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Contents.

(Illustrated articles are marked with an asterisk.)

Table listing various articles such as 'Abrading material, a new', 'Agricultural inventions, recent', 'Algal, the system of', etc., with corresponding page numbers.

TABLE OF CONTENTS OF SCIENTIFIC AMERICAN SUPPLEMENT No. 953.

For the Week Ending April 7, 1894.

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Table listing sections like 'I. ASTRONOMY', 'II. BACTERIOLOGY', 'III. CHEMISTRY', etc., with sub-articles and page numbers.

THE ANNUAL REPORT OF THE COMMISSIONER OF PATENTS FOR THE YEAR 1893.

The Annual Report for the year 1893 of the United States Commissioner of Patents has been published. It appears in the official Gazette of March 27, and in every way is a noteworthy document.

The ground is taken that the race retains the power of great conceptions and that the World's Columbian Exposition will make itself felt in stimulating invention. Of recent criticisms passed upon the patent system, those complaining of the inconsiderate grant of invalid patents are treated as most germane to the question of administration of the office.

A study of eighty-one court patent cases, in which the patents were declared invalid, was made, and disclosed the fact that in twenty-six the references which defeated the patents were not shown to have been cited by the office, in twenty-nine a part were so cited, leaving twenty-six which were decided on office references.

Recently three primary examiners resigned. The cases they had passed to issue were re-examined, and in one hundred and fifty cases the applications were withdrawn from issue, upon the ground that patents if granted for them would be void.

Various other points are spoken of. The office hereafter will make photographs of the drawings of patents in those cases where changes in the drawings are required or permitted, and will make the photographs part of the files of such cases.

The Gazette now publishes the claims and principal drawings of patents which expire just before the date of the Gazette. This innovation, the Commissioner believes, will be a benefit to the public, partly as giving present subscribers, in a sense, the benefits of the Gazette of seventeen years ago.

The Patent Office exhibit at the World's Fair is alluded to. It has, as far as possible, been kept intact, and is now on exhibition in the Patent Office.

Legislation is recommended in several directions. The price of copies of patents, the Commissioner believes, could in many cases be advantageously lowered. The limitation of the term of American patents to the period fixed by the expiration of foreign patents for the same invention, the Commissioner would have changed, so that an American patent for full term could be granted if applied for within six months of the date of application in any foreign country.

The business of the office for the year 1893 shows total net receipts of \$1,242,871.64, against an expenditure of \$845,408.36 under the appropriation, with approximately \$295,635.09 additional, giving a balance in the office's favor of \$101,833.19.

An exhaustive report upon the scientific library of the Patent Office is included as an appendix to the Commissioner's report. This gives the history and present condition of the library, its scope and the condition of its indexing.

its maintenance seems very clearly shown. During the year over thirty-one thousand journals and articles have been indexed. An appropriation of but \$2,500 was allowed for purchase of books and periodicals and for transportation.

We cannot let the occasion pass without expressing our appreciation of the ability shown in the report. In some ways it is an innovation, the present Commissioner holding very definite views of his own upon the subject of the administration of the office, and expressing them very clearly.

PREVENTION BETTER THAN CURE.

"An ounce of prevention is worth a pound of cure" is an old proverb, but one which men have been slow to apply.

The State enlarges its prisons and reformatories and asylums for the insane, instead of enforcing truant laws, preventing the opening of dens of iniquity, and forbidding the housing of human beings where disease festers and spreads with the very breeze which keeps the tenants from stifling.

But there are many signs that changes for the better have begun. The laws which science has discovered are making their appeal to the reason of more people than in any previous time and preventive measures are used where a few years ago they were unknown.

Probably not a philanthropic organization of today is doing better work than the Red Cross Society, and its work is largely preventive.

It gives courses of lectures on "First Aid to the Injured" to policemen, firemen and others. It pays the salary of nurses who are sent among the poorest people in our cities. While they care for the sick in these miserable tenement houses, they act as teachers to the well, incidentally giving lessons in cooking and the laws of health, including cleanliness, which will do more to prevent a recurrence of disease than any other means yet devised.

Now that medical science has made so great advance in the study and treatment of the eye, we may reasonably hope that the day is not far off when it will be considered just as necessary to have the little child's eyes examined to see whether they have congenital defects as it is to have him vaccinated.

The study of sanitary science as carried on at the Massachusetts School of Technology is one of the noteworthy advance movements of the day.

The ventilation of rooms, the purity of the water supplies of the State, the best methods of the filtration of water, the condition of milk, the determination of the best kinds and qualities of food for the maintenance of health, are all made subjects of investigation; the principles discovered are applied in the institution and elsewhere as people learn what service students who have had this training can give in these most vital matters.

The study made of foods by Mrs Richards, of the Institute, by Professor Atkinson and others, and the consequent opening of "New England Kitchens," where nutritious food at a low price may be had by the poor, cannot fail to help in lessening the tide of intemperance and its numberless attendant miseries.

The work of the Woman's Christian Temperance