

Scientific American.

ESTABLISHED 1845.

MUNN & CO., Editors and Proprietors.

PUBLISHED WEEKLY AT NO. 37 PARK ROW, NEW YORK.

O. D. MUNN. A. E. BEACH.

TERMS FOR THE SCIENTIFIC AMERICAN.

One copy, one year postage included... \$3 20

Clubs.—One extra copy of THE SCIENTIFIC AMERICAN will be supplied gratis for every club of five subscribers at \$3.20 each...

To Advertisers.—The regular circulation of the SCIENTIFIC AMERICAN is now Fifty Thousand Copies weekly.

The Scientific American Supplement is a distinct paper from the SCIENTIFIC AMERICAN. THE SUPPLEMENT is issued weekly.

Combined Rates.—THE SCIENTIFIC AMERICAN and SUPPLEMENT will be sent for one year, postage free, on receipt of seven dollars.

The safest way to remit is by draft, postal order, or registered letter.

Scientific American Export Edition.

The SCIENTIFIC AMERICAN Export Edition is a large and splendid periodical, issued once a month. Each number contains about one hundred large quarto pages, profusely illustrated.

Commercial, trade, and manufacturing announcements of leading houses. Terms for Export Edition, \$5.00 a year, sent prepaid to any part of the world.

NEW YORK, SATURDAY, JULY 17, 1880.

Contents.

(Illustrated articles are marked with an asterisk.)

Table listing various articles such as 'Alcoholic liquors, testing', 'Magnetism, experiment in', 'American industries, illus.', 'Motive power, relative cost of', etc.

TABLE OF CONTENTS OF

THE SCIENTIFIC AMERICAN SUPPLEMENT

No. 237.

For the Week ending July 17, 1880.

Price 10 cents. For sale by all newsdealers.

Table listing sections: I. ENGINEERING AND MECHANICS, II. ELECTRICITY, MAGNETISM, ETC., III. PHYSICS, ETC., IV. TECHNOLOGY AND CHEMISTRY, V. MICROSCOPY.

GOVERNMENT USE OF PATENTS.

Inventors are to be congratulated upon three recent decisions of the courts which open the way to an efficient judicial remedy for use of patents by government officers.

Although the right of an inventor as against government has been for some years recognized, to see how he could have a remedy has not been so easy. As long ago as 1858 a claim was preferred to the Secretary of War for payment for government use of the Sickles' cut-off.

In 1863, and again in 1868, suits were argued in the Court of Claims seeking to recover royalties for government use of inventions. In the first of these cases the Warden of the United States Penitentiary in the District of Columbia set up six patented broom making machines in the prison, and employed the convicts in making brooms.

Three recent decisions present the subject in new aspects, and indicate the law to be that if, upon request of the inventor, an officer competent to contract for use of an invention makes use of it without payment, the Court of Claims may award compensation to the inventor upon a theory of an implied promise to pay him, while if the invention is used against the inventor's consent, or by an inferior officer or contractor, the individual thus infringing is personally liable in substantial damages, recoverable in the circuit courts.

Another suit was brought against an officer—the Postmaster of New York—who refused to enter into any contract with the inventor, believing and claiming upon English precedents that he ought not to do so.

The third of the decisions mentioned, earlier in date than the others, applies the same principles to the simpler and easier case where certain contractors, because they were

manufacturing for government, assumed to use, as they supposed government had the right to do, the complainant's invention without paying him.

These decisions are subject to the ultimate approval of the Supreme Court at Washington. Should they be finally sustained they will enable an inventor to seek redress in the courts, whatever may be the way in which his invention is pirated under pretense of a use for government.

AMERICAN INDUSTRIES.—OUR ILLUSTRATED SERIES.

Not only our home subscribers, but our patrons abroad, express great satisfaction with the feature adopted by this journal, more than a year ago, of publishing illustrated articles on the prominent industries of this country.

Nothing like it has ever been attempted before by any weekly newspaper devoted to industrial and scientific subjects, and only to a publication having a very large circulation could the expense attending the preparation of so many costly, original engravings be afforded.

From every number of the SCIENTIFIC AMERICAN our English, French, German, Spanish, Italian, and frequently Russian contemporaries, also transfer to their pages the illustrations and descriptions of some of our best inventions and more important discoveries, and some of them have reproduced the full page cuts of some of our industrial series.

This will explain to many perplexed persons whose works or machines have been described in these columns what has been to them a mystery.

They receive letters from every part of the world inquiring about their wares or their inventions, as the case may be, often in a language they understand not, and they wonder how the writer, in such an out-of-the-way place, ever heard of them or their inventions.

The London Printing Times and Lithographer, of June 15, just received at this office, referring to our series of articles descriptive of American industries, makes mention of the three subjects in their special line which appeared in consecutive issues of this paper not long ago, with extracts from our articles.

A QUARANTINE FLEET FOR THE MISSISSIPPI.

The terrible visitation experienced in 1878, by yellow fever, by the cities along the lower Mississippi, indicated clearly to the United States Medical Department the great need of a more perfect system of quarantine regulation, inspection, and disinfection.

INCREASE IN THE RUBBER MANUFACTURE.

It is interesting to note, in connection with the extended description of the rubber manufacture we published last week, that the total imports of crude rubber and gutta percha for the United States, for the nine months to April 1, amounted to 13,444,750 lb., valued at \$7,436,560.