



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.



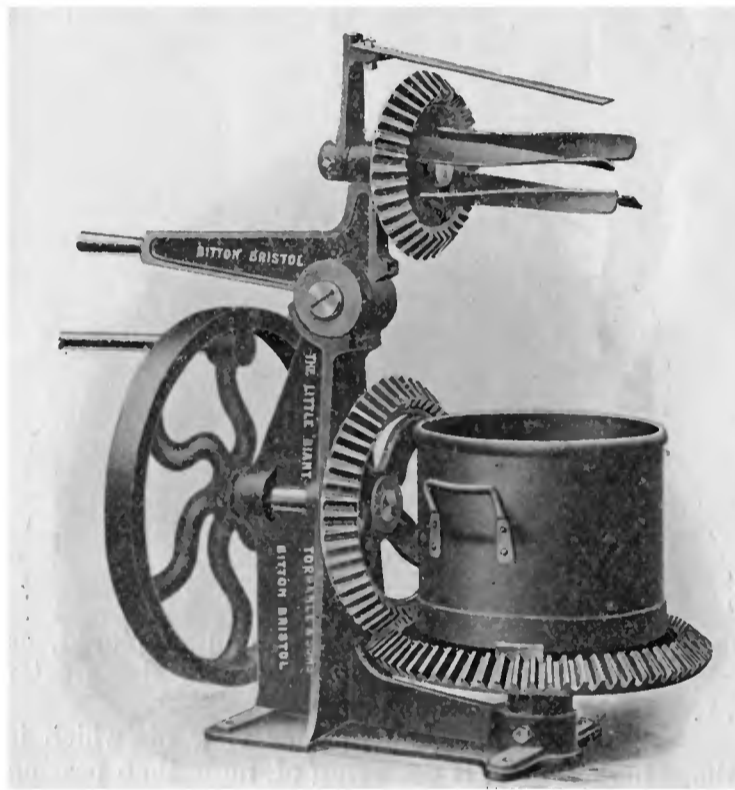
## TORRANCE & SONS, LTD.,

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

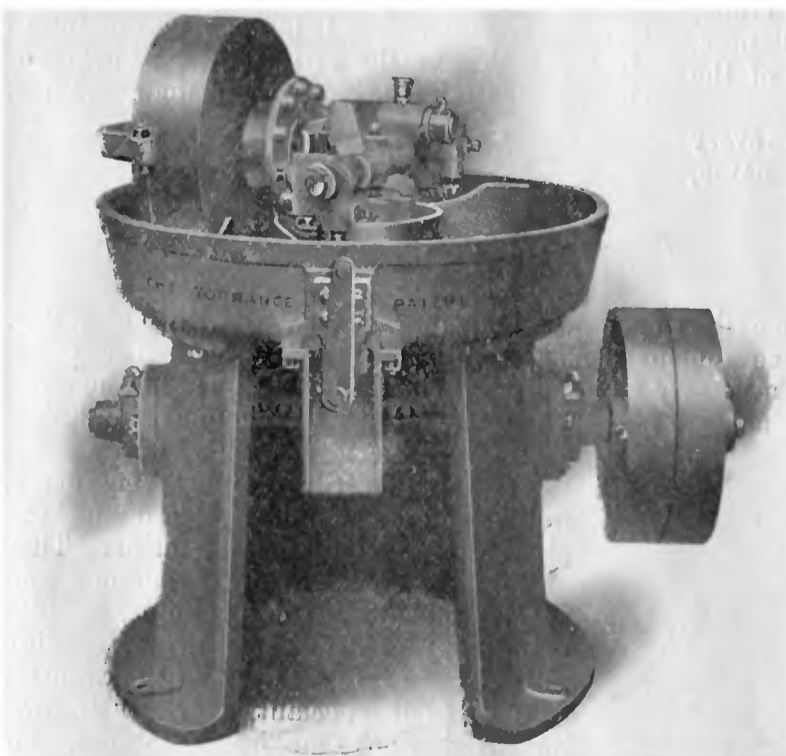


THE "LITTLE GIANT" PAINT MIXER.  
Constructed by Torrance and Sons, Limited.

result, but saved both power and initial expense.

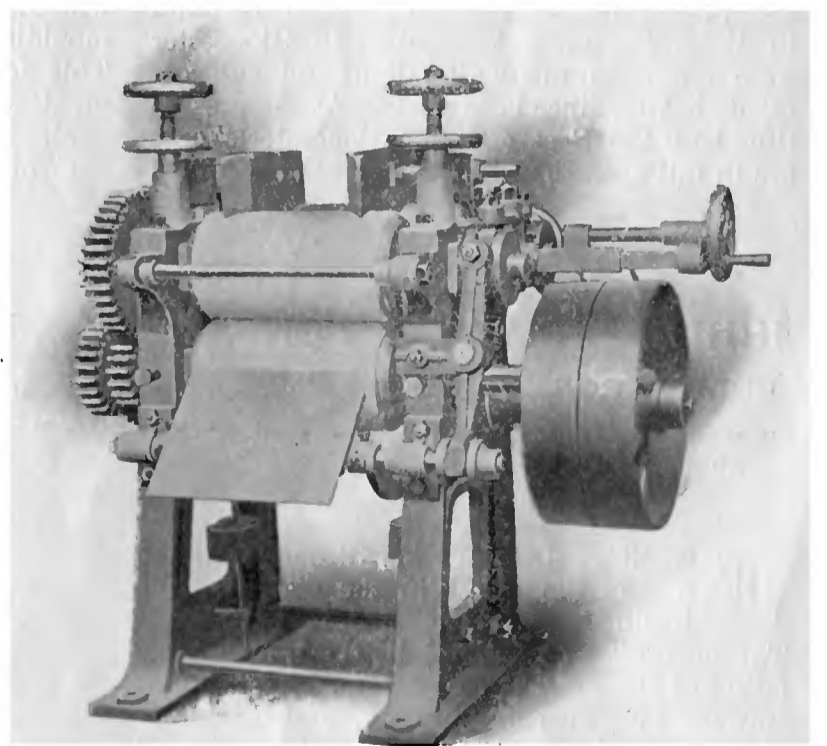
The quite remarkable success with which this mill met decided the Company to make further improvements in paint and colour grinding machinery, and for a number of years they have made a special feature of this class of work. All of their mills and specialities are of their own patent, and include dozens 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.