

wheel away loads of these frames to the dipping, or heading, department which has a building to itself away from the main workroom. There a man is busy at a metal table finely levelled, spreading the material—phosphorus, chlorate of potash, and glue—into a layer $\frac{1}{4}$ inch deep. He employs a gauge to ensure this uniform thickness. That done, he takes up the top frame (still full of tapers as we saw it last at the frame filling machine) from the trolley, and lays it bodily down in the ultramarine mass on the table, picks it up in a few seconds, and behold, every one of the evenly protruding matches has a head upon it.

Away now to the drying bins, where the matches, still held in the frame, are turned heads down in order that the blue phosphorus mixture may settle into the rounded tops peculiar to match heads. After this the frames with their loads of headed matches are finally sent to the boxing tables and the match girls. The girls unscrew the frames, take out the rows of matches heads up in handfuls, and drop them into the boxes. The pace they do it at is something wonderful, those who have had practice (and they have no time to deal gingerly with their work) ramming the handfuls of matches into the boxes. Occasionally a match resents this energetic treatment, and a half-filled box becomes a miniature volcano. There is a hiss and a flare, a smoke, and a match box falls out of the path of the useful—a failure. The filled boxes are finally cased, and that ends the process.

In order to manufacture such an apparently simple article as a wax match, nearly every portion of the globe has to be searched for material wherewith to accomplish the work; the sheep on a thousand hills supply the stearine, the teeming cotton fields of Georgia and Alabama, the cotton for the core of the match; the tropical forests of Java, Borneo and Sumatra and the gorgeous slopes of the Amazon country, the gum which hardens, and without which no match would strike, and the gum which binds; the Swedish factory where the chlorate of potash is made for the head by an electrical process patented there, which has reduced the cost to one-fourth; and the phosphorus and strawboard from England.

In one year the processes of matchmaking and boxmaking at Messrs. Bell's absorb the following quantities of raw material: cotton, 35 tons; wax, 150 tons; New Zealand glue, 12 tons; strawboard, 50 tons; chlorate of potash, 15 tons; and English phosphorus, 3 tons. The phosphorus has to be kept under fresh water until required for mixing with the glue and other substances of which the match head is composed, and it much resembles clarified kauri gum.

Chinese Wireless Telegraphy.

Arrangements have been made by the Chinese Government for the establishment of several stations throughout the Empire to experiment with the Marconi system of wireless telegraphy, in the working of which Chinese operators will be instructed. Apparatus has been installed on several Chinese war vessels at Shanghai, and at the northern cities of Peking, Tientsin, and Pao Tingfu. Instructions will be given by an Italian officer, who has been appointed for this purpose and who will also serve as engineer and superintend the operations. The establishment of other stations besides those mentioned is being contemplated, and viceroys throughout the Empire have been directed to investigate the subject.

State prisons are filled with people who thought they were clever.

Building & Architecture.

The Architectural Editor will be glad to receive suggestions or matter from those interested in this section. Address: Architectural Editor, PROGRESS, Progress Buildings, Cuba Street, Wellington.

A contract has been let for the erection of a power house at Longwood, Featherston, for £115. Architect, John S. Swan; contractor, R. Heald.

Mr. J. M. Dawson, architect, has started the practice of his profession at his office in Hume's buildings, Willis street, Wellington.

A contract has been let for the erection of additions to Mr. F. W. Mansfield's residence at Khandallah at £415. Architect, John S. Swan; contractor, John Moffat.

The contract for the supply of fittings for the National Bank's head-office building has been let at £1900. Architect, John S. Swan; contractors, W. Nees & Sons, Dunedin.

The contract for additions and alterations to the Wellington Club, Wellington, has been let at about £1900. Architect, John S. Swan; contractors Hunt & McDonald.

A block of two-story brick shops and dwellings are now in course of erection in Colombo street, Christchurch, for Mr. A. Lowry, and which will be a pleasing addition to the architecture of the street. Architect, W. V. Wilson.

A contract has been let for the erection of a residence in Daniel street, Newtown, for Mr. M. Segrief, at £1300. The building will be of timber on a concrete foundation. Architect, John S. Swan; contractors, Parkin & Betts.

A contract has been let for the erection of a new Primitive Methodist church at Newtown. Tenders are now being called for the erection of business premises in brick at the Lower Hutt. Architects, Maisey & Johns; contractor, A. Wilkening.

The contracts for the supply and fixing of plaster and steel ceilings for the National Bank's head-office building have been secured by the following: Plaster, the Carrara Ceiling Co., Ltd., £760; steel, Briscoe & Co., £205. Architect, John S. Swan.

One of the most up-to-date residences, situated at Gonville, near Wanganui, is nearing completion for Mr. A. G. Bignell. The house has a tiled roof, and is fitted with every modern convenience, and altogether presents a very striking appearance. Architect F. Atkins; contractors, Russell & Bignell.

A residence is being erected at Goldie's Brae for Mr. S. Brice. It is to contain seven bedrooms, kitchen, drawing-room, dining-room, a spacious reception hall, and a 27' x 12' billiard room, also two bath rooms, laundry, and the usual conveniences. Architect, J. M. Dawson; contractors, McLean & Gray.

A handsome brick building, in Ridgway street, Wanganui, is in course of erection, and is to be occupied as the Commercial Travellers' Club. The building is of two stories, and forms an interesting addition to the better-class architecture of the town. Architect, F. Atkins; contractors, Russell and Bignell.

A large and up-to-date building in Victoria avenue is shortly to be completed for Dr. Earle, and will be let for business purposes. The building is opposite the Technical School, and when completed will be a striking contrast to the old structures formerly situated there. Architect, F. Atkins; contractor, W. Kursky.

Plans for a new Commercial hotel, to take the place of the old wooden building on Lambton quay destroyed in the recent big fire, have been prepared. The new Commercial will consist of a four-storied brick building of 108 ft. frontage, built in the Renaissance style, and relieved in the front with three large oriel windows, an ornamental balcony running the whole length of the building, and bal-

conettes for means of fire escape. There will also be provided means of escape from the rear on to the Terrace. The front of the ground floor will be occupied by several shops, a public bar, and a sitting-room. On the first floor will be a large dining-room, commercial, sitting, and drawing-rooms. Bedrooms and sitting-rooms will occupy the other floors, and there will be about one hundred bedrooms in all. An electric lift is to be provided, and throughout the whole building the fittings and appointments will be of the most modern and up-to-date kind. Tenders for the work are now being called. Architect, J. Charlesworth.

A fine two-storied building, mostly of brick, has just been completed for the Wanganui Meat Freezing Co., Ltd. Part of the downstairs portion is to be occupied by them as a butcher's shop, while the remainder of the ground floor will be occupied by a leather merchant. The upstairs portion is very commodious, and will be let for office purposes etc. The building is in Ridgway street, and is up-to-date in every respect. Architects and contractors, Burton & Benge.

The contractor for the new Theatre Royal, Christchurch, has made a good start with the work of the basement and substage. The buildings are to be completed and ready for opening by November, 1907. The chief feature of the auditorium is that there are no posts or columns to support the circle or gallery floors, the whole being carried from the walls. We hope to publish illustrations of the exterior and interior at a later date. Architects, S. & A. Luttrell; contractor, W. H. Bowen.

Tenders were recently called by Mr. Frank Messenger for a two-storied or one-storied parsonage for the Wesleyan Church, New Plymouth. The one-storied building plan was adopted, and the following tenders were received: J. D. Smith £795, Boon Bros. £817, R. W. Bond £836, Turner and Beadle £865, Coleman & Son £873, J. Salt £907, A. Cliff £941, J. T. Mannix £942. The tender of Messrs. Boon Bros. was accepted. The building is to be completed in about four months.

The following tenders were received by Mr. Frank Messenger for the erection of a warehouse in Brougham street, New Plymouth, for Messrs. Macky, Caldwell & Logan: Coleman & Son (accepted) £1847, J. Salt £1848, R. W. Bond £1893, Boon Bros. £1960, A. Cliff £2140, Turner & Beadle £2295, J. T. Mannix £2346, Pikett & Wilkie £2470. This price did not include the plumbing and electric lighting. Messrs. Smart Bros.' tender at £177 being accepted, the only other tender received being that of Griffiths & Co. at £178.

Our illustration depicts the New Zealand Express Co.'s new building in Hereford and Manchester streets, Christchurch. This structure has just been completed, and it certainly redounds to the credit of the contractor. It has a frontage to Manchester street of 78 ft., and 66 ft. to Hereford street; from the path to the top of the parapet the height is 130 ft. The foundations and first two stories are of reinforced concrete, whilst steel has been freely used in the upper stories for ties and standards. The building, whilst presenting a bold appearance, has nothing of an aggressive nature. The building has been installed with two electric lifts, one for goods, and one for passengers. Architects, S. & A. Luttrell; contractors, W. H. Bowen; plasterer, A. Menzies.

An up-to-date and commodious residence has just been completed for Mr. Robert Davis at Kume-roa. The new "Homestead" has dining and drawing rooms, each with a floor space of 388 sup. feet, entering off a large hall, which is screened from the lobby by a fine grilled archway in oiled rimu, five bedrooms, kitchen, bathroom, laundry, store, and pantry, with meat safe, and dairy built outside. The drainage is on the septic-tank principle, and all according to the By-laws of the Napier Borough Council. The house has hot and cold water throughout and is fitted with electric bells