

Copper in the Human Organism.

Recent experiments by M. Bergeron demonstrate the presence of traces of copper in the human body. The organs examined were the livers and kidneys; and in fourteen instances copper was detected. The experiments were made with 800 to 1,000 grammes of organic materials in each case. Special precautions were taken to prevent the accidental introduction of copper into the solution undergoing analysis. A special chamber was constructed containing no copper; the laboratory tables were of wood; the balance, water-baths, gas-burners, etc., were of iron; and the filter paper, distilled water and reagents were carefully tested, and found to be free from this metal.

The organs were heated in a large porcelain capsule to complete dryness, and afterwards to carbonization. Incineration of the carbonaceous mass was performed in a muffle furnace at a low temperature.

The ash, treated with nitric acid, evaporated to dryness and redissolved in water, produced a solution which gave reactions for copper—with ammonia, with ferrocyanide of potassium, and with polished steel.

In eleven cases, the organs being taken from individuals varying in age from seventeen to fifty-eight, the maximum amount of copper found was .002 grms.; the minimum amount .0007 grms. In one case, the individual being seventy-eight years of age, the amount of copper was found to be .003 grms. In six other cases, where foetal organs were examined, copper was detected in minute traces.

The copper existing in the organism is without doubt introduced in the use of food.

The use of copper vessels, the daily contact with various objects of copper or brass, coins, keys, etc., introduce in our organs traces of copper, of which the greater part is eliminated; but there remains in a state of combination a minute trace of the metal, which is found in the liver and the kidneys, and this is true whatever the age, sex or mode of life, and averages .002 grammes in weight.

Routine Work.

The recurring duties which the change of seasons brings naturally suggests the fact that the greater part of the life of the average man and woman is spent in doing the same thing right over and over and over again. Every spring the housewife renews her house, in order, in cleanliness, in comfort, reclines the members of her family, and makes due preparation for the summer. She does essentially at this time the very same thing that she did the last season, that she will do the next. If she is a good housekeeper, each succeeding season makes the task easier because she is more accustomed to it and should know how to take it to better advantage than ever before, but the task is still the same.

The farmer plows the same fields that he plowed last spring, harrows them, plants them, and then goes over them again and again and again with hoe or cultivator till the harvest, so far as he can make it so, is secure. The merchant takes account of stock just as he did last year, lays in his goods for the summer season, deepens and widens the channels of his trade, if possible, but lets the channels remain the same. In like manner the mason, the carpenter, the compositor, the teacher, the editor, the lawyer, the physician, minister, do over the same work from week to week, from month to month, from year to year, with variations so slight that the routine seems essentially the same. Of course all this monotonous sometimes gets tiresome and we clamor for a change and fancy that some other mode of industry will be easier and more agreeable than that which circumstance or choice has made ours—that somebody else is better off in this respect than we are. But when we get inside of the life of that somebody else we find that routine work makes up the larger portion of it, and that without the mastery of routine work in the lower fields success in the higher ones had never been attained. The biographies of all who have achieved nobly, shows this so plainly that he who runs may read.—N. Y. Tribune.

FOREIGN TALENT AS AN AID TO PROGRESS.—Some countries, such as Russia for instance, have always done their best to attract foreign workmen, foreign artists, foreign talent of every sort, conceding special rights and immunities to the valuable colonists whose skill and knowledge silently help to reclaim the natives from barbarism. But for such importations from England, Holland and Germany the great empire of the Czars would not at the accession of Peter the Great have possessed a ship, or a sailor to navigate it, or a foundry for cannon. Some famous old manufactures are now all but extinct in the birthplace of the art. Toledo and Damascus no longer furnish their historic sword-blades to half a world; Florence and Mantua no longer clothe Europe; the Venetian glass has been but artificially revived, for none can chain the subtle spirit Prosperity to their chariot wheels; and when greed or neglect has brought about the period of decay, it is but a blank prospect that awaits native industry.

NEEDLE MAKING.—There is a needle factory in New Haven where the whole process is done by a single machine without the manual labor of any person. A coil of steel wire is put in. The machine cuts it off at the required lengths. It cuts the steel pieces consecutively, punches the eye-holes, countersinks the eyes and grinds the points, and in fact does everything until the needles drop out completely formed. Another machine picks them up and arranges their heads and points together, and a third piece of mechanism puts them into paper. One of these machines occupies no more space than an ordinary table, and each of them turns out from thirty to forty thousand needles a day. Most of the needles in use in this country have been imported from England until a few years past.

A GUN MANUFACTURED IN AN HOUR.—A gentleman recently called at the Remington gun manufactory at Ilion, N. Y., with the view of making the purchase of some arms. He was shown through the works, and evinced great interest in all the processes. At the close of his tour of inspection a gun was shown him and repeatedly discharged in his presence. He was then told that since his entrance into the works every part of the identical gun just fired had been manufactured and put together, and that his own eyes had witnessed every stage of the work. He then offered to purchase five car loads of guns which the Spanish inspectors had recently rejected, probably with the view of getting some small reduction, and paid the Messrs. Remington the price named in the original contract. It is supposed that this unknown gentleman was an agent of Don Carlos. If this be the case the Spanish government has through its officials quite overreached itself.

FAILURE OF COPPER SULPHATE.—Railway sleepers injected with sulphate of copper will be preserved indefinitely, provided the copper remains in its original combination with the ligneous tissue. But M. Max Paulet shows that, on railways where carbonate of lime exists in the stone ballasting of the track or in the soil, the carbonate gradually penetrates the wood and substitutes the copper. Decay then follows, for carbonate of lime is not a septic agent.

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THE OFFICE OF THE PACIFIC MAIL STEAMSHIP COMPANY, IN NEW YORK, IS ON THE WHARF, PIER 42 NORTH RIVER, FOOT OF CANAL STREET.

Advertisement for C.E. Roberts & Co. Screws, featuring an image of a screw and text: 'C.E. ROBERTS & CO. STEEL CASE HARDENED SET MACHINE AND CAP. SCREWS. QUALITY AND FINISH UNSURPASSED. 7 & 9, S. JEFFERSON ST. CHICAGO.'

Advertisement for R. J. Trumbull, Dealer in and Grower of SEEDS OF Vegetables, TREES, FLOWERS, Shrubs, BULBS, Etc., featuring an image of a seed packet and text: 'R. J. Trumbull, Dealer in and Grower of SEEDS OF Vegetables, TREES, FLOWERS, Shrubs, BULBS, Etc. For the GARDEN, FARM, and MANSION, 437 Sansome Street, San Francisco. Descriptive Catalogues on application.'

Advertisement for Paper Warehouse, featuring an image of a building and text: 'PAPER WAREHOUSE. Nos. 327, 329 and 331 Sansome Street, SAN FRANCISCO.'

Advertisement for Home Shuttle Sewing Machine, featuring an image of the machine and text: 'Save \$35.00! PAY \$80.00! THE NEW IMPROVED HOME SHUTTLE Sewing Machine. PRICE, \$43.00. WE ALSO SELL The Home Sewing Machine. These machines use a shuttle, straight needle, and make the Lock Stitch. They are surpassed by none. They are the simplest and lightest-running machines in the world. Send for circulars. Mme. Demorest Reliable Patterns. SEND FOR A CATALOGUE. Royal Charts, \$2.50. E. W. HAINES, Agent, 17 New Montgomery Street (Grand Hotel Building), San Francisco.'

Advertisement for Vicks' Floral Guide 1875, featuring an image of the guide cover and text: 'VICKS' FLORAL GUIDE 1875. Published Quarterly. — JANUARY NUMBER JUST ISSUED, and contains over 100 PAGES, 500 ENGRAVINGS, descriptions of more than 500 of our best Flowers and Vegetables, with Directions for Culture, COLORED PLATS, etc. — The most useful and elegant work of the kind in the world. — Only 25 cents for the year. Published in English and German. Address, JAMES VICK, Rochester, N. Y.'

Advertisement for H. Royer's Rawhide, featuring an image of rawhide and text: 'PULLED RAWHIDE. BELTING, SLACING, ROPES & CHORDS. Made by H. ROYER, 437 Brannan St. S.F.'

Advertisement for Bowditch's Flower Garden, featuring an image of a flower garden and text: 'BOWDITCH'S FLOWER GARDEN. I will send 12 Flowering Plants for One Dollar (your choice from 100 sorts), by MAIL OR EXPRESS. SEND MY ILLUSTRATED CATALOGUE, describes the culture of Plants & Seeds, to customers free of charge. Address W. E. BOWDITCH, 645 Warren St., Boston, Mass.'

Advertisement for 20 Fine Verbenas for \$1, featuring an image of verbenas and text: '20 FINE VERBENAS FOR \$1. Any of the following named plants sent by mail, postage paid, at 10 cents each. Any three sorts for 25 cents, or fifteen for \$1. No order received for less than 25 cents. Fuchsias, Geraniums (Double Zonale, Scented and Ivy), Begonias, Carnations, Pink, Calceolarias, Basket Plants, Aquaticum, Abutilon, Achyranthus, Cactus, Canna, Chrysanthemum, Hardy Pinks, Cuphea, Eupatorium, Nerium, Petiveria, Heliotropes, Heliconia, Libonia, Malvaria, Pilea, Sida, Double Petunias, Solanum Capicastrum, Veronica. One packet Aster, Balsam, Petunia, Pinks and Verbena for 25 cents. My Illustrated Catalogue of New Plants Seeds for 1875, and any two packets of the above seeds sent on receipt of 10 cents. Address C. A. REESER & CO., Erie, Pa.'

Advertisement for Heald's Business College, featuring an image of the college building and text: 'HEALD'S BUSINESS COLLEGE. BRYANT & STRATTON. 24 POST ST. SAN FRANCISCO.'

Manual of Jurisprudence and Co-operation of the Patrons of Husbandry.

This book is now in press at the well known publishing house of Mills & Co., of Des Moines, Iowa, and will be issued about the first of April, proximo.

The very large sales and the hearty and universal commendation of the little work, THE PATRON'S MANUAL, published some months since by Master Smedley, and the very numerous and oft recurring questions of law and usage, which were pouring in upon him by every mail, and not alone from this State, but from every State in the Union, suggested to him the want in the Order of a more complete treatise upon the several subjects therein briefly touched on, and of a more comprehensive discussion of all the many questions connected with the jurisprudence of our growing Order. The burdensome correspondence which was entailed on him by reason of his official position, and the high esteem in which his extensive knowledge of all these matters and his good judgment concerning them were held by members of the Order everywhere, literally forced him to prepare this book as a measure of relief, and his long experience admirably qualified him to do it.

At the same time, our business atm has been rapidly reaching out and our hand taking hold of many and new enterprises. A discussion of principles involved, and a plain statement of methods to be employed, seemed indispensable. Master Smedley's reading and his experience well fitted him for this work, also.

In an Order which has already assumed giant proportions, and has now more than a million active members, the proper transaction of its own immense business seemed to demand the facilities afforded by the use of well studied and conveniently arranged blank forms, and this want, too, Master Smedley has tried to supply in his copious appendix.

The organization of Pomona Granges, just now authorized by the National Grange, and for which, as yet, few State Granges have made specific arrangements, calls for the preparation of blank forms especially adapted for their use and for instructions as to their design, province and powers. Particularly desirable is it to make plain their relations to the State and Subordinate Granges respectively, and to the business interests of the Order. Master Smedley has carefully considered all these matters, has discussed them with the other Patrons of experience who might throw light upon the questions involved, and has tried to meet these pressing wants.

Of course the opinions expressed in this book are not to be regarded as law, except in Iowa, but they will be most suggestive and instructive everywhere.

The book is the only one of its kind, and will be not only most useful, but quite indispensable to the Grange officer, and it will be most instructive to every private member as well. It contains nothing of the unwritten work, however, nothing but what may be left upon the table or placed upon the shelves of any gentleman's library for all the world to read.

The manual will contain from 200 to 340 pages. It will be printed on fine, heavy paper, and be neatly and substantially bound in cloth. The price is fixed at \$1.25 per single copy, postage paid, or \$1.00 per copy when sent by freight or express, in packages of five or more. Prepaid orders will be booked and filed in rotation as received. Geo. William Jones, Publisher, Des Moines, Iowa. Address DEWEY & CO., PACIFIC RURAL PASSES OFFICE, SAN FRANCISCO.

CAMPO, SAN DIEGO CO., CAL., July 24, 1874. Messrs. Dewey & Co.—Gentlemen: To-day I received the patent and other papers of my animal trap, that you so successfully worked through the patent office for me, for which please accept my best wishes. The chances are that I will have another application for you to make for me before long. I am well satisfied with your manner of doing business, and I think inventors of this coast stand in their own light when they do not put their business into your hands. I remain yours truly, A. M. GASS.