

out into the country, providing the Ottawa electric railway is not extended to that point.

WINNIPEG, MAN.—G. H. West, chairman of Water and Light Committee, will receive tenders until the 19th inst. for the construction of a one-horse hose wagon.—The ratepayers of the municipality of Woodlands will vote on a by-law to raise the sum of \$15,000 for a system of drainage, also \$4,000 for the erection of a roller grist mill.—Nearly \$10,000 is to be expended on improvements to the Leland House.

PENBROKE, ONT.—Mr. Alexander Millar will receive tenders until Monday, the 25th inst., for the erection of a Presbyterian manse on the Calvin church grounds.—Mr. W. B. McAllister, proprietor of the Pembroke flouring mills and Pak-eham mills, intends building a grain elevator with a capacity of two hundred thousand bushels. Work will be started when the contemplated changes in the C.P.R. have been fully determined upon.

KINGSTON, ONT.—A deputation recently visited Sharpton for the purpose of locating a bridge across the Mud Lake to Florida. A civil engineer will be engaged to decide where the bridge will be built and the estimated cost.—The Street Committee have decided to report to Council in favor of the trolley system of electric railway, and that negotiations be entered into at once with Mr. Folger respecting the construction of the road.—A committee has been appointed by the Roman Catholic's to select a site among the Thousand Islands for the erection of a Catholic school.

TORONTO, ONT.—The York County Council has decided to widen Davenport road to 66 feet.—At the next meeting of the Board of Health Dr. Allen will recommend the construction of a crematory for the west end.—Workmen are now employed in preparing the ground for the new gymnasium of the University of Toronto. The building will be situated north of University College, near Hoskin avenue. The plans for the new building for a chemical laboratory are not yet complete.—Mr. A. J. Robinson, of Main st., East Toronto, is about to erect two houses—Mr. H. Smith is asking for tenders for the erection of three residences. Particulars may be had at W. Parsons, 4 Adelaide street East.—The Board of Works will meet on Monday next to award contracts for asphaltting King and Yonge streets—Building permits have been granted as follows: H. M. Stevenson, brick front and mansard roof addition in rear of 641 Ontario street, cost \$2,000; S. G. T. McAllister, six attached 3 storey bk. stores and dwellings, n.e. corner College and Givens st., cost \$24,000; J. W. Butchart, 8 attached 2 storey bk. dwellings, e. side Lansdowne ave., south of Bloor st., J. A. Ellis, Architect, Toronto Junction, cost \$12,000; John Holmes, det. 2 st. and attic bk. dwelling, Crescent road, opposite Hill st., cost \$3,000; Wm. Belshaw, ten 2 storey bk. fronted dwellings on new street running south from Wilton ave., between Sackville and Blair ave., cost \$20,000; E. Sexton, seven att. 2 storey and attic bk. dwellings, e. s. Shaw st. north of College, cost \$27,000.

MONTREAL, QUE.—L. J. Sargeant, General Manager Grand Trunk Railway, will receive tenders until to-day (Saturday), for the superstructure of various iron bridges required on the Great Western division. Plans may be seen at the office of the Chief Engineer of the Company at Hamilton, Ont.—The Secretary-Treasurer of the village of St. Louis du Mile End will receive tenders until to-day (Saturday) for the construction of a sewer on Mount Royal avenue.—The congregation of Westminster Presbyterian church intends building a new church near the corner of Atwater avenue and St. Antoine street. Plans are now in course of preparation, and it is expected that part of the edifice will be completed this fall.—The Town Council of St. Cuneogonde, at a meeting held on Wednesday last, decided to proceed with the erection of a new Town Hall, at a cost not to exceed \$60,000.—Building permits have been granted as follows: R. Penker, 2-storey brick store and dwelling on Rushbrooke st., cost \$3,500; W. A. Rineand, 2-storey brick store and dwelling on Charlevoix st., cost \$3,800; W. Se-combe 2-storey stone & brick dwelling on Congregation st., cost \$2,200; B. O. R. Simard, two 3-storey stone & brick dwellings on Maisonneuve st., H. R. Fallbord, architect, cost \$3,600; J. L.

Beaudry, three 3-storey stone & brick dwellings, cor. Notre Dame and Amherst sts., G. Simard, architect, cost \$18,000.—Chris. Clift, architect, is preparing plans for a Presbyterian church at Montreal Junction.—E. St. John, architect, is preparing plans for a residence for Mr. Caron, at Long Point.—W. Lavernore, architect, is preparing plans for a building on Craig st. for J. S. Thompson & Co.—A. Floekton, architect, is calling for tenders for the erection of a brick residence on Dorchester st., Cote St. Antoine, for Mr. W. Knox, also for 2 dwelling houses on Park avenue, with cut stone fronts, for Mr. J. S. Dixon.—Theo. Daoust, architect, is preparing plans for twenty-five stores and dwellings and a large theatre on St. Lawrence st., also for six houses on Sherbrooke st. and six cottages at Pt. Claire. Tenders will be asked for shortly.—Wm. H. Hodson, architect, is preparing plans for one store and dwelling, and two dwellings on Dorchester st. Tenders will be called for next week.

CONTRACTS AWARDED.

CHATHAM, ONT.—Mr. John Darling has been awarded the contract for the erection of an addition to Queen street school at the price of \$1,349.

OTTAWA, ONT.—Messrs. Faquhar Bros., of Toronto, have the contract for building the Amprior section of the Ottawa and Parry Sound railway.

KINGSTON, ONT.—Mr. G. Wilson has secured the contract to erect a two story double brick house on the corner of Alfred and Johnston streets, for \$2,500.

TORONTO JUNCTION, ONT.—Messrs. F. Hyde & Co., Montreal, have secured the contract for supplying the 15 in. and 18 in. Scotch fire clay pipes for the sewerage works.

WINNIPEG, MAN.—Messrs. Gray Bros. have been awarded the contract for the erection of Mr. Geo. Fould's new building on Main street. The building will be solid brick with stone foundation.

LONDON, ONT.—Messrs. Tambling & Jones have been awarded the contract for the rebuilding of St. Paul's Cathedral. The price is said to be in the neighborhood of \$40,000.—Mr. J. D. Ellison has received the contract for erecting a cottage on New Orchard Beach, Port Stanley, for the Young Women's Christian Association of London.

TORONTO, ONT.—The Dominion Wire Manufacturing Co., of Montreal, has been awarded the contract for the supply of twenty-seven miles of pure copper trolley wire for the Toronto Street railway. The copper is made in mile lengths.—Messrs. McGuire & Bird, of this city, have received the contract for the heating apparatus for the public building at Peterboro'.

VANCOUVER, B. C.—The Board of Works, have received the following tenders: Seventh avenue grading—Geo. Ronasefell, \$7,304; lump sum, and for the bridge \$17 per 1,000 feet b. m. and log culverts, \$16; Whitehead & Campbell, \$7,400, and \$16 per 1,000 feet for bridges, Hobson Bros., \$6,250, and bridges \$15 per 1,000 feet. T. M. Thomas, \$7,595, and bridges, \$22.75 per 1,000 feet; Cook & McDonald, \$7,194. The tender of Hobson Bros. was accepted. Barely street, sidewalk—E. C. Britton, 21 cents; A. D. McDonald, 21 cents; W. Jones, 22 cents. Mr. Britton's tender was accepted. Grading Barnaby street from Nicola to the foreshore—J. Gibbons, \$1,174; F. M. Thomas, \$1,149; George F. Rounsefell, \$780; Hobson Bros., \$775.50. The latter bid was accepted.

HOUSE COLORING.

A very common error, selecting the colors for a house, is to choose a shade for the gables which is darker in effect than the general body color, reds being frequently taken for the gable. This nearly always gives a top heavy appearance, which would be entirely avoided were a color of lighter tone chosen. The proper method to pursue in adopting a color scheme for any building, is to use darker and richer tones at the base, and as we go upward to gradually lighten the

effect, until the highest and most delicate shades are reached in the gables. The roof may properly be considered as a thing by itself; as it is not in the same vertical plane with the side walls the light will be reflected from it in a different manner, and hence the tone will be greatly modified from that of the actual color employed, being generally lighter in effect. Even taking this into consideration, it is not well to choose too dark colors for the roof, or it will appear to crush the house. Of course, the architectural effect must be considered, as it sometimes happens that the roof should appear low, in order to reduce the apparent height of the building. In this case the roof may properly be dark, though on the side wall no architectural necessity can ever arise which will require dark colors to be placed above lighter ones.

Another thing well to remember is that the under side of overhanging eaves or the flat under side, or planer, of a boxed cornice, should properly be painted in a lighter color than the barge boards or face mouldings. Otherwise, as the under side of the cornice is in shade it will be lost, and will not be readily distinguished in bright sunlight, from the cast shadow on the side walls, hence the effect of projection will be lost and the value of the cornice will be destroyed. On the other hand, the light under side will throw out the cornice, and will increase its architectural value by giving it greater apparent projection.—*Painting and Decorating.*

ELECTRICAL STONE CARVING DEVICE.

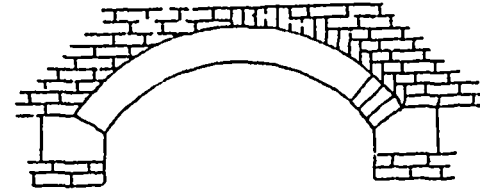
Electricity has now been put to many uses, the very latest being the working of a machine which it is said will revolutionize the art of stone carving. The inventor is a Colorado man, W. P. Carstarphen, and the inventor, we learn from the Denver Sun, is known as the "electrical reciprocating" tool. This tool is provided with a reciprocating plunger, located and moving within the tubular spools of two coils of insulated copper wire through which a direct current of electricity is alternately passed. The current for operating the tool can be supplied from any suitable electrical source, such as an ordinary galvanic battery or a dynamo electric current, which is simultaneously switched from one coil or set of coils to the other by the use of a suitable mechanism located between the two coils, and controlled by the reciprocation of the plunger. The electrical current enters one end of the tool through a revolving swivel, and the rapidity of the strokes made by the plunger is regulated by a button on the side of the tool. In the model, which is a three-pound tool, the stroke can be made to vary from one-eighth of an inch to one inch with a motion varying from 50 to 300 strokes per minute.

To operate a tool of this size but from four to six volts current are required. Portable storage batteries twelve inches by six inches by six inches have been made, which are incased in a neat box and intended for operating the tool on scaffolds and elsewhere away from the shop. These have operating force sufficient for a day's work, and can be so charged over night at an expense not to exceed one shilling.

With this tool the carver or sculptor, instead of dividing a portion of his attention to striking his chisel, can devote his entire attention to the lines which he is following, thus producing more accurate and rapid work. It is estimated that the machine will produce work in one-fourth the time of hand work, and therefore a material reduction in the cost will be secured.

CUTTING BRICKS FOR ARCHES.

A correspondent of the *Contract Journal* writes as follows: I beg to forward the enclosed drawing of arch (if you deem it worthy of publication), showing the old method of cutting the bricks to the curvature of the arch on the left-hand side, and the new method on the right-hand side.



Your readers will perceive the difficulty a bricksetter has in cutting his bricks to a feather edge, as shown on the left hand side, but on the other you have a good joint all round, with every little difficulty in cutting. I think the new method overcomes the difficulty, looks much better, and is certainly stronger. I have not seen the bricks cut as suggested on any building in my travels, but having shown it to Mr. Brown, the borough engineer of St. Helens, he at once adopted it on the new intercepting sewer, which he has recently constructed in that town, with good effect.

MUNICIPAL DEPARTMENT.

STONE PAVING.

The following observations are from a paper recently read by R. H. Dorman, County Surveyor, Armagh, at a meeting of the Association of Municipal and County Engineers held in Dublin.

Stone pavements consist of squared setts laid on a suitable foundation. The foundation usually consists of gravel, broken stone, or concrete of varying thickness; this latter is the only reliable material—it should never be less than six inches thick, while nine inches will carry the heaviest traffic. Portland cement and Thames ballast in the proportion of one to seven make excellent concrete. As the concrete is laid in the trench, the top surface should be brought to the proper scamber with the shovel. In Dublin, I recently noticed the concrete was lightly rammed, while in India I was taught to have concrete thoroughly rammed until the lime or cement creamed to the surface, but this appears to be unnecessary and even injurious proceeding, particularly when a good cement is used.

Setts.—Granites of various qualities, whinstone, and occasionally sand stone, are employed. For ordinary traffic Aberdeen or Newry granites are largely used. For very heavy traffic it is advisable to use greenstone or a hard granite; owing to the extreme hardness of greenstone it is very difficult to dress, and, in consequence, the neatest looking pavements can be made with granite setts. Asphalt, an asphaltic mixture, and wood have been suggested as materials for parking, but they are seldom used, owing to the expense; sand and gravel are commonly used. When the foundation consists of broken stone or similar material, gravel is probably the best packing material, but it is not suitable for use on a concrete foundation; it is far easier to bed a stone on sand packing than on gravel, and when well rammed it will take an even bearing, but a stone laid on gravel is liable to rock and work loose. Formerly, it was usual to bed each stone in lime or mortar—no doubt a good method, but expensive.

Grouting.—In the North of England, Dublin, and other places and joints are