

their reserves to retake the Mamelon after the French had carried it by assault, which was then in contemplation. Sentries were now placed, and for two hours we chatted, some few Russian officers speaking English, and several being conversant with French.

During the cessation of hostilities, some Russian officers remarked on the excellent practice made by a 68 pounder gun, in the 21-gun battery, and informed us that they had one of equally heavy calibre, with which they meant the following morning to silence our gun, which had done them much damage. The challenge was eagerly accepted. Soon after daylight next morning the Russian gun opened fire, and was answered, shot by shot, from our right 68-pounder, no other guns taking part in the duel. Our practice was superior to that of the foe, and after we had fired our seventeenth shot, the Russians "ceased firing" and dropped a mantlet over the embrasure, thus admitting that their gun was silenced.

The Russians answered our fire slowly, but carefully, and during the first hour's work the embrasure of the 8-inch gun which the greatest portion of the fire was cut down and rebuilt three times. After firing between two and three hours, the 8-inch gun, which stood in the angle of the battery, the right half of which fired at the Redan, became so hot that we were obliged to "cease firing," and the men released from their work crowded up on the raised platform so as to stand out of the water, which in the dug-out trench was half way up their knees. The other two guns remained in action.

It was important to observe exactly the first impact of each shot, which, with a steady platform for the telescope, I was able to effect calling out "ten yards to the right," or "twenty yards short," as it struck the parapet or ground. I was resting my left hand with the telescope on the 8-inch gun, and was steadying my right hand on the shoulder of Charles—, first class boy, while I checked the practice of the centre and right-hand gun, when a man handed round the grog for the gun's crew then out of action. The boy asked me to move my elbow while he drank his grog, so that he might not shake me, and

on receiving the pannikin he stood up, and was in the act of drinking when a shot from the Redan, coming obliquely across us took off his head, the body falling on my feet. At this moment, Michael Hardy, having just fired his gun, was "serving the vent." This consists in stopping all currents of air from the gun which, if allowed to pass up the vent, would cause any sparks remaining after the explosion to ignite the fresh cartridge. Hardy, like the rest of the gun's crew, had turned up his sleeves and trousers as high as he could get them; his sailor's shirt was open low on the neck and chest. His face, neck, and clothes were covered with the contents of the boy's head; to lift the thumb from the vent might occasion the death of Nos. 3 and 4, the loader and sponger, who were then *ramming home*; but he never flinched. Without moving his right thumb from the vent, with the left hand he wiped the boy's brains from his face and eyes as he looked round on us. Those sitting near me were speechless, startled, as indeed was I, for I had felt the wind of the shot, which passed within six inches of my face, when we were awakened to a sense of the situation by Hardy's somewhat contemptuous exhortation as he thus addressed the men: "You—fools, what the hell are you looking at? Is the man dead? take his carcase away; isn't he dead? take him to the doctor. Jim, are you home?"—this was said to No 3, the loader, who was in the act of giving the final tap on ramming home the fresh charge, and on getting the answer, "Yes," without bestowing another look at us, or possibly even seeing me, Hardy gave the order to his gun's crew, "Run out, ready."

I saw a great deal of Hardy after this episode, for always going to battery together, he carried down my blanket and tea-bottle, receiving my allowance of rum for his services. He was in many ways a remarkable man, for, having been stationed on shore for a little time in Eupatoria, he collected, doubtless by questionable means, some ponies, which he used to let out on hire to the officers of the fleet for a ride. Brave beyond description, he was an excellent sailor in all respects when kept away from drink, but any excess rendered him unmanageable. I shall relate his heroic end in the next number of these reminiscences.

Powder Engines.

In the course of an interesting lecture on "Modern Explosives," recently delivered by Colonel Barker, Superintendent of the Royal Small Arms Factory, Sparkbrook, reference was made to the

possibilities of the industrial use of high explosives for generating motive power. The construction of a gunpowder engine has often been attempted. But this explosive is ill adapted for such a purpose—in the first place, because it only develops in combustion about 280 volumes of permanent gases, while the solid residues are very considerable, and would soon clog any machine. At the same time, it should be remembered that one pound of gunpowder is capable of developing 170,280 foot pounds of energy. The new smokeless powders are capable of developing still higher energy, and are also more under control, while giving off nearly 1,000 volumes of permanent gases, and leaving no solid residue. The temperatures developed by all these propellants are high; but it is very possible to overcome this difficulty, in the same way as it is done in the case of gas engines, or even by making use of the energy of the water so employed when converted into steam. As English cordite develops 1,250 calories per gramme, the possibility of its employment in some form of "powder gas" engine is not without attractiveness to engineers of a speculative turn. The temperature of gunpowder on explosion is about 4,000° Fah., and that of the smokeless powders is believed to be considerably higher, though this has not yet been fully determined.

"Girl I Left Behind Me."

An English contemporary says:—"The Girl I Left Behind Me," according to tradition, became the parting tune of the British army and navy about the middle of the last century. In one of the regiments then quartered in the south of England there was an Irish bandmaster, who had the not uncommon peculiarity of being able to fall in love in ten minutes with any attractive girl he might chance to meet. It never hurt him much, however, for he fell out again as readily as he fell in, and so acquired a new sweetheart in every town the regiment passed through. Whenever the troops were leaving the place where he had a sweetheart he ordered the band to play, 'The Girl I Left Behind Me,' which, even then, was an old Irish melody. The story of his accommodating heart soon spread through the army, and other bandmasters, at the request of officers and soldiers, began to use the melody as a parting tune, and by the end of the century it was accounted disrespectful to the ladies for a regiment to march away without playing 'The Girl I Left Behind Me.'

The oldest known version of this song (1770) is called "Brighton Camp" and it is supposed by Mr. Chappell to have been written in 1758-59, when we had troops encamped on the South Downs in expectation of a French invasion. Mr. Molloy says that "this melody, although claimed by the English, is indisputably of Irish origin," but it must be allowed the melody is very unlike any well authenticated Irish air.