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Contents.

(Illustrated articles are marked with an asterisk.)

Accidents on Eiffel tower and North bridge... 328
Aqueduct, the Nadria, in India... 328
Baltimore, cruiser, injury to... 328
Baas-relief work... 328
Bowlders, how to break... 327
Breach-mechanisms for guns... 321
Seabury's... 321
Bricks, refractory, from coke... 327
Car coupling, Freeman's... 324
Car, petroleum, Hill & Bender's... 330
Cellulose material for paper, etc... 330
Centrifugal pumps, Hill & Bender's... 330
Ceylon serpent, venomous... 330
Chemical exhibition, permanent, Manchester, Eng... 327
Coke, the use of for bricks... 327
Decapitation trick... 329
Dentures, securing, immovable, suction in... 328
Drinkers, hard, a caution to... 329
Electric fire ball, an... 329
Electric welding of shells... 329
Electricity as a manufactured article... 323
Eugenol in oil of cloves... 329
Evaporation (2227, 2233)... 329
Exposition, Paris, profits of the... 326
Fair, Mechanics', Boston... 326
Falling bodies, stopping (2192)... 312
Flax, straw, the effect of precipitating metallic lead and antimony by zinc, a curious experiment with antimony... 12006
Flume, great, proposed, Seattle... 326
Gas pipe, underground, detecting leaks in... 325
Grinding machine, knife, Graves... 324
Hamadryds, science and... 327
Harbor defense, electric batteries... 327
Harness, blanket, Grim's... 324
Improvements, recent, needed... 324
Indian languages to be preserved by the phonograph... 327
Iron, cast, testing... 324
Langaroo, the... 326
Labor, cost and productiveness... 323
Machinery, genus of... 330
Mechanic, the, honored... 330
Niagara Falls Power Co... 328
Oil of cloves, eugenol in... 329
Padlock, Mosley's... 324
Patents granted, weekly index of... 333
Petroleum car, Hill & Bender's... 330
Phonograph, the, for preserving Indian languages... 327
Photography, acid sulphite a new helper in... 327
Reposse, a lesson in... 325
Serpent, venomous, Ceylon... 330
Science and hamadryads... 327
Serpent, venomous, Ceylon... 330
Slack escape for tynes, Bansemer & Davies... 324
Stage trick, a modern... 324
Steamer, the Normania... 326
Testimonial to France, proposed national... 322
Tin types, formula for (2223)... 322
Tools, wooden, for reposse work... 325
Tynes, slack escape for, Bansemer & Davies... 324
Vase formed of embossed plates... 325
Walls, party of buildings... 325
Water rights... 329
Welding, electric, of shells... 329
Wood, John T. explorer... 330
Woods, government test of... 326

TABLE OF CONTENTS OF SCIENTIFIC AMERICAN SUPPLEMENT No. 751.

For the Week Ending May 24, 1890.

Price 10 cents. For sale by all newsdealers

I. AGRICULTURE.—Culture of Strawberries and Other Fruits.—A lengthy and detailed paper on the art of cultivating the different kinds of fruit, on exterminating insects on the same, on preparing the product for market, and other practical details. 12008
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XIII. MISCELLANEOUS.—An Entomologist's Experience.—By T. G. H.—A curious and disagreeable experience of a peaceful naturalist.—Threatened presumably by an illicit distiller. 11999
The Edinburgh Exhibition.—A general view of the exhibition grounds at Edinburgh, showing the buildings and general plan of the grounds.—1 illustration. 11999
XIV. NAVAL ENGINEERING.—The Accident to the Steamer City of Paris.—Further details of accident to the City of Paris, with illustration of the engine room after the accident and of the stern and screws. 11991
XV. TECHNOLOGY.—Electrical Carpet Sewing Machine.—A machine for sewing carpet by electricity, driven by electricity, and traveling along the floor like a tricycle.—1 illustration. 11990
Improved Separator.—Separator actuated by an ascending air blast, separating materials into different degrees of fineness.—2 illustrations. 11996
Pocket Valve for Gas Engines.—Preventing oscillation in the ordinary gas supply, where gas engines are used.—1 illustration. 11996

PROFITS OF THE PARIS EXPOSITION.

M. A. Neymarck has recently made an interesting communication to the Chambre Syndicale des Industries Diverses of France, on the subject of the profits of the late exposition to France in general. These he considered from the most varied standpoints. A resume of his work is of special interest now.

The gold reserve or balance in the Bank of France was enormously increased. On October 25, 1888, it was 1,021,641,845 francs. A year later, as the exposition was on the point of closing, it had increased by 272,640,240 francs. It was calculated that Americans brought over and spent 350 millions of francs in gold. During the exposition one and a half million of foreigners visited France; the greater part were distributed thus: Belgians, 225,400; English, 380,000; Germans, 160,000; Swiss, 52,000; Spaniards, 56,000; Italians, 38,000; Russians, 7,000; Swedes and Norwegians, 2,500; Greeks, Roumanians, and Turks, 5,000; Africa (principally Algerians), 12,000; North Americans, 90,000; South Americans, 25,000; Oceania, Java, etc., 3,000.

The gold reserve of the Bank of France was not the only gainer; the other banks of Paris showed an increase of 86 millions of francs. The receipts of the railroad companies were 66 millions of francs larger than for the corresponding period of the preceding year. The omnibus company running stages through the streets of Paris reports an increase of receipts over the same period of 1888 of four millions of francs. The cab company transported 29,097,112 people from January 1 to November 1, 1889, instead of 12 millions in the same period of 1888. This brought an increase of revenue of 1,558,000 francs. Four free stages run by the Louvre stores carried 1,320,000 passengers gratis. Spring vans were utilized, and as an example of their profits, it is said that the conductor of one of these vehicles acknowledged he had made 33 trips on the day of the closing, carrying eight people at one franc apiece each trip; giving as receipts for one day 264 francs or about fifty dollars. There were about 300 of these vehicles in use.

The tramways from May 6 to October 31 carried 6,342,670 people, giving over a million and a half francs receipts. Sometimes they transported 10,000 people per hour from the Place de la Concorde to the Machinery Hall. The cars running around the city carried 30,000 people a day more than in 1888.

The octroi or internal revenue of the city of Paris felt the effects of this increase of visitors. For the first ten months of 1889 it showed an increase of 10,398,721 francs over the estimates, and an excess of 9,946,551 referred to the same period of 1888. The excess of wine drunk in 1889 over that drunk in 1888 was 3,162,227 gallons; the excess of meat eaten was 3,278,871 lb. The total consumption of wine was 81,586,189 gallons; of meat, 94,680,630 lb.

The theaters showed an excess over 1888 of 10,867,555 francs receipts after payment of the droit des pauvres (poor tax) of 2,045,398 francs in place of 958,643 francs in 1888.

The restaurants on the Champ de Mars (bouillons Duval) received six millions of francs, 1,640,000 more than in 1888. A single restaurant toward the close of the exposition served 20,089 meals varying from less than a franc in cost (of which latter 267 were served) upward, only 95 exceeding five francs. The greatest number cost between 2 and 3 francs each.

The Eiffel tower, costing 7,514,095 francs, had a gross income from May 15 to November 5 of 6,459,584 francs. The exposition proper showed a profit of eight millions of francs against a profit of 4,130,840 francs at the exposition of 1887, and a loss in 1878 of 31,704,890 francs.

Adding together the increase of the bank balance, of the receipts of railroads, of the revenue, etc., a total gain not far short of five hundred millions of francs will appear. To this must be added the strictly private receipts. Allowing one million and a half of foreign visitors spending an average of 500 francs each, and six millions from the provinces of France spending an average of about 100 francs each, 1250 millions appear as the private receipts, giving a total of 1750 millions of francs direct monetary gain, or about 350 millions of dollars.

AMERICA'S TESTIMONIAL TO FRANCE.

The National Society of the Sons of the American Revolution has inaugurated a movement intended to give expression in the form of some suitable testimonial of the deep sense of gratitude which the people of the United States cherish toward the people of France for the magnanimous aid, naval, military, and financial, rendered by the French to this country at the critical moment of our revolutionary war.

From the beginning of the struggle the active sympathy of the French was extended to our countrymen, which found expression in supplies of money, of arms, and of men. In 1778 treaties of amity, alliance, and commerce with us were signed in Paris. In the summer of the same year a large French fleet was sent to our assistance, and from that time until the close of the war and the signing of the final treaty of peace at Paris, September 3, 1783, the French continued to be our faith-

ful allies, assisting us in every possible way, supplying us with arms, munitions, soldiers, and ships of war. Among the practical fruits of this timely and most generous assistance was the capture of Lord Cornwallis with 106 guns and 800 men, the veterans of the British army, at Yorktown, October 19, 1781. On this glorious occasion the French were on hand with a fleet of 37 war vessels and 7,000 men, the American forces under Washington numbering 9,000 men. This practically ended the war, and peace soon followed. The blessings which have ever since ensued to us may be attributed in a high degree to the aid thus given us. We may never hope to repay these benefits, for they are priceless; the most we can do is to ask the acceptance of some souvenir indicative of the obligations which as Americans we owe to the people of France.

In money alone the French expenditures on our behalf are estimated to have been between ten and twenty millions of dollars; say fifteen millions—a sum which if put at interest would probably by this time have amounted to over three thousand millions of dollars.

Coming now to the practical business of the proposed testimonial—the matter is in the hands of a committee of eminent gentlemen resident in different parts of the country, as follows:

- Chairman, William Seward Webb, cor. 44th and Vanderbilt Streets, New York City.
Hon. Chauncey M. Depew, New York City.
General W. S. Stryker, Trenton, N. J.
General W. H. F. Lee, Burke's Station, Va.
Governor S. B. Buckner, Frankfort, Ky.
Mr. Goldsmith Bernard West, Jacksonville, Ala.
Judge Lucius P. Deming, New Haven, Conn.
Hon. Clifford Stanley Sims, No. 242 South 3d Street, Philadelphia.
Mr. H. B. Ledyard, Detroit, Mich.
Mr. Wm. O. McDowell, Newark, N. J.
Mr. E. S. Barrett, Concord, Mass.
Rev. Charles Pinckney, Charleston, S. C.
W. H. Brearley, Detroit Journal, Detroit, Mich.
Treasurer, Mr. James Otis, No. 22 East 10th Street, New York City.

The committee has suggested that individual subscriptions to the amount of \$1 each be solicited by those who take interest in the matter, to be forwarded, with the names of the subscribers, to the treasurer, as above. A large amount has already been received.

We hope every reader of the SCIENTIFIC AMERICAN will do his share in promoting this most noble and patriotic enterprise. Let each one open a subscription list in his own family and extend it, as time permits, among his neighbors. Any further information may be had from members of the committee.

We believe no definite decision has been reached as to the exact nature of the proposed testimonial. For ourselves, we wish it could take shape in something grand and useful, worthily representative and permanently commemorative of the gratitude of a great people toward the greatest of benefactors.

We propose the erection in France, wherever the people of that country shall designate, of a building which in exterior form and dimensions shall be a copy of the Capitol at Washington, with its stately dome and statue of Liberty; the building to be constructed of materials and filled with objects from this country, exemplifying within and without, in the most interesting manner, the richness and variety of our resources; the walls to be adorned with sculptures and paintings by the ablest masters, commemorating the heroes and achievements of the French, both in the early history and settlement of this continent as well as in the later period when they came to our aid in the war. In brief, we would build, endow, and present to the French people a museum of America, great, complete, and substantial, a worthy and perpetual token of the sincere regard and grateful veneration with which the people of France are held in the hearts of the American people.

The idea of an American testimonial to France appears to have originated with Mr. W. H. Brearley, of the Detroit Journal, and he made the appointment of the chairman, Dr. Webb.

Electric Welding of Shells.

Modern Light and Heat says there is another electrical industry about to be established at West Lynn, Mass., for the manufacture of welded shells. The Thomson Electric Welding Company is pressed beyond its capacity in the demand for welding machines, which will be used extensively in the new enterprise. The government has already given an order for 100,000 shells for the Hotchkiss gun and Shrapnel shells as soon as facilities for their manufacture, under the patent of Lieutenant Wood, U. S. N., are ready. By the new process the shells, instead of being made of cast iron and boxed as formerly, are made by welding the chilled point and butt to a section of soft iron pipe, and, in the case of Shrapnel shells, the trouble of graduating the thickness with calipers, after boring and adjusting the delicately poised diaphragm between the powder and the bullets, is greatly diminished.