

Scientific American.

ESTABLISHED 1845.

MUNN & CO., Editors and Proprietors.

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

O. D. MUNN.

A. E. BEACH.

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One copy, one year postage included \$3 20
One copy, six months, postage included 1 60

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NEW YORK, SATURDAY, APRIL 3, 1880.

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THE SCIENTIFIC AMERICAN SUPPLEMENT

No. 222.

For the Week ending April 3, 1880.

Price 10 cents. For sale by all newsdealers.

Table of contents for the supplement, categorized into I. ENGINEERING AND MECHANICS, II. ELECTRICITY, LIGHT, ETC., III. TECHNOLOGY AND CHEMISTRY, IV. AGRICULTURE, ART, ETC., V. HYGIENE AND MEDICINE.

AMERICA'S INDUSTRIAL SUPREMACY ASSURED.

"Every war, even a victorious war, is a national calamity." So writes the Count Von Moltke, Germany's most successful warrior. And he might have added To be constantly preparing for war is a national calamity but little inferior to actual warfare.

This is the tax paid in money. That which comes from withdrawing able-bodied men from productive labor is an item of scarcely less magnitude, for the standing armies of Europe foot up something over eight millions.

The military strength of Russia consists of 3,046,800 men, of whom 600,000 belong to the reserve and 2,446,800 to the standing army. The regular army of France comprises 1,689,000 soldiers of all arms, the territorial army, 1,208,000 total, 2,289,000; to be increased in 1892 by the addition of 300,000 reserve men to 2,723,000.

The grand total of all these forces amounts to 16,471,918, the standing armies alone numbering 7,925,000. To these figures there should be added for the armies of Great Britain, Spain, and Turkey, about 700,000 regular soldiers and twice as many reserves. Allowing that half of the men nominally in the European armies are at home on furlough, and able to take part in productive labor, there cannot be less than 4,000,000 men in the prime of life permanently withdrawn from productive industry in the great states named.

Not the least disheartening feature of this state of things is its tendency to grow steadily worse. As a leading English journal pertinently remarks, it is the special aggravation of this waste of human energies that it is interminable, that it settles nothing finally, that the consequence of war is not peace, but a condition of further preparation, in which victory and defeat alike are used as arguments for further preparations.

To this frightful extent Europe is handicapped in the race for industrial supremacy. It is the penalty which the people have to pay for the accidents of their geographical position, the forms of government they have inherited, and their worse inheritance of military history, national hatreds, and political entanglements.

The United States comprise about the same area as the great states of Europe combined, and already have nearly one-fifth as many inhabitants. In all probability children now born may live to see United America equal in population to all Europe.

The natural advantages of America for diversified and prosperous industries are certainly not less than those enjoyed by Europe; and our people are quite as capable as those of Europe of making the most of their industrial op-

portunities. The problem of industrial supremacy is, therefore, not hard to solve. The single advantage we enjoy in being free from the terrible war-burdens of Europe even in times of peace, and our practical exemption from risk of foreign wars, cannot fail to maintain us in our position as the most prosperous people in the world.

PROTECTION FROM YELLOW FEVER.

"Out of sight, out of mind," has been too much the rule in regard to this matter. Two successive years of severe visitation of this dreadful disease at New Orleans and Memphis each time drew general attention to the necessity for some action in the way of prevention, but with its disappearance the matter appears to have passed almost completely out of the public mind.

For the purpose of adding to our specific information in regard to yellow fever the National Board of Health last year sent a special commission to Cuba, whose preliminary report has just been published. What they have furnished does not throw much light on the pathology of the disease, but the facts they present as to the sanitary condition of the island are such as should compel our authorities to erect more effectual barricades than have yet been provided against this pest-house at our very doors.

The water is very impure, and so insufficient in quantity that "a large portion of the population purchase their water daily in kegs and carboys from street vendors." The streets are not paved, except in about one-fourth of the city; many of them are so narrow as to afford room for but one vehicle, and in but few cases have any sewers, while the most of these are so filled with solid materials as to be inoperative.

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Under these conditions it is quite plain that any protection we have from constant visits of this disease must come from a more stringent regulation of our commercial intercourse with Cuba, as substantially the same circumstances exist in most other Cuban ports as at Havana, though in a lesser de-