

BAYONET CHARGES.

A recent article in the *Portland Transcript* thus speaks of bayonet charges. We have abridged it slightly, to suit our columns:—

To read the graphic descriptions in the daily press of fierce charges and sanguinary encounters with this deadly weapon, one would suppose that these were among the most common occurrences of the war, whereas it is a stubborn fact that not a single instance can be found in the whole history of it where opposing forces, of any considerable number, have stood for a moment in close quarters with this terrible instrument of death. This may seem a bold statement, but it is one which we think can be substantiated. On the bloody field of Fair Oaks, where Sickles's Brigade dispersed twice their number in a charge, I saw perhaps two thousand dead, among these there were but three that I noticed pierced by bayonets, since then I have participated in two charges, the last that of Hooker's Division, at Manassas, August 29, 1862, one of the most sanguinary of the war, but our line was at no time nearer than ten paces to that of the enemy, and the only two instances in which I saw the bayonet used, was that of two rebels who had got beyond the lines and refused to surrender. I have been informed by those who were in the grand charge of Hancock's Brigade at Williamsburgh, that they did not see one man injured by the bayonet. The Old Guard at Waterloo, it will be remembered, was led against the French by Wellington himself, yet the next morning but five bodies could be found on the entire field pierced by bayonet thrusts. And yet an English historian gravely relates, as an instance of John Bull's prowess, that a gigantic member of the Guard was surrounded and killed, after having bayoneted five of his enemies. These facts, however well substantiated, do not detract in the least from the value of the weapon in question as an instrument of assault, but they create sad havoc with the flowers of rhetoric, and the glowing language which "our own correspondents" make so frequent and fulsome use of, and which, while they delight the low and vile, create the greatest anxiety in the breasts of those whose relatives are in peril. But the reader may ask "If the bayonet is so seldom used, in what manner does it so often decide the fate of battles and of nations?" To which we answer, in its moral effect lies the secret of its efficiency. The attacking party always have the advantage, as it is reasonable to suppose that they know the number and strength of those whom they assault. The yells, the infuriated faces, the approach on the "double quick," all give such an exaggerated idea of the force, that the assaulted usually discharge their pieces at short range and fly. Even should they make a bold stand, the chances are greatly in favor of the attacking party coming to a halt and disputing the ground with powder and ball; thus the bayonet, though seldom drawing blood, performs an important part in every engagement.

It is amusing to the soldier to see what precise mathematical lines newspaper artists make in their pictures of charges, as if it were possible for exhausted men to advance in regular order over fields, ditches, and through woods. It is not possible. A charge is much like the rush of an infuriated mob through the streets of a city, those with the best pluck and longest legs leading off. It is particularly difficult in Virginia, where there is so much woodland, to maintain a good organization after being once engaged.

THE TOOLS WITH WHICH GREAT MEN WORK.

It is not tools that make the workman, but the trained skill and perseverance of the man himself. Indeed, it is proverbial that the bad workman quarrels with his tools. A great painter on being asked by what process he mixed his colors, replied: "I mix them with my brains, sir." It is the same with every one who excels. Ferguson made marvelous things with a penknife, such as a wooden clock that marked the hours accurately. A pan of water and two thermometers were the tools with which Dr. Black discovered latent heat. A prism, a lens and a sheet of pasteboard enabled Newton to unfold the composition of light and the origin of colors. An eminent philosopher once called on Dr. Wollaston and requested to be shown over his laboratories, in

which science had been enriched by so many important discoveries. The doctor took him into his study and showed him a small tray containing a few watch glasses, test papers, a small balance and a blowpipe, saying: "Here is all the laboratory I have." Stotard learned the art of combining colors by closely comparing the wings of butterflies; a stick and a barn-door served Wilkie in lieu of canvas; Bewick practiced drawing on the cottage walls of his native village; and Sir Benjamin West made his first brushes from the hairs of a cat's tail. Ferguson made a map of the heavenly bodies by means of a thread with knots on it stretched between his eyes and the glass; and Franklin robbed the clouds of their lightning by means of a kite made with two crossed sticks and a silk handkerchief. Watts's first model of a steam engine was made out of an old syringe, and Guifford worked his problems on leather with a blunted awl, while he was a shoemaker's apprentice. These examples are by no means confined to the past century; our contemporaneous history is full of just such instances. General Banks, the brilliant soldier, was once a machinist; General James, who was lately killed, worked as a carpenter; and many in civil life now fill high positions of honor and profit, whose early lives were a long struggle with poverty and deprivation.

A Noble Example.

Among those drafted in Lebanon county, Pa., the only man was the proprietor of the Cornwall Furnace, Mr. Robert Coleman. Not being able to go himself, he assembled his workmen and asked whether any of them would be willing to go in lieu of himself, providing he was liberally paid. After some hesitation, one of the men present informed Mr. Coleman that he was willing to go as a substitute. The man was closely questioned and fully informed of the danger to which he subjected himself, but he frankly declared that he was willing to go, on which Mr. Coleman presented him with a check for \$3,000, and guaranteed, further, that, in the absence of the substitute, his family was to receive a sum each week equal to that which he earned as a laborer. In addition to this sum, Mr. Coleman stipulated to pay to the wife of the man thus acting as a substitute the sum of \$3,000, in case he should be killed in battle or die by any of the diseases incident to the camp. This is a noble example of liberality.

How Does Your Rifle Carry?

Lieut. Busk in his "Hand-book for Hythe"—the English rifle school—says: "I cannot imagine a more helpless or hopeless position than that of an individual who, having determined to expend his ten or twenty guineas in the purchase of a rifle, and guided only by the light of nature, applies to a gun-maker to supply his want. I never hear of an inexperienced buyer in search of a rifle without being reminded of the purchaser of a telescope, who, on asking the optician, among a multitude of other questions, whether he would be able to discern an object four miles off, received the reply: 'See an object four miles off, sir? You can see an object four and twenty thousand miles off, sir—you can see the moon, sir!' In like manner, if you naively enquire of a gun-maker whether a particular rifle will carry two hundred yards, the chances are he will exclaim emphatically: 'Two hundred yards, sir? It will carry fifteen hundred!' And so no doubt it may. The only question is, 'How?'"

Change of Color for Ships of War.

The deep black which our ships have been painted has proved to be a very prominent mark to shoot at, in consequence of which, a change has been made to a grayish drab. The steamers *R. R. Cuyler* and *Ossipee*, now at the Portsmouth Navy Yard, have been painted this shade, which makes them much more "invisible," so that one standing on this side of the river can hardly distinguish the vessels from the wharf or the water, whereas a small black boat and a schooner stood out in bold relief.—*Portsmouth Chron.*

[We were much struck with the truth of this fact a few days since when crossing one of our ferries. The iron-clad vessel, *Passaic*, is painted in lead color, and though but a few hundred yards distant from us, while the sun shone so brightly that we knew exactly in what direction to look for the vessel, we could hardly distinguish her.—Eds.]

RECENT AMERICAN INVENTIONS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list.

Boot and Shoe Stretcher.—Among the many instruments used by bootmakers to facilitate the accurate stretching and fitting of particular parts of the boot, we know of none that are superior to this excellent and ingenious implement. Three rods are so nicely combined and arranged together under the immediate control of the operator, that by turning them the instep of the boot may be raised and stretched; the toe parts may be similarly worked, and the foot portion may be widened or spread. All these operations may be effected with great ease and rapidity. We think that this invention will prove to be a very desirable acquisition to the bootmaker's shop. J. G. Young, Jr., of Auburn, Maine, is the inventor of this device.

Corpse Preserver.—The object of this invention is to arrest or check the decomposition of a body for several days after death, and to present the features in a perfectly natural state as to expression, color, &c., on the day of burial and also keep the body free from smell. The invention consists in the arrangement of a movable cooling board fitted into the body chamber with an air-tight joint, in combination with an ice-box and cold-air chamber, forming the top or cover of said bridge chamber, in such a manner that a body or corpse, fastened to the cooling board and introduced into the body chamber, is exposed to the cooling influence of the ice without coming in contact with the moisture or water formed by the melting ice, and at the same time convenient access may be had to the corpse, if it is desired to look at the features of the deceased from time to time, or the corpse may be closed up air-tight if that course is rendered advisable. Lewis D. Bunn, of Morristown, N. J., is the inventor of this preserver.

Balancing Slide Valves.—The object of this invention is to provide for the balancing of the slide valve; that is to say, to relieve it of unnecessary pressure toward its seat, and to this end it consists in making such valve of two pieces, one of which constitutes the face, and the other the back, and which are fitted together with transversely inclined planes or wedge-like surfaces, which permits them to be so adjusted relatively to each other, by a screw or its equivalent, that while the face works in contact with the seat, the back will work in contact with a parallel surface provided on the interior of the back of the valve chest, and so be kept entirely protected from the pressure of the steam. The inventor of this device is John B. Roach, of Elizabethport, N. J.

Cotton Gin.—This invention relates to that description of gin known as McCarthy's, in which one roller is employed in conjunction with a fixed and vibrating blade. It consists, first, in the employment of two of such vibrating blades acting alternately upon the usual roller and fixed blade; and, secondly, in the adaptation of apparatus whereby the material is regularly supplied to the roller and blades, and is presented thereto in a more open and suitable condition for the separation of the seeds. John Platt & Wm. Richardson, of Oldham, England, are the inventors of this gin.

Crushing Linseed.—The object of this invention is an improvement in that class of machines for crushing or mixing any substance in which two disks or wheels are employed, which are connected to a rotary vertical shaft by means of a horizontal axle, so that they have an independent rotary motion around said horizontal axle on a stationary trough or platform. The invention consists in introducing the substance to be crushed through a channel passing down through the center of the vertical shaft in such a manner that said substance is fed between the crushing wheels, and that the required supply can be effected by an elevator or other mechanical means, dispensing with the hand labor generally employed for this purpose. Thomas Rowe, of New York city, is the inventor of this improvement.

LONDON and Peking are expected to be connected by telegraph within a few months. A line through Russia, Siberia and Mongolia to the latter city is being constructed.