## THE UNITED STATES MILITARY ACADEMY,

BY COL. CHARLES W. LARNED, U.S.M.A.

West Point derives from George Washington the initial impulse of its existence, and, in the following words from his last annual message to Congress, the reason of its being and development are clearly expressed: "Whatever arguments may be drawn from particular examples, superficially viewed, a thorough examination of the subject will evince that the art of war is both comprehensive and complicated; that it demands much previous study, and that the possession of it in its most improved and perfect state is always of great moment to the security of a nation."

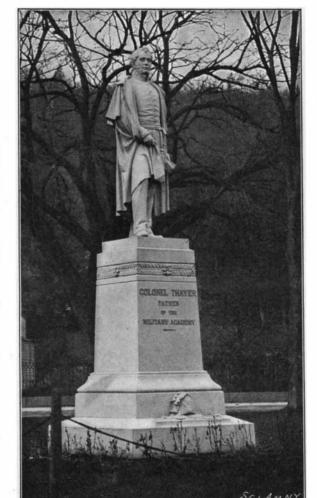
The birth of this great school, however, was attended with throes and pangs that threatened its life, and for a period of several years it could without sensible error have been pronounced a miscarriage. Twice it was without graduates; in 1819 it was under the command of a second lieutenant and deprived of supplies of every kind; in 1812 and for some time after, it was without students or instructors. The Secretary of War under Madison, William Eustis, sought to strangle the infant school during this struggle for existence, and only the exigencies of the war of 1812 saved it from his hostile designs. It was again indebted to the stress of war for rescue from its opponents in the national Congress, who, just before the war with Mexico, had very nearly accomplished its overthrow. The vindication of that conflict, however, was so complete as to silence all hostility, and the great struggle of 1861 added such overwhelming testimony to its worth that no voice has since been raised against its existence.

The genesis of a great school is a gradual process dependent mainly upon principle, personality and environment. In all of these the Military Academy has been fortunate. The basic principles of its purpose and methods; the personality of the men guiding its formation and early operation; its ideal location for its special functions—all have been remarkable and admirable. In the principles governing its purpose

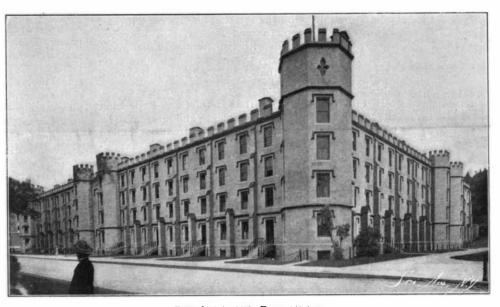
and methods it has the immense advantage over civil institutions of singleness and authority. It aims at a special result for a specific purpose, and it possesses authority for enforcing its methods. To this may be added the powerful leverage given by the fact that the prize of graduation is an honorable office in an honorable profession-rank and competence. Unlike civil institutions, it is not careless of nor indifferent to the general performance of its students. It exacts rigid conformity to its minimum standard in every individual, and this minimum is not less than proficiency in every branch of study taught in its curriculum. In its methods of instruction its fundamental is "every man every day." In other words, every student is expected to recite every day upon every subject in which he is under instruction, and to this end classes are divided into small sections and

time so apportioned as to insure individual recitation. In practice the result is so close to the rule that no cadet can count upon escape.

In another respect its principles are unique. It stands in loco parentis not only over the mental but the moral, physical and, so to speak, the official man. It dominates every phase of his development, every moment of his academic existence. It becomes responsible for his health as a physical, social, and official being. There is very little of his time over which it does not exercise a close scrutiny and for which it does not demand a rigid accountability.

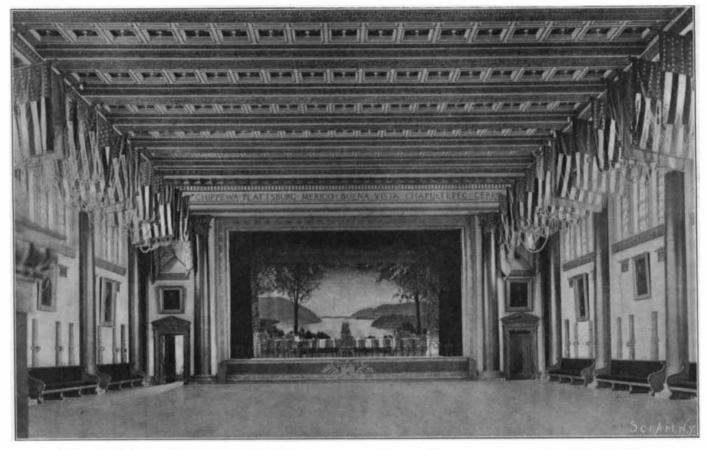


STATUE OF COLONEL THAYER,
'Father of the Military Academy."



Erected 1851. Main Front, 341 feet.

CADET BARRACKS, FROM THE NORTHWEST.



Containing Regimental Flags, Standards, and Colors; Portraits of Graduate Army and Corps Commanders; Bronze Memorial Tablets, and Trophies, CULLUM MEMORIAL HALL.

To the layman this sounds intolerable and tyrannical, and as tending to a mechanical product, deficient in originality and initiative. Under other conditions and an administration less judicious than that formed by the experience of the wise as conscientious founders of its system, this might be true of a process savoring so strongly of Procrustes. At a matter of fact it makes a West Pointer, and perhaps no other institution in the world has so strongly impressed its stamp upon the whole body of its alumni as the West Point Military Academy; while I venture to believe that very few have endowed their graduates by their diplomas with a guarantee so universally accepted as prima facie evidence of character and high ability. In the formative process no influence is more potent than the body of tradition which has developed with the growth and penetrated the vital system of the academic training. The atmosphere of West Point is surcharged with this tradition, this belief in its standards and methods. All careers are shaped by the point of view, and in an institution like this, in which a severe discipline controls the activities of the student body, the aspect in which questions of tone and morals are viewed becomes impressed upon the character, stamped into it as a matter of fact, with a force that is quite indelible. A graduate may afterward fall from the standard of his alma mater but he never loses the impression of her work. The coin is stamped, but the metal is base. How little base metal has been able to stand the fire and forge of this workshop the records show-a record unique in the annals of education.

Exclusive of outbuildings, reservoirs and batteries, the Military Academy and Post of West Point consists at present of 163 structures.

These structures have been erected at various periods and irregular intervals from 1816 to the present day. This sporadic building, brought about partly by the adverse conditions under which the Academy developed at its formative period, has prevented the adoption of any systematic plan in the arrangement or

coherent type in the architecture of the public edifices, although the topographic requirements of the site have controlled developments along certain lines, and the socalled Elizabethan style of the Cadet Barracks and Library have, to a certain extent, determined the character of some of their more important neighbors.

There have been three important periods of construction in the history of the Academy. The first, from 1836 to 1841, includes the Chapel, the Academy building, recently torn down, Ordnance Laboratory and the Library. This latter, a castellated and buttressed building with a dome, determined the style of the Barracks erected later. The second, from 1851 to 1858, comprises the Cadet Barracks, Mess Hall, Riding Hall, a Soldiers' Hospital and two sets of Barracks. The third, begun in 1890, sees completed the new Academic

building, Gymnasium, a Memorial Hall, a renovated Library, a new water supply, some few officers quarters, a Soldiers' Hospital, Barracks and quarters, and a Battle Monument, with other minor changes. Although in this last period much has been done. there remain manv of the buildings of the first and second period in an inadequate and obsolete condition, irrespective of any increase in the functions of the institution. Any proposition looking to a considerable enlargement of the Academy involves at once a review of the whole establishment, and invites at the same time a con-

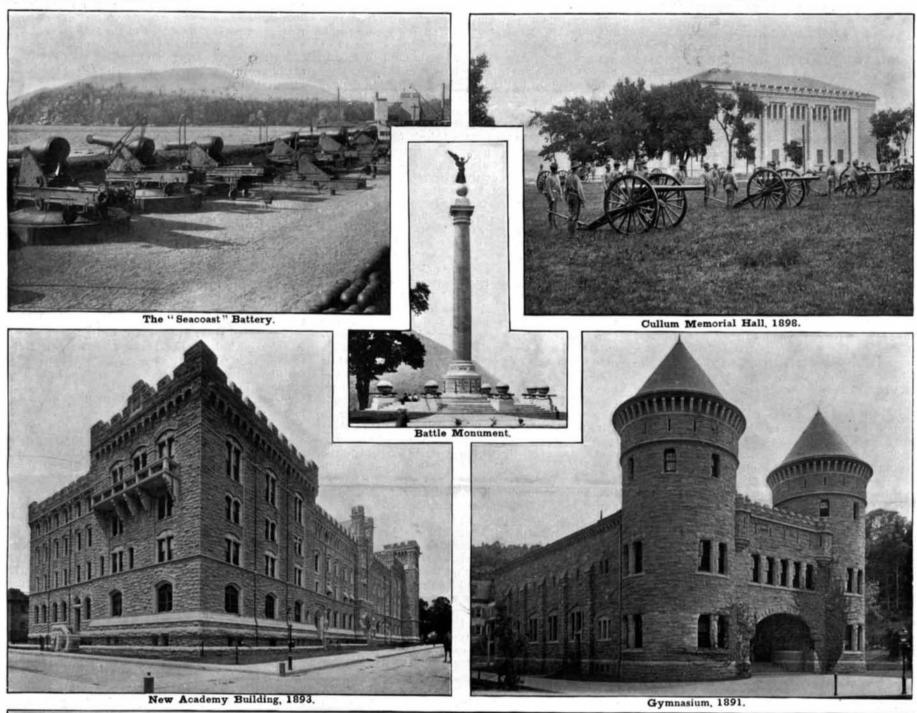


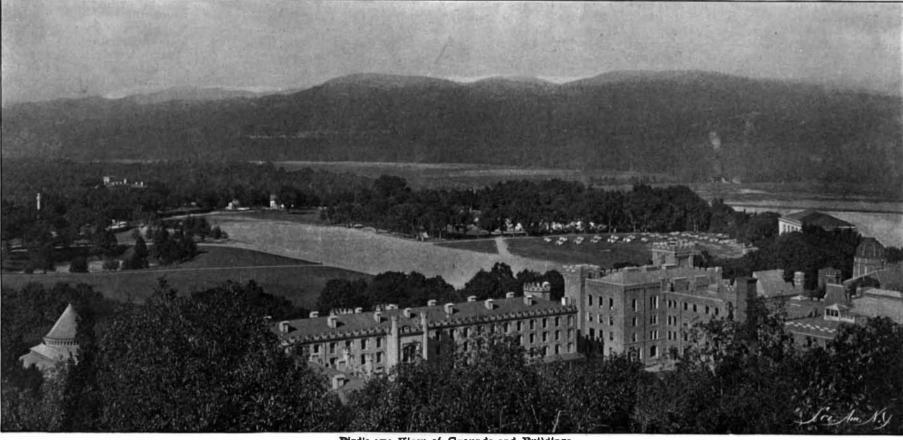
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Bird's eye View of Grounds and Buildings.

## Scientific American.

sideration of the scheme of arrangement throughout with a view to its systematic renewal.

The Corps of Cadets on July 19, 1899, numbered 329, exclusive of three foreigners present for instruction by act of Congress. The maximum strength allowed by law is 381, and there were, therefore, at that date 52 vacancies, or between 13 per cent and 14 per cent of the legal allowance.

The average strength of the different classes at the close of the academic year for the last ten years is as follows: 1st class, 59.4; 2d class, 64.7; 3d class, 69.0; 4th class, 92.2; or an average strength for the entire Corps of 285.3. The strength as given above for July

19 represents the period of nearly maximum size after the entrance of the new class, and the average for the past ten years is for the period of minimum strength after the annual examination. The average strength of the Corps for the past ten years at the period of maximum strength, i. e., after the entrance of September candidates (excluding these for 1899) is 323.9. This figure is approximate, owing to the difficulty of determining exactly the period of maximum strength, but is sufficiently accurate for purposes of comparison. The difference between these averages of maximum and minimum strength is 38.6, or an average yearly loss of nearly 12 per cent.

The legal maximum of the Corps of Cadets for nearly all of this period being 381 and the average maximum being 323.9, the average loss to the Corps through failure of

As the losses of the first two classes are small, these figures would very nearly represent the size at the maximum period in the beginning of the academic year. The 3d class, however, would be about 20 per cent larger at that time, or in the neighborhood of 125 men; and the 4th class about 30 per cent, or 185 men.

It is pertinent in regarding this increase of size of the graduating class of the United States Military Academy to observe that this is now, or will be in the very near future, equivalent to one graduate for every million inhabitants, and also to recall the fact that in the greatest war of modern times, after four years of conflict

battlefields of a long and terrible struggle. The advisability of increase of the number of graduates of the academy is independent of the question of increase in the regular army, and tends directly to minimize the necessity for such increase, for the reason that as more men of military education are at the service of the nation in the emergency of war, the more efficiently and promptly can large bodies of volunteers be organized and trained; and were the nation to possess three or four such schools their provision of educated soldiers would be the most economical military establishment it could create. As a matter of fact, a graduating class of the size estimated would not provide the yearly sup-

ply required for an army of sixty thousand men.

## FOREST PRESERVATION.\*

In Pennsylvania, we are able to report substantial progress in the way of suppression of forest fires. Ten years ago it was estimated, and not overestimated, that the annual loss to this State by forest fires was not less than \$1,-000,000 a year; in some years I know it exceeded that. In 1896, the loss by forest fires was only about \$557,056; in 1897, it was \$394,327; in 1898, it did not exceed \$250,000. Now, of course, we must make allowance for certain differences of seasons, which may have tended to ameliorate these fire losses, or to have lessened them; but, nevertheless, we cannot avoid the conclusion that a very large portion of this betterment has been the result of the labors of the





1. Arizona forest lands ravaged by fire. 2. Spencer River, Pa.—Such land should be reserved for forests. 3. Mifflin County, Pa.—Land more valuable to the State than to the individual. 4. Long Run, Pa.—Too rapid drainage producing extremes of high and low water. 5. Susquehanna River, Pa.—Dry stream bed, affording reduced evaporating surface.

## FOREST PRESERVATION.

appointment or deficiency in studies is 15 per cent, or, in other words, the strength of the Corps of Cadets at the period of its maximum strength is 85 per cent of its legal strength, and at the close of the academic year its strength (minimum period) is 74.9 per cent of its legal strength.

Should the maximum legal strength of the Corps be increased by Congress to 600 men, it would follow from the foregoing that under existing conditions its maximum actual strength would be 510 and its minimum 449. As the average size of the graduating class for the same period is 59.4, it follows that with the increase proposed a graduating class of about 93 men may be looked for. The size, therefore, of the four classes would be as follows at the minimum period: 1st class, 93; 2d class, 102; 3d class, 109; 4th class, 145.

had sifted thoroughly the military talent of the land, the commanders-in-chief of the opposing armies and the commanders of every separate army in the field were graduates of this academy; that during this war it gave the country twenty Federal army commanders, thirty-six corps and fifty-four division commanders, all of the rank of Major-General, in addition to a large number of brigade and regimental commanders: that the chiefs of the active corps of the General Staff in Washington, who organized the great armies of the war, were also West Pointers, and that on the opposing side a very large majority of the officers in chief command, as well as the President of the Confederate States, were all educated at the academy. This condition of affairs was not the result of an initial advantage of position, but the fruit of experience on the Pennsylvania Forestry Association, and the State Department of Agriculture. Every law that has been passed in this State has been mainly through these two bodies; and one law, which compels the constables to turn out and summon a posse and put out a fire, and bring in the neighbors from these fire-infested districts and compel them to put out the fire—that law has been one of the most potent factors in changing public sentiment that you can conceive of. Before that became a legal necessity—before it was anybody's duty to put out these fires—before anyone was armed with the authority to summon a posse and suppress it, the man who started a fire was looked upon as a harmless

<sup>\*</sup>An Address delivered February 21, 1899, at Horticultural Hall, Philadelphia, before the Pennsylvania Forestry Association, by Dr. J. T. Rothrock, Pennsylvania Commissioner of Forestry. Revised by the author.