

REALISM IN MILITARY MANEUVERS.

BY W. G. FITZ-GERALD.

The Titanic struggle now being waged in Manchuria between two armies, each approximating half a million of men, in which the line of battle often covers a front of fifty miles or more, has brought to a head the suspicion that the military maneuvers do not represent modern conditions, when guns may come into action at a distance of four or five miles, and small-arm fire likewise has a range formerly undreamed of.

Shortly after the Anglo-Boer war, the various chiefs of staff in the military cabinets of the world pointed out in war councils that the days of dashing cavalry charges, and the advance of infantry in dense masses was a thing of the past; and for the last year or so the great armies of the world have been steadily endeavoring to reproduce, as nearly as possible, in their maneuvers, the actual conditions of modern warfare, as they are shown in the Russo-Japanese battles of to-day.

But to reproduce these conditions calls for vastly extended territory—a difficult and costly condition in the case of a very small country like Great Britain. It has been found that the famous military camp at Aldershot is altogether too circumscribed in area for the reproduction of the actual war conditions of to-day. Hence the British war department has acquired immense tracts of land on Salisbury Plain.

The French war office, as well as the military departments of Germany, Austria, Italy, and Russia, are also expropriating vast tracts of land, which are chosen not only on account of their great size but also by reason of their remoteness from human habitation, and the presence of "cover," rocky wells, hills, and other "conditions."

On Salisbury Plain the British government has laid down a portable railroad on which is run an armored train. One can imagine nothing more curious than to see these queer khaki-colored steel trucks flying along at five and twenty miles an hour under a perfect hail of shot and shell from an invisible "enemy." And yet, the train only contains two living persons—one the driver, and the other a recording officer, whose duty it is to report the number of hits and the general result of the fusillade.

Out of the top of the train, however, stick dummy heads of supposed soldiers, and concealed marksmen on either side of the line take very careful aim at them—for it should be said here that the most important innovation of all is the doing away with the old blank-cartridge system, whether in heavy ordnance or in small arms, and the substitution therefor of ball cartridge and live shell. So severe were British losses in the Boer war from attacks on farmhouses and other dwellings, that the British have erected several most curious structures of canvas and iron framework to represent houses of all kinds. These are defended by troops concealed in pits on the floor of the house, and both they and the attackers, who are deployed over a very wide front, use ball cartridges.

Incidentally it may be remarked that the Japanese, too, have suffered very severely from defended houses in Mukden and elsewhere. The danger to the attacking force under these conditions is sufficiently obvious, and need not further be emphasized. Inside the "farmhouses"

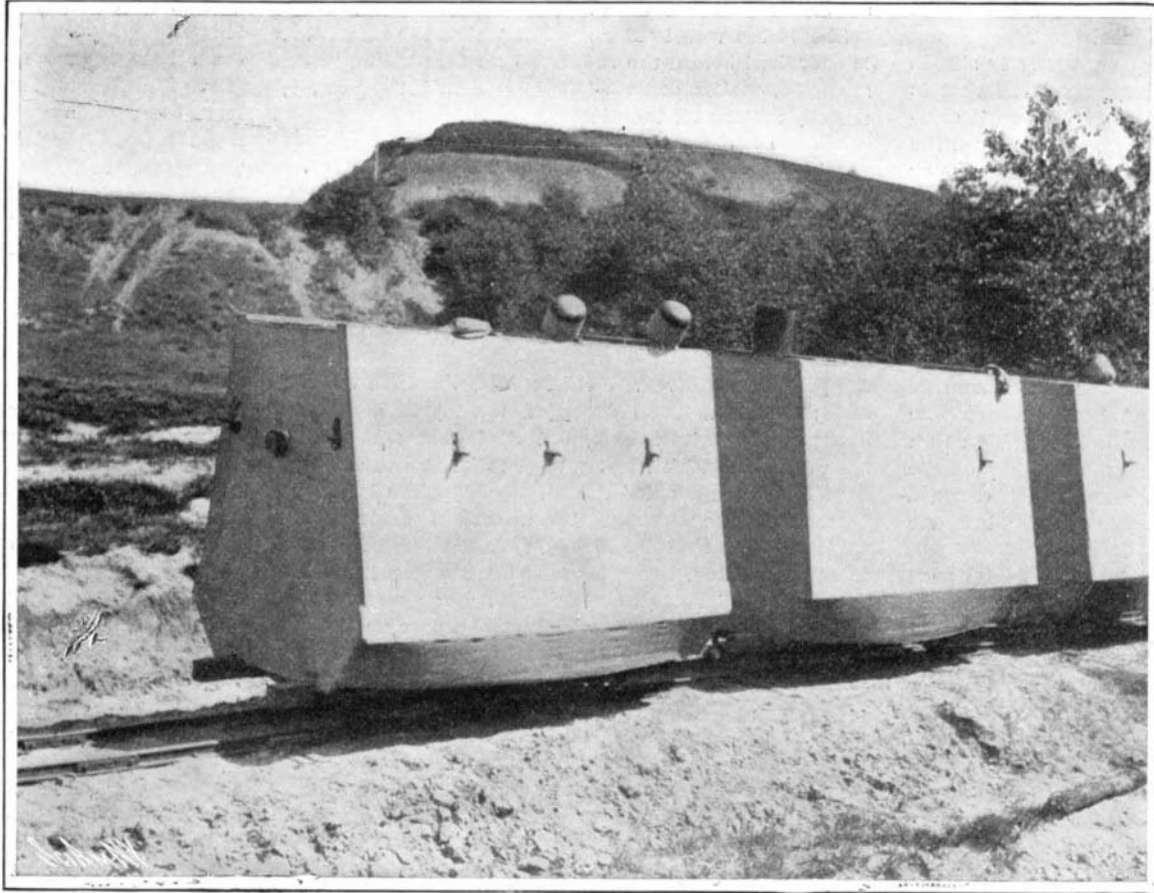
which the British build so flimsily that each bullet will make a perforation, there is one officer whose sole duty it is to take note of the number of hits, and also to direct his men's return fire. Accidents are extremely rare, so effectively are attackers and attacked

motion. There are similar dummies used to represent advancing cavalry, "head on."

As every one knows, the military cabinets of every civilized nation are represented at the front in each war in the person of their military *attachés*. These officers, specially trained and most competent observers, bring back with them data upon which their chiefs rely to bring the army into line with the very latest conditions obtaining in actual warfare. It is then the business of the various war offices so to arrange that these conditions shall be reproduced as realistically as possible in the periodical war maneuvers.

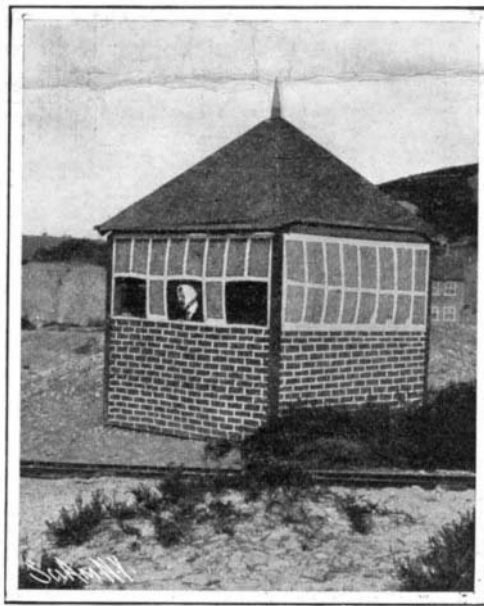
For example, both in the Boer war and the great struggle at present in progress, artillery has been so cunningly concealed that it has been next to impossible to locate it. In the war maneuvers of to-day real guns are mounted in the field in such a way that they can fire their shell and then disappear into a pit, leaving in front of them dummy cannons made of wood and mounted upon ordinary cart-wheels. These remarkable "scape-goats" are commonly pounded to pieces, so that nothing remains of them but the merest fragments.

There can be no doubt that the termination of the present war will see yet another change, even in the most realistic war maneuvers of to-day. It is common knowledge that *attachés* of the military powers of the world are constantly forwarding to the various war offices voluminous reports and suggestions; but so important and far-reaching are the changes involved or suggested, that it is probable the war departments will wait until all is over before inaugurating the new régime.



A Dummy Armored Train.

protected. When it is desired to aim at the open target, naturally human beings cannot be used; but in order to reproduce the conditions as nearly as possible, "men" ten feet high and mounted upon small trolley-cars running on rails, are ranged in line, and set in



Dummy House Made of Lath Work and Sheet Iron, Defended by Troops and Attacked by Others Using Ball Cartridges.

Inside are special officers in ditches to register the percentage of hits.

THE CONCRETE AMPHITHEATER AT BERKELEY, CAL.

BY ENOS BROWN.

The Greek amphitheater of the University of California at Berkeley, ten miles east of San Francisco, was completed about eighteen months ago. As an essential adjunct of that great institution it has proved its utility and, structurally, its perfect success.

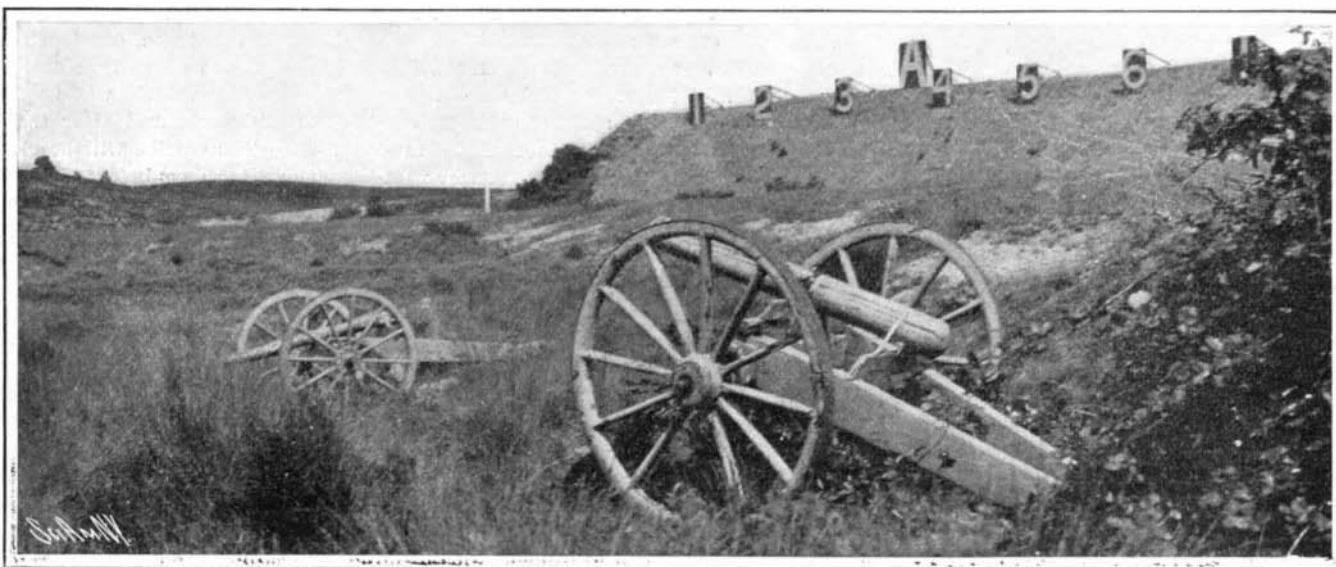
It has been the scene of important academic functions in which the President of the United States has taken the leading part, and witnessed the production of classic plays, performed by students in the garb of antiquity and recited in the sonorous tongue in which these monuments of Grecian literary genius were written over twenty centuries ago.

Nature provided a convenient site for this remarkable structure in one of the valleys of the university grounds, which extend in successive undulations from the base to the summit of the lofty range which forms the eastern boundary.

No institution of learning in the world has so incomparably magnificent a site or will (when the present architectural scheme is carried out) be housed

in so splendid a group of structures as the University of California. The choice of a location for the amphitheater was decided by the natural advantages possessed by the little valley which, by the foresight of earlier years, had been inclosed in a thick growth of eucalyptus trees. The base formed a level platform, and from all sides the banks arose in regular ascent to a considerable height.

Prior to the



Dummy Guns Made of Wood Are Placed in Position on the Field. A Firecracker or Two is Attached, Revealing Its Presence. Often the Wooden Guns Are Blown to Pieces.

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