

(For the REVIEW.)

ABERCROMBIE'S GRAVE.

[Sir Ralph Abercrombie's remains are buried in the angle of one of the bastions of the Castle of St. Elmo at Malta. A marble slab inserted in the opening of the vault recounts the history of the hero. A 110-pounder Armstrong Gun was mounted directly over the tomb when the writer visited the spot in 1863, and, from the cavalier of the work above, floats the British Ensign:]

No drooping willow weeps,
Where Abercrombie sleeps
On the bastion that towers o'er the sea
Where the billows evermore
Tell the echoes on the shore
Of him whose name was one with victory.

Near Abercrombie's grave,
Looking down across the vale
Is a sleepless, giant, iron sentinel
Crouching grim and silent there,
Like a lion in his lair,
The ashes of the hero guarding well.

When Abercrombie died,
Old England o'er the tide,
Sont this sentinel to guard his sacred tomb,
They are brothers—he who sleeps
And the giant one that keeps,
Endless vigil in the sunshine and the gloom.

Over Abercrombie's head
Floats a banner bloody red,
Victorious over sea and over land,
And the foe had need be brave,
Who on Abercrombie's grave
Would dare to lay a desecrating hand.

CARROLL RYAN.

THE TURKISH ARMAMENTS.

(From the London Naval and Military Gazette.)

There is perhaps no state in Europe which is generally regarded as so completely dependent on the forbearance and protection of its neighbours as the Ottoman Empire. We have heard so much of the Sick Man that we have almost begun to look upon his case as hopeless, and few persons are inclined to attach much importance to the armaments or the Turkish authorities by themselves. We are disposed to believe, however, that much of this feeling is due to the want of information on the subject which is to be found even in quarters where one would perhaps least expect it. Thus, when the Foreign Secretary some little time ago stated in the House of Lords that the Turkish fleet, far from being in an unsatisfactory condition, was in reality one of the most powerful and efficient in the world, many of his hearers indicated plainly enough their surprise and incredulity. Nevertheless this statement was correct. Not only is the fleet of Turkey one of the most powerful and efficient in the world, but there is every reason to believe that the position which that country has obtained among the maritime powers will be energetically preserved. Whether it is due to the enlightened character of the present Sultan, or to the ability and foresight of the late and of the present Grand Vizier, or to the energy of the foreign officers at present in the service of the Porte, certain it is that of late years both the military and naval service, but especially the latter, have received an impetus which has imparted a new life to them. It is probable that late events too have convinced the Turks that to maintain their position in Europe they must trust less to treaties and more to their own efforts. The Turkish navy at present consist of one hundred and eighty-five vessels, carrying two thousand three hundred and seventy guns, including

four line-of-battle ships, five first class mailed frigates, twelve corvettes, and five gun-boats of modern construction; and both the naval and military arsenals at Tophaneh and Haskeni are busily engaged in the construction and equipment of other first class vessels. The first iron-clad built in Turkey, the *Mukat-demiheigher*, has been on the stocks for fifteen months, and is now almost completed. It is built from the drawings of Mr. Reed, late chief constructor of the British navy, and is the sister ship of the *Fati Bulend*, constructed last year for the Turks at the Thames Iron Works. The vessel will be armed with twelve-and-a-half ton Armstrong guns, inclosed in a central box or battery, which projects two feet on each side, realizing the constructor's favorite theory of all-round fire. One great advantage which has also been secured is that she draws only seventeen feet of water. Vessels of this kind are unquestionably destined to play an important part in future warfare, and it is said that the Prussian Government has already ordered the construction of two on the plan of the *Mukat-demi-heigher*.

But it is not only to securing good vessels that the activity of the Turkish Government has recently been directed. In every department engaged in the production of war material the same energy is displayed; increased stores of arms being accumulated, of the newest and most improved patterns; and the best and most powerful machinery is being secured for the factories, the buildings of which are being permanently enlarged. Thus, at the Imperial Gun Factories at Tophaneh on the Bosphorus, an enormous new workshop is being constructed, and is, indeed, all but completed, which will probably be the finest thing of its kind in the world. Its length is something under 900 feet, and in width it measures more than 80 feet. It is intended for the manufactures of the largest guns, and the foundations for the machinery are laid upon solid rock conveniently found just below the surface of the soil. Some of the machinery is already in position, and the rest is ready to be put up. The old wooden gun-carriages and limbers too are definitely and entirely abandoned for the lighter, more durable and stronger ones of wrought iron, and this has necessitated the remodelling and enlargement of the carriage department. Tophaneh, in fact, to use the words of the excellent authority to which we are indebted for the facts mentioned in this article, is fast becoming the Woolwich of the Bosphorus.

An improvement in the system of manufacturing muzzle-loading guns on the Woolwich principle, which has been introduced by Halil Pasha is worthy of notice. These guns, made on central steel tubes, are strengthened at the breech-end by welded coils of wrought iron. Halil Pasha has substituted for these coils a jacket of cast bronze of similar shape and size. The advantages obtained by this improvement are that the danger of defects in the casting is considerably less than with wrought iron coils, the number of operations required in the manufacture fewer, and the amount of skilled labor less. The experiment made to test guns already made on this system, though nothing larger than a 63-pounder has yet been completed, have all been so thoroughly satisfactory that it has been determined to proceed at once to the manufacture of guns of the largest calibre. With regard to small arms, all the muzzle-loading rifles in store are being rapidly converted on the Snider principle, and a hundred machines for the manufacture of the metal parts of cartridges having been also erected at the disposal of the Turkish government are more

than enough to supply all possible requirements, the mills at Barout-haneh alone being large enough of themselves to supply double the quantity required, and they are now busily engaged in making pebble, bean, and prismatic powders.

But the most interesting portion of the works of Tophaneh is that devoted to the manufacture of torpedoes at Zeitoun-Bournou. The works here are under the direction of an able American officer (who we believe has patented the processes), and are making great progress. Accurate and detailed information with regard to this part of the factory operations is not at present attainable; the matter being kept as private as possible. But we believe that the extent and power of these sea defences of Constantinople will cause some surprise when they come to be fully known. From the admirable work on "Modern Turkey," which has just been published by Mr. Farley, and which is the most complete and authoritative book we have seen on almost all the subjects of which it treats, we learn that the factories at Zeitoun-Bournou have completed a large number of massive hemispherical iron tanks, each of which will contain seven thousand pounds of powder, and that it is intended to build two hundred of these tanks and sink them in suitable parts of the Dardanelles, the Sea of Marmora, at the mouth of the Black Sea, and in the Bosphorus. They are doubly rivetted, and made stronger than the strongest steam-boilers, as they will, when sunk, have to support a pressure of seventy pounds to the square inch. These are, in short, submarine mines, containing the most terribly destructive charges of powder, lying in the bed of the sea, and exploisible at will from the shore by electricity. They will be fitted with an apparatus very durable, but at the same time most delicate and unerring, which indicates at once to the operator at the electric battery on land the passage of any ship over the spot at which they are sunk. The explosion of one of them in the deep Bosphorus would utterly annihilate, within a radius of about two hundred yards, the largest iron clad ever built.

But the torpedo works are not limited to these machines, which are useful only for defensive purposes. They will be supplemented by a service of torpedo-rams for offensive operations. The immense service done by torpedoes during the American war will be remembered. It was the first occasion in which these machines were used as military engines on anything like a scientific and comprehensive scale; and during the struggle the Confederates succeeded in destroying by their agency a more powerful fleet than the Northerners possessed at first. Turkish waters are, as we have quoted from remarks, peculiarly adapted to this system of defence; and, as the kind of engine adopted by the Sultan's government is an immense improvement on those used in America, the arrangements now in progress in Zeitoun-Bournou will put Turkey in possession of the most extensive and complete system of torpedo defence in existence. All these works are at Tophaneh; but the naval arsenal, at Haskeni, is similarly active. Besides several new buildings, the whole of the boilers throughout the works have been renewed, a new smith's shop, to contain fifty fires, is in course of erection, and several large factories and foundries are to be constructed as shortly as possible. The prospect of the Turkish naval service is thus very encouraging. The fleet is in a state of thorough repair; the works now in operation, or in course of construction, will not only maintain the position now secured, but