. Next in importance is the manganese [American. largely employed in the green flint glass works in precipitating the iron, and when added in excess to produce an anythyst color in flint | spondent informs us that in Stratford, the glass.

4th. Steel manufacturers require manga-

nese for producing a hard and tough product; a half pound to fifty of iron will have the offort

5th. Linseed oil is rendered more siccative

6th. A permanent black on earthenware and pottery is obtained by exposure to hest.

7th. A black enamel used in ornaments by jewelers is likewise produced with manganese.

8th. The manufacture of permanganates, in the new oxygen light is obtained from the

10th. The chameleon mineral use in sugar

The consumption of manganese for the manufacture of the new gas light about to be introduced in this country, forms a new epoch The in this direction. It is to be converted first into the alkaline manganate, which acting as a sponge alternately absorbing the oxygen of the air and again releasing it, must require, if successful, not less than one hundred thousand tons of manganese in order to produce contained in the combination. The manganate is regenerated by submitting the above mentioned solid residue to the action of a current of air at the same temperature as used in the decomposition, and all these operations are conducted in a series of retorts placed in a furnace where the manganates, after being raised to a temperature of 600 deg. Fah., are alternately submitted to the action of a jet of mon coal gas permits a reduction in the con-sumption of the latter, but at the same time

The permanganate of potash or Condy's agent in obtaining pure drinking water and in epidemic diseases. But by far the largest I will now enumerate the many useful ap- amount of manganese is consumed by the manufacturer of bleaching powders. Eng-1st. Manganese is employed for producing land alone consumes 80,000 tons for that purpose per annum, and as soon as the United States becomes independent of the English imported chloride of lime for bleaching the | yellow, 82.37 per cent.; pale yellow, 81.55 million tons will be consumed for the desired object, for on examining the report of the the manufacture of chlorine so as to prepare a | director of the bureau of statistics. I find that 12,682 tons of bleaching powder have been imported the first five months of the year at the value of \$324,066.-Scientific

> NO ACCOUNTING FOR TASTES. - A COTTEother day, a customer wanted an ounce of assafectida to fry with beefsteak.-[Note-In

Paris, it is very customary among gourmets to have the plate for beefsteak, when warmed, rubbed with assafatida, which has a flavour very similar to onions, but much stronger. Wa were not aware, however, that Canada had arrived at such a refined taste.]

## The Manufacture of Bronze Powders.

The waste material of the beating of metals a powerful disinfectant, and the main material (an art which took its rise in the fourteenth century, in Nuremberg, Germany) was thrown away till 1750. In that year a mason in Fuerth, by the name of Huber, conceived the fortunate idea to grind this material called "Schabig" on a stone; and to sell the metallic powder thus obtained as a color. Tho gold-beater Martin Holzinger succeeded subsequently in imparting to the powder various lusters by exposing it to different degrees of heat; and in 1781, Courrier, a Frenchman, discovered the mode of preparing gold bronze from leaves, consisting of an alloy of zinc and copper. Although this bronze powder was offered for one florin (fifty-one cents cur-rency) per pound, it was but little in demand; but since the preparation of various colors, a million of cubic feet of oxygen gas, and I from red down to nearly white, is no longer ordinary steam which liberates the oxygen (longer sufficient, special alloys are flattened, and leaves a residuum composed of sesque ; When in Fuerth, Bavaria, in 1864, we counted oxide of manganese and the alkaline base | not less than fourteen bronze powder establishments. In Munich and Nuremberg the value of this article is said to reach yearly \$225,000 in currency.

The process of flattening metals for the purpose of reducing them into powder is carried on in a manner similar to that of goldbeating. When obtained in a thickness so as to permit the transmission of the rays of light, the leaves are rubbed through an steam and current of air which restores to the | iron sieve of exceedingly small holes by means mass the oxygen has lost. The oxygen is of a wire brush, the powder thus produced The geological position of manganese is not disengaged by the steam from retorts; this is then allowed to pass through a mill under quite accurately known. In Germany it steam is liquified by pressing into a condenser, (addition of some oil, and finally it is heated to a certain degree, according to the color desired.

Prof. Wagner, a chemist well known in this country, has ascertained that all bronzo powders consist chiefly of a fatty matter, oxygen, copper, and iron. The composition used for light shades consists of 83 per cent. of copper and 13 per cent. zinc; for deep ones, of 94 to 80 copper, and 6 to 10 zinc; for copper red, pure copper is used. The amount of copper in various colors was found to be the following:

In French copper red, 97.32 per cent.; orange, 94.44 per cent.; light yellow, 81-29 per cent.

In English orange, 90.82 per cent.; deep per cent.

In German copper red, 98.92 per cent.; violet, 98.81 per cent.; orange, 95.30 per cent.; lemon, 82.34 per cent.

Recently various methods have been suggested in order to avoid the dividing of the metal leaves by means of a brush. They are partly founded on mechanical, partly on chemical principles. It was, for instance, attempted to prepare the powder by means of files, but it was discovered to be angular and without luster. When, however, passed through rollers, it gained its original luster