

CAVALRY SONG.

FROM "ALICE OF MONMOUTH."

Our good steeds snuff the evening air,
Our pulses with their purpose tingle;
The foe-man's fires are twinkling there;
He leaps to hear our sabres jingle!
Halt!
Halt each earbine sands its whizzing ball.
Now, clang! clang! forward all,
Into the fight!

Dash on beneath the smoking dome:
Through level lightning's gulf, nearer!
One look to Heaven! No thoughts of home:
The gulphs that we hear are dearer.

Charge!
Clang! clang! forward all!
Heaven help those whose horses fall:
Cut left and right!

They flee before our fiercer attack!
They fall! they spread in broken surges.
Now, comrades, bear our wounded back,
And leave the forlorn to his drags.

Wheel!
The bugles sound the swift recall:
Clang! clang! backward all!
Home, and good night!
EDMUND CLARENCE STEPHAN.

The above gem is taken from William Cullen Bryant's "Library of Poetry and Song," and sent to the Journal for the personal use of those who may not have a ready access to the volume in which it found it. REGULAR.

—U. S. Army and Navy Journal.

Heavy Artillery.

Mr. Haabury Tracy moved for the re-appointment of the Ordnance Select Committee. In support of it he gave a long history of the operations of the old committee, and made various suggestions for its improvement, among other things recommending that two distinguished civilian Engineers should be added to it. It was not with a view of reorganizing our gunnery system that he advocated the re-establishment of the select Committee. On the contrary, he maintained—giving numerous details and particulars under each head—that our great guns for the navy and fortification were superior to the guns of every foreign Power, whether muzzle or breech-loading—in durability, rapidity, power, simplicity, and cheapness. Nevertheless we ought not to rest content with our present position; and it was in order that every opportunity might be taken for improvement that he wished for the reappointment of the Select Committee. In the course of his remarks, the hon gentleman said the liability of steel guns to burst was shown in the unwillingness to test them. We tested our guns like our boilers by a large surplus charge; but Mr. Krupp had never allowed his guns to be proven in this way, and on the Continent the guns were practically not proved at all. He could not find any officer in our Mediterranean fleet who had ever seen a German ship fire at target. In Russia they would not allow the large guns to be proved. They were tested up to seven tons to the square inch, while we proved them up to 11.5 tons, and occasionally even up to sixty tons. Whatever Krupp might have done, it was not clear that he had succeeded in making a gun that was sufficiently sound; and certainly in Russia, where a similar gun was made, there was not confidence enough to test it as we tested our guns. It was said that we ought to adopt a breechloader instead of a muzzle loader, because it was important to have a rapid loading under cover and great rapidity of firing; and in speaking of this question he referred only to heavy guns. In Germany it was considered sufficient to be able to fire a breechloader once in three minutes, but we had fired, on board the *Resistance*, with an 8 inch gun, eight rounds in eight minutes and fourteen seconds when the ship was rolling ten to

eleven times to a minute; on board the *Minotaur*, with a 9 inch gun, eight rounds in eight minutes and twenty-six seconds; on board the *Iron Duke*, with a 9 inch gun, eight rounds in five minutes and twenty-three seconds, on board the *Devastation* turret ship, when steaming round the target and rolling slightly, with the 7.5-ton gun eight rounds in fourteen minutes and forty-eight seconds. In the cases of the *Minotaur* and the *Iron Duke* the target was hit every time; and yet it was said that the guns were muzzle loaders, which had no rapidity of fire. On land, from a casemate with a 35 ton gun, firing a distance of 2600 yards we had discharged three rounds in six minutes thirty seconds; this was done in a limited space, and, therefore, with less rapidity than on board ship. These figures showed that for rapidity of fire our muzzle-loaders were superior to breechloaders; and he had it on good authority that some of our best Artillerists deprecated breechloaders because they impeded firing. Neither did breechloaders save labour, particularly since a partner of Sir W. Armstrong had succeeded in applying hydraulic power to loading in a way which seemed likely to revolutionize gunnery. The experiments had been made in harbour, and at sea in the turret of the *Thunderer* with the 35 ton gun. The work was done with six men instead of twenty. The apparatus was very simple; it was compatible with the use of a larger gun than a breechloader, and the loading could be effected in forty-five seconds—a speed which certainly left nothing to be desired. There need be no danger of a charge going off through a ship's bottom even in a ship adapted to the hydraulic system; but in a ship constructed for the system it might be made practically impossible. The reduction of the number of men required in a turret would enable us to diminish the amount of armour plating. With regard to power of endurance, he found from returns which had been presented that our 35-ton gun at 500 yards would pierce fourteen inches iron, eighteen inches backing, and 1½ inches skin of every ship afloat. Only six in use had fired 207 rounds. Then 368 7-inch 6½-ton guns had fired over 1000 rounds, one 2342 rounds; one of these had been provisionally condemned and one required a new tube after 1770 rounds. These guns would pierce six inches iron, and twelve inches backing. The 8 inch 9-ton gun would pierce seven inches iron and twelve inches backing. They had not been largely employed, and none were unserviceable. The 9 inch 12½-ton gun would pierce nine inches iron, twelve inches backing, and 1½ inch skin, at 200 yards, and it would pierce every Russian ship except the *Peter the Great* and the *Kreuzer*. At 600 yards it would pierce every French, German, and Italian ship. 111 of these guns had fired over 100 rounds, twelve an average of 518 rounds, and none were pronounced unserviceable. The 10-inch 18-ton gun at 600 yards could pierce eleven inches iron, twelve inches backing, and 1½ inch skin, and would pierce every foreign ship except the *Peter the Great* and the *Kreuzer* and the *Huffel* (Dutch), also our *Hercules*. Fourteen of these had fired over 100 rounds, one 693 rounds, one 189 rounds, and two required retubing after 534 and 324 rounds respectively; the rest were all serviceable. The 25-ton gun, 11-inch, could at 500 yards pierce twelve inches iron, eighteen inches backing, and 1½ inch skin, and could pierce every ironclad afloat except the *Peter the Great* and the *Kreuzer* and our own *Thunderer*, *Devastation*, *Glatton* and *Fury*. Eight of these guns had fired 100 to 485

rounds, and one required a new inner tube. A comparison between the German and English guns showed that the latter possessed greater penetration with less power. With respect to cost, the 12-inch 35-ton gun made at Woolwich cost £2156, while the Krupp or German gun cost £7400. The 11-inch 25-ton gun at Woolwich cost £1559, and the Krupp, £5520. The 9 inch 12-ton gun at Woolwich cost £1090, and the Krupp, £3120. Taking the cost of the German guns as only one half more, the four millions sterling spent on our armaments would at the German rate have amounted to six millions. Our guns were thoroughly satisfactory, but he by no means thought they would be justified in limiting their experiments to the present state of things. They ought to carry them out more rigidly, and to look very carefully into every question which arose in connection with that subject. He hoped the House would agree to his motion, which would be an immense boon to the Government, would effect a great saving of expense, and also to provide a satisfactory tribunal for inventions. CAPTAIN PRICE, however, took a very different view, and entered into an elaborate condemnation of the Woolwich system of rifling. The condition of our heavy ordnance, he contended, was such as to demand the serious consideration of the Government. The country could not afford to despise the opinion and the example of foreign countries. It must not be forgotten that steel guns and armour plating were first adopted by the French, and that we had followed the example of the Prussians in adopting breechloading small arms. Captain Simpson, of the United States Navy, who had been at the head of the American Commission appointed to inquire into the merits of the different systems of artillery adopted in Europe, stated in his report that our Woolwich guns were safe, but were short lived. In 1866 the Ordnance Select Committee carried out a series of exhaustive experiments in order to ascertain the respective merits of the Woolwich, the Scott, the Lancaster, and of another gun. The report of the Committee on Rifled Guns stated that the Woolwich guns or guns rifled on the French system had a lower velocity than the Lancaster or Scott gun—the difference between 1600 ft. per second as compared with 1520 ft. per second—the real difference in penetrating power being as the weight of the shot multiplied into the space of the velocity, which would make the difference very great indeed. With respect to accuracy, the experiments were slightly in favour of the Woolwich gun. With respect to naval guns, their best quality was not extent of range. According to Admiral Key, the best quality of a naval gun was endurance, the next was penetrating power, the next ability to use a powerful shell, the next simplicity; then followed accuracy of range and last of all was extent of range. If there were so there was a great difference between the gun required for the naval and for the land services. On the committees of which he spoke, of eight officers, but one was connected with the navy; whether that officer agreed with his colleagues he had no means of knowing; but he knew, that the Admiralty of the day rejected the system, and that since that time the 7 inch gun had been constructed on the uniform twist. The honours of the Woolwich gun had been variously stated in that House as being from 250 to 315 rounds. He would be glad to take it as the highest figure, but could not do so, as the reports before the House showed that no experiment tried would war. at him in doing so. Under the Head of "endurance" they had "no