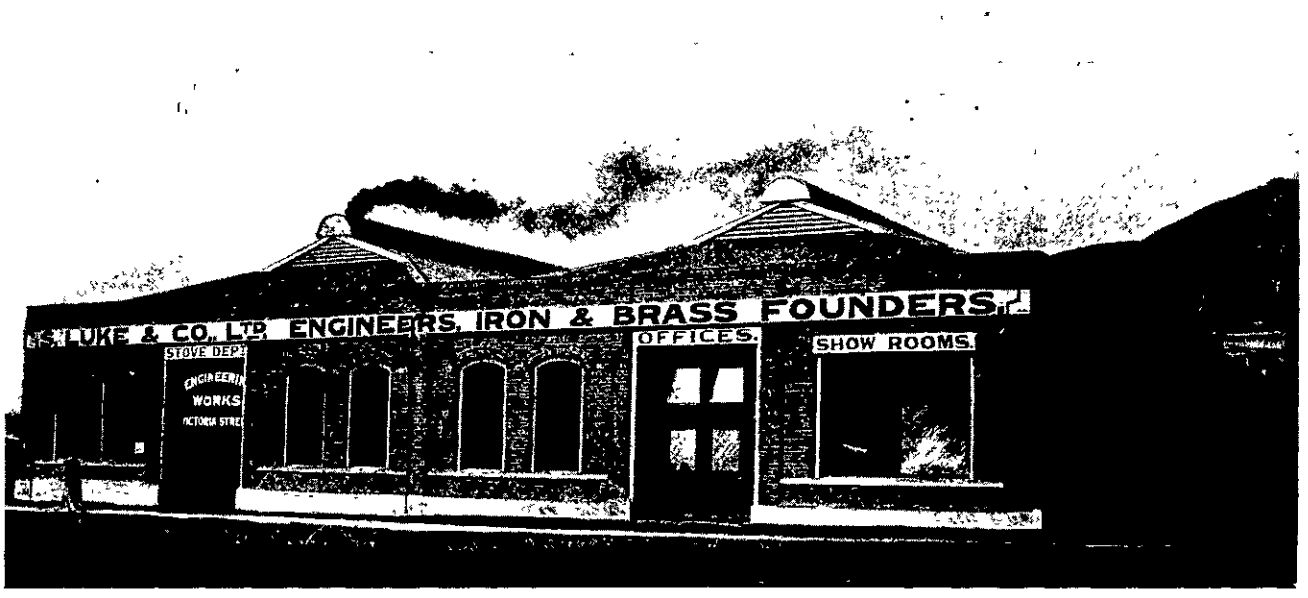
Our Industries: No. 8. S. Luke & Co.'s Stove-making Branch.

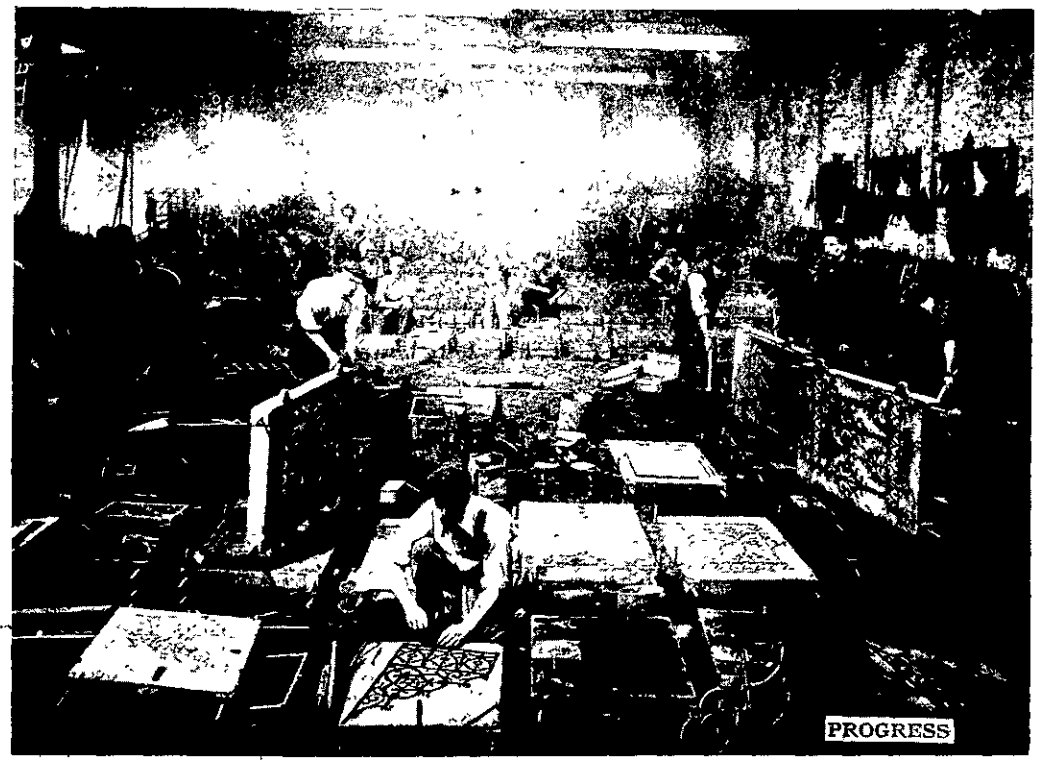
It is now close upon thirty-five years since the first stove-making business was established in New Zealand. Up till that time we were almost wholly dependent on the foreign-made article, the number of stoves imported in 1870 and distributed amongst a population of 250,000 being 5,000. This, compared with 200 stoves imported last year to serve a population of 857,539, demonstrates very clearly that importations have decreased by a considerable amount. Time has brought some notable inventions, even in such a prosaic device as the cooking-stove. Benjamin Franklin, great electrician and engineer of the 18th century, invented the apparatus known in America for many years as the Franklin stove, which was entirely open in front and was used generally for the dual purpose of cooking and heating. From that date to the present improvements have accompanied each new stove model to such an extent as to give us in the article of to-day an appliance of the highest efficiency for use in the kitchen. It is interesting, also, to note that the introduction of chimneys into houses took place in the 14th century, and opened the way to all modern improvements in the kitchen stove; thus, the efforts of inventors have not only been directed towards bettering shape and introducing compactness, but to securing draught for the thorough combustion of fuel and the utilisation of a maximum heat therefrom in the most useful and healthful manner.

In New Zealand stove-making has become an important industry, because it is possible to turn out a stove which is in all respects equal to the imported article landed at an advance in price of 25%. Another advantage gained through this industry is that we manufacture stoves in accordance with our own requirements. The foreign manufacturer is not aware that the majority of stoves used in this colony must be designed for burning wood, and that, consequently, they should possess abnormally large fire-places; therefore, it may be fairly assumed that he has not troubled himself as much over the constantly changing conditions of living, away from his own land, as in persistently exporting stoves built up on principles which he thinks we ought to accept.

Twenty-five years ago the capacity of Messrs. Luke's works in Wellington was a modest two stoves per week; now eighty to one hundred a month can be manufactured with ease—stoves measuring from 2 ft. up to 15ft. in length. The building in which this industry is carried on, and which will in time have three stories added to it, has a frontage of 100ft., and a depth of 200 ft., with two entrances, one facing Blair street, the other Allen street. At the Blair-street end of the moulding-shop stand a large and a small cupola, the former being always in use while the latter is kept as a stand-by, or for the purposes of work not requiring the fullest possible supply of metal. These cupolas furnish the grim side of an iron-founder's business, and to witness the molten metal running at a white heat and the flying sparks enveloping the men, as they alertly shift from one place to another in disposing of the glowing torrent, is a fascinating sight at any time. There is one man amongst this company of smoke-begrimed and silent workers who occupies an important position, and he is the smelter, or furnace-man. He can either make or mar the cast. Not only is the smelter required to scientifically charge the furnace with coke in order to maintain a uniform heat, but he has to gauge the right amounts of pig and scrap iron intended for conversion into "stove" metal. The adept smelter, too, can have his metal ready for the moulding box in a quarter of an hour after the starting-up of the furnace, and thereafter he is able to supply 1 cwt. of metal every three or four minutes. The forced draught for the cupolas is furnished by a 7½ h.p. electric motor driving a Barker centrifugal fan; while the removal of slag is carried out by means of a flux inside each cupola, so that when the metal is poured out the quantity of impurities deposited with the metal in the ladle is reduced to a minimum. Busy hands are waiting to hurry the liquid mass to the moulding boxes, of which there are 200, where sandy receptacles, fashioned by brass moulds into the shape of the oven door, or fire front, or whatever the particular moulding is to be, are waiting. Part of the outfit of this moulding department includes nearly six tons of brass moulding plates which effect a considerable saving of time in the moulding of the parts, while tending to a more satisfactory production than that which used to be identified with the old-fashioned pattern moulding, and it is now possible to witness at Messrs. Luke & Co.'s establishment a complete casting carried out with a brass moulding plate in ten minutes.



MESSRS. LUKE'S STOVE-MAKING BRANCH, ALLEN AND BLAIR STREETS, WELLINGTON.



MOULDING-SHOP. IN ADDITION TO STOVE CASTINGS MESSRS. LUKE EXECUTE ORNAMENTAL IRONWORK IN THIS DEPARTMENT.

From the moulding-shop the crude casting is transferred to the fettling-shop, where the fettlers brush away the remaining sand and trim up the parts prior to handing over to the fitters. The stove faces intended to be bright, and which are always the delight of the neat housekeeper, are now handed to the polisher who is seen plying his occupation to the accompaniment of the whirr of highly revolving grinding stones, emery buffs and calico mops, which in turn do their work so well that the polished piece of metal held up to the eye appears as reflectent as a looking-glass. Fitters next take the parts and assemble them for the shaping of the stove, which, when put together, is finally passed on to the paint shop to receive finishing touches.

Several minor departments, such as the smithy and iron-working shop, are situated at the Blair-street end of the works. The iron-workers prepare the ovens, ash pans, copper boilers, etc., while for the angle-bending of ⅛″ plates, when cold, a powerful Rhodes bending machine is installed. The high-pressure wrought and cast boilers, and those of copper for both high and low pressures, are made in this department, and they are important features of modern stoves in a cold climate, being designed for a maximum steam pressure of 80 lbs. per sq. inch, and tinned inside for the purpose of warding off the injurious effects that would otherwise supervene