

as may be desired. The casing is of lacquered brass; the cap is of a special form and bronzed, so that there may be no hesitation as to the proper manner of grasping the instrument. The closing of the glass tube to prevent the possible entrance of air required much study and many experiments. The following method was adopted: The tube is closed by two rubber plugs compressed in the casing. A large number of instruments constructed in this manner have been under observation for some months, and, though frequently carried suddenly from temperatures varying between 140 deg. and 14 deg., yet, up to the present time, no trace of air is discoverable; they appear to be able to last for years. Yet, as it is probable that in the course of time bubbles of air may get in, this contingency has been provided for in the following manner: An air chamber is formed in front of the plug at the origin by a silver funnel-shaped disc set into the glass. Air imprisoned in this chamber can escape only with great difficulty, while it may enter with ease. Should then a bubble appear in the fluid it is only necessary to hold the instrument vertical and to give it several slight taps during the descent of the index so that the bubble may pass it, when it is caught immovably in the net. It is preferable, however, to leave a little air to facilitate the expansion and contraction of the liquid. Instruments made in this manner will stand, it is believed, at least ten years' service. Owing to the air chamber, the tube may be hermetically sealed, but the method already described is esteemed better, as it makes the instrument stronger and more compact. Three models have been established to meet the various wants of the Army.

The following remarks of the *Army and Navy Journal* shows the value of the instrument—but notwithstanding all the advantages it offers it must require nice and careful manipulation—at the same time it is the simplest yet invented for the specific purpose it is intended to serve:

"The account of the above instrument has been transmitted to the *Journal* through the courtesy of Captain O. J. Michaelis, Ordnance Department, U. S. A. It needs only to be examined to be appreciated, for the simplicity and accuracy of principle and result combined in its construction. A practicable and rapid way of obtaining the distances of an enemy has become one of the great desiderata of the age since rifled fire arms have been invented and long range sights come into common use. Give a skillful rifleman a good weapon, and the distance, and the man will put his bullets into a mark the size of another man at half a mile, with as little difficulty as at 200 yards. This has been shown, both at Creedmoor and Wimbledon, the average number of bull's eyes at 500, 600, and 700 yards, having exceeded the average at 200 yards, among skilled shots. This arises from the fact of any position being allowed. The steady rest offers advantages over the erect position and trembling sights produced in offhand shooting. In war time, the same general result follows, from the fact of the smaller extent of the dangerous space in long range shooting. A man feels safer, keeps cooler, and fires more carefully at long range than he does at short, when the fire is more hot, rapid, and confusing. The use of the telemeter in the hands of every officer in a long line will tend to encourage coolness. It will then become an object to reserve your own fire and provoke that of the enemy at long

ranges, so as to get the advantage of knowing his distance and concealing your own. Once his range is ascertained and the sights properly elevated, a brisk fire being opened all along the line will prevent the enemy from using his own telemeters to any useful purpose, from the confusion of flashes and reports becoming lost in one another. Thus its use would tend to improve the behavior of officers and men under fire, encouraging them to patient waiting while on the advance, and to heavy and rapid firing only when it is most useful and necessary.

For Artillery, the use of the telemeter must prove of very great value, in the saving of expensive projectiles now thrown away every time a battery comes into action to "get the range." At sieges the instrument will give the attack a new advantage in opening first parallels and establishing batteries within proper range of every piece of the besieged that announces the distance with its tell-tale flash. In rapid military and other sketching it must prove of great convenience in measuring long distances to certain points, by sending a man to those points to fire off a piece, and mark the distance. Many other uses will suggest themselves to any person acquainted with applied trigonometry and mensuration, such as the telemeter to check a rough triangulation, and vice versa. On these we shall not enlarge for the present, contenting ourselves with presenting to American officers the first public account of one of the most remarkable military inventions of modern times."

### A Cunning Soldier.

THE PRICE OF TWO POTATOES IN 1805.

The following anecdote of the first Napoleon was related by an Englishman, who was a considerable time in the French military service, and who vouches for its authenticity: The evening before the battle of Ulm, when Napoleon the First, in company with Marshal Berthier, was walking *incognito* through the camp and listening to the talk of his soldiers, he saw in a group not far off a grenadier of the Guard, who was roasting some potatoes in the ashes. "I should like a roast potato above all things," said the Emperor to the Marshal; "ask the owner of them if he will sell one." In obedience to the order, Berthier advanced to the group and asked to whom the potatoes belonged. A grenadier stepped forward and said—"They are mine." "Will you sell me one?" inquired Berthier. "I have only five," said the grenadier, "and that's hardly enough for my supper." "I will give you two Napoleons if you will sell me one," continued Berthier. "I don't want your gold," said the grenadier; "I shall be killed, perhaps, to-morrow, and I don't want the enemy to find me with an empty stomach." Berthier reported the soldier's answer to the Emperor, who was standing a little in the background. "Let's see if I shall be luckier than you," said the latter, and going up close to the grenadier, he asked him if he would sell him a potato. "Not by a long shot," answered the grenadier; "I haven't enough for myself." "But you may set your own price," said Napoleon. "Come, I am hungry, and haven't eaten to-day." "I tell you I haven't enough for myself," repeated the grenadier; "beside all that, do you think I don't know you in spite of your disguise?" "Who am I, then?" inquired Napoleon. "Bah!" said the grenadier. "The Little Corporal, as they all call you. Am I right?" "Well," said

Napoleon, "since you know me, will you sell me a potatoe?" "No," said the grenadier; "but if you would have me come and dine with you when we get back to Paris, you may sup with me to night." "Dona!" said Napoleon; "on the word of a Little Corporal—on the word of an Emperor." "Well and good," said the grenadier. "Our potatoe ought to be done by this time, there are the two largest ones, the rest, I'll eat myself." The Emperor sat down and ate his potatoe, and then returned with Berthier to his tent, merely remarking: "The rouge is a good soldier, I'll wager!" "Two months afterward Napoleon the Great was in the midst of a brilliant court at the palace of the Tuilleries, and was just sitting down to dine, when word was brought to him that a grenadier was without, trying to force the guard at the door, saying that he had been invited by the Emperor. "Let him come in," said His Majesty. The soldier entered, presented arms, and said to the Emperor: "Do you remember one having supped with me off my roast potatoe?" "Oh, is that you? Yes, yes, I remember," said the Emperor; "so you have come to dine with me, have you? Rustan, lay another cover on your table for this brave fellow." Again the grenadier presented arms, and said: "A grenadier of the Guard does not eat with lacqueys. Your majesty told me I should dine with you—that was the bargain; and, trusting to your word, I have come hither." "True, true," said the Emperor; "lay a cover here near me. Lay aside your arms, *mon ami*, and draw up to the table." Dinner over, the grenadier went at his usual pace, took up his carbine, and, turning to the Emperor, presented arms. "A mere private," said he, "ought not to dine at the table of the Emperor." "Ah! I understand you," said Napoleon; "I name you Chevalier of the Legion of Honor and Lieutenant in my company of Guards." "Thank you heartily," returned the soldier. "Vive l'Empereur!" he shouted, and then withdrew.

Agents of the French Government have made contracts in Bohemia for 10,000 horses to be delivered next June.

The Rothschilds have issued a prospectus for a new Russian loan of fifteen million pounds with interest of four and a half per cent. per annum, to be issued at 92. Of the total amount eight million pounds are offered for subscription in London, the balance is reserved for St. Petersburg.

A correspondent, writing from Baroda, describes the enthusiasm with which the native population all along the line of railway between Bombay and Baroda received Sergeant Ballantine after his arrival in India. Natives cheered him as the trains rushed past; at the stations crowds were assembled to welcome him by sprinkling them with pansopari and adorning him with garlands. The feeling of even the natives in the Bombay Presidency runs very strongly in favor of the Guicowar.

*L'Union* says the Pope has made representations through the Patriarch of Venice to the Emperor of Austria that the position of the Church is becoming more and more intolerable and that if the unreasonable demands of Prussia are not resisted by the Catholic powers, the latter will lose all their influence and become subject to the German Government, which is endeavouring to bring the whole German nationality under one sceptre. The Emperor replying to this, through the Austrian Ambassador at Rome, deplores the struggle between Church and State and advises prudence.