

loss in these actions was only 7 officers and a few hundred men, while the French lost 1,000 in prisoners alone. The French have been badly beaten near Amiens. Their army was totally routed and fled toward Arras. Four French guns were captured. On Monday, the 28th, the main body of the French Army of the Loire attempted to force a passage toward Fontainebleau by a heavy and general attack. They encountered the 10th Prussian corps at Beaune, 26 miles north of Orleans. The Prussians were quickly reinforced with the 6th infantry and 1st cavalry divisions. The French onslaught was repulsed with heavy loss in killed, wounded, and prisoners, especially the latter. Failing in this attempt the army of the Loire withdrew.

VERSAILLES, Nov. 30, noon.—It now appears that the greater part of the French army of the Loire was engaged against the Prussian 10th corps at Beaune on Monday. From additional particulars which have just come to hand, in the reports of commanders, there is no question but that the defeat of the French was most complete. At least 1,000 killed were left on the field by the fleeing French; 1,700 unwounded prisoners had been captured by the Germans at the last account, and the number was constantly increasing as the Prussians were in close pursuit. A sortie from Paris was made in the direction of St. Cloud on Monday. It was easily repulsed by the Prussians, who suffered only a slight loss. The people of Versailles were terribly excited during the battle.

L. PERRAULT & CO'S. PRINTING OFFICE.

The Messrs. Perrault, the exterior of whose handsome and elegant printing office we illustrate on our last page this week, have unquestionably one of the finest printing establishments in Canada, and they have already secured a wide reputation for the execution of job printing in the neatest and most artistic manner. Interiorly their establishment presents a most orderly and attractive appearance, the arrangement of the presses, printing material, &c., being such as to give the best facilities for the speedy execution of work. Messrs. Perrault have lately become proprietors of the French journal *Le Pays*, which they publish daily both morning and evening. They also issue a weekly edition of the same sheet. We know not whether the change in the proprietary will affect the politics of the *Pays*, which heretofore have been of the most prominent liberal stamp.

QUEBEC.

Many of our readers are familiar with the ancient town of Quebec: its narrow streets, its quaint buildings, its break-neck side-walks, and steep hills, its esplanade, its magnificent citadel, and no less magnificent scenery surrounding it. In this number we give a view looking westward from the towers of Notre Dame Cathedral, taking in St. John's and St. Roch's suburbs with a part of the valley of the St. Charles in the distance. Many of the most important events in the history of Canada are associated with Quebec. There Jacques Cartier in 1534 founded the the Indian village of Stadacona, and in 1605 Samuel Champlain founded the city of Quebec, showing great sagacity in the selection of the site which, for defensive purposes, is so important as to have earned the title of "the Gibraltar of America." Before the final conquest of Canada, Quebec suffered more than an ordinary share of the vicissitudes of war; and if enormous and terribly destructive fires can be ranked among the miseries of peace, it has had an unfortunate pre-eminence in these. Its progress has therefore not been so rapid as that of the cities further west, but after a long time of stagnation it promises again to enter on the march of advancement with renewed vigour. The railway and colonization road schemes now being carried out under the encouraging patronage of the Local Government, promise to establish a rural population in the country around Quebec that will add immensely to the trade and commercial importance of the city.

A despatch from Quebec says:—"The Gosford Wooden Railway was formally opened on Saturday by an excursion trip over the whole line, in which the Lieutenant-Governor, the Speaker of the Assembly, a large number of members of both Houses of Parliament, the New Brunswick delegates, members of the press, and many leading citizens participated. The excursionists were provided with a splendid luncheon at Gosford, and speeches appropriate to the occasion were made by the Lieutenant-Governor, Mr. Joly, M. P., Hon. Mr. Chauveau, Senator Berthelot, and others, all agreeing, from the satisfactory manner in which the road worked, that wooden railways were the best colonizers for Quebec."

THE MARTINI-HENRY RIFLE.

After the conclusion of the investigation of breechloading small arms by the sub-committee appointed to the work, the War Office lost but little time in taking steps to subject the rifle that had been recommended by the Committee to the real test of every-day work and ordinary usage in the hands of troops, in order to ascertain how far the favourable opinions that had been officially expressed were justified. Accordingly, in the beginning of last year, 200 rifles were ordered, and these made chiefly by hand labour, but partly by the aid of such machinery as could be readily adapted for the purpose, were completed and served out in the summer of 1869. In distributing the arms, care was taken that they should be subjected as far as possible to the different circumstances arising from variation of climate, and the specialities of the different services. Accordingly they were despatched to Aldershot and Dublin, to the school of Musketry at Hythe, to the Royal Engineers at Gravesend, to Portsmouth, Quebec, Ottawa, and Montreal, on board the Excellent at Portsmouth, and the Cambridge at Devonport. The rifles thus distributed were exposed to some months of hard service, to ascertain, if possible, their defects, and to learn how soon the men became accustomed to them. Out of these two hundred weapons, seven failures are reported, which may, most of them, be traced to faulty manufacture, arising, at least in some cases, from the fact that they were hand, and not machine made. Two fractures were due to flaws in the metal, one to unfair usage; in two cases evident signs existed of defective workmanship. There exists but one opinion as to the facility of loading the Martini-Henry. Out of all the reports sent in, there are but two instances in which the cartridges were introduced with difficulty, pointing out again either the deficiency of the hand made mechanism, or defects in the cartridge. Indeed, the cartridges supplied appear to have been unsatisfactory. They show an inequality in size, a readiness to bend, and a tendency for the paper round them to ruck up and strip, preventing its insertion into the breech. This fault in the cartridge was made manifest, also, in many instances by the failure of the extractor, which refused to eject the case, in some instances tearing the base from the body. In some of the rifles under trial, however, the extractor action was decidedly bad, but as in the majority it was perfect, the failures may fairly be traced to the faults in the construction of the hand-mechanism. It is worthy of note, however, that the lever in none of the rifles has been bent or broken, so as to impede the action, a somewhat important fact, when it is remembered that the men were strange to the use of these arms, which in many cases required an undue amount of force to manipulate them. In regard to the fouling of the breech mechanism by dirt and rust through exposure and careless treatment, the evidence of practice fairly bears out the experiments of the Select Committee, who, it will be remembered, subjected the experimental arm to exceptional tests, which it stood remarkably well. It would appear from the reports sent in upon this point, that, though rust and grit accumulated in the mechanism, no impediment to free action was the result. Indeed, the arrangement of the breech is perhaps the best possible to obtain a freedom from the dangerous consequences of rusting. One of the principal objections urged against the Martini breech was based upon the use of the coiled spring which impels the striker, and which, it was argued, would become deficient in its action, besides being liable to break, and so reduce the efficiency of the rifle, if not rendered it useless till the defect could be repaired. We do not consider that the trials of the Committee were quite conclusive upon this point, nor that the short time during which the 200 guns have been in the hands of the troops has been sufficient to test the spring. So far, however, as this experience has gone, there is little left to be desired. It should be remarked, however, that in the majority of instances the coiled springs of the 200 rifles were originally made too weak, occasioning an undue proportion of miss-fires. The substitution of stronger springs materially amended this defect, and the practice with the rifles proves distinctly, as far as it goes, that the spring is not weakened by constant use, as may be seen by the performance of some of the rifles in which this part is reported to have become weakened:—

	Number of rounds.	Number of miss-fires.	Percentage.
Numbers 9, 68, 1st trial....	2,999	79	2.6
102, 112, and 2nd "....	3,009	30	3.0
180 rifles. 3rd "....	2,810	27	0.96

The percentage of miss-fires in these trials, it will be seen, decreased considerably in the last trial, but this evidence is hardly conclusive of the reliability of the coiled springs under the severe test of actual service and of lengthened usage. There seems to be little doubt that the miss-fires were in some of the rifles occasioned by the striker being too short, a defect arising from the cause we have previously mentioned, but which would be entirely obviated when the manufacture was carried out on a large scale. But, taken altogether, the average of miss-fires has been very small. Thus, from 86 guns there were fired collectively 26,463 rounds, with a percentage of .034 misses.

But although both officers and men agree in approval of the new rifle, and although the experience now obtained justifies their favourable opinion, considerable objection is raised against the cartridge which certainly required modification. It is too long and easily bent, it is apt to interfere with ready loading, and with free extraction, and these objections are sufficiently serious to warrant a considerable alteration in its form and construction.

With regard to the rifle itself the new experience we now possess corroborates what we have always advanced on the subject, and establishes the opinion of the Special Committee when they recommended it to the Government for general adoption in the service.—*Engineering.*

An editor in New Jersey had a little nephew only six months old, and the little nephew died. Some of the editor's friends considered that it would be a good thing to give to the afflicted uncle a substantial expression of their sympathy; so they contracted with a local sculptor for a gravestone. The design consisted of an angel carrying the little one in her arms flying away, while a woman sat weeping upon the ground. It was executed horribly. The tombstone was sent to the editor, with a simple request that he would accept. As he was absent, the junior editor determined to acknowledge it, although he hadn't the slightest idea what it meant. So next day he burst out in the paper with the following remarks:—"ART NEWS."—We have received from the hands of our eminent sculptor, a comic *bas relief* designed for an ornamental fire-board. It represents an Irishman in his night-shirt running away with the little god Cupid, while the Irishman's sweetheart hides her head indifferently in the corner. Every true work of art tells its own story; and we understand, as soon as we glance at this, that our Irish friend has been coquetted with by the fair one, and is pretending to transfer his love to other quarters. There is a lurking smile on the Irishman's lips which expresses his mischievous intentions perfectly. We think it would have been better, however, to have clothed him in something else than a night-shirt, and to have smoothed down his hair. We have placed this *chef d'œuvre* beneath our kitchen mantelpiece, where it will be admired by the friends of the artist when they call. We are glad to encourage such progress in local art.

The animals in the famous Jardin des Plantes are reported as in a bad way through the siege of Paris. The elephants are getting weak on their pins, like so many broken-down cricketers; the lions are put on short commons; the hippopotamus looks morose, and the black bear is climbing up his tree and dropping down again, as if he had discovered perpetual motion. He begs as supplicating as any lady's lapdog, but very few crumbs of comfort, we fear, fall into his pit now-a-days. The thoughtless monkeys and the patient camels are the only animals that seem to take this siege in the proper spirit. A curiosity in its way is the famous eagle from whose wing the quill was plucked that signed the peace of Villafranca. He is as melancholy as if he were conscious that the dynasty which had adopted him for heraldic type had taken its flight from the Tuileries. He is no longer the proud bird

that soars and stares sunward, but a wretched depressed prisoner, with dull eyes and ragged plumage, an eagle *ramollé*, such a one as might have furnished a quill to sign the capitulation of Sedan.

THE BRITISH NAVY.—An Admiralty return has been issued, dated 4th of August, giving a list of vessels building, or ordered to be built, for Her Majesty's Navy in the year 1870. It includes the ill-fated Captain, completed last April, at a cost of £335,518. The list of ships building, completely iron plated up to the main deck and partially (the Glatton wholly) above, includes also the following:—The Repulse, 12 guns, at Woolwich, completed, cost £223,370; Devastation, at Portsmouth, 4 guns, marked "with turrets;" the Glatton, at Chatham, 2 guns, turrets; the Thunderer, at Pembroke, 4 guns, turrets; the Sultan, Chatham, 12 guns, broadside; the Rupert, Chatham, 3 guns, turret; the Swiftsure, Palmer's Company, 14 guns; the Triumph, Palmer's, 14 guns; the Iron Duke, Pembroke, 14 guns; the Audacious and the Invincible, at Napier's, both 14 guns; the Vanguard, Laird's, 14 guns. These last six are all broadsides, not turrets. The Hotspur, at Napier's, 2 guns, stands in the list as "fixed turret." The Fury, Pembroke, 4 guns, turrets, is marked "not commenced." The list of vessels not armour-plated, building or ordered in the year, includes the Volage, 8 guns, completed; the Dido, 6 guns, completed; the Druid, 10 guns, completed; the Bittern, 3 guns, completed; the Vulture, 2 guns, completed; the Active, 8 guns; the Thalia, 6 guns; the Tenedos, 6 guns; the Briton, 10 guns; the last four were all to be completed this year. The Woodlark, 3 guns, is marked for completion in March, 1871. The time of completion of the following is uncertain:—The Osborne; the Plucky, 1 gun; the Lively, 2 guns; the Vigilant, 2 guns; the Snake, 1 gun; the Scourge, 1; the Comet, 1; the Blazer, 1; the Thetis, 13. The Raleigh, 22 guns, and the Blonde, 26 guns, are marked "not commenced." All but two of these 21 vessels not armour-plated are building or to be built in Her Majesty's dockyards; the Volage and the Active were built by the Thames Company, Blackwall, and completed at Portsmouth.

Temperature in the shade, and Barometer indications for the week ending Tuesday, Nov. 29, 1870, observed by John Underhill, Optician to the Medical Faculty of McGill University, 299 Notre Dame Street.

		9 A. M.	1 P. M.	6 P. M.
We'nsday,	Nov. 23.....	28°	32°	32°
Thursday,	" 24.....	27°	32°	29°
Friday,	" 25.....	36°	37°	37°
Saturday,	" 26.....	36°	37°	36°
Sunday,	" 27.....	38°	44°	40°
Monday,	" 28.....	36°	37°	35°
Tuesday,	" 29.....	34°	35°	36°
		Max.	Min.	Mean
We'nsday,	Nov. 23.....	34°	22°	28°
Thursday,	" 24.....	34°	20°	27°
Friday,	" 25.....	38°	22°	30°
Saturday,	" 26.....	38°	28°	33°
Sunday,	" 27.....	46°	30°	38°
Monday,	" 28.....	38°	28°	33°
Tuesday,	" 29.....	38°	29°	33° 5

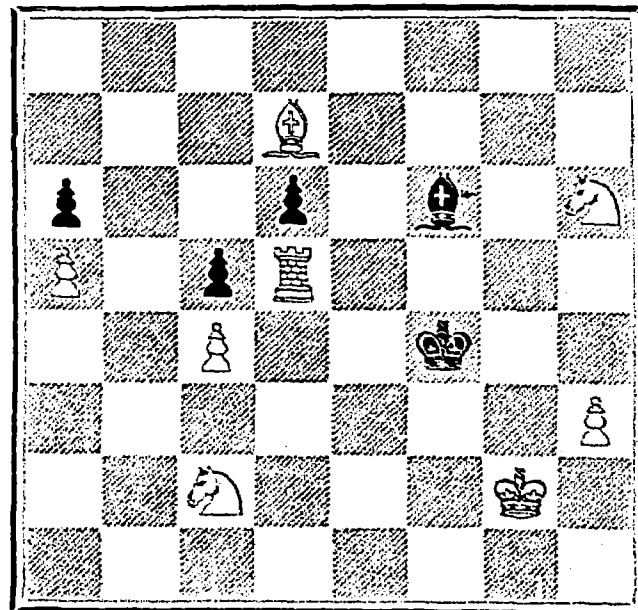
Aneroid Barometer compensated and corrected.

		9 A. M.	1 P. M.	6 P. M.
Wednesday,	Nov. 23.....	29.70	29.65	29.71
Thursday,	" 24.....	29.90	30.00	30.13
Friday,	" 25.....	30.08	30.03	29.93
Saturday,	" 26.....	29.70	29.63	29.71
Sunday,	" 27.....	29.68	29.75	29.90
Monday,	" 28.....	30.35	30.38	30.33
Tuesday,	" 29.....	30.27	30.30	30.36

CHESS.

PROBLEM No. 23.

BLACK.



WHITE.

White to play, and mate in three moves.

SOLUTION OF PROBLEM No. 21.

White.	Black.
1. Kt. to R. 5th.	K. takes Kt. (must.)
2. K. to Kt. 7th.	B. takes R.
3. Kt. to K. 2nd.	Any move.
4. Kt. mates.	

VARIATION.

	P. moves.
2.	Any move.
3. Kt. to K. 2nd.	
4. Mates with Kt. or dls. ch.	