some church in France, after the battle of Agincourt. Bells have been cast of steel, some of which have had a tone equal in firmness to the best bell-metal, but wanting in duration, having less vibration. Some have also been cast of glass, with considerable thickness of material, which give an extremely fine sound, but are too brittle to stand the continued use of a clapper. In remote antiquity, cymbals and hand-bells were used in religious ceremonies.

In Egypt the feast of Osiris was announced by ringing bells; Aaron and other Jewish high priests wore golden bells attached to their vestments, and in Athens the priests of Cybell used bells in their rites.

The use of bells in churches and monasteries spread rapidly throughout Christendom.

They were introduced into France about 550, and Benedict, Abbot of Wearmouth, brought one from Italy for his church about the year 600. Pope Sabinian ordained that every hour should be announced by sound of bells, that the people should thereby be warned of the hours of devotion. Bells came into use in the East in the ninth century, and into Switzerland and Germany in the eleventh. Most of the bells first used in Western Christendom appear to have been hand-bells, made of thin plates of hammered iron, bent into a four-sided form, and bronzed or brazed. Perhaps the most remarkable is that said to have belonged to St. Patrick, called Clog-an-eadhacta, or the bell of St. Patrick's will. The four-sided bell of St. Gall, an Irish missionary who died in 646, is still shown in the monastery of the city in Switzerland which bears his name. In the thirteenth century bells began to be increased in size, but it was not until the fifteenth century that they attained any considerable dimensions. The bell Jacqueline of Paris, cast in 1400, weighed 1,500 (pounds); another Paris bell, cast in 1470, weighed 2,500; the famous bell of Rouen, cast in 1501, weighed 36,364. The largest bell in the world is the great bell or monarch of Moscow; it is above twenty-one feet in height and diameter, and weighs one hundred and ninety-three tons. It was cast in 1734, and fell down during a fire in 1737, remaining buried in the ground until 1837, when it was raised, and now forms the dome of a chapel made by excavating the space below it. Another Moscow bell, cast in 1819, weighs 80 tons. The great bell of Pekin, fourteen feet high, with a diameter of thirteen feet, weighs 53½ tons; those of Olmutz, Rouen, and Vienna, nearly 18 tons; the first, cast for the new Palace at Westminster (cracked), 14 tons; that of the Roman Catholic Cathedral of Montreal, cast in 1847, 13½ tons; Great Petu, at York Minster, cast in 1845, 10¾ tons; Great Tom, at Lincoln, 5½ tons; the great bell of St. Paul's 5 1-10 tons. There is a bell belonging to the church at St. Ann's, P. Q., said to have been presented by Queen Anne, to which attaches quite an history, I cannot just now find its weight.

The principal cities of Canada—Quebec, Montreal, Toronto, Hamilton, London, and Fredericton—have peals of bells. At Buffalo and at Philadelphia I believe there are carillons. Carillon is the name of a small instrument somewhat resembling a piano; it is used for a large series of bells, which are tuned accurately to the tones and half tones of the scale with strong wires that are connected with hammers that strike the bells, and at the other end with keys, and pedals for the lower notes of the scale, on which the carillonneurs perform music in parts by striking the keys forcibly with their hands and feet. The keys are projecting sticks, wide enough apart to be struck with velocity by the two hands edgewise. The performers wear a thick leather covering to protect the hand. The first and second trebles are played with the hands, and the bass with the feet on the pedal keys. The keys to the carillons at Amsterdam have three octaves, with all the semi-tones complete in the manual, and the octaves in the pedals. The custom of tolling the passing bell was discontinued by the beginning of the eighteenth century. During the Reformation it was used to admonish the living, and to excite them to pray for the dying. The practice of slowly, solemnly, tolling the bells at death is continued to the present day as a mark of respect to the deceased. The ringing of the curfew bell, supposed to have been introduced into England by William the Conqueror, was a custom of civil and political nature, only strictly observed until the end of the reign of William Rufus. Its object was to warn people to extinguish their lights and fires at eight o'clock. The custom still continues in many parts of England and Scotland. Great proficiency has been attained in the Netherlands in the ringing of bells. In the church towers of that country the striking, chiming, and pealing of bells is incessant. The tower of Les Halles, a large building in Bruges, is allowed to contain the finest carillons in Europe. There is a set of music bells in the steeple of St. Giles Church, Edinburgh. In certain seasons tunes are played on them for an hour daily, by a musician in the pay of the town corporation. Most of the church towers of London are provided with peals of bells. One of the most celebrated peals in London is that of St. Mary-le-Bone, Cheapside.

CALZABIGI.

MONTREAL GARRISON BALL.—On the evening of the 17th inst., the Montreal Garrison Artillery gave a concert and ball in the Drill Shed, under the patronage of H. R. H. Prince Arthur. The concert began by the P. C. O. Rifle Band playing the Prince Arthur March; and at about half-past eight o'clock, the arrival of His Royal Highness was announced. The Prince entered the room, accompanied by the Mayor, and was received by Col. Smith, Lieut.-Col. Ferrier and other officers. A Company of the Montreal Garrison Artillery, formed the guard of honour, and they, with a large number of firemen in uniform, were drawn up in line in front of the platform, on which seats for the Prince and other invited guests had been provided. After listening to the music for about an hour, Prince Arthur left the hall and was cheered by the audience on his departure. At the conclusion of the concert, the platform was cleared and the dancing commenced which was kept up with spirit until four o'clock in the morning.

A Catholic paper gives the following account of the persecution of Christians at Tsen-y-fou. On the 14th of June in the afternoon the gates of the town were suddenly closed, and a mob of pagans fell upon all the Christian establishments, the two churches, the dispensaries, the boys' and girls' orphanages, the workshops, and a good many private houses. Their rage for destruction was so great that they carried away the materials and sold them, leaving not a tile nor a brick upon the ground. They went so far as to dig up the foundations of the houses, even of those only hired by the missionaries, and disinterred and dispersed the bones of M. Macaire, who died in 1868. Several Christians were seriously wounded, and one of the missionaries was stripped, beaten, and dragged through the town. A price was placed on the heads of the Christians —200 taels, £64, for an ecclesiastic, and 300 sapeks, about 1s. 2d., for lay Christians and the children of the orphanages. This, it is said, is probably the first time that the children of the "Sainte Enfance" have been subject to persecution. About twenty children escaped to Kong-yang-foo by climbing over the town walls, or by selling their clothes and bribing the pagans to connive at their escape; many were said to be dying of hunger and fatigue on the road. The orphan girls found a refuge in the house of a Christian mandarin, and three missionaries in the tribunal of the sub-prefect. The letter giving this account was written on the 20th of June. On the 11th of July the news was that the town of Tsen-y-fou was becoming quiet again, but that the pillage was still at its height in the surrounding country. At Takiti the catechist Tao had been murdered; and in the western district five other Christians had met with the same fate, and many houses of Christians had been burnt. The mandarins are said to have been guilty of connivance either from hatred of Christianity or indifference. The prefect, at whose house the missionaries sought shelter, refused to receive them, and it was then that they were obliged to seek an asylum with the sub-prefect.

SOMETHING NEW IN WORKING PLASTER OF PARIS.—The *Druggists' Circular* says:—"It is a well-known fact that powdered gypsum, when freed by calcination of its water of crystallization, regains to a great extent its original hardness when incorporated with water enough to form a stiff paste. In order to attain this end, there is at least thirty-three per cent. of water required, wherefrom twenty-two per cent. is withheld as water of crystallization. The rest evaporates, and thus brings about the porosity of the hardened gypsum. In working up a small quantity of gypsum, one has only a few minutes' time for using the paste for moulding or puttying, as it soon becomes hard. With larger quantities, in which case the making of the paste requires a longer time, the mass hardens, sometimes, during the operation of dressing. According to Mr. Puscher, of Nuremburg, this inconvenience may be got rid of by mixing with the dry powdered gypsum from two to four per cent. of finely pulverized althea-root, (marsh mallow) and kneading the intimate mixture to a paste with forty per cent. of water. In consequence of the great amount of pectin which is contained in the althea-root, and which in fact amounts to about fifty per cent., a mass similar to fat clay is obtained. This mixture begins to harden only after a lapse of one hour's time. Moreover, when dry it may be filed, cut, twined, bored, and thus become of use in the making of domino-stones, dies, brooches, snuff-boxes, and a variety of other things of a similar character. Eight per cent. of althea-root, when mixed with pulverized gypsum, retards the hardening for a still longer time, but increases the tenacity of the mass. The latter may be rolled out on window-glass into thin sheets, which never crack in drying, may be easily detached from the glass, and take on a polish readily upon rubbing them. This material, if incorporated with mineral or other paints, and properly kneaded, gives very fine imitations of marble. They bear coloring also when dry, and can then be made water-proof by polishing and varnishing. The artisan, in the practice of his trade, will probably find it to his advantage to make use of this prepared gypsum in place of that usually employed by him; the manufacturer of frames need have no fear that his wares will crack if he uses a mixture of the above-indicated composition; moreover, the chemist and chemical manufacturer will find that the same does excellent service in luting vessels of every kind. The exact proportion of water to be made use of cannot be given exactly, as it varies within a few per cent., according to the fineness and purity of the gypsum employed. The above-mentioned althea-root need not be of the very best quality, the ordinary kind serving the purpose perhaps quite as well."

NOTES ON THE PRINCIPLES OF POPULATION: Montreal compared with London, Glasgow, Manchester, &c., &c., by ANDREW A. WATT. Montreal: Murray & Co., Stationers' Hall, 1869.

This is a pamphlet of 36 pages, reprinted from contributions to the local press in refutation of Dr. Carpenter's *data* and conclusions concerning the alleged excessive death rate in Montreal. Mr. Watt argues correctly enough that any comparison of death rates where the birth rate is not accounted an element in the calculation is utterly fallacious, and this point appears to have escaped the attention of Dr. Carpenter, as well as of other writers on vital statistics. The conclusion at which Mr. Watt arrives is that Montreal is more healthy than London or Glasgow, and that the deaths of children in the first year of life in Montreal are not only not excessive but actually less in proportion to the number of births than in London. The apparently low rate of mortality in the Metropolis of the Empire is accounted for by the low birth rate, just as the seemingly high rate of mortality in Montreal is explained by the high birth rate. Where the birth rate is high, there the average of life will be shorter than where the birth rate is low, though in other respects the localities compared may be equally healthy. Canada is as yet but imperfectly supplied with the machinery for correctly registering vital statistics, but Mr. Watt's pamphlet will assist those who peruse it, in forming a correct value of such returns when they are procured. Doubtless, Dr. Carpenter will make a rejoinder in defence of his own conclusions which, judged by the light of this pamphlet, have been very ill-founded. In the meantime it is satisfactory to know that the fair fame of the city has been freed, apparently at least, from the aspersions cast upon it by the Secretary of the Sanitary Association; but we should be sorry to believe that this vindication would lead to the relaxation of any efforts in contemplation for the still further improvement of the sanitary condition of the city.

One day, at dinner, a scientific lady asked the late George Stephenson, "What do you consider the most powerful force in nature?" "Oh," said he, in a gallant spirit, "I will soon answer that question: it is the eye of a woman for the man who loves her; for, if a woman look with affection on a young man, and he should go to the uttermost ends of the earth, the recollection of that look will bring him back. There is no other force in nature that could do that."

SUPPOSE.—Suppose that women qualify themselves to be good wives; suppose they learn to superintend the household, to direct the cook, to control the nursemaid, to keep the butcher-boy and grocery-man up to the requirements of the occasion and the letter of their contracts. Suppose they study economy, acquire the skill necessary to fit their dresses, and the good sense to cut their cloth according to their means. Suppose they educate themselves partially, so as to be useful and pleasant companions, not mere dolls and toys. Suppose they practise keeping accounts, so that they can have some idea how the money goes. Suppose they try to go without morning visits and evening parties—matinées, balls and routs. Suppose they strive to appreciate the fact that they are not meant merely to make peacocks of themselves. Suppose, when they have done all this, we let them work as much besides as they may wish, provided they insist upon it.—*N. Y. Citizen.*

The Arkansas papers announce of a frequently divorced man, recently shot, that he leaves several families of numerous children.

MONTREAL MARKETS.

Business during the past week has been exceedingly quiet, and for the present we may look for no activity. Advices from England are adverse to any rise, and stocks here are accumulating, so that a dull market must be anticipated.

PRODUCE AND PROVISIONS.

FLOUR.—The market has been dull and prices irregular, but the tendency has been downwards. We give the latest quotations: Extra $4.80 to $4.95; Fancy $4.70 to $4.75; Supers Canada Wheat $4.20 to $4.35; do from Western Wheat $4.20. There is a demand for Strong Bakers' which command full prices, and owing to their scarcity are likely to range high, we quote them at $4.70 to $4.90; Canada Supers No. 2. $4.25; Western States do. $4.25; Fine $4 to $4.10; Middlings $3.50 to $3.60; Bag flour U. C. $2.17½ to $2.20; City brands $2.25.

WHEAT.—There is no change to report, the market is still dull.

CORN.—Nothing doing; the imports are light.

BARLEY.—Very little has been done during the past week; the demand from the States is likely to be large, but so far prices have not been arranged.

OATS.—The quantity likely to be offered apparently being above previous calculation, no price is at present fixed.

We give the imports and exports of the Port of Montreal, from 1st January to 18th November for the last four years:

RECEIPTS.

	1869.	1868.	1867.	1866.
Flour, brls.	822450	690296	622628	637628
Wheat, bu.	6941210	2145347	2838592	794760
Corn	166600	1041606	824856	2105320
Barley	524602	56597	118358	283322
Pease	309416	480310	1279704	969102
Oats	27758	101591	258839	733108

EXPORTS.

	1869.	1868.	1867.	1866.
Flour, brls.	511627	247471	209532	155456
Wheat, bu.	5464413	1020901	1456960	2903
Corn	77408	736568	658496	1852877
Barley	226	6726	116986	202897
Pease	436843	616336	1587745	999887
Oats	70612	710549	658496	2939091

PORK.—The Market for Mess is very active, and old is exceedingly scarce and commands from $28.75 to $29; Prime Mess and Prime are nominal.

LARD.—Active at 15½c. to 16½c. according to packages.

BUTTER.—The business during the week has been dull, and now that the navigation has closed we are likely to have a dull period. Stocks, however, are pretty well reduced, and no immediate decline in prices may be expected. First quality, 20c. to 21½c.; second do., 19c. to 19½c.; and medium, 17½c. to 18c., with but little offering.

ASHES.—The demand for Pots is quiet. Firsts worth $5.25 to $5.30; Seconds $4.80. Pearls.—Firsts $5.65 to $5.70.

GROCERIES.

There have been several Auction Sales during the past week, and the attendance has been average, but not up to general expectancy. The bidding was languid, and although a considerable amount was placed, still the business done was not satisfactory to sellers.

COFFEE.—There has been but little done, prices are: Laguary 16½c. to 17c.; Maracaibo 17c. to 18c.; Jamaica 16c. to 18c.; Java 25c. to 28c.; Rio 14½c. to 15c.

FRUIT.—The market is quiet, but full prices are obtainable, especially after the recent advices from England and the Continent. Layers, new, $2.45 to $2.50; Old, $2 to $2.15; Valentias, new, 8½c to 9c. Currants range up to 7c. for new good fruit. Figs are 10c. to 15c. for Turkey, according to quality. Prunes scarce and in good demand at 6½c. to 6¾c. We may expect an active demand for all imported fruits for some weeks at full prices.

FISH.—There have been large sales on the wharf at full rates. Labrador Herrings have ranged from $4.75 to $4.87½; for brls. inferior splits $3.62½; half brls. $2.87½,—other qualities in proportion.

MOLASSES.—Several lots have been sold at full prices, say—Barbadoes 46c. to 48c. Clayed 35c. to 37½c. Centrifugal 30c. to 31½c.

SYRUPS.—Standard 46c.; Golden 50c.; Amber 76c.

NAVAL STORES.—Spirits of Turpentine are firm at 47½c. Rosins in good demand at $4 to $5 for best grades. Pitch and Tar nominal at $4.

OILS.—No change in our last week's quotations.

PETROLEUM.—The demand is active at last week's rates. We look for rather a firmer market during the coming week; 30c. to 32½c. is the current price.

RICE.—In spite of the decline in Flour, which to a large extent influences the price of Rice, the market has not declined, and $3.90 for Arracan and $3.20 for Rangoon is readily obtainable.

SALT.—There has been very little done in Liverpool Coarse, and prices are unchanged.

SUGARS.—The great interest is now in the state of matters in Cuba; should the revolutionists persist in destroying the Sugar plantations, as they have already commenced, it is impossible to state what might be the effect on the market. There is great excitement in New York, and our market is very stiff. We quote Porto Rico $9.25 to $9.50; Cuba $9 to $9.50; Barbadoes $9 to $9.50 Refinery prices: Dry Crushed 12½c.; Ground 12½c.; Crushed A 11½c.; Yellow Refined 9½c. to 10½c.

TEAS.—Messrs. D. Torrance & Co.'s sale fell flat, and only a few lots of the amount offered were placed. But there is a good jobbing demand at full rates in anticipation of the winter trade.

TOBACCO.—We give the latest prices: Western 10's 14½c. to 18½c.; Montreal 10's 18½c. to 22c.; Western Navy 19c. to 22c.; Montreal Navy 22c. to 23c.; Western Bright Solace 22c. to 27c.; American Tobacco, Bright, 35c. to 40c.; American Leaf 8c. to 9c.; Canada Leaf 10c. to 12c.

WINES AND LIQUORS.—The market is firm for all classes of the heavier wines, such as Ports and Sherries; but the sale of the light wines is over. Spirits rule high, and outside rates are readily obtainable.

IRON AND HARDWARE.

The market for Pig Iron has been very stiff, and prices have advanced fully 50c. under recent advices from England. We quote Garbshemie, $23, and other brands in proportion. Bar and Band Iron have also advanced and are now rated at: Bar Scotch, $50 to $52; do. Refined, $56 to $60; do. Swedes, $85 to $100; Hoop and Band, $56. The manufacturers are demanding an advance in Cut Nails, say $2.75 to $2.00; Lathe, $3.10 to $3.20.

LEATHER MARKET.

There has been a fair business done in staples, and the stocks of Spanish are somewhat diminished. There is some demand for Waxed Uppers at our rates. We give the latest quotations: Spanish Sole, No. 1. 21½c. to 22c.; No. 2, 19c. to 20½c. Slaughter Sole, No. 1, 24½c. to 25c. Harness, 27c. to 29c. Upper Waxed, 38c. to 40c. Splits, large, 25c. to 27c. Patent, 19c. to 19½c. Enamelled, 18½c. to 19c.

DRY GOODS.

The Fall business is now over, but when the winter roads set in, we may expect a revival, although the country merchants have pretty well stocked themselves.