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NEW YORK, SATURDAY, JULY 17, 1880.

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Price 10 cents. For sale by all newsdealers.

- V. MICROSCOPY.—Organisms found in Beer and Wort. By EMIL CHR. HANSEN. Red colored saccharomyces and red cells resem-bling saccharomyces. It figures. Organisms found in beer and wort Indian Corn. By LOUISA REED STOWELL. A microscopic ex-amination of make and its products. 6 figures. Section of kernel and forms of starch grains highly magnified.

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. There has been a vague idea that obtaining a patent does not protect the inventor against gratuitous use of his invenbe inoperative against the crown. But the reasons for this pirated under pretense of a use for government. do not prevail in America. In this country a patent is a compact with the inventor to induce him to disclose his invention for the public benefit. In England patents are a preserved class of "monopolies"—a privilege which the express great satisfaction with the feature adopted by this sovereign is allowed to give to favored persons.

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 gov ernment use of the Sickles' cut-off. The government contracted with Merrick & Son to build a steamboat. The contractors attached the cut-off to the engine without paying royalty, considering that government was entitled to the free use of the invention. Sickles applied to the Secretary of War, and that officer asked the opinion of the Attorney General. The Attorney General of the day, Judge Black, advised that the government was equally bound with an individual to pay a royalty; and that the Secretary might pay a reasonable one if there were an appropriation available. This "if" gravely embarrasses the inventor's right in most cases. What he has needed has been an efficient remedy in the courts. But the courts cannot render judgment against the government for wrongs done by its officers. Nor can they enjoin the government directly from using an invention; and if they could, or could stop the use by enjoining the officers personally, this is not what the inventor wishes; he wishes his invention used and a royalty paid.

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. There was noth-Court of Claims said that for want of some contract binding the government to pay, that court could not render any judgment. In the other case, a patented army tent was adopted by the War Department and a contract was made by direction of the Secretary, with the inventor, to pay him a royalty. the payments were stopped; but on proof of the special conofficers were disposed to use inventions as if they were free to the government.

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 In one of the cases, Lieutenant McKeever, being the patentee the government has not the right to use an invention, and that as the cartridge box had been submitted by the inventor to the department, the presumption must be that the government used it under an implied license and upon an obligation to pay a reasonable royalty. It could not be this theory of contract was therefore awarded.

to cancel the stamp on a letter by the same implement and stroke which imprinted the postmark. The device obviously diminished the time consumed in stamping letters by nearly one half; and the pecuniary saving realized in the New York office during the term covered by the suit was shown to have been \$63,000. That is to say, the officer had saved, and presumably had remitted to the government at Washington, \$63,000 of postal moneys, which he otherwise must have expended in paying salaries of stamping clerks. The court adjudged him personally hable for this sum to the inventor. The fact that he had paid it over to government did not protect him. The inventor was declared entitled to his damages, and the task of coaxing the money back from the Treasury was left to the Postmaster.

The third of the decisions mentioned, earlier in date than

manufacturing for government, assumed to use, as they supposed government had the right to do, the complainant's invention without paying him. But the Circuit Court very promptly told them that they had no such privilege.

These decisions are subject to the ultimate approval of the Supreme Court at Washington. Should they be finally tion by authority of government. This view was founded sustained they will enable an inventor to seek redress in the upon English practice; an English patent is understood to courts, whatever may be the way in which his invention is

AMERICAN INDUSTRIES. OUR ILLUSTRATED SERIES.

Not only our home subscribers, but our patrons abroad, journal, more than a year ago, of publishing illustrated articles on the prominent industries of this country. To some of our foreign contemporaries it seems to be a mystery how it is possible to gather the material and prepare for every weekly issue the full page illustrations which embellish the initial page, together with the other not less beautiful wood cuts which appear in other portions of the paper.

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 circula tion could the expense attending the preparation of so many costly, original engravings be afforded.

From every number of the Scientific American our Eng lish, French, German, Spanish, Italian, and frequently Rus sian contemporaries, also transfer to their pages the illus trations 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 ing like a bargain between him and the inventor; and the three subjects in their special line which appeared in consecutive issues of this paper not long ago, with extracts from our articles. Farmer, Little & Co.'s type casting works; Geo. Mather's Sons printing ink manufactory; and the Albion Paper Company's extensive works at Holyoke The editor might with propriety have added to the list the For reasons connected with his participation in the rebellion printing press manufactory of Cottrell & Babcock, which appeared in the issue next preceding the three industries to tract, he recovered judgment. Obviously these views gave which the writer refers, and this would have rendered more no protection in all that large class of cases where executive nearly complete the range of subjects to which our contem porary is allied.

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. Also, the want of swift, properly appointed craft to relieve passing vessels of sick per contractor, the individual thus infringing is personally lia- sons and to convey such to the quarantine stations along ble in substantial damages, recoverable in the circuit courts. the river. To meet the peculiar requirements of the case a fleet of four steamers has been designed by Dr. J. F. Turof an improved cartridge box, submitted it to the War De-ner, Secretary of the National Board of Health, and these partment in the hope that it might be adopted. It was have just been completed at Pittsburg, leaving that city, adopted. But upon the theory that government is not June 23, for duty on the Mississippi between Cairo and New bound to pay royalties, none was paid to the inventor. He Orleans. The fleet comprises the hospital and supply steambrought suit in the Court of Claims. That court decided that er H. H. Benner, and the steel launches Sentinel, Lookout, and Picket. The Benner is a stern wheel iron hull steamer of the Western high-pressure type, 112 feet long, 18 feet beam, 4 feet hold. On the main or boiler deck she carries an iron disinfecting tank for the reception and steaming of bedding, etc., supposed to contain the germs of fever. This supposed that the inventor intended to give a gratuitous tank is 6 x 8 feet, of boiler iron. The upper deck is fitted leave or that the Secretary intended a lawless infringement. up with bath room, physician's quarters, and medicine A judgment for a substantial compensation founded on chests. The main cabin is a clear, well ventilated space 14 x 50 feet, fitted with thirty iron cots for the reception of Another suit was brought against an officer—the Post- the sick. The launches are of handsome model and are 36 master of New York-who refused to enter into any confeet long by 7 feet beam, and 31/4 hold. Engine vertical, tract with the inventor, believing and claiming upon Eng- driving propeller of 32 inch diameter and 6 feet pitch, maklish precedents that he ought not to do so. There was, thereing 250 revolutions per minute with steam at 120 lb. Each fore, no ground for a suit in the Court of Claims, but the launch carries a small cannon for calling passing and sus-Improved Telephone Call. 2772 Circuit Court held the officer personally liable for damages pected steamers to a prompt halt. Their swiftness will Transmission of Motion by Electricity. Deprez's system 3772 Circuit Court held the officer personally liable for damages pected steamers to a prompt halt. as an infringer. The patent in this case was for an improved enable them to hurry the unfortunate sick to the nearest ment in canceling the letter stamps. It enabled the clerks quarantine station, and a physician will be on board each launch. The Benner will be in charge of Dr. F. W. Reilly, of Chicago, and the crew will be selected from men who have run the dread gauntlet of "Yellow Jack." The cost of this laudable enterprise to the government will be about \$35,000. The quarantine stations already provided for are located at Cairo, Vicksburg, Memphis, and New Orleans, and also at the mouth of the Red River.

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, against importations for the nine months to April 1, 1879, of 11,the others, applies the same principles to the simpler and 010,677 lb., valued at \$4,387,071. This shows a material adeasier case where certain contractors, because they were vance in prices within the past year, the average rate for