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(Illustrated articles are marked with an asterisk.)

Ammonia from gas liquor	199	Mushrooms*	194
Answers to correspondents	203	National trial and its results, our	192
Art intelligence	198	New books and publications	201
Ashtabula verdict, the	192		203
Bronze statues, cleaning (13)	2 03	Oidium, antidote for	201
Business and personal	203	Paint, cement (5)	203
	200		201
Carbonic acid and animals		Patent decisions, recent	
Cars on a curve (18)	203	Patents, American and foreign	202
Cement for vulcanite (15)	203	Patents, official list of	204
Cement, waterproof	199	Patents, the Commissioner of	193
Chilblains, cure for	203	Peas, poisonous Perpetual motion, an editor's	193
Chloroxynaphthalic acid (27)	263	Perpetual motion, an editor's	193
Correspondence, Washington	196	Photographs in the eye	193
Cutlery manufactory, a	197	Pigs and poisonous plants	200
Dairy, a gigantic model	200	Planing mill machinery	200
Dairy interests, our	199	Planing mill machinery Practical mechanism—No. 23*	195
Diamond cotting by girls	199	Preaching, the science of	197
Drills, sizes of (20:	203	Produce exported in one day	200
Woodwigal bolungo an	196	Pump, the Selden compound*	198
Electrical balance, an. Electro-chemical lighting	200		203
The control to the deep the control of the control		Refrigerator, to make a (14)	
Hanery wheels, busling (23)	203	Rice culture in China*	194
Fireworks, poisonous	197	Roses, grafting	194
Force, atmospheric (2)	203	Rubber, hardening (17)	203
Fruit trees, wash for	200	Rubber, tough (22)	203
Glass tubes, cutting (3)	26 3	Rubber, white (27)	203
Heat from tin roofs (10)	203	Science, what is	193
Heating with natural gas	196	Ships, watering in mid-ocean	197
Horn, ivory, coloring (25)	203	Sonorous tubes, a novelty in	197
Induction coil (1)	203	Steam for drying lumber (4)	203
Ink, postal card	201	Sulphuret of iron (21)	263
Iron front buildings	192	Sumac	199
Kerosene, deodorizing (11)	203 i	Telephone, the*	191
Life, the lesson of a	199	Temperature (9)	203
Light, the theories of	192	Timber church, Norwegian*.	199
			198
Lightning rods at the Centennial	190	Toys, dangerous	
Lunacy, scientific	194 '	Water, pipes for, etc. (16)	203
Magnets, wire for (12)	203	Wells deeper, digging	197
Medals, making, etc. (8)	203	Wood, staining(1)	203
Milk, ewes', the richest	194 ,	Wool, cleansing	197
			_

TABLE OF CONTENTS OF

THE SCIENTIFIC AMERICAN SUPPLEMENT, No. 65,

For the Week ending March 31, 1877.

I. ENGINEERING AND MECHANICS.—Compound Corliss Engine, by Douglas & Grant, one large engraving.—Remarkable ocean steaming of over 44 days without stoppage of engine.

Siemens and Halske's System of Electrical Railway Signals, with 10 illustrations.—Locomotive Wiping.—Iron Freight Cars.—The Wire Railway, on Posts, for conveying freight, 1 engraving.

Machinery for making Lace.—Bent Plate Glass, how made.—Prepared Paper for ships' bottoms, a remedy for fouling.

Saville's Gas Scrubber-Washer, with 2 engravings.—Aitken's new oven for Coking, with 1 engraving.—The Turbine Tests at the Centennial.—Mechanical Progress in France.—Value and characteristics of Red Ash Coal.—A new System of Navigation.

IL LESCONS IN MECHANICAL DRAWING.—New Sories. No. 7. With

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Work and Wages. Abstract of a Lecture by Professor L. Levi. Process for colored photos. A quick photo process.—The Aubeltype process for making printing plates.

process for making printing plates.

IV. CHEMISTRY, MINERALOGY, ETC.—The Chemical Constitution of Gun Cotton.—Solubility of Gases in Iron.—Molybdic Acid Reagent.—Faraldol.—Nicotine.—Native Iron.—Explosions of Marsh Gas and Air.—Chromium Arsenite.—Copper Sulphate.—Adulteration of Beeswax.—Alkalimetry, by J. CHISHOLM.—Test of Carbonate of Soda.—Meeting of the German Chemical Society, Berlin; with notices of a large number of papers and subjects.—Action of Heat on Quercite.—Test of Salicylic Acid

Acid. Phosphorus, its nature, method of manufacture, different forms, and remarkable properties. The Chemical Harmony of the Universe; an abstract of the recent cture by Dr. T. STERRY HUNT, before the Chestnut St. Club, Boston,

Mass.
Carbonic Acid Gas; its curious properties, methods of production, and uses as fire extinguisher.

Specific Heat of Gases, with table, by E. WIEDEMANN.—Atomic Weights of Cresium and Rubidium.—Action of Antimony Pentachloride.—Beren and its Specific Heat.—Reating of Air for awellings.—Ammenia found in Cast Steel,—Hexagonal Columns of Clay and Sand.

mema Jound in Cast Steel,—Hexagonia Columns of Clay and Sand.

V. MEDICINE, PHYSIOLOGY, HYGIENE, ETC.—The Controversy on Spontaneous Generation.—Physiological Properties of Hydrobromic Ether.—Vaso-motor Nerves of Striated Muscle.—Influence of the Nervous System on Perspiration.—Cure of Ringworm by Cassia Leaves.—Variations of Blood Globules in certain diseases.—Vegetable Digestion.—Course of Sapin Plants.

A Combat with an Infected Atmosphere: being a recent lecture delivered at the Royal Institution, by Professor John Tyndall. A most interesting and valuable contribution.

VI. MISCELLANEOUS.—On the Tormation of Rain-grops and Hail-stones, by Professor Osborne Reynolds, with 4 illustrations. Appearance of a New Star.—The Intra-mercurial Planet. The late Professor Puggeendors, by WALTER FLIGHT. The Wall Paintings of Tompell. The method of preparing the walls and executing the work.

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OUR NATIONAL TRIAL AND ITS RESULTS.

The four months beginning November 7th, 1876, and ending on the 4th of March, 1877, will long be remembered as a period not only of severe trial to our national institutions ship companies to send vessels to sea without proper lifebut also to the material interests of the country. The saving apparatus—the same that begrudges the room in pubcrisis has been passed, and there can be no question but that lie buildings necessary for the construction of broad and the new start is taken under better auspices than have obtained for many a year.

We believe that the revival in business activity is one that is going to make itself rapidly felt. Material for manu- people will keep on in the same course as long as they think facturing purposes is comparatively cheap, building can they make money by thus saving, which is questionable be much more inexpensively carried on necessaries of life and wages are down, and altogether conditions are favorable for the undertaking by capitalists of enterprises contemplated, but long delayed, and for the investment of a vast amount of capital which hitherto has been closely guarded.

hard times have not been destitute of good. As soon as The structure was quite lately built, and had an ornate iron to adjust their business to the new order of things. Cot-solidity of construction. ton fell in value, and old stocks were, as already noted, the production of cotton goods we made numerous valuit affords a great deal of show for little money. We do not from England during the five years from 1871 to 1876 is and readily insured, landlords will subject themselves to any

have hitherto imported. On the other hand, during all the long period of depresmeat. More than forty-four per cent of the foreign wheat and finally dazzling with gilding and paint in many colors, required by England to eke out her home supply, we furnish. The shipment abroad of American lobsters and oleo-margarin oil are two new experimental additions recently made to our export list, both of which are promising. Our butter the less prevalent, idea that an iron building is necessarily trade (we quote figures obtained by the New York Sun, and its integrity long with a fire among combustible materials,

sections of the country, all of the most encouraging nature. the burning goods, increase the conflagration, while the plates In New England, mill after mill is resuming full work in on the front curl up like shavings. the iron trade of Pennsylvania, where the greatest stagnation has reigned, there are good signs of improving business; the fronts in general, because we believe that they may serve an shoe and leather merchants announce better sales; and alto- admirable purpose in spreading good architectural designs at gether, look where we may, either the actual opening of augmented trade or good prospects of activity near at hand are clearly apparent. Even the blue glass mania has con- and renders deceptive, which we condemn. Back an iron tributed its share to the general revival, as it has brought front with good and well laid brick and stone, and a sublarge business to our glass works, and has caused the produc-stantial structure is accomplished. tion of a variety of glass which hitherto we have imported almost wholly from Europe. In fine, we have passed through the fire, not unscathed, it is true, but strengthened and energy of our people may be relied upon to render its years those of plenty, prosperity, and peace.

THE ASHTABULA VERDICT.

which is based on investigations conducted with great they do not deserve any consideration. thoroughness and by a body of men well versed in the tech- Newton's theory, as is well known, consists in the assump-

nical subjects laid before them, is: First, that the bridge fell because of its own inherent defects, and second, that the subsequent burning of the train was owing to neglect to comply with the Ohio State law which provides that railroad the time indicated expires, to insure a continuity of numbers, cars shall be so heated that the fires shall be extinguished if the cars leave the track. This obviously places the whole responsibility on the shoulders of the railroad company; and it remains to be seen whether the fact of the latter's being a corporation is sufficient to shield it from the punishment de-

> The bridge was unsafe, it appears, for eleven years. The man who designed it is dead, and the engineer in charge, who ought to have found out the defects, has perished by his own hand. Criticism of the direct agents is therefore silent. As regards the railroad company, the absence of the necessary precautions against fire can only be attributed to that spirit of parsimony which is altogether too prevalent among corporations when the question of using or not using the improved devices, which are constantly being invented, comes before them. It is the same spirit which causes steamample staircases and other ready means of escape in time of danger. It is a peculiar phase of human nature, doubtless, that prevents the necessary outlay for such purposes; and policy when life is at stake.

IRON FRONT BUILDINGS.

A fire recently occurred in this city in a magnificent-looking building, which left the edifice a total wreck and resulted We are beginning to learn, moreover, that, after all, the in the destruction of over a million dollars' worth of property. the first effects of the blow had passed, manufacturers began front, which gave it an exterior appearance of stability and

There has been a predilection for exactly this species of cleared out under enforced liquidation. Meanwhile in building in New York and other cities, of late years, because able improvements, and all this tended toward render-doubt but that excellent materials are used by excellent aring us consumers of fabrics produced at home, rather chitects in their construction. The difficulty lies not so much than purchasers from England, as we had been to a large ex- in the structures themselves as in the law which permits their tent before. The same is true, though in smaller ratio, of existence, for it is not to be expected that while a handsome woolen and worsted goods. The decline in our imports building can be cheaply erected without infringement of law, shown in the following figures: Cotton goods from 129,700,- extra expense in the matter. The question is one for the 000 yards to 55,000,000 yards, woolens from 5,391,000 yards legislators, and it certainly seems to us that either laws forto 1,478,000 yards, and worsted from 86,682,000 yards to bidding the construction of any but really fireproof build-41,079,000 yards. Not only, however, is the market here for ings in cities should be enacted, or else that existing statutes English fabrics substantially lost, but our manufacturers are should be so modified as to prevent the erection of edifices entering into competition with British producers on their which are so easily burned as the kind to which we have reown soil. We have already a considerable trade in Man-ference. We can recall over a dozen structures even larger chester (the home of English cotton weaving) in cotton calico than the one now destroyed, the progress of construction of cloths. Our cotton mills have large South American orders which we have watched with apprehension lest they might on hand; and it is well known that we are now making tumble before completed. We have seen the thinnest brick worsted goods of better quality than the foreign fabrics we walls erected to support a wilderness of wooden beams and partitions, the whole run up so quickly that the structures, before the façades were in place, reminded one of gigantic sion, our exports have been steadily increasing. Fresh birdcages. Then the ornate cast iron fronts were added, bit by American meat, which bids fair to be the staple of a great bit; and in an incredibly short space of time the bird cages were foreign trade, is now sold throughout Great Britain at 16 hidden, and elegant architectural creations, with richly decocents and less per pound, or one quarter less than English rated columns and ornamental window caps and cornices, presented themselves to the admiration of all who did not know how frail was the backing of these gaudy exteriors. To make matters worse, there is a mistaken, though none and cheese exports are exceedingly large and still growing. fireproof. An edifice wholly of iron of course would not In brief, and without entering into further detail, our export burn; but we doubt if even such a structure would maintain embodied in a very carefully prepared article) for December, like cotton and other fabrics common in our drygoods stores, 1876, was by far larger than ever was known in one month, on one of its floors; and this for the reason that iron speedily and the lessons of thrift and frugality which the business expands and warps with the heat. But buildings wholly of stringency has enforced are known by their fruits in the iron are few; and what is generally understood by an iron statement that the exports of 1876 exceeded those of 1872 by building in these days is one with cast iron front and iron \$171,000,000, while the excess of exports over imports for columns supporting wooden beams inside. The beams and 1874, 1875, and 1876 amounts to the grand showing of \$314,- the contents of the structure burn readily; and the iron columns, as soon as they are heated, bend out of shape, and re-We have before us a large number of reports from various lease the wooden beams, which tumble in a mass and, with

We would not make a sweeping condemnation of iron moderate cost; but it is the poor and inadequate material behind these ornamental fronts, which their beauty conceals

THE THEORIES OF LIGHT.

Among the generally received theories of light, there are chastened. The future opens hopefully. The characteristic only two which possess any degree of probability: the corpuscular theory of Newton and the undulatory theory of Huyghens. The idea of the ancients that, in seeing, something goes out of the eye to the object seen, and the theory of Euler (who, by the way, was blind) that we see by induc-The verdict of the coroner's jury, relative to the terrible tion, and that visibility is transmitted without the necessity accident at Ashtabula bridge, accords with the popular ver- of any intervening medium, in the same way as gravitation, dict reached some time ago. The substance of the finding, are so imaginary and so thoroughly disproved by facts that