UNCLE SAM'S BIG GUNS TO BE AT BUFFALO TESTING THE SEEDS

thinking people that the seacoast cities of the United States are not well defended. A flood of new light will be let into such gloomy minds by the Ordnance exhibit of the War Department at the Pan-

American Exposition. When the Exposition opens for its six months season at Buffalo on May 1 of this year, the early visitor will find the largest and most powerful guardians of our seacoasts ever exhibited by the United States Government. Even the smaller of the two great new guns in the Government exhibit at the Exposition will be larger than any ever before displayed by our Uncle Samuel.

Captain Peter C. Harris, who represents the War Department, in charge of the entire war exhibit, has been engaged actively for months upon his great work of collecting the newest display of the kind ever made in this country. It was an absurd question perhaps that I asked when I inquired phy guns. if his exhibits would be ready on May 1, as though there were any other alternative for a soldier. The Captain looked reprovingly at me.

But of the guns-great guns, indeed; big around as a locomotive boiler, thir. ty odd feet long, with a more savage muzzle than ever coughed destruction upon any hostile fleet; built with the accuracy of a watch; so delicate in adjustment that a little finger may travnearly half a million pounds, yet a ma-

loading rifle, model of 1895, mounted upon a disappearing carriage. Its weight, stripped of everything, even the breech is 36 88-100 feet. The maximum diameter at the breech is 44.5 inches. It throws an armor piercing shot weighing 1,000 pounds, the length of which is three and one half feet. It also throws a projectile, an armor piercing shell weighing 1,000 pounds, four feet long, carrying a bursting charge of 39.4 pounds of gun cotton. The charge of powder is 240 pounds of smokeless or 490 pounds of brown prismatic powder. The muzzle velocity of the projectiles under the above conditions is 2,300 feet per second, with a maximum pressure per square inch of 37,000 pounds. The muzzle energy is 36,671 foot tons. The of penetration in steel at the muzzle is 30.9 inches, at 1,000 yards 28.5 inches, at 2,500 yards 25.5 inches and at 3,500 yards 23.5 inches. The total weight of the gun and carriage is 477,959 The carriage is twenty-five feet in diameter at the base, and the gun when in firing position is seventeen feet above the base of the carriage. When the shot is fired, the recoil causes the mechanism to lower the gun seven and one-half feet, behind the parapet. The gun has an accuracy of aim for about eight miles, and the extreme range is about double that distance,

As I have said, guns of this type have never before been exhibited by the United States Government, and they are designed for use in secret fortifications, to which no visitors are admitted under any circumstances. The gun was manufactured at Watervillet Ar senal, near Troy, N. Y. The carriage was made at the Watertown Arsenal, near Boston. The disappearing carriage was designed several years ago by Captain Buffington, now Brigadier General and Chief of Ordnance, and improved and adapted to modern steel rifles by Captain William Crozier, Ordnance Corps, United States Army. It is known as the Buffington-Crozier carriage. The mounting of these mammoth pieces of ordnance has been in the immediate charge of Lieutenant R. H. C. Kelton and a small detail of ar-

To enable the observer readily to make an intelligent comparison of the mounts of our seacoast guns Captain Harris has caused to be placed by the side of the great twelve-inch gun a teninch rifle on a barbette carriage. In a barbette carriage the rifle is at all times exposed above the parapet. The reader may remember the discussion on subject between General Miles and the Ordnance Board, the general not favoring the disappearing device chiefly on account of its complicated mechanism and its liability to get out order. Each carriage appears to have its particular use. On elevated sites the parapet furnishes all the protection required, but on a flat coast the be mounted either on a disappearing carriage or in a turret. The expense of a turret is estimated at about four and a half times the cost of the disappearing carriage. The Endicott Board on Ordnance and Fortifications a number of years ago decided in favor of the disappearing carriage, and the department has been laboring to obtain a satisfactory one. The one shown at the Pan-American Exposition is considered the most perfect in the world.

The ten-inch breechloading rifle is from the model of 1895 and weighs 66,700 and the diameter of the breech is thirty-seven inches. The projectile is an armor piercing shot or shell. The shell carries a bursting charge of 22.4 pounds of gun cotton and weighs 575 pounds, having a length of four feet. The solid shot is three and one-half feet long. The powder charge is 140 pounds of smokeless powder, and the muzzle velocity of the projectile is 2,300 feet in a second. The maximum pressure per equare inch is 37,000 pounds. The muzzle energy with the charge of smokeless powder is 21,086 foot tons. The gun has a penetrating power of twenty inches

At the right of the ten-inch gun a twelve-inch mortar has been mounted, and it is no small affair. Farther to the right is a five-inch rapid fire gun. All are mounted behind sections of a parapet, and the four pieces represent

the twelve-inch gun itself representing the Mississippi River will also be dis- ural resources of the country and their the climax. Near the small building played. Two of the Mississippi models- utilization not covered by other departspecially constructed for this purpose will be displayed the mountain, field draulic Grader-were given the grand and siege guns of the present day, to- prize in the recent Parls exposition. gether with types of old guns used in

Coast Defenders of Mammoth Size--Huge Rifles Such as Are Used Upon the Secret Fortifications to Be Shown at the Pan-American Exposition.

States have been engaged:

The largest guns mounted in any of pounds. They were a little over ten They were mounted upon wooden carriages. In 1829 the thirty-two pounder, erse the gun, thus moving a weight of charge of eight to ten pounds of black powder, was adopted, and in 181 the chine to spout a volcanic blast and to forty-two pounder, with a caliber of create an earthquake at the will of seven inches and using ten to fourteen The big gun of which I speak is a In 1844 the eight and ten inch Colum-United States Army twelve-inch breech- blads fired a shot weighing sixty-five pounds and used a charge of ten to fifteen pounds of black powder. The teninch shot weighed 126 pounds, and the block, is 115,000 pounds. Its total length powder charge was eighteen and twen-

lafferty Range Finder.

Pan-American-Exposition

Tuelve inch Breech Loading

Seacoast Defense Rifle on

Disappearing Carriage in Position for Loading.

were smoothbores of cast iron.

first ones of large caliber used in the

and were east hollow and cooled from

the interior on the Rodman plan. They

pounds of black powder. The ten-inch

the different wars in which the United partment exhibit will be displayed all reau of Ethnology, will be especially uments showing important periods in instruments and appliances used in unique. Representatives of all the the history of the United States, de- John B. Brownlow, Postoffice Depart-The Ordnance exhibit will show the communication by flag, heliograph, tribes now in the country will be partmental publications and a number ment; B. F. Peters, Navy Department; historical development of ordnance in the Entrement of the Exposition. The historical development of ordnance in the Entrement of the Exposition. The historical development of ordnance in the Exposition. The historical development of ordnance in the Exposition. The historical development of ordnance in the Exposition of the Interval of the Interv every type adopted by the United in operation at all times during the Ex- will be reproduced in bark by the In- department will be the photos and tion and National Museum; W. deC. States and showing the evolution of position, one station being located at dians, who have gathered and prepared guns, mortars and howitzers. Among the howitzers will be one made in 1792, the howitzers will also be thirty or forty trophy guns, displayed according to period. The Military Academy at West Point weapons, tools, utensils, dolls and a larger space at this Exposition than Geddes, Disbursing Officer; John M.

C. W. Larned, Professor of Drawing, who is a member of the committee, has

of capture. A novel feature will be a has never been represented at any pre-trophy fountain, representing a burst- vious exposition. A very complete and stone mortars 300 years old, and bread exposition in this country—5,000 square Stone. Clerk. feet long, and the powder charge was been appointed by the superintendent rious feativals will be celebrated, with Express" and large models of rural col

monials. lustrative of distribution, the effect of Porto Rican and Filipino mail cartransplantation, of changes of soil, cli- riers as they were under Spanish rule;

Twelve-inch Breech
Loading Seacoast Defense
Rifle on Disappearing Carriage in
Firing Position.

trophy fountain, representing a burstling shell, with water spouting from its
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line shell at the Department of Association was appointed at the Department o curriculum, plant of the Academy, its to the Six Nations as they learned it in or mail transportation employed the country and our newly acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully work and workings, will constitute a time immemorial. For the time being country and our newly acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii, Porto by the Government are now carefully acquired terrifrom the Philippines, Hawaii acquired terrifrom the Philippines, Hawaii acquired part of the War Department exhibit. the Indians will discard what civilizatories will be exhibited, and these will Rico, Cuba, Alaska, the Island of Guam tested for purity, germinability and free inclosure of the West Point exhibit. The inclosure of the West Point exhibit. our seacoast batteries during the war will have the form and appearance of wigwams as their ancestors lived. They will include models of domestic and Manua. This work is well adof 1812 were twenty-four pounders, the regular cadet barracks, the top of the ready for the battle or the chase. In- and international mail steamships, diameter of bore being less than six partition showing battlements, with a terpreters will be provided so that the railway postal cars, mail wagons, pneuinches and the weight of guns 5,500 tower at each corner. A committee of public may talk with the Indians who matic mail carriers, a model of the pounds. They were a little over ten professors of the Military Academy has do not understand English. Their vasix and eight pounds of black powder. of the Academy to prepare this exhibit, the customary dances and weird cere- lection and distributing wagons, in themselves postoffices on wheels. Under the Department of Agriculture addition, there will be an array of there will be a museum of cereals, to- stamps, envelopes and cards, domestic bacco, animal and vegetable fibers il- and foreign, with models of Cuban,

The transportation and arrangement of all these exhibits are under the board of management of the committee also charged by act of Congress with their selection and purchase and which is composed of the following members: J. H. Brigham, Assistant Secretary of Agriculture, chairman; W. H. Michael, Department of State; W. H. Hills, Treasury Department; Cap-tain Peter C. Harris, War Department; Frank Strong, Department of Justice; Assistant Secretary; R. L.

our newest possessions, Tutuila dom from seeds of vanced, and unique and instructive exvanced, and unique and variety will try are also tested at this laborate

THE GOVERNMENT FORESTRY EXHIBIT.

partment of Agriculture is well rec Splendid Display to He Made at the Pan-American.

The United States Government Forestry exhibit at the Pan-American Exposition will form a division of the important display to be made by the Department of Agriculture. It will consist mainly of a photographic display illustrating the relation of agriculture to forestry, supplemented by maps and sections of commercial timber trees from the Appalachian Mountain region. The photographic display will embody sixty framed bromide prints enlarged from photographs, together with twen-ty colored and uncolored transparen-

The bromide pictures range in size from sixteen by twenty-four to twenty-four by thirty inches, and the transparencies are from three by four to six by

The subjects to be illustrated by bro mides and transparencies comprise briefly the various methods of lumber-

devised and perfected by the men in charge to meet the necessities work. On entering the space devoted to the exhibit at the left of the main gale one sees first in a glass case a party sparating table, with magnifying glass, forceps and other tools used by streets in separating a sample of commercial seed into its component parts of parts seed, chaff, sand and other foreign matter and weed seeds. Next is a pair of fine balances, on which samples are weighed, all percentages in seed purity ests being based upon weight. Beond the scales is a new combined mixer and sampler. In this a quantity of eeds is quickly mixed and a sample of the desired amount delivered which will fairly represent the entire lot. One of the most attractive pieces of apparatus used in purity testing is the blast impurity separator, which is also a new device. The air blast is furnished by modern blower driven by an electric motor. The device itself, however, i which the separation of chaff and lighter impurities from seed is performed through the action of an air current, consists of a simple bent glass tube onnected with a receiver. Actual germination tests will be can ried on at the Exposition as in the Seed Laboratory at Washington. Commer cial seeds will be counted, arranged in folded blue blotters, moistened and

EXPERIMENTS TO BE MADE AT THE PAN-AMERICAN.

Exhibit of the Division of Boi.

any of the United States De.

partment of Agriculture

Will Deeply Interest

Agriculturists.

The progressive agriculturist will be

interested in the exhibit of the Divine

exhibit will be restricted to only

pure seed investigations. It w

Thousands of samples from farmen

and seedsmen in all parts of the coun

The work is of special interest to far

ers, gardeners, seedsmen and exper-

ment station workers, to whom

subject of pure seeds is of vital in

nized as the most important seed

ing station in America. Its mer

standards and most important pieces of

apparatus have been adopted for est

testing at many of the State experi-ment stations. The methods now is

use and many of the instruments and

larger pieces of apparatus have been

tance. The Seed Laboratory of the D

placed in the standard germinating chamber, where they will be kept at fixed temperatures favorable to germination. Check germination tesu tests with many kinds of seeds, will be made in sterilized sand and set a greenhouse "flats." The number to minating each day for a definite period in each of the tests will be noted and the percentage of germination thus computed.

Many weeds the seeds of which are most frequently found as impurities in commercial seeds are represented by living plants, labeled with the names by which they should be designated by English speaking people wherever found. A unique feature is an exhibit of seeds of many of these weeds and also several kinds of commercial seeds arranged under forty magnifying glasses, accompanied by seeds of the same kinds in open dishes, so that one may readily compare the magnified impression with the actual seed and note differences and distinctive characters that would not appear to the unaided sys.

The results and importance of sed testing are graphically represented by several groups of glass tubes comining different kinds of commercial sets. These show the ordinary comments seed, the amount of pure seed the name in the sample and the amount of inert matter, such as chaff, sticks and sand, the proportion of weed seeds and finally the amount of germinable seeds true to name, as determined by test of similar sample and the proportion waste. A comparison of these last two indicates how much is often paid for waste in buying untested and poorly

deansed seeds. Commercial seed growing is shown by photographic illustrations of some the largest seed farms in Californ where the production of gardes sel has reached its highest development

this country. The exhibit is under the general illustration of individual trees of the rection of Mr. Frederick V. Coll White Firs and the Sugar Pines of the Chief of the Division of Botany, is under the immediate supervision of E California Sierras forests by colored Edgar Brown, assistant in charge transparencies six by ten feet. It is germination tests in the Seed Inth interesting to state in this connection Laboratory.

Uncle Sam will have a splendid Fat

ural adjacent mountain forests and exhibit at the Pan-American Englishment shelter beits of forest trees. The region and the subject from which The region and the subject from which comprehensive idea of the beauty st interest which attach to this could tural and forest sections of the United W. deC. Ravenel, Chief of the Dissertates. of Fish Culture, and several assists are now in Buffalo creeting in the ernment Fisheries building an arm design for a home in which all placed. and their tributaries. The major these specimens will be alive be exhibited swimming in the element. At all past exposing exhibits prepared by Mr. Raman been so crowded with visitor has been at times impossible a within a comfortable distance brilliant and beautiful inhabitate

the oceans and rivers. In this exhibit will be shown the rious methods for the propagation fish and oysters and for filling our ers and bays with these useful artis of food.

STABLE CONSTRUCTION AT THE EXPOSITION.

arms of today.

Rodman gun was cast. These guns this feature.

stream of water or air passing through about forty lay figures.

charge of forty pounds of black powder most entertaining character, as the and was the first great gun introduced Captain has visited all the arsenals of and Experimental Stations. in modern times in any service. Just the country, gathering such things as before the Civil War rifled muskets to him seemed of public interest and and guns began to displace smooth- value in order to make an entirely new bores. Captain Parrott's rifles were the and attractive exhibit.

United States service. The largest of these had an eight and ten inch bore OTHER GOVERNMENT DEPART-MENTS.

MARK BENNITT.

band of wrought iron over that portion lion dollars was made by the Govern- ment.

rifle fired a 250 pound elongated projec-Inside of the main Government building will be exhibited the machine guns of all kinds, including the automatic States Army in the Philippines and

the Hydraulic Dredging Plant and Hy- ments or exhibitors will be exhibited.

ty pounds. In 1861 the first fifteen-inch recently sent Captain Harris a plan of mate and altitude and showing depart- paintings, photographs and pictures il- ing, their effects on forest production mental methods of study and treat- lustrative of mail transportation in and on the adjacent agricultural lands. The In the Quartermaster's section will be ment. All exhibits of interest and con- all countries, as well as a large and cu- The effects of forest fires on the forest process of manufacture was evolved by shown paintings, photographs and cern to those engaged in agriculture, rious exhibit from the Dead Letter Of- land and the relation of such denuda-General Rodman, who, to prevent in- drawings illustrating the Army Trans- horticulture and live stock industries fice and a "Model Office," giving a com- tion to the flow of water in streams and disappearing carriage would seem to jurious strains produced by cooling port service. Uniforms of the army at will be gathered and arranged by the plete view of the operation of a post- the supply of water for irrigation will ss very great advantage. It is castings from the exterior, cast these different periods from the Revolution following bureaus: The Bureau of Anithought that on low sites the rifle must guns on a hollow core and cooled by a to the present day will be exhibited on mal Industry. Weather Bureau, Divisien of Entomology, Division of Ornithe core. Rodman's fifteen-inch gun The entire exhibit of the War Depart- thology and Mammalogy, Botanical fired a shot weighing 428 pounds with a ment under Captain Harris will be of a and Horticultural Divisions and Divi- will be exhibits from the Geological honagricultural lands. The value of sions of Forestry, Chemistry, Statistics Survey, with particular reference to the preserving certain types of protective

Letters of Statesmen.

Consular Bureau, Bureau of Statistics, As an appropriation of half a mil- der the auspices of the State Depart- from our national parks.

charge. The eight-inch Parrott rifle Government exhibits, as well as for the Treasury is one of a lighthouse in full ing battleships, monitors, protected and fired an elongated projectile weighing exhibits themselves, the display at the operation, with models of lighthouses unprotected cruisers, gunboats (includ-150 pounds with a charge of sixteen Pan-American Exposition will be of no showing styles of construction; a coin ing the dynamite gunboat Vesuvius). stamp in operation, showing the coin- rams, torpedo boats and torpedo boat The collection from the Smithsonian ing of money at the rate of 90,000 coins destroyers. One of the most interest-Institution will be very large and of per hour; a complete collection of the ing of these will be a nickel plated great interest, as it will demonstrate coins of all nations and a set of medals model of the submarine boat Holland. the scientific progress of the country struck by the mint in Philadelphia; a and the results of its recent explora- model of a quarantine station, illus- Manila will be separately grouped. The gun now being used by the United tions, accompanied by portraits and trating the care of the Government in visitor will be able to examine close at models of various kinds. The groups preventing the introduction and spread hand such interesting objects as rapid China; also several hundred small under the Department of Anthropology of contagious diseases; models of Ma- fire guns of numerous designs, Gatling arms, showing the development of in the Museum will be of particular rine Hospital operating rooms, with X guns, rifled cannon of various calibers these arms from the match lock, wheel value both from scientific and artistic ray apparatus, and a model of a vessel torpedoes, gun carriages, shot and shell lock, flint lock and percussion cap lock standpoints. Some already completed especially constructed for deep sea of all kinds, models of powder used in to the breechloading magazine small are groups of the Patagonians, the Es- sounding, showing sounding lines and modern naval warfare and the thoukimos and the Sioux, done by skilled apparatus used in measuring the depth sand and one equipment articles that In the Engineering section of the War artists and scientists. The sculptor of the water. The department will also make up the outfit of a modern manDepartment will be exhibited models of Eilicott has had several of them in construct a life saving station upon the of-war, together with the clothing of and six inches thick, with bark attachone gun of each type used in seacoast those constructed by our Engineer esting and lifelike study of character, devices, including a lifeboat and a surf-supplies, etc. A model of a drydock in size, quality and character of the comfortifications. boat, with captain and crew of ten men, working order will be installed, giving mercial timber trees of the Appalachi-

Photographs of Famous Lawyers.

The Living exhibit of the Six Na- Justice, together with photographs of roes while in active service will be apt- part of the exhibit was at Paris. In the Bignal section of the War De- tions, now in preparation by the Bu- other famous lawyers and judges. Doc- ly shown and their uses demonstrated.

trees and forests will be illustrated to Models of Warships. show the size and lumber production Under the Department of the Interior of forests occupying agricultural and forests on watersheds for the conservation of water important to adjacent onstrating the educational work of the large areas of agricultural lands will The State Department will illustrate Government among the Indians. The also be illustrated. A special feature

mineral products of the States, and from the Bureau of Indian Affairs demthe workings of the Diplomatic Bureau, special features of interest under this of the photographic display will be the Bureau of Accounts and a number of ka, showing the wonderful development mammoth Bigtree, the Giant Red Firs. other divious of the department. An of gold mining, the fish, fur, oil and exhibit of historical archives and let- timber industries, as well as minerals ters of great men will also be made un- and curious sections of formations

that these transparencies are the lar-The Navy Department will make exof the gun which surrounds the powder ment for the buildings to contain the Among the exhibits collected by the hibits of models of men-of-war, includgest ever made. Typical agricultura valillustrated on the same scale, showing the special protective agencies of natold seacoast ordnance of the United falo harbor. A very interesting collection of the united falo harbor. A their hulls and again floated. His- Mr. Gifford Pinchot, the Chief of the torical naval exhibits will be there to Division. He is a graduate of Yale, has All of the portraits of the Attorney enlighten and amuse patrons, and the travelet extensively and has prepared Generals from 1789 to the present time many equipment articles handled and for Buria; an exhibit that has never will be sent on by the Department of used in the daily life of our naval he-

these illustrations were taken are rep-Fourteen colored maps of the United

Mortar in front of U.S. Government Building

States will show the distribution of the distribution of rainfall in relation to that of forest areas and in connection the location of State Experiment Stations.

Nineteen large clabs

ley lands in the East and West will be

engineering work, both military and hand, and they present the most inter- shore of Lake Erie, showing all modern officers, sailors and marines, stores, ed and one surface polished, show the To the left of the great twelve-inch Among the latter will be models of the rious peoples they portray. The Nat- who will give exhibited the breakwater being constructed in Buf- ural History display, also under the trating the actual operations of all the a glance how the vessels are taken out.

The Covernment Forestry exhibit will be installed, giving mercial timber trees of the Appalachi- the uninitiated an opportunity to see at an forest region.

The Covernment Forestry exhibit will be actual operations of all the aglance how the vessels are taken out.

> been shown in this country before. A CHARLES EDWARD LLOYD.

are obliged to breathe the same air being the goddess of fruits and flow

pergolas and pergola buildings, which model in all respects. In addit City milk supply is now deavoring to learn the cause they found. Harmful bacteria delight in a dusty beams overhead, which will be thickly ing very expensive.

pregnated with moisture. When a nounced pur'-go-luh, not pur-go-luh share of the dampness comes from the Fountain of Ceres.—The fountain of moisture lader breath fore the Horticulture building. over and over again, bacteria condi- Pronounced as written-See-reez

Mr. Converse is building a stable tions are complete.

Mr. Converse is building a state of the Exposition grounds that will be the Exposition grounds the Exposition grounds that will be the Exposition grounds the Ex

this why.

Tanced stockmen have for years recognized the value to animals of plenty of resh air without knowing why. It is he aim of Mr. Frank A. Converse who In stable construction the question of can Exposition, to endeavor to explain he aim of Mr. Frank A. Converse, who by every one who would be successful. York State has resolved itself into a they were working might be abnormal. structed will admit the strict censure of dirty, antiquated Prospecting still further and while entrees the sun to every stall. Dairy departments of the Pan-Ameri-ing more attention from the consumer methods.

necessity by all who have looked into for ventilation and cleanliness. This sentiment is fast

York State has resolved itself into a they were working might be abnormal. structed will admit the direct rays of

change in methods is recognized as a for condition and health, the stables propagation of the stockman and dairy-

as well as from the producer, and a traced to its source, the cows examined conditions peculiarly favorable to the atmosphere, especially when it is im-

man's worst enemy. Analyzing stable atmosphere led to Bank barns are always damp and albuilding up a system of inspection that the detection of harmful bacteria in in- ways dusty. Owing to their construcis compelling unwilling dairymen to credulous numbers. Scientists engaged tion they never admit direct sunlight in Sunlight is destructive to all forms of Government milk inspection in New thinking that conditions under which bacteria, and a stable properly con-