



EXCELSIOR ENGINEERING COMPANY, LIMITED.

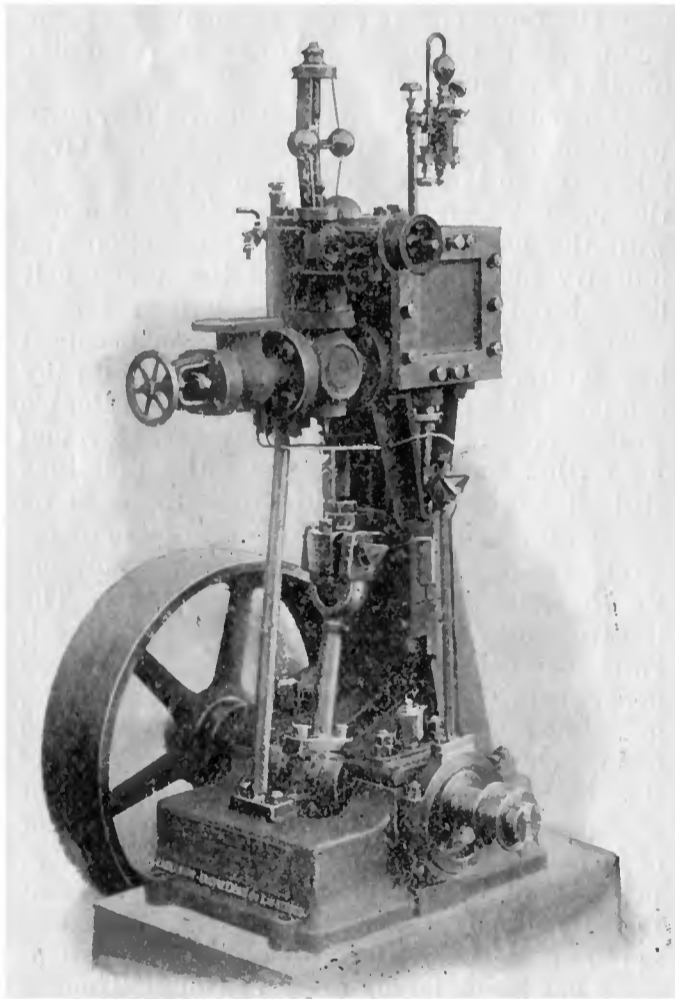
BOWBRIDGE, STROUD.

Engineers and Manufacturers of Engineering Specialities.

THE Excelsior Engineering Works, Bowbridge, Stroud, were established three years ago, being one of the youngest of our engineering concerns. No industry in the district, however, has made more rapid progress, the firm having already gained a high reputation throughout the entire country. Starting with a staff of but three or four workmen, the firm now employ fifty men, and it is foreseen that this force will have to be soon increased.

The freehold premises occupied by the Excelsior Engineering Company cover an area of approximately one acre of ground, ample space being available for the addition to the buildings now in contemplation. The present buildings consist of a large four-storey structure, containing the machine, fitting and erecting shops, the pattern shop, pattern storage rooms, and drawing and business offices. The large smithy and forge room and the engine room occupy separate wings.

The mechanical equipment has been constantly improved, the most modern lathes, shaping, boring, slotting, and other machines having been recently installed. The fitting and erecting shop is provided with overhead travellers, which are so placed as to connect with the outside swinging crane, thus facilitat-



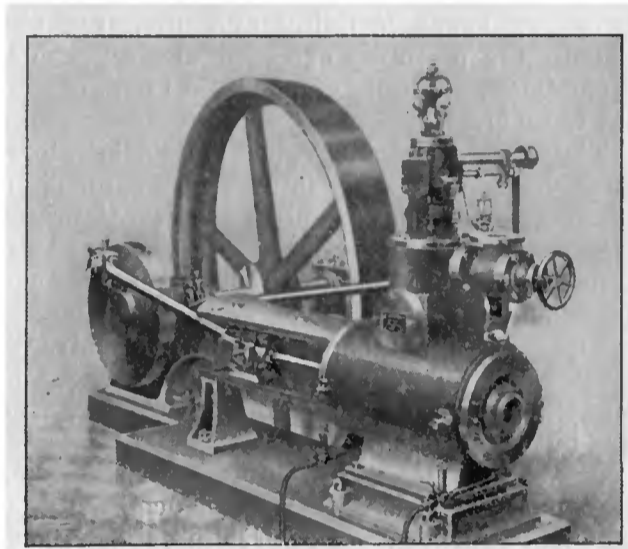
8½ IN. X 8 IN. HIGH SPEED VERTICAL ENGINE.
Constructed by Excelsior Engineering Company, Limited.

ing the handling of the heavy manufactures. Indeed, every provision seems to have been made to turn out a large quantity of work promptly and economically.

The Company are General Engineers, and design and manufacture all kinds of high class labour and steam saving engineering specialities. They have gained a pronounced success with their vertical and horizontal steam engines, of which they make several types, ranging from 4-H.P. to three hundred and 50-H.P. Through the firm's courtesy we are enabled to present herewith three excellent engravings showing several types of their engines. They also manufacture pumping

machinery, mill gearing and power transmission, mill and warehouse hoists, constructional iron work, roofs and girders, etc., etc., having executed a number of important contracts for our leading cloth, carpet and other manufacturers.

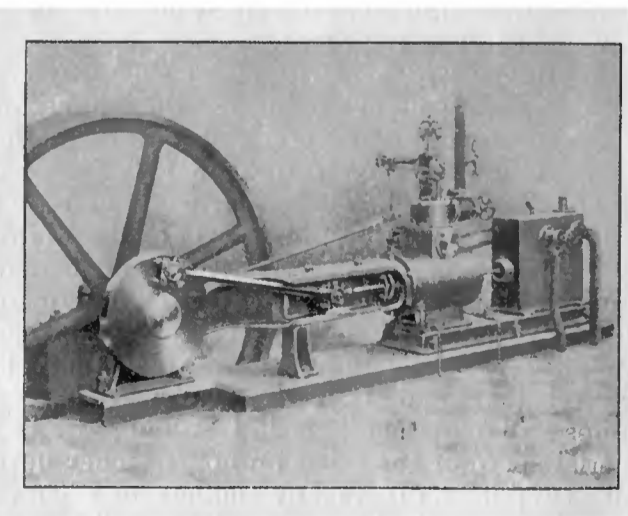
During the past few months the Company have engaged extensively in the designing and construction of special machinery for the manufacture of lime-sand bricks by what is known as the new "Silo" process. These bricks, which are composed entirely of sand and lime, are not only much cheaper than those made by the old method, but have a much finer surface, do not warp, and are not affected by atmospheric conditions. They have been but recently introduced into this country, though their manifest advantages have already gained the endorsement of a number of the leading architects and builders throughout the Kingdom. Their manufacture requires extensive



13 IN. X 24 IN. SINGLE CYLINDER STEAM ENGINE.
Constructed by Excelsior Engineering Co., Ltd.

machinery, and the Excelsior Engineering Company are at the present time fitting out a large plant near Liverpool—the second plant of the kind to be established in England. The Company are also negotiating for the construction and equipment of similar plants in Australia, South Africa, India, and New Zealand. Indeed, in perfecting machinery for the equipment of these and similar plants the Company have created what is practically a new industry, and one which promises to develop into large proportions.

The directors of the Excelsior Engineering Company are Messrs. G. F. Alder, A.M.I.M.E., Chairman and Managing Director, R. H. Stotesbury, M.I.J.E. and T. Walker. Of these Mr. Alder devotes his entire time to the



13 IN. X 24 IN. CONDENSING STEAM ENGINE.
Constructed by Excelsior Engineering Company Limited.

management of the works, which under his direction, combined with the commercial connection of Mr. Stotesbury, have taken a very important place among the engineering concerns of the County.

J. M. BUTT & COMPANY, GLOUCESTER.

**The Oldest and Largest Iron Founders
in the District.**

MESSRS. J. M. BUTT & COMPANY, Kingsholm, have the distinction of being the oldest iron founders in this district, the business having been established considerably over a century ago. During all of that time it has occupied the present site, though the buildings have been frequently enlarged. Nearly twenty years ago the present proprietor, Mr. Harley Butt, succeeded his father in the control of the business, which in spite of the prevalent "hard times" of recent years, is still increasing. Mr. Butt has been almost bred up in the atmosphere of the foundry, having been associated with his father for a number of years before assuming control himself.

Since the foundry is the largest, as well as oldest, in Gloucestershire, it will be of interest to the reader to give a brief description of it, and the part it takes among our more important industries. The following reference will be necessarily brief, however, and we can allude to but a few of the more noticeable features.

The foundry premises cover a large area in one tract, with additional large pattern warehouses in Columbia Street, the latter warehouses occupying what were once the buildings and playground of St. Mark's Schools, and a warehouse near the Cattle Market. The main premises are so situated as to be to the ordinary passer-by most deceptive in appearance, giving no indication of their real size. It is only when one passes through the yard and into the foundry buildings, that he can form any idea of their extent. They are, in fact, far larger than any other premises in this district devoted to the same purpose.

The foundry is divided into several departments, which are reserved for the different classes of castings. All of the equipment is thoroughly modern, including heavy travelling and swinging cranes, moulding machines, and two capacious cupolas. One of these cupolas, which has just been erected, is the new Thwaite's Patent Cupola, and is the only one of the kind in the City. The buildings are splendidly lighted from the roof, and with gas at night.

In addition to the foundry is a well-equipped fitting shop, used largely for repairs and special work required on the premises, a pattern shop, a smithy, several pattern storage rooms, stables and large yards. The pattern storage rooms, which are very extensive, are filled from floor to ceiling with thousands of patterns, many of which have been kept in stock almost from the beginning of the business. Notwithstanding the enormous number of these patterns they are so classified and arranged that any desired one may be located in a moment.

While Messrs. Butt and Company make castings of every conceivable shape and size, weighing from an ounce to six tons, they have for some years been particularly noted for several specialities. Among these are their rain water pipes and gutters, which are made on the Scotch principle. They are the only firm in this district, and one of the very few in England, specializing on this line. Their rain-water goods are sent to all parts of the country, a large force of men constantly being engaged in making them. They also make a speciality of castings for kilns, their work of this character having been made for export as well as for the home trade. Their work has always been distinguished for its high quality, many of our best engineers who have no foundries of their own having their castings made here regularly. It may be proper to add the interesting fact that Messrs. Butt and Company constructed the first railway trucks ever made in Gloucester, having executed an order of this character in 1852. Castings are made daily, this being





probably the only foundry in the district in which that is the case.

When the cupolas are in operation and the moulds are being cast the foundry presents a scene of the greatest activity and interest.

Nearly one hundred men are given employment, many of whom have been with the firm for years. Indeed, as regards the length of service of their workpeople Messrs. Butt and Company have a most gratifying record. At the present time there are working in the foundry 18 men who have held their positions uninterruptedly for over 20 years; of these two have been working for 39 years, and one for over 40 years. At one time three generations of the same family, grandfather, father, and son, were employed—a case which is probably unique in the annals of Gloucester industries.

On a recent occasion Mr. Butt was given a complimentary dinner by his employees, all of whom felt it a privilege to show their appreciation of his fair and considerate treatment. By keeping in close touch with his workpeople and taking a real interest in their welfare, he has secured that cordial co-operation which has no

doubt been largely responsible for his success; and more than that, he has demonstrated that the frequent disputes which disturb the industrial world may be avoided by cultivating the proper relations between master and man.



Gloucestershire Engineering.

The remarkable growth of the engineering industry in Gloucestershire during the past decade is strikingly illustrated in the last published Census returns. In 1891 there were in the County 7,185 persons engaged in the metal working industries; in 1901 this number had increased to 9,490, or 32.1 per cent. During the past four years the increase has been particularly rapid, as may be readily seen from the descriptions of the representative engineering firms included in these pages.

Factory Equipment.

In the quotation on this page from the last published Census, reference is made to the increase in the number of operatives engaged in the metal working industries. The growth of engineering in Gloucestershire, as exemplified by the figures referred to, is further attested by the additions to factory buildings and equipment. During the past five years every engineering concern described in this publication has either extensively enlarged its plant, or so remodeled its mechanical equipment as to very largely increase the productive power of its operatives. In some instances the capacity of the plant has been quite doubled in that period. One of the leading firms, which has more than doubled its staff of workmen, has found it necessary to purchase a large tract of ground in a location permitting of greater expansion, and the erection of a new model plant will soon be begun.



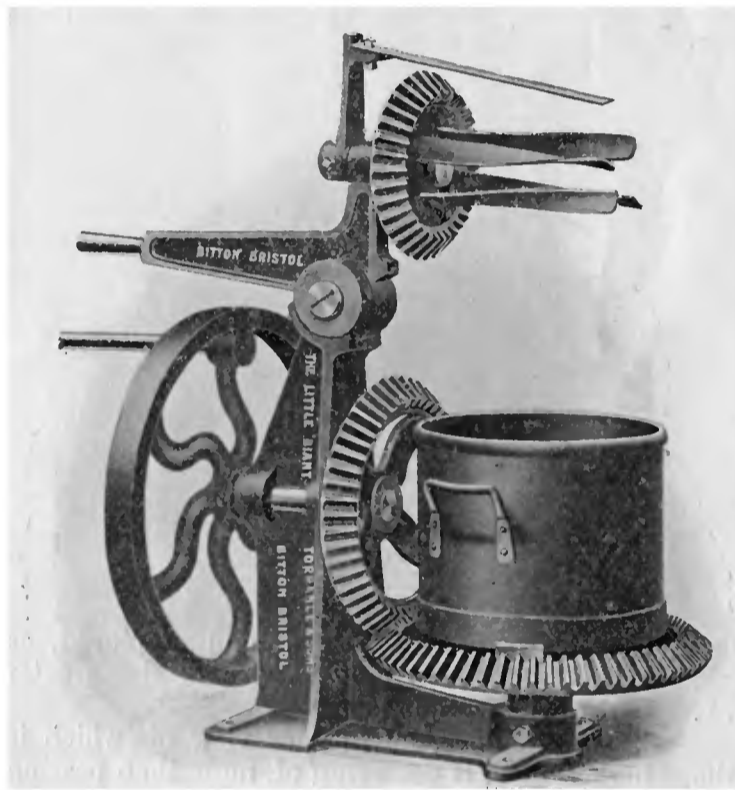
TORRANCE & SONS, LTD.,

BITTON, near BRISTOL.

Manufacturers of High-class Machinery for Paint and Colour Grinding.

IN 1881 Mr. Thos. Torrance and his elder son, Mr. J. R. Torrance, the founders and present senior members of Torrance and Sons, Ltd., established themselves as General Engineers on the premises still occupied by the Company. Like many other of Gloucestershire's notable industries the business was begun on a small scale, the entire plant originally occupying the building which now constitutes the foundry. In the year 1894 the present private Limited Liability Company was formed, the directors being Messrs. Thos. Torrance (Chairman), and his sons, J. R. and H. N. Torrance. All of these gentlemen devote their whole time to the business.

From time to time the buildings and mechanical equipment have been enlarged and added to, not fewer than six additions having been made. The works now comprise a number of separate departments, each of which is

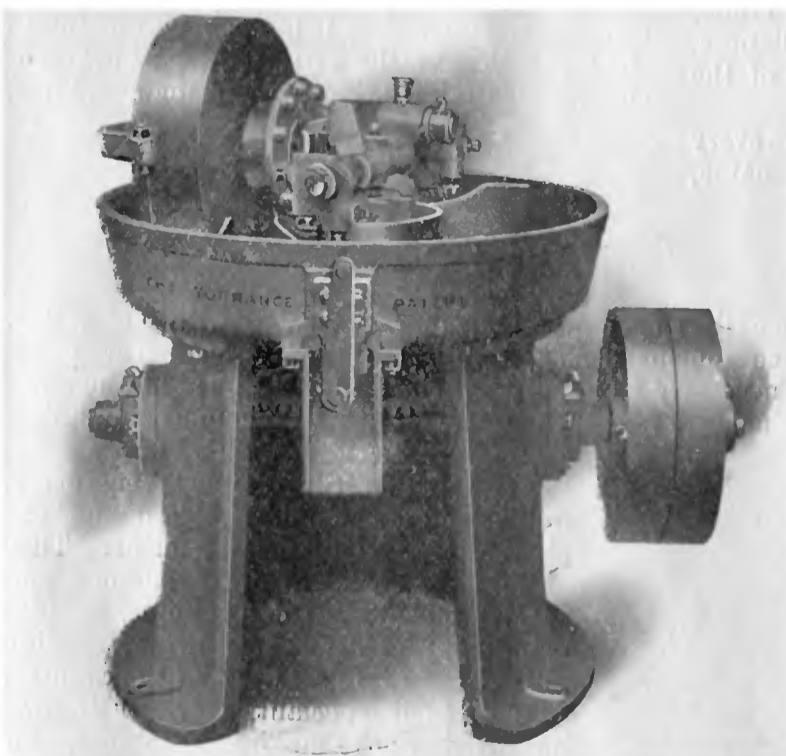


THE "LITTLE GIANT" PAINT MIXER.
Constructed by Torrance and Sons, Limited.

result, but saved both power and initial expense.

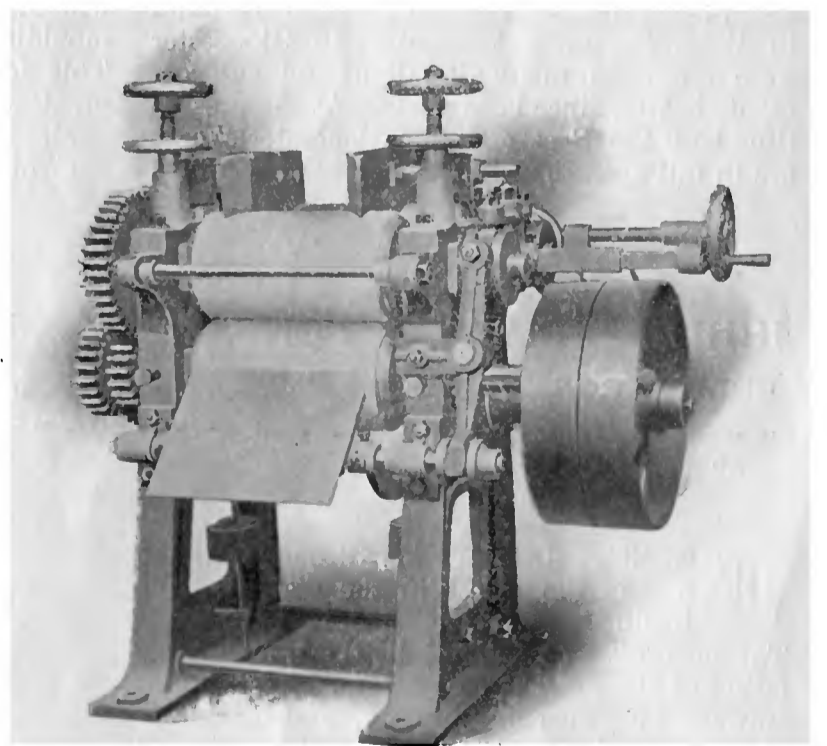
The quite remarkable success with which this mill met decided the Company to make further improvements in paint and colour grinding machinery, and for a number of years they have made a special feature of this class of work. All of their mills and specialities are of their own patent, and include dozens of special machines for grinding and mixing both the crude ochres and oxides, and white lead, pastes, paints and greases in oil. They also design, erect, and equip new works, or adapt old ones, for paint and colour mixing and grinding, levigation, burning, drying, powdering, etc., and will submit plans and estimates for any distance.

It should be added that Messrs. Torrance & Sons have been distinguished for the excellence of their workmanship as well as for their inventiveness, and they have consistently adhered to the policy of making high-class machines



THE TORRANCE PATENT MILL.
Constructed by Torrance and Sons, Limited.

and erecting shops, the engine room, and the stores are conveniently arranged and equipped with travelling cranes and the latest labour-saving tools and appliances. The entire works are lighted by electricity generated on the premises. At present a large number of hands, nearly all of whom are skilled mechanics, are given employment. The very gratifying increase in Messrs. Torrance and Sons' business has no doubt resulted from a radical departure in engineering they made some years ago. We refer to the introduction by them of what has since become



TRIPLE GRANITE ROLLER MILL. (Vertical Pattern)
Constructed by Torrance and Sons, Limited.

as large as the entire original plant. The most recent addition was a large two-storey building containing the pattern shop on the upper floor, and the main fitting and erecting shop on the ground floor. The business offices, drawing office, pattern shop, foundry, turning, fitting

known all over the world as the "Torrance Patent Mill," for grinding white lead and paints in oil. This mill, which is of their own invention, combined several features which were hitherto unknown in paint and colour grinding, and which not only secured a better

only. Their various manufactures are not only known and used in the largest paint and colour works in Great Britain, but are constantly being made for export.

Accompanying this notice are engravings showing some of their special machines.