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#### NEW YORK, SATURDAY, JULY 29, 1882.

#### Contents.

(Illustrated articles are marked with an asterisk.)

| Agricultural inventions 7                      |
|--|
| Air, condensed moisture of 6                   |
| American Association, the                      |
| Atropine etc. col. react 6                     |
| Billiard cue cutter *                          |
| Birds' nests, tree with 200                    |
| Boller tubes, app. for draw., etc., 7          |
| Boracic acid. delet. effects of 7              |
| Carbonic acid in the air                       |
| Carrier pigeons for naval service. 6           |
| Cement acid proof 6                            |
| Converting a neg, into a pos                   |
| Correspondence                                 |
| Correspondence                                 |
| Cutter bar for reapers, etc.* 6                |
| Drains, cutting by machinery* 6                |
| Earths, about                                  |
| Eclipse, recent, observations 6                |
| Education in Japan                             |
| Education in Japan Electric lights, over 5,000 |
| Engineering inventions                         |
| Faucet, hot and cold water*                    |
| Fasting in acute rheumatism 6                  |
| Fountain and bot, ston, attach.*               |
| Glass, new variety of                          |
| Glass, new variety of                          |
| Ice, microscopical examination* 7              |
| International gas and elec. exhib. 6           |

Inventions, miscellaneous\*. Inventions miscellaneous\* . 33, 74
Leatheroid . 64
Malaria in New England . 64
Malaria in New England . 67
Mechanical inventions\* . 73, 74
Mellogen . . . 67
Metalic copper . 67
Metalic copper . 67
Metalic copper . 67
Micro-prismatic meth, for solids . 67
Mining cables . . . 63
Motor and thrasher connection\* . 72
Nickel plating by boiling . . 67
Nitrite sel. of pot. lodide, etc. 67
Notes and queries . . 63, 66
Pit dwellers of Yeso . 68, 66
Pit dwellers of Yeso for August . 75
Plating org. bodies with metal . 68
Pulverizer, improved\* . 70
Research, imp. field for . . 64
Russell . John Scott\* . 71
Seed planter\* . 73
Transit of Yenus next . 68 

# TABLE OF CONTENTS OF

# THE SCIENTIFIC AMERICAN SUPPLEMENT No. 343,

For the Week ending July 29, 1882.

Price 10 cents. For sale by all newsdealers,

| 1.  | ENGINEERING AND MECHANICS.—Logging in California.—<br>The cutting and removal of redwood timber.—I figure.—Train of<br>cars loaded with redwood.—Humbolet Logging Rallway.—A<br>Barrel Boom<br>The Telephone Indicator of the Torsion and the Speed of Revo-<br>lution of the Moving Axle of Machines. By M.C. RESIO.—<br>The Suez Canal.—A history of the canal enterprise.—I figures.—<br>The Couvreux excavator in the great El Guisr cutting, Suez Canal.—<br>The Suez Canal in the Plains of Suez.—Present aspect of the | 5468                         |
|-----|---|------------------------------|
| II. | Canal at Port Said.—View near Port Said.—The Jeannette Expedition.—A correction Laproved Sponge Filter.—1 figure. Laproved Winding Gear for Mines.—2 figures  | 5466<br>5466<br>5466         |
|     | Tar Dyes.—Preparation of nitrobenzol and anlline.—3 figures. The Deodorization of Impure Spirits by Electrolysis.—Process of Messys. Naudin & Schneider.—4 figures.—A paratus for hydrogen- ging impure spirits. Electrolysing apparatus.—Sectional view of plant for a skilly manufacture of 220 gallons of rectified alcoho! Sewuritions of Gallium. By M. LECOQ DE BOISBAUDRAN.—Sensi-   |                              |
|     | bilities of principal reactions.—Quantitative analysis of the salts of gallium.  Notes on the Determination of Phosphoric Acid. By CARL MORE.  A New Request for Nitrage Acid. Dr. A. Torreser.   | 5473                         |
|     | NUTIC Acid in Soils.  Crystalline Zirconia. By A. M. LEVY and L. BOURGEOISE  Separation of Nickel. By Dr. A. JORISSEN  The Kosaniline Question. By A. PABST.  Action of Sulphureted Hydrogen. By H. M. BAUBIGNY.  | 5474<br>5474<br>5474<br>5474 |
|     | Process for Printing Aniline. Protein Matters for Printing Fermentation of the Preteic Matters. Byld. GAUTIER and A. ETARD Synthesis of Various Organic Compounds Bread Analysis in Massachusetts   | 5475<br>5475<br>5475         |
| II  | Emulsions. By Prof. C. Lewis Diehl.—Practical directions for preparing emulsions of cod-liver oil with other medicines  |                              |
|     | review by Mr. MUYBRIDGE of his studies of the motions of men<br>and animals by means of instantaneous photography.—Descrip-<br>tion of apparatus.—Failure of artists to represent animals cor-<br>rectly.—Comparison of ancient and modern pictures with photo-<br>graphs of living animals.—Movements of men, of birds, etc.—The   |                              |
|     | physiognomy of motion.  The Birth of an Elephant. By Dr. GUSTAVUS E. SUSSDORFF.—5 figures.—Elephant during and after labor.—Photo-micrographs of cow's milk and of elephant's milk.—Analyses of elephant's milk, and table of comparative analyses of human and animal  |                              |
|     | milk  | 5470                         |

IV. ELECTRICITY, ETC.—Effects Produced in a Vacuum bythe Current of Gramme Machines. By MM, JAMIN and G. MANEUVIRIER. 5475
Magnetic Variations of Magnetized Rods during Storms.............. 5475

V. ASTRONOMY.—Facts and Fancy Concerning Comets. By Prof. E. L. LARKIN.—Velocities of bodies failing into the sun.—Possible heating effects of comets striking the sun.

#### A NEW AND IMPORTANT FIELD FOR RESEARCH.

to higher forms of life and yet so fatal to all sorts of mor- or impotence of supposed germicides could be determined bific germs that it would answer as a general disinfectant is with these perhaps as well as with the living (human) organnot greatly encouraged by the progress of discovery. In their ism. At any rate enough might be accomplished to prevent life habits and capacities the lower orders of living things! the mistake of trusting individual or public health in the higher orders do. Conditions which kill one class are not disinfect, simply because the same substance had been harmless to another while others specially thrive under found useful in other cases. them. And curiously, with varying conditions, the same germs may exhibit an enormously variable power to resist the action of germicides.

For example, the germs of the cattle plague symptomatic anthrax, after drying, are able to withstand disinfectants which quickly destroy the fresh virus. Thus it appears that for the certain antagonizing of any specific disease germs it will be necessary to study the action upon them not only of all the different disinfectants, but these separately under all the conditions in which the germs are likely to be met with.

An excellent illustration of the kind of work thus required is seen in the researches recently reported in the Lyons Medicale, by Arloing, Cornevan, and Thomas, in which was demonstrated the fact just noted as to the superior resisting power of dried anthrax virus. These investigations were undertaken to discover the effect of the various disinfectants in use when applied in turn to a particular class of disease germs. They were carried out with pulp taken from tumors in symptomatic anthrax, when in a fresh condition, and also when the matter had been slowly dried at a temperature of 95° Fah. The dried virus, even after two years' keeping, showed, when diffused in a little water, a virulence not exceeded by that of the fresh virus, while, as already noted, its power to resist the action of disinfectants was greatly increased. The test of virulence was the hypodermic injection of five drops, the virus having previously been subjected for forty-eight hours to the action of the substance rheumatism was cured by fasting usually from four to eight whose antiseptic power was under examination. In this days. In no case was it necessary to fast more than ten way it was found that (with respect to the virus of anthrax) many substances regarded as efficient antiseptics had no rheumatism. The patients were allowed to drink freely of effect whatever on the fresh virus, while but few of the substances which destroyed the fresh virus had any effect upon ferred. No medicines were given. Dr. Wood says that the virus after it had been dried.

points out that pure or camphorated alcohol, which is his own practice he is inclined to believe that rheumatism is, largely used by surgeons to wash their instruments, is evi- after all, only a phase of indigestion, to be cured by giving dently capable of giving only an illusory safety against mor- complete and continued rest to all the viscera. bid germs. We should say rather this class of morbid germs. "Quicklime, in which it is often recommended that the bodies of animals dying of anthrax should be buried, and with which the walls of infected places are washed, is no better. At the moment of its hydration some organisms are probably destroyed by the heat which is disengaged, but those which are not in immediate contact with the lime seem to have preserved all their activity. Very thin layers of the tissue of the tumors of anthrax were taken and rolled up and plunged into the quicklime, and left in it for forty-eight hours. At the end of that time they were rubbed up with water, and the liquid was found to possess full virulence. The inutility of tannic acid suggests the question whether tanning is really adequate to destroy the poison in the hides of the affected animals, and it is clear that salting has no influence on the virus contained in the flesh, etc. Quinine, so powerful in the paludal diseases, which are now believed to thought she smelled something burning up stairs. In be due to organisms, was found to have no influence over searching for the fire she entered a small close garret room the bacteria of anthrax. Ammonia and its compounds were used for storage. She opened a window and instantly a also powerless. Ammoniacal fermentation, therefore, which bag of carpet rags hanging there burst into flame. The is said to destroy some bacteria, does not influence those of rags had been there all winter. The fire was promptly anthrax. Sulphate of iron, and chloride of manganese, sub- smothered; and when the bag was opened it was found that stances which have been strongly recommended as disinfec. only balls of cotton rags were burned. Whether the rags tants, were equally powerless. Further, the sulphurous had been dyed is not stated. acid, which is so potent in action upon some parasites of 70 high organization, and on many forms of virus, has no influence on the bacteria of symptomatic anthrax. Chlorine and sulphide of carbon, which destroy the fresh virus, are powerless against that which has been dried. Of all the vapors view, is the action of carbolic acid. A two per cent aqueous This fact has already been noted by Koch with regard to copper and a fixing agent, such as cyanide or hypo. other kinds of spores. On the other hand, salicylic acid, mixed with alcohol, preserves its power. Turpentine, 75 recommended by Pasteur for the purpose of destroying the bacillus of true anthrax, has no influence on that of symptomatic anthrax. At the head of the efficient agents stands | of a number of thicknesses of cotton paper wound one upon corrosive sublimate, of which a solution of one in five thousand is sufficient; next come in order nitrate of silver, salicylic acid, and carbolic acid. A two per cent solution | cal bath, through which the paper is drawn on its way to of the latter was found, however, only to destroy the the cylinder. It is moulded wet, and retains its form. organisms when it had been in contact with them for eight When dry, it cuts like raw hide. hours in the case of the fresh virus, and for twenty hours in

the case of that which had been dried." possible germ killers upon the germs of diseases more lightships lying off the coast having been successful. especially afflicting humanity. For those diseases which are not transmissible to the lower animals, and consequently cannot be directly studied in animals, it may be possible to 

artificial compounds in which the bacteria of the particular The hope of finding some substance not greatly injurious diseases to be studied are able to live and multiply, the potency -bacteria or what not-seem to differ almost as widely as special cases, to the protection of disinfectants that would

#### THE HEKTOGRAPH.

This is the well-known copying process in which gelatine transfer pads are used. Contests were carried on for a long time after its invention, before the United States Patent Office, to determine who were the original and first inventors. A mass of testimony was taken; but the priority of invention was finally awarded to Vincenz Kwaysser and Rudolf Husak, of Austria, to whom Letters Patent were granted June 1, 1880. During the progress of the interference proceedings hundreds of dealers began to make and sell the article, and it was difficult for them to understand that, now that a patent had been issued to the inventors, they must cease to manufacture or assume the liabilities of infringers. In some cases it became necessary for the Hektograph Manufacturing Company, the owners of the patent, to bring suit for damages. One of these suits has lately been brought to a conclusion, the patent being fully maintained by the United States Court, as will be seen by reference to the advertisement in another column, in which the particulars are fully given.

#### Fasting in Acute Rheumatism.

Dr. Wood, professor of chemistry in the Medical Department of Bishop's College, Montreal, reports in the Canada Medical Record a number of cases in which acute articular days. Less positive results were obtained in cases of chronic cold water, or lemonade in moderate quantities if they prefrom the quick and almost invariably good results obtained Reviewing the results of these experiments, the Lancet by simple abstinence from food in more than forty cases in

### A Colored Reaction of Atropine and Daturine.

If a specimen of either of these alkaloids or of their salts is covered with a little fuming nitric acid, let dry up on the water-bath, and when cold moistened with a drop of potassa dissolved in absolute alcohol, a violet color is instantly produced, and soon passes into a fine red. Only the violet color is characteristic, as strychnine also gives a beautiful red color if similarly treated. According to the author, 0.000001 grm. of atropine sulphate can thus be detected. None of the other important alkaloids give a similar reaction.-D. Vitali.

# Spontaneous Combustion of Cotton.

During one of the hot days of June a Connecticut lady

# Converting a Negative into a Positive.

Capt. Bing, of Paris, has devised an ingenious method of making a positive on glass from a negative, and on the same glass. The back of the negative is covered with solubromine is the only one which seems to offer complete ble bitumen or asphalt and then illuminated through the security. Another important result, from a surgical point of negative. After an exposure sufficient to render the light portion insoluble, the remainder of the asphalt is dissolved solution destroys the activity of the dry virus, but all the off with any of the usual solvents, leaving a positive. The power is lost if the carbolic acid is mixed with alcohol. silver negative is then dissolved off with the chloride of

Leatheroid is a new article made of paper. It consists another over a cylinder. The remarkable qualities of strength and adhesion it possesses are derived from a chemi-

CARRIER PIGEONS FOR NAVAL SERVICE.—The Secre The value of these results in connection with the treat- tary of the German Navy has resolved to employ carrier ment of the disease in question need not be insisted on here. pigeons in the coasting service, all the experiments with

#### ---The American Association.

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