"The second experimental attack upon the double bottom of the iron paddle steamer *Oberon* took place on Friday last week, off the east end of Stokes Bay, near Portsmouth, under the supervision of the War Office *Oberon* Committee, presided over by Sir William F. Drummond Jervois, K.C. M.G., C.B., Royal Engineers. The *Oberon* was built at Deptford, as far back as 1841, and structurally, therefore, she must be a weak, as well as an old vessel. For these experiments a double bottom has been given her. The outer skin plates now cover the cellular spaces built upon the old bottom of the ship to represent the bottom of an ironclad being of 13-16ths and ½inch plates. The bottom of the *Oberon*, thus prepared, is supposed to represent the bottom of Her Majesty's ship *Hercules* in strength. This being premised, the results to be obtained by firing submarine mines at decreasing horizontal distances from the *Oberon's* bottom, will furnish to the torpedo committees valuable *data* relative to fixed distances from which sunken mines can be exploded with certain effect upon the double bottoms of ironclad ships. At present the *Oberon* Committee appear to be confining their experiments within those limits, but as they proceed the "fish" or other forms of moving topedo may possibly be employed. At the previous experimental attack upon the *Oberon* (4th inst) a charge of 500 pounds of compressed Waltham Abbey gun cotton, in 9oz. discs, saturated with fresh water, and primed with about one pound of dry cotton in a water proof bag, was sunk at a distance of 100ft. horisontally from the *Oberon*, in a watertight iron case, in 48 feet depth of water, at the time of explosion, about slack tide. The firing wire from the priming charge to the shore at Fort Monkton, a distance of about 800yards. The mine was exploded, and, as Sir William Jervoise had anticipated, without damage to the *Oberon*, or to the condenser on board. The ship, had, of course been lifted up by the explosion of the mine, and loose things on board generally shook up. Two lambs on board sustained *no injury*. An examination of the vessel in dock the day after the experiment proved that the double bottom under water was also entirely uninjured.

"The experiment last week was arranged to be a repetition of the first experiment in all particulars, except in the distance of the mine from the *Oberon*, which was 80 feet horizontally from the vessel instead of *100ft.* as before. There were, however, two other alterations in the conditions which must be noticed. The *Oberon* was now moored a little further off the edge of the shoal than on the previous trial, and the mine was exploded in a depth of water of about 52ft. instead of 48ft., as on the previous occasion. The other alteration was that the gun cotton was saturated with fresh water to the extent of 1½ per cent. above the amount of saturation on the first trial.

The president and members of the *Oberon* Committee, comprising Colonel Sir F. W. D. Jervois, *R E*, Captain *Singer*, R.N., Lieut.-Colonel Stotherd, R.E., Lieutenant W. H. Hall, R.N., Mr. Abel, chemist to the War Department, and Lieutenant J. Townsend Bucknell, R E., secretary, left Southsea and Portsmouth Harbour about two p.m. in the Royal Engineer steam launch and the *Excellent's* steam cutter for the *Oberon*, which lay moored in her old position off Fort Monckton, at the east end of Stokes Bay. Other steam and gun vessels followed with members of the Naval Torpedo Committee, naval and military officers, War Office ticket holders, &c., and soon there was a goodly ring of vessels assembled round the *Oberon*, but at respectful distances.

"High water slack, soon after three p.m., had been selected as the best tide for making the experiment, and fairly punctual to the time the mine was fired by the Engineer officer ashore. An immense fountain-like body of water and black mud rose into the air to a height estimated variously from 150 feet to 200ft., which in falling again flooded the *Oberon's* deck. It exceeded threefold the column of water and mud thrown up in the last experiment; but here there was a greater fresh water saturation of the 500lb. gun cotton forming the charge of the mine, and the latter had also a greater head of water over it than the previous mine had. The *Oberon* still floated, however, without any visible injury to the exterior of her hull, and on examination it was found that no injury whatever had been done to the sides of the vessel, to the condenser, or its tubes. The loose things on board as on the previous occasion, were generally shaken out of their places, and the old and rotten wooden planking of the decks in one or two places was started; but this was the extent of damages discoverable even in this direction. It is, however, impossible to say whether the double bottom of the *Oberon*, representing the double bottom of the *Hercules*, had suffered any damage or not by the explosion until she had been examined in dock, for which purpose she was at once towed away into Portsmouth Harbor.

"The War Office programme of the experiments gives the subjoined figures:—"Weight of *Oberon's* hull before the outer skin and frames were added to represent *Hercules* double bottom, 590 tons. Present weight 926 tons. Weight of condenser, slinging cable to hull, &c, 30 tons. Forty-four crusher guages are fitted to the starboard side of the ship, the side attached. Over each side of the vessel there are also suspended by 3-inch ropes, 12ft. long, 18-pounder round shot, each shot having a crusher gauge, but with a piston of smaller weight than the other gauges. The weather, a light wind and smooth water, was very favorable. The next experiment will most probably be made some time during next week."

THE experiments on the *Oberon* (an account of which we copy from *Broad Arrow* of August the 29th) is a decisive proof of the fallacy of attempting to use the *torpedo* as an effective weapon of warfare. A very trifling amount of time spent in calculating the expansion of the gases (which in the real explosive force in gunpowder, gun cotton, glycerine, dynamite, or any of the fulminates) would show that the resistance offered by water being equal on all sides but capable of accummulating laterally as the out of the force employed would compel the energy of the charge to be expended upwards in the line of least resistance and that except it was exploded directly under the hull of the vessel it could do no positive damage. Until the operators can place the torpedoes so that a vessel must pass over them and then that they shall be able to explode them on the instant, their use as weapon of offence or defence is more than doubtful. The United States *Army and Navy Journal* speaks of the above experiments.

"The second series of experiments to test the effect of distance on the results of the explosion of electrical mines (or as some call them, stationary torpedoes—practically the same as Major Abbot of the Engineers has been constructing at Willet's Point), has been completed in England. At the first trial the *Oberon* was placed with 100 feet of water intervening between her and the mine, which was charged with 500lb. of gun cotton, equal to about a ton of gunpowder), and the result was that the vessel, so far from being blown to atoms, was comparatively unharmed, and if she had been an enemy's attempting the entrance to a harbor, she could have entered it in spite of the explosion of the torpedo. At the second experiment a similar torpedo similarly charged was used, but the distance to the *Oberon* was reduced to 80 feet; and the results were to all intents the same. As the London *Engineer* remarks, they differed only in *degree* rather than in *character* from those obtained at the long distance. The vessel was much shaken, and everything that was not firmly fixed was violently dislodged from its position. Still the *Oberon*, if a hostile vessel, could have gone on in spite of the disturbance. There was some leaking but it was afterwards discovered, on examination, that it was due to the injury effected on some ballast tanks from which the water poured out. At the next experiment the distance will be reduced to 60 feet. Whenever the result of this—and it may be the disablement of the vessel—the experiments show, what we contended in our strictures on Major Abbot's mines, that their power as offensive weapons has been greatly exaggerated. So many elements besides distance enter the problem of their action that it is not safe to rely on them for the defence of important harbors. Electrical mines fired by an observer on shore, even with the aid of guns mounted in fortifications, are by no means a sure defence for harbors. They will not protect a deep harbor against a first-class modern ironclad fleet. The experiments with the *Oberon* indicate that a vessel might be provided with outriggers or other appliance, that would sweep away the mines within sufficient distance to allow the ironclads to pass with safety. The torpedo question it will therefore be seen, is by no means solved by these anchored magazines."

"Last winter the announcement was made in England that all the soldiers of the war of 1812 were to be pensioned by the Imperial Government. In accordance with the announcement, the veterans of the Colonial Militia who served with the Imperial troops made application for the pension through the Dominion Government, but informed, as we stated some time ago, that the pension would be given only to soldiers in the regular army. The Government of the Dominion have been considering the matter, and have determined to ask Parliament for such an amount as will give a small pension to the survivers of the grand old veterans who, as part of the Provincial forces, lined the frontier of British America, and maintained their country's independence. They well earned this in their declining years, and will not have reason to feel hurt that the regular soldiery were pensioned, while they were left to suffer from neglect."

THE foregoing paragraph from the Ottawa *Times* of 19th October, must be particularly gratifying to the people of Canada. There