

TEMPERATURE in the shade, and Barometer indications for the week ending Saturday, May 20, 1871, observed by JOHN UNDERHILL, Optician to the Medical Faculty of McGill University, 229 Notre Dame Street.

		Aneroid Barometer compensated and corrected.								
		9 A.M.	1 P.M.	6 P.M.	MAX.	MIN.	MEAN.	9 A.M.	1 P.M.	6 P.M.
Su.,	May 14.	48°	56°	50°	58°	31°	46°	30.00	29.95	29.95
Mo.,	" 15.	41°	56°	56°	58°	31°	44°	30.02	30.01	29.98
Tu.,	" 16.	54°	65°	66°	68°	36°	52°	29.89	29.84	29.72
We.,	" 17.	54°	56°	54°	58°	44°	51°	29.90	29.87	29.84
Th.,	" 18.	51°	61°	67°	68°	36°	49°	30.34	30.30	30.25
Fri.,	" 19.	56°	68°	67°	70°	47°	58°	30.28	30.20	30.15
Sat.,	" 20.	72°	81°	82°	83°	55°	69°	30.15	30.14	30.12

CALENDAR FOR THE WEEK ENDING SATURDAY, JUNE 3, 1871.

SUNDAY, May 25.—*Whit Sunday (Pentecost).* Sir Humphrey Davy died, 1829. Great Fire at Quebec, 1,500 houses burnt, 1845. Judgment given by the Dominion Arbitrators, Judge Day dissented, 1870.
 MONDAY, " 26.—*Battle of Sackett's Harbour, 1814.* Ex-Empress Josephine died, 1814. Restoration of Charles II., 1660. Arrest of Fenian Generals in the States, 1870.
 TUESDAY, " 27.—*Constantinople taken by the Turks, 1453.* Pope died, 1744. Sir P. Maitland died, 1854.
 WEDNESDAY, " 28.—*Ember Day.* Dr. Chalmers died, 1847.
 THURSDAY, June 1.—*St. Nicomedia, M. Parliament first met in Toronto, 1797.* Capture of the "Chesapeake" by the "Shannon," 1813.
 FRIDAY, " 2.—*Ember Day.* Fenian skirmish at Limeridge, 1869.
 SATURDAY, " 3.—*Champlain arrived at Tadousac, 1688.* Prince George of Wales born, 1865.

THE CANADIAN ILLUSTRATED NEWS.

MONTREAL, SATURDAY, MAY 27, 1871.

We have made but little reference to the progress of affairs in distracted France during these last few months. For, indeed, there has been little of a cheering character to comment upon. The peace, which followed the armistice of the 28th January, was in itself onerous and odious enough to all who regarded the integrity of French power as a material support to Britain in checking the schemes of aggrandisement believed to be cherished by one or two ambitious European powers; for the load of indemnity imposed—two hundred millions sterling—is in itself sufficient to tie the hands of the nation for a century. But the Communist rebellion, organized in Paris within a month after the preliminary terms of peace had been signed, made matters appear so much the worse for France that nothing short of unreasoning faith in the recuperative energies of the people of that country could have preserved the belief in its continued existence as an influential and important unit among the family of nations. The hesitating policy of Thiers, due, no doubt, to his humane feeling for his misguided countrymen, gave the Commune for the nonce an appearance of triumph. But, for once, France refused to rise at the bidding of Paris, and let us hope that for all time to come it may no longer be said with truth that "Paris is France." Great cities, though adding much to the glory, add but little to the stability of national power. Rather they are a menace to its perpetuation, as witness the occasional uprooting of the Hyde Park railings in London. The seething mass of turbulent people congregated in that modern Babylon is a positive source of weakness to the British Empire. But Paris has, heretofore, had the bad pre-eminence of leading France through every rebellion which the Parisian mob may be able to carry so far as to take possession of the *Hôtel de Ville*. This time, Paris has failed in carrying France with it, and we may hope that the circumstance will for ever put an end to that greatest and most disastrous of political heresies, that Metropolitan whims rule the national destinies. If France should be emancipated from this hitherto generally accepted practice in that country, the lesson of the Communist rising of 1871 will be worth twice its price to the future peace and progress of the country.

But, accepting the revolution as strangled; admitting that the red cap is once more in the dirt; what is the position of France? What a frightful waste of life and property has been caused by the late devastating war! To say nothing of French losses or of French debts incurred in the prosecution of the war, the Prussian indemnity alone is five pounds sterling per head of debt imposed upon every man, woman and child in France, or, to put it in other words, an average of \$125 to every head of family. But worse than this, two of the most productive Provinces in the old Empire—Alsace and Lorraine—are transferred to the German Empire, and they contain nearly a million and a half of inhabitants, so that the share of the burthen that would otherwise have fallen upon them must be distributed amongst the remainder. So too, the continuance of the Prussian occupation, necessitated by the Parisian revolution, entails a daily outlay of enormous expense; the second siege of Paris has caused immense waste and destruction of public and private property; and in every way the country is being impoverished at a rate which it is hardly possible to compute. Surely, in these items there is a mortgage on the best energies of the people, and the most enlightened administration, which a hundred years will not suffice to discharge.

Is France, then, still to be considered a first class power? No! Tamely its representative had to submit to the undoing of nearly all that was gained by the Crimean war, and accept the terms of the Treaty of London, as they were dictated by Russia for the purpose of tearing the Treaty of Paris of 1856 to tatters; and tamely, too, must France submit to any other national pretension, however unjustifiable. Whether it be the King of Italy setting at naught the famous "September Convention;" the Emperor of Russia unshackling himself from the well earned chains of his father; or the newly-made German Emperor grasping Luxemburg or gulping down a few Swiss cantons, France must look on in silence, because no longer able to unsheath the sword which was once the terror of Europe, and has many times been its best friend. No doubt the crushing out of the Paris rebellion, which seems to be almost already accomplished, will lead to some sort of stable government in France. No doubt its representatives will be accorded due honour and distinction in any European Congress that may hereafter be called together. But the honour will be paid to fallen, and not to substantial, greatness, for all the world knows that France is in bonds to Prussia, and her private creditors, for more than a century to come. We do not speculate on the return of Napoleon, or the restoration of his dynasty. Whatever of good or evil, and there was much of both, perpetrated by him, or in his name, no one can say he has been an economic financier; and France at the present moment requires, above all things, economic financial administration. Unless the current of the nation's industry be turned almost exclusively into those branches strictly recognised as productive, there is little hope for any government, under whatever form it may be administered, of dragging the country out of its present almost fathomless slough of indebtedness.

Possibly the disappearance of Britain's modern ally from the rank of a star of the first magnitude in the galaxy of nations may have had something to do with the anxiety so earnestly manifested to cultivate better relations with the United States. There would at least be a glimmering of the light of ancient British statesmanship in this; and, perhaps, some excuse for the enormously high price which Canada is to be compelled to pay to Britain's new-bought friend. Alliances there must be among the nations, so long as the law of Might is held, in practice, to be the ultimate law of Right; and an American alliance, if it could be counted upon, might in the progress of events recompense Britain for the loss sustained through the reduction of French power on questions of international concern. These are, however, speculations that can only derive practical value from the development of events yet to come. In the meantime all must see, and many will see with regret, that France is for the present reduced from the rank of a first class power; and the circumstance can scarcely be without important consequences.

THEATRE ROYAL.—We are glad to see that under the new management the Theatre is a decided success. It is something enjoyable for Montrealers to have a real live theatre in their midst where they can spend an evening without being bored by stupid acting or annoyed by vulgarity, and the success of the present manager is a proof that, were their taste and convenience better consulted, the Montreal public would not be behind-hand in encouraging deserving merit. Of the *troupe* at present occupying the boards it is impossible to speak too highly. The general "get-up" and the acting of the various burlesques is admirable. Wherever she goes Mrs. Oates, who is supported by an unusually clever *troupe*, deserves hearty support.

THE STATE OF PARIS.

The Paris insurrection bids fair to become a thing of the past. What with discord and discontent within the walls, and repeated defeat without, the Commune have had a hard time to maintain their position. The fall of Issy, followed immediately by the resignation of General Rossel, increased the difficulties that lay in their way, while the approaching collapse was yet further hastened by the dissensions of the inferior officers, and the impossibility of finding a military man capable of undertaking the supreme command. Vanvres followed Issy, and then, finally, Thiers made up his mind for a decisive attack. The Versailles troops were massed between Versailles and Neuilly, and on Saturday last an entrance was effected simultaneously at two points, at the St. Cloud gate and the Montrouge gate. The latest intelligence announces that the Government troops are driving the Communists before them through the streets, and that peace may shortly be expected.

In the Versailles Assembly recently a vote was passed for the rebuilding of the Column Vendome and Chapel of Expiation, which had been destroyed by the Reds. It is also stated that the respectable class in Paris are greatly incensed against the insurgents, by whom they had been forced to serve against the Government, and that on the entrance of the Versailles terrible vengeance will be wreaked on the leaders of the Commune.

A Berlin letter says that the Emperor, Bismarck, and Moltke now hold daily councils of war just as in 1870.

REFUSE AND WASTE.

(From the Scientific American.)

There are no such things as waste products in Nature's laboratory, but in many workshops there are plenty of them. In fact, we make little use of the gifts that are bestowed upon us, a vast majority of them being wasted on account of our ignorance of their value.

If there be anything that characterizes the present age, it is the revolution that has taken place in this respect. We live in the era of saving, and many are the objects now turned to good account which formerly were thrown away. But, notwithstanding the boasted progress of this century, we cast away far too many substances under the names of refuse and waste.

In the cutting, sawing, and paring of cork wood, there is an accumulation of light material, which is used for packing, filling life preservers, and manufacture of mattresses. This refuse, if burned, would produce a smoke that might prove of value in preserving meat and fish; if distilled, it would yield peculiar products; and, if chemically treated, would furnish corkic acid, the properties of which are not well understood. The charred cork has long been used for its fine black colour, and it is possible that, for disinfecting and filtering purposes, it is capable of application. Here is quite a field of research for anyone who has the knowledge and leisure.

What becomes of the buttermilk, after the fatty matter is separated from it? We know that it is extensively fed to the pigs, and not a few people eat and drink it. It has peculiar chemical properties, and is said to work up into cements. Could we not, also, by blowing air through the milk, as well as agitating it, add to the yield of butter, and otherwise modify the character of the sour curd? The fermentation of the buttermilk is not understood by our farmers, nor do they pay much attention to other possible uses of this refuse. As there are enormous quantities of milk used in butter making, it would be well to look into this matter.

So, too, in the cheese industry; in Europe they save the whey to convert it into milk sugar, and this article of sugar can be fermented, and used for many purposes. In homoeopathy it already plays an important part.

The root plants growing wild all over our country ought to be examined and experimented upon by agriculturists. We have abundant encouragement in favour of such a course in the history of the tobacco, potato, sugar beet, peppermint, spearmint, wintergreen, and a host of other natural products that, by judicious culture, have been raised from the rank of weeds to a first class position among profitable crops. The sugar beet especially is worthy of note; it was originally an unsightly plant growing wild in Southern Europe. By culture it has been improved and changed in character, and now yields nearly one-third of the total sugar crop of the world, and represents an industry worth some hundreds of millions of dollars. As the Government of the United States has set aside large tracts of land to endow agricultural colleges, it is not asking too much for some of these institutions to cause experiments to be made upon what are now called weeds. Many of these wild plants contain alkaloids, sugar, tannic acid, and fibre for paper, and could, by culture, be converted into valuable products. The example of the Massachusetts Agricultural College in this direction is well worthy of imitation.

Sawdust, which was formerly thrown away, is now converted to many useful purposes. The manufacture of oxalic and formic acids from it is extensively prosecuted in England, and is the source of wealth to all who are engaged in the business; but that is not the only invention that has been sought out with this unpromising material. The hard boxwood sawdust makes an excellent polish for jewellery, and mahogany sawdust is good for smoking fish. Westphalia hams owe their admirable flavour to the wood used in preparing them. Sawdust from the birch cleanses furs; that of sandal wood, cedar, butternut, and black walnut, affords volatile oils that find favour as perfumes or to destroy insects. They have a way in France of compressing sawdust into moulds suitable for use as artificial wood; and it could also be distilled for the production of creosote, acetic acid, and wood gas. Some of it could be used for paper, but in general the fibre is too short. A new industry has arisen in converting the sawdust into gun cotton for the use of photographers, and in the manufacture of a coarse blasting powder. It will thus be seen that sawdust is hardly any longer to be considered a waste product, but it is a great help in many industries.

Vulcanized rubber was long an object of study and experiment, to see what uses could be made of the waste; after the sulphur had been added, it was thought that it could not be worked over, and in this event the price was likely to remain at a high quotation for many years. Fortunately, the difficulty yielded to the stubborn will of our manufacturers, who do not like to throw anything away, and a process was discovered by which the old rubber could be mixed with the fresh in certain proportions, and thus changed to a useful article. Ivory dust and shavings have found favour in the manufacture of steel plates, and as an article of food. Iron filings, tin scraps, refuse from galvanized iron, furnace slags, photographer's slops, chimney soot, dead oil, rags, galls, bone, fat, brine, oil from wool, coal dust, cotton seed, sponge, sea weed, leather scraps, and a host of other things that were useless in former times, are now economized to a considerable extent.

There is a waste in large cities for which there is really no necessity, and that is of the sewage. A vast amount of valuable phosphate goes to feed the fish of the banks of Newfoundland; and if we had the monopoly of the fish, there would be some recompense; as the case now stands, we have the consolation of knowing that we feed the fish for other people to catch; and then as a sort of compensation, we send to the islands of the Pacific for guano with which to enrich our lands. There is enough compost annually thrown away to increase the value of our crops many millions of dollars. The vastness of this waste has probably deterred our engineers from attempting to grapple with it, but that is no reason why the loss should go on forever.

We have thus presented some considerations on the topic of refuse and waste, which may awaken inquiry in the minds of inventors, and lead to practical results.

The German army has been fixed at 400,000 as its "peace footing." The cost of this immense force will be 90,000,000 thalers, or somewhere about 13,500,000.