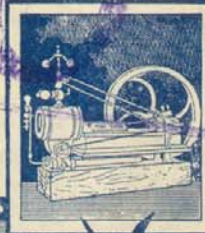
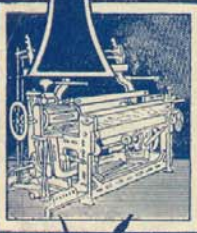




THE IRISH TEXTILE JOURNAL



WITH WHICH IS INCORPORATED

THE BELFAST LINEN TRADE CIRCULAR

DEVOTED TO
THE INTERESTS OF THE IRISH TEXTILE INDUSTRIES, AND TO
THE PROMOTION OF TECHNICAL INSTRUCTION.

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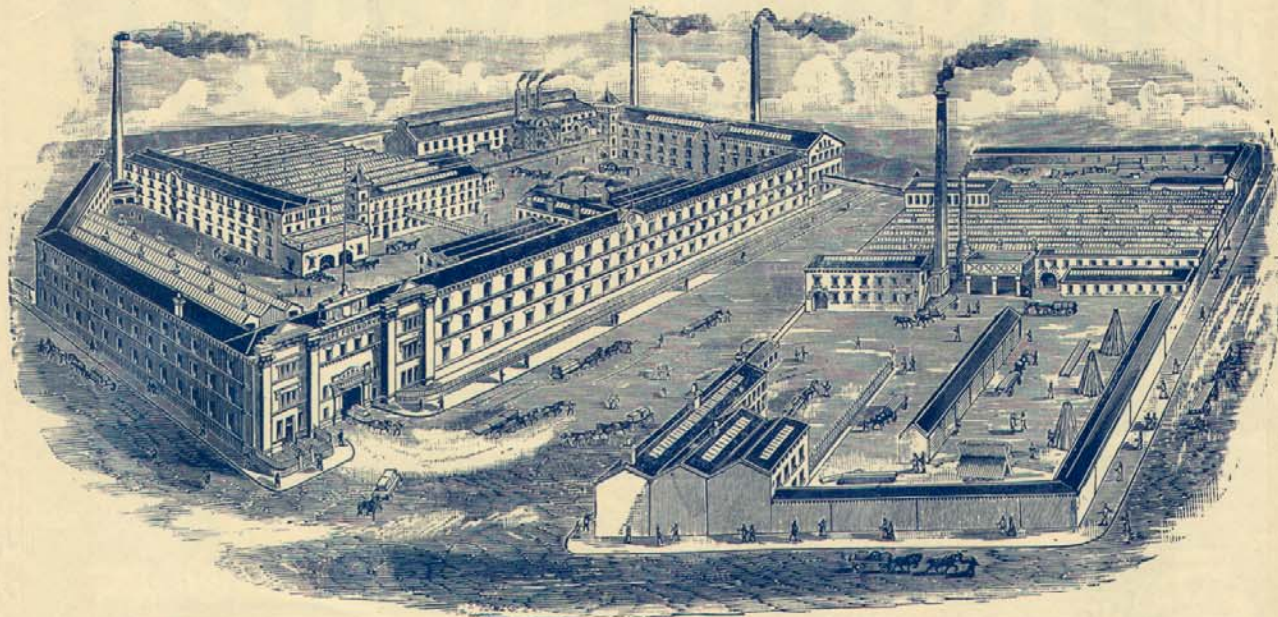
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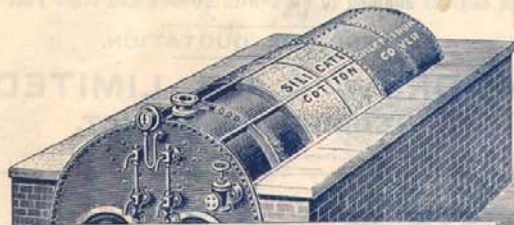
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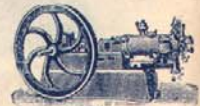
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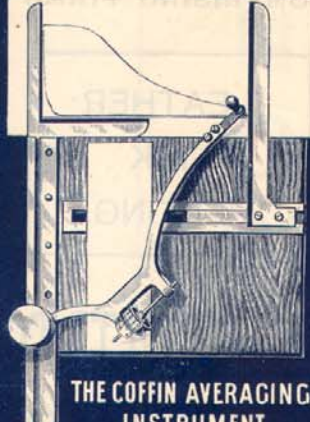
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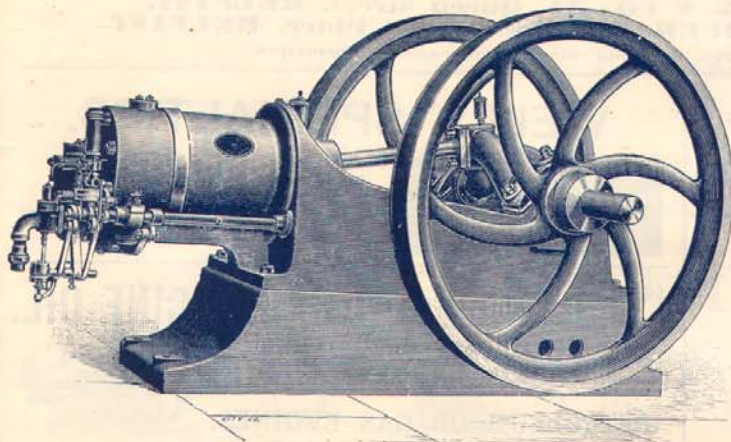
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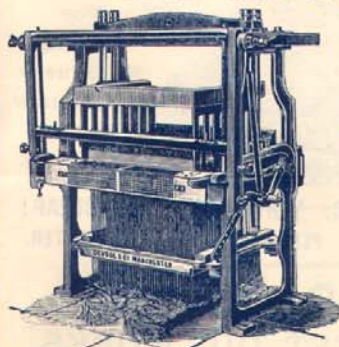
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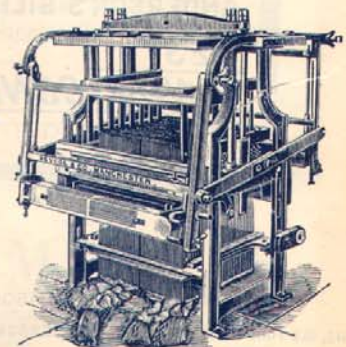
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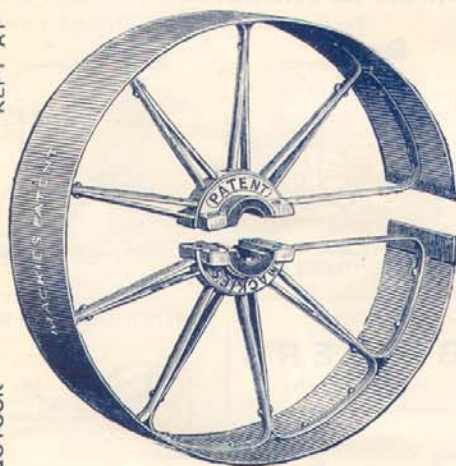
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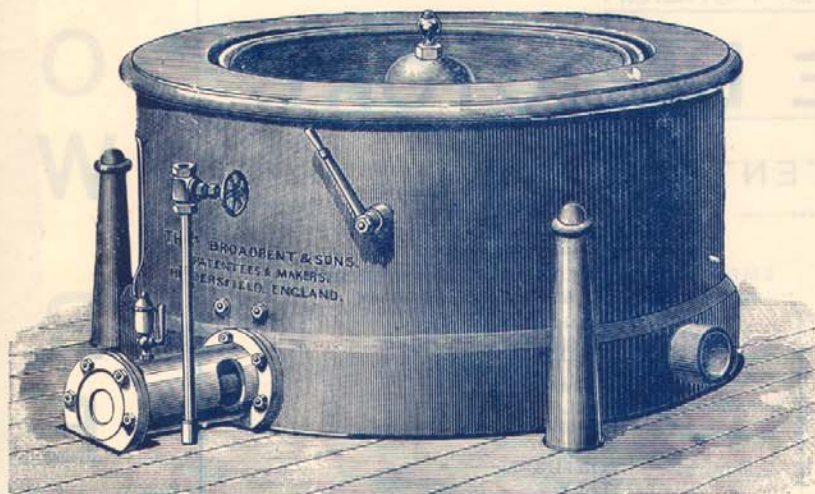
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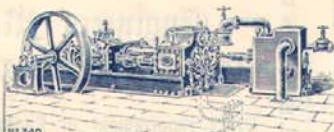
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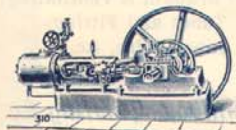
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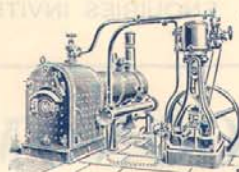
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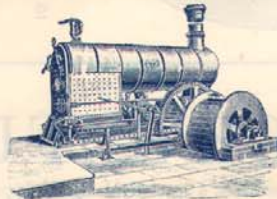
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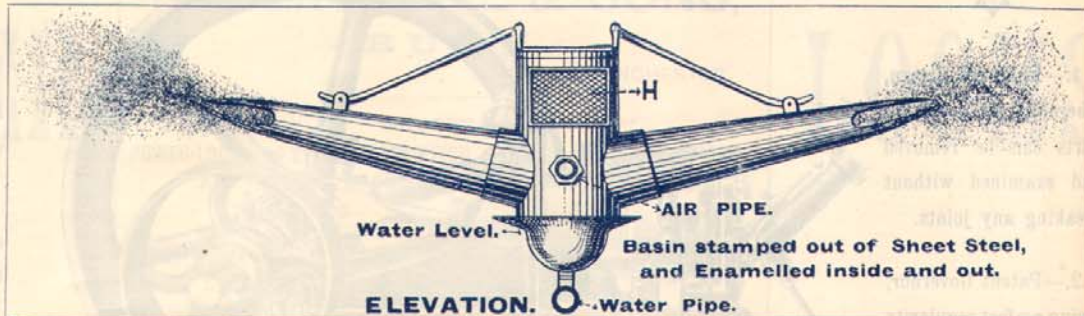
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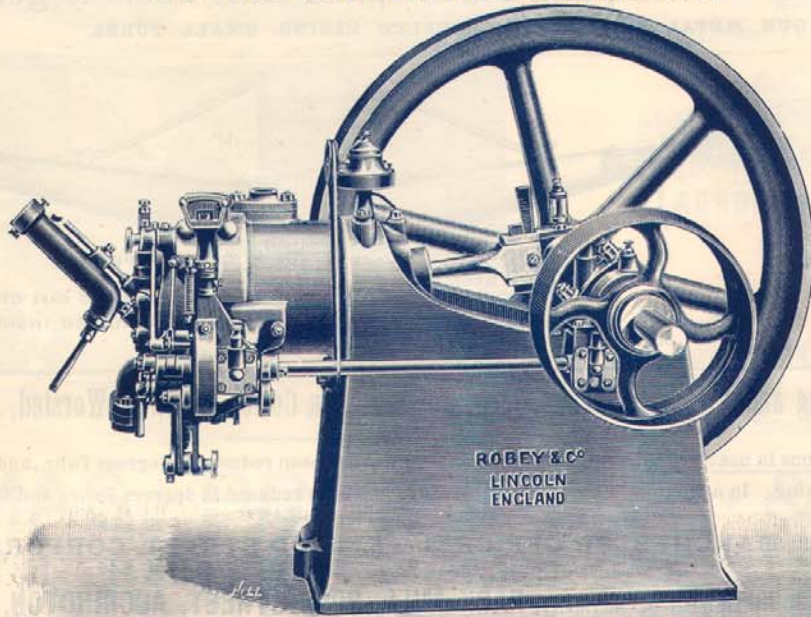


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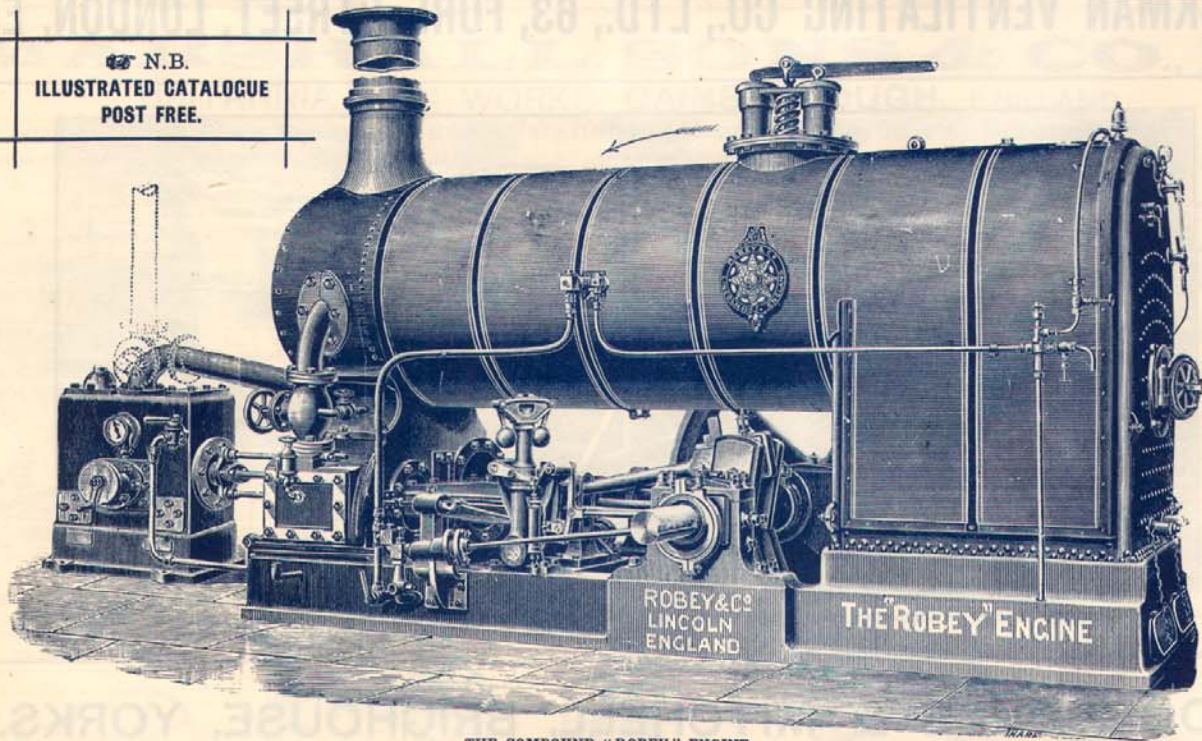
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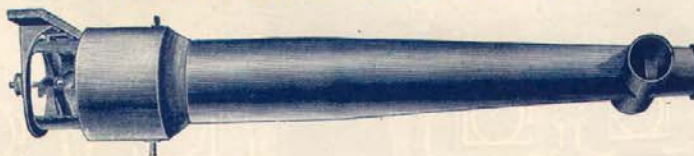
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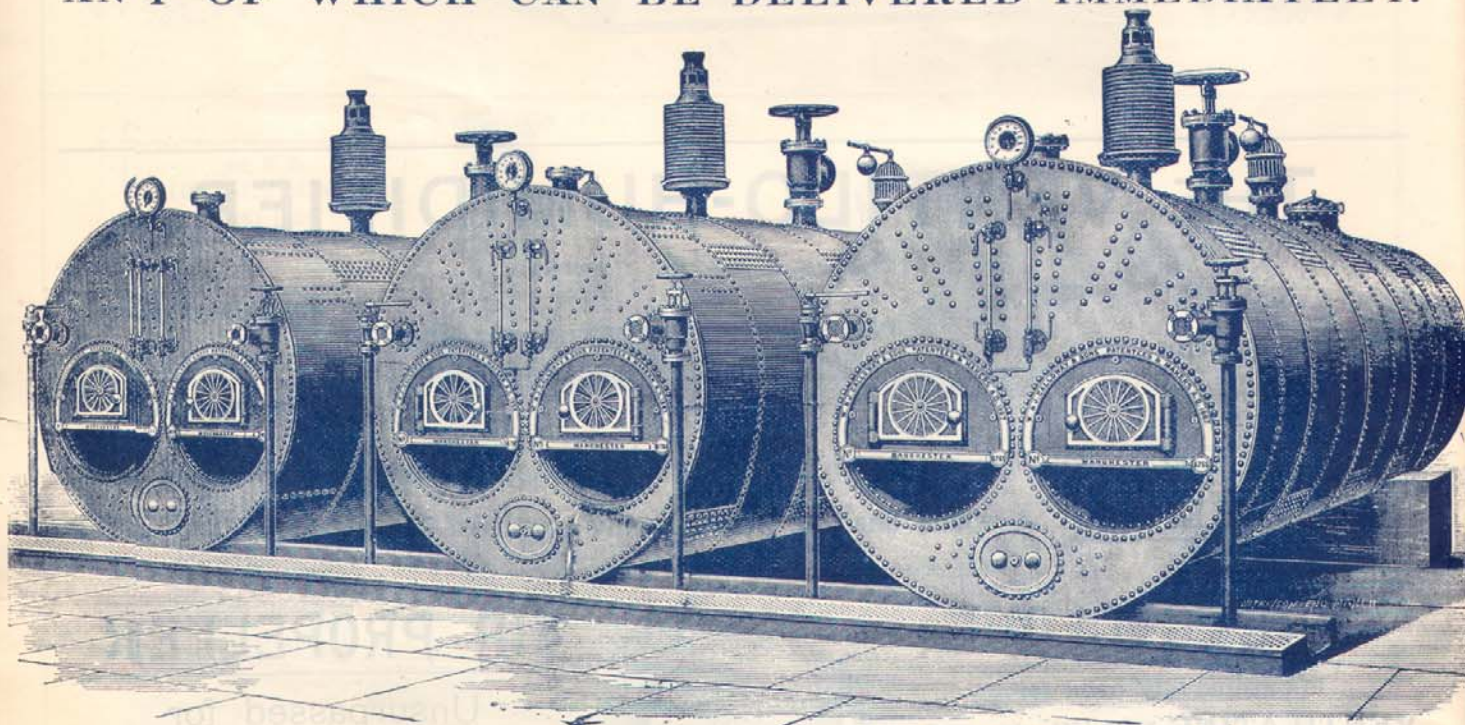
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[REGISTERED.]

ESTABLISHED 1852.

NEW SERIES, 1886

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Notices.

Correspondence and items of interest bearing upon the Textile Industries, Technical Education, or other questions treated in this Journal, are solicited. Market reports, or notes respecting the position and prospects of our Irish industries, will be specially acceptable. Correspondents should write briefly and on one side of the paper. Foreign readers are invited to send reports, and to point out any facilities which may exist for promoting the interests of Irish manufacturers.

The Irish Textile Journal is published on the 15th of each month. Yearly subscription, including postage, 11/6. Subscriptions payable in advance. Free sample copy sent to any address. Advertisers will find the Journal an excellent medium for announcements suitable to its pages. Terms may be known on application.

All remittances to be made payable to the Proprietor, F. W. SMITH, 7, Donegal Square East, Belfast.

The Linen Market, published every Saturday, at the above address, deals exclusively with the Irish linen trade in all its branches. Annual subscription, £1 1s. The Irish Textile Journal and The Linen Market, if ordered at the same time, will be supplied by post for £1 4s., or if within the City delivery for £1 2s. 6d., per annum.

Exportation of Linen to the United States.



IN the June number of this Journal, when writing on the importance of making a good display of Irish linens at Chicago, we drew attention to the inaccurate remarks made by some of the speakers at a meeting in the Chamber of Commerce, Belfast, when the question of exhibiting was under discussion. The tariff was alleged to be the main reason why Belfast would not exhibit to any extent. Others were

mentioned, but the greatest stress was laid upon this, that the duties were now "actually prohibitive." This statement was endorsed by at least one of our daily papers, in the face of statistics having a directly opposite bearing. It need scarcely be wondered at that a Dublin paper, not taking the trouble to consult official returns, should have reported a decline in the Belfast linen exports to the United States, when those who should have been better informed gave colour to the statement. It appears some sensational reports have been circulated in the American press on this subject, in consequence of this Dublin announcement. We dare say that in the Southern and Western States such may obtain currency, but the statistical returns which are published every week in many of the New York papers will quite disprove statements of the kind in that quarter. From exchanges to hand this week we give the most recent figures in reference to the *manufactures of flax* imported into New York from European countries:—

DECLARED VALUE FOR EIGHT MONTHS TO AUGUST, 1891 AND 1892.			
	1891.	1892.	
Entered for consumption, ...	\$8,825,682	\$8,764,228	
Do. for warehousing, ...	2,652,272	3,023,332	
Total entered at New York,	\$11,477,954	\$11,787,560	
FOR WEEK ENDED 30TH SEPTEMBER, 1891 AND 1892.			
	1891.	1892.	
Entered for consumption, ...	\$247,181	\$498,273	
Do. for warehousing, ...	48,401	132,103	
Total entered at New York, ...	\$295,582	\$630,376	

It must also be borne in mind that though values show an increase this year, quantities are still larger, as it is known that lower-priced goods are being taken by the States.

But to come to the Board of Trade returns for the United Kingdom, we have been recording a considerable increase for months past, the month of September and nine months of the year being as follows:—

LINEN PIECE GOODS EXPORTED FROM UNITED KINGDOM TO UNITED STATES.

	Month of September.			Nine Months to September 30.	
	1890.	1891.	1892.	1890.	1891.
Quantities—yds.,	7,101,800	7,343,800	8,746,600	81,077,100	62,929,800
Values, ...	£153,858	£159,255	£187,665	£1,688,059	£1,324,832
	75,651,200	75,651,200	75,651,200	£1,565,486	£1,565,486

The foregoing statistics will completely refute all sensational statements as to the decline of the linen trade with the United States.

Development of South American Trade.

Our Manchester correspondent calls attention to the enterprise of some well-known English machinists who have recently established a new company at Buenos Ayres, for the purpose of promoting the sale of British manufactures, chiefly machinery, in the region of the River Plate. He points out that textile manufacturers should follow the example, and show more energy in opening up undeveloped markets. An Export Company for pushing the sale of British and Irish Textiles would, if properly managed, be very useful to our manufacturers. In point of fact it would be a co-operative agency, and doubtless in new countries or places, where it would be far too expensive to send representatives of individual firms, many of our manufacturers might be able to find a profitable outlet for their goods by means of an agency of this kind, in which, as shareholders, they had a direct interest. The establishment of a large joint-stock co-operative agency of the kind would, no doubt, provoke the jealousy of private distributing firms; but in an extensive region, where a large amount of ground was unbroken, or only very feebly worked, this opposition would not count for much.

Royal Dublin Society.

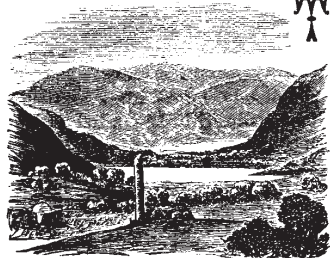
In a paragraph which appeared in the *Farmers' Gazette* for last week, we observed that a vacancy has taken place in the office of Agricultural Superintendent of the Royal Dublin Society, through the resignation of Mr. Macdonald—who goes to the Highland Association—and who for some years past filled the post in Ireland with such advantage to the Society as well as the farming interests of this country. We trust that whoever may be appointed as his successor will bring to the office not only a sound technical knowledge, but a thoroughly practical experience in agriculture and dairy work. The Dublin papers have been urging that an Irishman should be appointed, if one with the requisite qualifications can be found. We join in the same wish, as the tendency of too many Irish public bodies is—when a professional appointment of importance is to be made—to look across the channel for a new man, thinking he must necessarily bring more modern and comprehensive ideas to the work than one who has been trained in the country and fully acquainted with its special requirements. The post is an important one, especially at the present time; and though there will, no doubt, be many candidates, we feel sure the Council of the Society will make the best selection. If among the number there should be one who has farmed progressively and well in Ireland, and is qualified by his technical knowledge and business capacity, we shall be glad indeed to know that the choice has fallen on an Irishman, but, failing this, on one who has an intimate knowledge of the country and its special needs. A correspondent of the *Daily Express* puts it that the holding of large shows is but a part of the Society's work, and that "more attention should be paid to the improvement of Irish farming." This surely cannot be done on the advice of a man having no knowledge of the country.

Agricultural Education.

At a recent meeting of the Cork Corporation the following resolution was unanimously adopted:—"That as this country depends for its prosperity mainly on the success of its agriculture, and especially on the dairy industry, it is essential that the Government should take prompt steps to organise a thorough system of agriculture and dairy education, which can be best promoted by the establishment of an Irish Department of Agriculture; that copies of this resolution be sent to Mr. Gladstone, Mr. Morley, and the Irish members, and that other public boards be asked to co-operate in the demand." The various public boards throughout Ireland ought to follow the above example, and agitate for the formation of an Agricultural Department to work with some degree of energy in the direction indicated. It is hopeless to look for reform under the National Board administration.



Agricultural Regeneration.



THE press notices of the article on Joint-Stock Farming contained in our last number have been almost unanimously favourable. There are now numbers of people familiar with the idea of limited-liability farming, and a large proportion of them probably ready to give full consideration to any feasible proposal, when the scheme has been put into shape and prepared for a start; some of them, we may fairly assume, ready to support it. Scarcely a doubt has dimmed the anticipations of success which the suggestion is admitted to justify. On the contrary, confidence is expressed in the prosperous future of such a Company. "It would pay, and pay handsomely," is one opinion. "Once established, it could hardly fail to be successful," is another. The *Irish Times* says—"The enterprise would be large, but its extent would provide the best security for its success, and if it should be undertaken, even as an experiment, it would probably earn a vast return before any considerable lapse of time." "We strongly commend the subject to the thoughtful consideration of the farming and trading community," says the *Armagh Guardian*. The *Farmers' Gazette* "would gladly see such a Company at work, and would look hopefully to the result under good management and on a sufficiently large scale," but considers that "there would be considerable difficulty in starting it. Occupiers in Ireland have not thrown up their land because of bad seasons and unremunerative prices, as Norfolk and Essex farmers have; so that it would seem necessary to the successful floating of the venture that a large body of farmers in one district should become shareholders, as many have in creameries." While these limitations point to the thoughtful reception which has been given to our article, they are really encouraging in, so far, indicating no real difficulty to be encountered. If land is wanted, we believe that there would be no trouble in acquiring it in sufficient quantity, either by purchase or rental. It would not be imperative, however preferable, that the holding of the Company should be all in one block, so long as it was in one district, and all within easy working distance. There would be one feature about the Company's prospectus not common to such documents, for it would be based upon the depressed condition of the industry which it proposed to enter. The present extremity might be said to be the Company's opportunity, and in the present state of agriculture it can hardly be thought that a large sum of money, ready and waiting for investment in land, would have to lie idle long for lack of employment. The adhesion and support of farmers might possibly be hard to obtain at first; but it is more than probable that Farmers' Companies would follow when it was seen that wholesale agriculture was both possible and profitable. In fact, nothing need now prevent some of them working together, if they had a mind to. The way in which "trusts" or "combines" are organised in America, and in which "unions" have been tried over here, would enable them to commence at once, if they cared to. All they would have to do would be to agree upon the nominal capital of their association, have their holdings valued and counted as paid-up cash, work under appointed direction in an appointed way, and, according to their stake in the undertaking, share in the profits. As is well known, the operations of these societies are directed, first, to the sole control of the manufacture of some article of general use or consumption, and then to the regulation of the supply of it. Competitors are bought up or undersold, and the last state of the public under this system is worse than the first, no matter how agents or middlemen have flourished aforesaid. A trust will shut up production so long as prices are kept up, and pay stockholders to be idle rather than let profits run low. A Farmers' Union on such lines would be rather an extensive undertaking, but a number of farmers, large, small, or mixed, might work advantageously in the same way, if they could work amicably. Without actual amalgamation they could in many ways pull together for their common benefit;

and so long as they rendered service to Irish agriculture, or contributed to Irish prosperity, we should be glad to see it. For the present, the best chance of a change for the better seems to be in the setting up of a Company such as we advocate, with ample resources and the best management, and the most cheering circumstance connected with the proposal is the admission by competent judges that such a venture might be expected to pay, first a fair, and in a very short time a good profit. Low prices notwithstanding, there is money to be made by farming in Ireland; there is still more money to be made out of the direct supply of dairy and other food products; and with men and means a powerful Company could and would make it. There is a good return to be had, as Mr. Pringle's important letter on another page points out, in the prevention of waste on farms. How much has science effected in recent years in the utilisation of waste products, and what splendid service has it rendered to industry, in reclaiming and using afresh necessities of manufacture, which for generations, and in some instances for centuries, had been run away into streams or sewers! The subject is most engaging and attractive, and a fair-sized book has already been devoted to it. Great fortunes have been made out of materials which had come to be looked upon as the outcasts of industry, some of which had been regarded as nuisances and only fit for destruction, but that some of them, again, defied destruction, and accumulated in obstructive heaps until the inventor came along and turned them into money. But what case amongst all these brilliant economies could compare with the prevention of waste in squandered land, duplicated labour, and all the hundred-and-one details of mismanagement which have helped to make farmers poor; or what recovered substance in any process of production could equal in worth the interception of waste in sales and values, which has made jobbers and agents and middlemen rich? Anyone can calculate the profit which the butcher makes off the farmer in buying prime beef at the recent official quotation of 5½d. per lb. by what is paid for a joint for the table.

Profit and hard cash furnish the main motive with which this proposal has been put forward. Unless there appeared to be, not millions in it, but the prospect of good dividends, the subject would have had no place in these pages. But, at the same time, we keep steadily in view the inestimable benefit of the success of such a Company, as an example. Proof in black-and-white, on matter-of-fact balance sheets, of the possibilities of what Mr. Pringle happily calls agricultural regeneration, would have, in the first place, an immense effect upon the fortunes of the country. The inter-dependence of agriculture and manufactures is not even yet sufficiently recognised. Although not written of this country, it is true to the letter everywhere, that it is "upon the productiveness of our agriculture and the prosperity of our farmers that the entire wealth and prosperity of the whole nation depend. The trade and commerce of this country of which we so proudly boast, the great transportation facilities so greatly developed during the past quarter of a century, are all possible only because the underlying industry of them all, agriculture, has called them into being. Even the product of our mines is only valuable because of the commerce and the wealth created by agriculture. These are strong assertions, but they are assertions fully justified by the facts, and recognised the world over by the highest authorities in political economy." This is, then, emphatically an industrial question, and we should share all round in any success which the Company might achieve, or any improvement which it might initiate. In the next place, the published and demonstrated results of scientific land culture would surely have—could hardly help but have—an immediate and—in a compound noun after the German fashion—an earnestly-to-be-desired effect upon our educational system.

The German, by the way, has a very expressive name for his technical schools. They are to him *real-schulen*, where children are fitted, as well as may be, for the work which may fall to them in the world, and equipped to encounter the stern realities of life which they must face. *Real schools* are sadly needed in Ireland. So far as practical teaching and ends are concerned, the National Schools are Pretence Schools. We ask for means of livelihood, and the rudiments of industrial education, and the Board of Education gives us book-learning and a smattering of accomplishments. To expose the defects and shortcomings of the system would be but to slay the slain, and there is no defence of it. It is true that the National Board is beginning to find out that there are blemishes and imperfections in its practice; and how grave must the occasion be, how glaring the faults, when a suspicion of anything less than infallibility can

reach those which have in charge the training of our children! At the rate that light is breaking in on the system, we may get a change in the policy of the Board in the course of a century or so, which would bring us near the new Boston of Mr Bellamy's book in point of time. At present we have in Irish education just what an eminent philosopher said the British nation could never be brought to tolerate—an intility. A pretty experiment which was once popular, as serving to show perfect control of the most powerful machinery, set the mighty Nasmyth hammer to crack a nut. It was only a playful illustration of the supremacy of man, and the hammer, of course, was generally at work dealing blows which shook the earth, and fashioning huge appliances with force which Cyclops himself might have envied. That is exactly what Irish education might do, but it keeps to nut-cracking. The success of a Farming Company, showing the value of treatment and methods which the Board will only teach in theory, and not much of that, would give fresh impetus to practical education. It would hurry up imperative reform, so that young Irishmen might be taught to grow potatoes properly; and there is plenty of room even for that.

At this point, another objection to the proposed Company disappears. It must be borne in mind, we are told, that persons interested in the financial welfare of a Joint-Stock Farming Company will not jump at the idea of letting the secrets of their success be known. We shall be very glad if the Company reaches the stage of deciding upon such particulars as what it will disclose, and what alone it will determine to hold fast. But, in certainly the greater part of its practice, and to an extent within which there would be ample room for a good technical school, it would proceed upon established and already-approved lines; but, alack! lines which are far too much neglected or unknown. It might go about this part of its work by taking pupils or apprentices to be trained in and for its own service as might be required, ready or to be ready for good appointments elsewhere. It would hope to be the pioneer of thorough agricultural reform, and to find out and make fit many men able and competent to carry out, continue, and extend its work, and, both because of its early start and established position, as well as by reason of the extensive and almost inexhaustible markets open to all, would have little fear of being ousted from its position. It would probably foster many minor undertakings, and, if it succeeded in establishing its own shops in large towns, might expect to do a large collecting business, by which many localities would be supported, and many dependent industries developed. It would be an object-lesson in acres, and show openly the use which might, and would be, made of them, and it would carry out, to the fullest possible extent, but in a trade still open to enterprise, the business of direct distribution. It would make money with both hands. It would be a public gain in its working and by its teachings. Without being over-sanguine, it is seen, and admitted, too, by qualified critics, that there is a fair prospect of profitable investment in this direction, and there are hardly any bounds to the trade which might be hoped for, or to the good which it might accomplish. In wise and enterprising hands, with enthusiasm behind it, and the popular American virtue of sticktoitiveness carrying it on, such a Company would become an institution of which Ireland might be proud.

To what has already been advanced, with Mr Pringle's admirable letter seconding these suggestions, there can be little to add; but we hope, with all earnestness, that the impression already made will not be allowed to lose strength, without some positive steps being taken to ascertain what measure of public support would be given to a scheme which has in it so much promise of utility and profit.

Leeds Association of Engineers.

At the first ordinary meeting of the session of this society lately held, the president (Mr. Robert Lupton) in his opening address referred to the remarks of the President of the Leeds Chamber of Commerce on the state of trade, and deprecated the tendency to give a bad impression in busy times by making out that trade was not as good as it really was. Orders, he said, were easiest to obtain when work was brisk, and a good appearance should therefore be maintained. Leeds was now in the first rank in the engineering world. Makers of hauling machines, locomotives, traction engines, blowing engines, and hydraulic machinery had come to the front. Textile machinery had been made in Leeds for fully fifty years for all parts of the world, and war material and the best of machine tools were also produced. From 12,000 to 14,000 people in Leeds were employed in these branches of the trade. There was ample scope, he added, for new inventions, and drew attention to a beautiful specimen of work produced by a machine for drilling square and other angular holes in metal. Messrs. R. H. Wood, Towler, Craister, Scriven, Tempest, Drake, Atkinson, and Blackburn also addressed the meeting on the various points raised by Mr. Lupton, and a hearty vote of thanks, proposed by Mr. Craister and seconded by Mr. Wood, was accorded to him.



JOINT-STOCK FARMING IN IRELAND.

To the Editor of the Irish Textile Journal.

SIR,—Your article in issue of 15th inst. is most interesting. It refers to matters of exceptional importance to all classes. Agriculture in Ireland is suffering from a variety of causes: some of them we attribute to the law of the land, others to the lack of combination and co-operation which exists among farmers themselves. Some idea may be formed of the distance which separates the feeder of the ox and the consumer of the beef, by stating that not long ago I traced a lot of fat cattle through the hands of five different persons before the butcher's stall was reached. Needless to say each of these persons had his profit out of the cattle, and it is certain that the beasts were losing flesh all the while. In the interests of producer and consumer, it is time that they were brought into immediate contact the one with the other. It should be done, and in your article you hit upon the best way to do it.

Of course, the prosperity of a large farming company will benefit or suffer from such causes as seasons good or bad, prices high or low, foreign competition slack or firm; but there are certain advantages that a large farming company possesses over small holdings which must approve themselves to every man of business experience. There is, firstly, the economy in working the land, growing the crops, and producing the beef and mutton. Every one knows that the labour bill, whether horse or manual, is proportionately smaller on a farm of 1,000 acres than on a holding under 100. Secondly, there is the saving effected by purchasing on a large scale such things as cake, artificial manures, coal, seeds, and machinery. A large farming company, paying cash down, can surely save 15 per cent. on such purchases, when contrasted with the impecunious small holder who buys by the hundredweight and pays six months after delivery. Moreover, a large company under capable management will buy nothing but the best article; whereas the credit purchaser, for want of technical knowledge, is frequently imposed upon. Thirdly, there is the great saving of land effected by throwing small fields into large ones. To give some idea of the space occupied by fences on a small farm, I may state that of thirty-seven acres which constituted a holding in one of our midland counties, I found 4a. 3r. 7p. occupied by fences which to me seemed quite unnecessary. On a large occupation of 1,000 acres the fields would range from forty to seventy acres in size, and at the end of the term, if held on lease, compensation would be allowed for "the levelling and clearing away of fences." Fourthly, there is the opportunity possessed by a large farming company of selling direct to the consumer from a shop or store in some neighbouring town. To any one doubting the practicability of this course, I have only to say that England and Scotland supply numerous examples of successful direct dealing; and what is done there can be done here. If we only consider for an instant the expenses incurred in passing the produce of the farm—whether it be meat, vegetables, fruit, or wool—from the homestead to the counter or factory, the folly of the fashion of to-day, and the great saving to be effected by direct dealing, will be seen.

In your able article you mention a capital of probably £100,000, of which £50,000 might be expended in the purchase of land. For my own part I would prefer to rent land. The conditions upon which land can now be rented are so favourable, that a joint-stock farming company would be well placed as tenants at a fair rent.

As farming capital, a sum representing not less than £15 per acre statute would be necessary. Were market gardening and fruit culture largely gone into, more would be needed. But for the usual conduct of a large corn and meat-producing farm, worked in connection with a town shop and store, the capital above-mentioned will be ample.

A farm of 2,000 acres, worked on the ordinary four-course rotation, should feed fit for the knife 400 bullocks of six hundredweights, and 2,000 sheep of ten stones, in the year, and would supply a good-sized butcher's shop.

The success of such an enterprise would chiefly depend upon the capabilities of the acting farm manager and the powers of organisation displayed by the directors. Large concerns, when properly gone about, become automatic; but experience and constant close attention are at all times required, particularly when a numerous body of customers have to be supplied from day to day.

Unless direct dealing with the consuming public were an inseparable part of the scheme, I would not take upon myself the responsibility of recommending a large joint-stock farming company. The middleman must be kept out; for if not, the farmer's legitimate profits just slip into his pockets, and the enterprising company will be overweighted. But deal direct, and the company will get fair and full payment for everything it produces, and the public will have the advantage of the genuine article direct from the stall, fold, field, dairy, or garden.

Capitalists will not go into schemes of this kind for philanthropy's sake; but it is my firm and candid opinion that a large joint-stock farming company would, under proper management, pay right well, and

increase its profits as time passed. At present, land is easily taken and stock very cheap. Entry to a farm is a light undertaking, with ewes at 35s., and two-year-old bullocks at £10. These prices must rise before long, and those who buy in a low market cannot but reap the advantage.

Apart from these considerations, the benefit to Irish agriculturists of following the doings and watching the proceedings of a well-managed enterprise, where industry and skill are pitted against foreign competition, would be immense. That demonstration in high-class farming is sorely needed in Ireland we all agree, and if demonstration be supported by a fair return on capital, as declared by the balance-sheet, the prospects of Irish agriculture will gradually rise above the sphere of charity in times of starvation, and Union seed in years of potato blight.

Your article is well worthy of the prominent place it occupies in the *Irish Textile Journal*, and I join with you in hoping that the proposal to establish an Irish Joint-Stock Farming Company may take root and grow.—I am, sir, yours faithfully,

R. HUNTER PRINGLE.

54, York Road, Kingstown,
20th Sept., 1892.

Practical Notes on Textiles: Linen Processes, &c.

IV.

(SPECIALLY WRITTEN FOR THIS JOURNAL.)

Difficulties to contend with.

STAINS and damages of various kinds are often beyond the power of a bleacher to either contend with or remedy, whilst others may be owing to some defect in the process. Iron stains are the most common, and exceedingly troublesome. They appear in the shape of red spots, larger or smaller in extent, but rarely developed until the pieces are fully bleached. Their origin is often a vexed question, not easily determined. The machinery may be the cause; if the various receptacles (kiers) are not kept in order and clean by whitewash, &c., these stains will result. Any machine of iron must be kept free from rust.

Remedy for Water Impurities.

In our September issue we briefly alluded to the water used in bleaching being impregnated with iron; some waters contain so much that they are positively injurious. There is a means of rendering lime in water comparatively harmless, and at the same time precipitating the iron and magnesia salts. Caustic soda, if really pure, will be found an antidote.

One quarter of an ounce per gallon is sufficient; in the case of waters but sparsely impregnated with impurities, one-sixteenth of an ounce per gallon has been found effective. The quantity required may be roughly estimated by adding the eighth of an ounce of pure powdered caustic soda to a gallon of the water; boil, and put to settle for a time; pour off the clear water, and add another eighth of an ounce of caustic soda. If the water remains clear, then the first quantity of soda will be found ample; but if muddy, the second eighth of an ounce will be found necessary. Large tanks are not really requisite—although there are very few establishments without some provision for holding a few hours' supply of water—the powdered caustic soda could easily be put in proportion to the contents. If a tank holds 500 gallons, and the water is found to require one-eighth ounce of caustic soda per gallon, then four pounds will be the quantity required. The caustic soda of commerce is very impure, containing, besides other impurities, common salt, so that the use of this form of soda would do more harm than good. Pure powdered caustic soda dissolves at once; a slight motion is sufficient to mix it thoroughly with the water; or the soda may be placed in a tank before it is filled, and the water running in will mix it thoroughly; or the caustic may be put with the water in any vessel before the goods are entered.

Oil Stains, &c.,

are common, and take the form of yellow stains extending in streaks along the piece or in patches. In many instances they do not show until the goods have been sold, when complaints will be received of imperfections. These stains are not always due to the bleacher; in fact, they are the consequence of cheap sizing compositions used in preparing the warps for weaving, and also from the lubrication of the machinery with mineral oils, which resist the bleaching process. It would be a decided gain, in more ways than one, if the lubricants used in spinning and weaving contained a fair proportion of fatty oils, such as olive, rape, or cocoa nut; about ten per cent. would suffice.

Alkaline Baths.

The hot alkaline bath is considered to have a tendering effect upon the fibre in bleaching; so that some bleachers substitute for the alkali a bath slightly acidulated either with sulphuric or hydrochloric acid,

following this up by a bleaching process with hypochlorite of soda, especially for yarns. The hanks, strung on a rod, are plunged for five or ten minutes at the most in a sulphuric acid bath, $\frac{1}{2}$ -deg. B \acute{e} ., then rinsed, drained, and bleached in chloride of soda, 2 degrees, until the desired shade is obtained—cream-white—then again rinsed and drained. A weaker bath of sulphuric acid, about $\frac{1}{4}$ -deg. B \acute{e} ., is then used for steeping the yarn, which is afterwards aired and dried. Hydrochloric acid may be used in this process with the same degrees of concentration, or the two acids may be alternated, thus giving a range of tints. Two baths of the sulphuric will give *cream white*; a bath of hydrochloric, followed by a bath of sulphuric, gives a *half white*; or two baths of hydrochloric give a *yellow cream*. These shades or tints are not dull, and can be fixed by passing through soda. This is a patent process, and the patentees (MM. C. Delescluze & Co., France, 1891) claim that the thread is remarkable for brilliancy and suppleness, without being weakened. Hydrochloric acid possesses the advantage over sulphuric acid in forming a more soluble salt of lime or *calcium chloride*; moreover, its action is more solvent upon iron traces or any other metallic oxide stains present in the goods, but its fumes are extremely unpleasant. Sulphuric acid is, if anything, cheaper in the cost of carriage. As we have stated in the course of our remarks in preceding papers, the final washing is of the greatest importance; it must be thorough, so that all traces of acid will be removed. If this is in any way neglected, the goods acquire, by exposure, a yellow tinge.

Bleachers.

Almost every bleacher has his own methods, differing in detail, but without changing the principles upon which the process of bleaching depends. The working pressure of the steam used for kiers, from ten to fifteen pounds, will require more chemicals, and the boilings more frequent or longer than where the pressure ranges from twenty to thirty pounds. Then, again, the strength of the alkali used *must* and *will* have a very potent influence on quantity required. Common sense shows us that it will take more caustic soda at 60 per cent. than at 76 per cent. soda, a great deal more in proportion to the actual strength of the alkali; the amount of impurities in the 60 per cent. alkali causes a more than ordinary quantity, so that there is no real economy in using the inferior, if, indeed, there is not a waste and risk.

Finishes and Farina.

In this process also there are various methods. Generally, finishing may be said to consist of widely different operations; goods may be first stiffened with some substance to give weight, and then the necessary lustre and feel is obtained by mechanical means; in the first operation, glue, gum, dextrine, starch, etc., but more commonly starch, on account of economy and the best result. Potato and wheat starches are mostly used. Farina, that is potato starch, gives a firmer, heavier finish, the proper proportions being 20 lbs. of starch to 50 gallons of water. It is first mixed with milk-warm water, stirred well, heated to a boiling point by steam for ten minutes, stirring continuously; the boiling must not exceed the time given, as the paste will become too thin, and the finish will not be uniform. A good farina can only undergo fermentation with difficulty; if it will not settle from water in a quarter of an hour it is too poor and risky for use. Wheat starch requires longer and more careful boiling; it ought to be first mixed in cold water, then brought to boiling point for fifteen minutes' duration by a pressure of steam at 15 lbs., which will give the full strength of the starch. If a mixture of this and potato starch be used, boil the wheat starch first, cool it off to 180° Fah., mix in the farina, and boil up. There is some difficulty in calendering goods which are starched only; a little tallow facilitates the operation, from one to five per cent. of the weight of starch, in accordance with the degree of calendering required. If more tallow than the above is used, the cloth will look like cotton and feel greasy. Farina gives a harder finish than wheat starch, but it will not give the same brightness, and becomes sooner dull and lifeless.

To Bleach without Chlorine.

Another process for which provisional protection has been obtained is stated to be as follows:—The fabric is boiled in a solution of 3½ lbs. of caustic soda to 100 gallons of water, cooled, rinsed, and then placed in a bath of 1½ to 4½ parts of permanganate of potash or potassium permanganate in 100 of water; it is left for 60 seconds, and placed for a few minutes in a bath of *sulphuretted borax* made by passing SO₂ sulphuric acid through a bath of 2½ lbs. of borax in 20 gallons of water; half-a-ton of goods or fibrous material would require 5½ lbs. of borax and an indefinite amount of sulphur. The materials, after passing through the last bath, are thoroughly washed and dried. It has often been suspected that incomplete washing causes discolouration and tendering. This is in the main correct; but there is also another cause scarcely if ever noticed. The bath being emptied, the cloth not being immediately washed, or left overnight, a lime settles upon the fibres. Contact with the warm sides of the bath dries the lime into the fibres. The final steaming causes this lime to attack the material and produce yellow spots wherever it is deposited. If the yarn, after being bleached, is to be sold for sewing thread or other purposes, it is found necessary to give it a more pleasing appearance.

Tinting.

This is done by working in warm liquor and blue; a little soap added will give a rotundity to the threads, though it is not specially necessary. The tinting matters are found in ultramarine, indigo, Prussian blue,

smalts, and many of the coal-tar blues. Acids will discolour ultramarine; otherwise it is fast to light and alkalies. No doubt, by careful treatment, specks or other defects may be avoided. Indigo is free from specking, but great care must be taken to wash out every trace of chemic; light and air, however, will interfere with the tinting on exposure. Prussian blue is a fine powerful tint; the action of acids or chemic has no effect upon it, but alkali or soap liquor turns it brown. Smalts would be the perfection of a bleacher's tinting material as being fast to acids, chemics, alkalies, and light, but it is heavy and very liable to specking, giving a disagreeable tone to goods. Coal-tar blues generally turn a ruddy hue if brought in contact with soap liquor. A new coal-tar colour, Thiocarmine R., is found useful. It takes the place of indigo extract, being very much faster to light and air.

Bleaching by Electricity.

We may now turn our attention to the very latest improvements attempted to make bleaching a commercial success. By the liberation of chlorine under the action of an electric current, Messrs. Cross and Bevan some four or five years ago found that a solution of magnesium chloride, electrolysed by the current, delivers active oxygen of strong oxidising properties, and that a smaller quantity of this bleaching oxygen effects the purpose than the ordinary bleaching powder. The new process being one-third cheaper, the electrolysed solution was made to circulate through a specially constructed bleaching tank, and kept active by a voltaic current. Without going into the full history of the ideas and experiments which have led up to the use of electricity as a bleaching agent, we may briefly allude to prolonged experiments by MM. Naudin and Hermite on sodium chloride, which was relinquished for calcium chloride, then for magnesium chloride, as a bleaching salt. In the Hermite process the electrolyser is made of galvanised cast-iron—a pipe pierced with a number of holes runs along the bottom; by this means the solution enters the vat. The cathodes consist of a number of discs of zinc mounted on two spindles, which slowly rotate; between each pair of discs is an anode plate of platinum gauze fixed in an ebonite frame, and communicating by a leader lug with a copper bar. From an economical point of view, the anode should be a good conductor, cheap, and able to resist the attacks of electrolysis products. Carbon seems to be the most suitable for the purpose, and is now commonly employed. These processes have been protected by a series of patents overrunning each other, and are still being followed up. Further details in our next communication.



The Industries of Ulster.

(By a Special Contributor.)

LARNE.—PART I.



IT has become almost habitual with writers on the English side of the channel, when referring to the trade of Ulster—manufacturing and mercantile—to write as if all the industrial enterprise of the province were confined to the city of Belfast. The habit is too often shared by the press on this side, especially in the South. The rapid and almost unexampled progress of Belfast, and the prosperity which has attended her numerous industries, new and old, to a great extent account for the fact that the increase of manufacturing industry throughout the northern counties has been almost completely overlooked. The town of Larne, by no means one of the most striking examples that might be adduced, may be taken as an instance of almost unnoticed industrial growth. Everyone has heard of Larne in connection with the Northern mail route as one of the termini of the shortest sea passage to Scotland and England, and has read of its noble harbour and shipping facilities; many know Larne as a rising seaside resort, with its charming surrounding scenery, and as a centre from which the tourist may, *via* the magnificent coast road, explore the romantic and beautiful Glens of Antrim, or visit other scenes of interest in the neighbourhood; but how many people have ever read or thought of Larne as an important manufacturing town? And yet, even from an industrial point of view, Larne is worthy of note, and if it were situated in the South or West of Ireland, instead of Ulster, the entire kingdom would have heard of its progress. It may not be without interest and instruction for many readers on both sides of the channel to describe from time to time in the pages of this Journal some of the thriving but less known scenes of industrial activity in the Northern Province.

The linen trade, in several of its branches, has been carried on in the vicinity of Larne from a very early period in the history of the manu-

facture down to the present day. The spinning and bleaching of yarns, linen manufacturing, and the bleaching of linen for the home and export trades, have all at one period or other been located here; and though for a length of time little effort seems to have been made to extend the business much beyond its original limits, of late years symptoms of healthy development and extension have not been wanting. The latest addition to the textile trade of the neighbourhood has been made by the erection of a power-loom linen factory by

The Larne Weaving Company,

the proprietors of which are the Messrs. Brown, sons of James Brown, Esq., of Donaghmore, who is also largely engaged in the linen trade. The factory is most conveniently situated, overlooking the town of Larne and the Corran Harbour, and within easy distance of both. The building was begun less than three years ago, and the works have been in full operation for a little over two years. The premises are most compactly planned, the yarn and cloth store, winding rooms, and weaving sheds being so arranged as to afford the fullest facilities for the expedition of business; and the entire plant and appliances are of the most modern construction. The machinery of the winding rooms, which at present contain above 300 spindles, was supplied by a Glasgow firm. In the weaving sheds there are at present close upon 100 power-loom, and an additional number have been contracted for, and will be erected immediately. The goods manufactured embrace a somewhat wide variety of all-linen and union cloths. Narrow checks, glass-cloths, &c., for the United States markets are largely produced, and an extensive business is also being done in the manufacture of 31 to 39-inch coloured union goods for the making-up trades. A number of looms are kept constantly engaged in the weaving of 39-inch union dowlases, which eventually are purchased almost exclusively by the apron and pinafore manufacturers. Scrims are at times manufactured on a fairly large scale, but the trade in these is not so regular as in some of the other classes already enumerated. It is intended that the new looms, which are to be erected by Messrs. William Smith & Bros., Heywood, shall be chiefly employed in the making of crashes, towels, hucks, &c., for the American market.

No difficulty whatever has been experienced as regards the supply of labour. Some weavers from other districts have sought and found employment here, and a plentiful supply of workers can be obtained from amongst the people of the vicinity, who have proved themselves apt learners, and have been easily trained to the work.

The Messrs. Brown express themselves as being highly pleased with the result of their venture in the manufacture of linens in Larne, and hopefully anticipate a still further extension of their productive power than that above alluded to. Possessing practical ability and skill, they have conducted the business so far with enterprise and success, and have already made a name for themselves for the excellence of their productions.

Messrs. Gifford, Beers & Company—The Olderfleet Paper Mills.

The manufacture of paper is not one of the textile trades, though indirectly allied to them, especially when, as in the case at present under notice, the chief consumers of the production are the linen and woollen trades. The Olderfleet Paper Mills—whether the title be taken from the historical ruin visible from the mills across the bend of the bay, or from the name of some parish or townland, I am not sufficiently informed to say—were erected a few years since, and filled with new machinery of the most modern type, by a firm who, after carrying on the manufacture for a brief period, gave up the business, owing, it is said, to disagreement between the partners. They have recently become the property of Messrs. Gifford, Beers & Company, who entered on possession a month or two ago, and who made their first roll of paper on the first day of the present month. The mills are situated adjacent to the termini of the Larne and Belfast and of the Larne and Ballymena railways, and within a short distance of the harbour at the Corran, possessing thus the double advantage of cheap transit for the raw material by sea, and for the manufactured article by both sea and land. Surrounding them is a very considerable space for storage, but not more than is likely to be fully needed, there being at present in store of raw material fully 400 tons of wood pulp, and about 150 tons of linen rags, old rope, and manilla. The machinery at present in work is capable of turning out 100 tons of paper per month—an output the proprietors have reason to expect they will have no difficulty in finding ready sale for. The motive power is supplied by tandem condensing engines built by Victor Coates & Company (Limited), and indicating 400 horse-power. A complete set of manilla ropes for driving the main shafts and rag engines is being at present manufactured for the firm by the Belfast Ropework Company (Limited). The entire concern is lit up by electric light.

Space will not permit of our giving a detailed account of the various processes of the manufacture, though it is most interesting to observe the different stages, from that in which the raw material is put into the chopping and dusting machines, in which it is torn into fragments and cleansed from dust, thence carried by elevators and deposited in huge rotary boilers working up to a pressure of 90lbs.; thence again into the rag engines, of which there are six, in each successive one of which it assumes a clearer hue; again into the "agitator," from which it emerges a pulp of requisite consistency and shade required; flowing finally over infinitely fine wire meshes, with suction fittings to abstract the water, until it reaches the enormous cylinders, from which it is taken in rolls of paper 92 inches in width.

The Belfast Linen Trade Report.

SINCE last report an improved feeling has sprung up in trade, and though buyers are exercising much caution in the placing of orders, there is, on the whole, more doing both on home and export account.

FLAX.

The quality of this season's Irish flax is still reported as very disappointing to the spinner. To the farmer also, though the range of prices is higher, the yield is turning out unusually small for so far. The season both at home and on the Continent was unfavourable for flax-growing, so that good raw material is likely to be scarce, and to hold to a high level of prices for some time to come. The following market reports have been received from our correspondents since 29th ult:—

September 29th.—MAGHERAFELT—20 tons of milled, prices ranging from 4/8 to 9/-, bulk of which was of medium description; any choice lots offered eagerly sought after, inferior slow of sale. NEWRY—15 tons of milled, prices from 5/- to 7/3; fair attendance; demand quiet. *30th.*—BELFAST—15 tons of milled in local market this morning, which sold from 5/- to 8/- per stone; quality much below last week's. *October 1st.*—COLERAINE—20 tons of milled, prices from 39/- to 62/6 per cwt.; bulk of medium quality; demand steady. COOKSTOWN—35 tons of milled, prices from 5/- to 9/-. *5th.*—RATHFRILAND—5 tons of milled, all of which was of inferior quality, and which varied in price from 4/6 to 6/3. *6th.*—BALLYMONEY—58 tons of milled, prices ranging from 40/- to 65/-; market well attended by buyers, and demand brisk; all flax bought up. NEWRY—20 tons of milled, prices running from 4/6 to 7/3; bulk of poor quality; fair attendance of buyers; no change as regards prices. *7th.*—BELFAST—About 15 tons of milled, which sold from 4/6 to 7/6; quality mixed; market well attended, but demand slow. *12th.*—LISNASKEA—5 tons of milled, which varied in price from 5/- to 9/-; one lot of fairly good flax, remainder only medium; all flax bought up. Owing to the scarcity of flax in this locality there will only be two markets in the month, after the 26th inst.

The Registrar-General has supplied the following return of the acreage under flax in Ireland in 1891 and 1892:—

1891.	1892.	Decrease.
74,665 acres	70,642 acres	4,023 acres

YARNS.

A very steady consumptive demand has been kept up for line yarns since last month, and the turnover was sufficient to keep production in check. Spinners have held very firmly to their quotations, no change being reported since previous list, fine numbers being harder to buy. The action of some dealers in selling at less than quotations did not influence producers, who, in the face of dear flax, were unable to make concessions. In a few numbers of coarse tows of very common quality prices are easier, coarse flax being relatively more plentiful now.

BROWN POWER AND HAND-LOOM LINENS.

Though manufacturers are now getting a few more orders for light

linens for bleaching and dyeing, they have not been able to secure any better prices. The tone is firmer, and stocks are better controlled. Medium and heavy makes of plain linens are also in somewhat better demand. Ballymena makes have, however, been slowly bought of late, and stocks, owing to small production at harvest season, are in smaller compass. County Down linens have had good attention, and quotations for the several qualities are well maintained. For roughs, tailors' linens, and brown goods of this class there is an improved demand. Towelling, glass-cloth, and crash have also come in for a considerable share of attention, as the export trade in these has been improving. Union makes of these goods are selling pretty freely. Linen handkerchiefs are still very slowly moving, but there seems to be an improving demand springing up for cambrics, not only in power but hand-loom makes. Damasks and diapers, though not brisk, have been in rather better request of late. On the whole, compared with the very dull state of trade for a long time, the manufacturing end has brightened up a little within the past week or two.

BLEACHED AND FINISHED LINENS.

Home Trade.—An improved inquiry is generally reported in this branch of trade, and though not much increase in business has followed, there are indications of a recovery from the long period of dullness previously recorded.

Continental.—With the exception of Germany, which is taking a larger supply of linens—the Board of Trade returns show an increase of 38 per cent. over September, 1891—all other European markets are very dull, and exports have fallen off compared with same month last year.

United States.—Advices speak of a very fair season's trade at the other side, and several buyers have been here and bought pretty freely for spring account. The shipments of piece goods, by official returns, again show a marked improvement, the quantity being upwards of 19 per cent. over September, 1891.

Other Markets.—The foreign West Indian trade is fairly good, though the returns for last month are not so favourable; still, for the nine months of the year there is a distinct improvement on last year. The British North American trade is also expanding, official returns showing an increase of 37 per cent. compared with September, 1891. British East Indian market is taking more goods, but the Central and South American markets, as well as the Australasian, are all more or less smaller.

For the nine months ended 30th September, the total quantity of linen piece goods exported from the United Kingdom shows an increase of 9½ per cent. and values 6¼ compared with same period last year.

Prices Current for ordinary Line and Tow Wefts. October 14th, 1892.

LEA NOS.	14	16	18	20	22	25	28	30	35	40	45	50	55	60	65	70	75	80	85	90	100	110	120	130	140	150	160
Line Wefts	—	—	—	7/6	6/9	5/9	5/3	5/-	4/7½	4/3	4/1½	4/-	3/10½	3/9	3/7½	3/7½	3/7½	3/7½	3/9	3/9	4/-	4/1½	4/3	4/6	4/9	5/-	5/3
Tow Wefts	5/9-	5/1½	4/10½	4/9	4/7½	4/6	4/4½	4/3	4/1½	4/-	3/10½	3/9	These prices are per bundle of 60,000 yards of grey Yarn, subject to the usual discount for cash.										120 threads 2½ yds.—1 lea 12 leas=1 hank 16 hanks 8 cuts=1 bundle				

At frequent intervals, as the paper comes from the cylinders, it is sampled, and taken to a very ingenious testing machine, which shows the weight per ream of sheets of given sizes. It is interesting also to watch the working of the glazing calender, a splendid machine of ten rollers, and the "slipping and cutting" machine, which cuts the rolls of 92-inch paper into sheets of the required size, its great revolving knives cutting no less than fifty sheets at a single blow. Considerable power is needed to drive the last-named machine, and this is supplied by a special vertical steam-engine.

The principal classes of paper now being manufactured are what are known as "biscuit caps," used in the form of paper bags by flour dealers, confectioners, &c., and strong, glazed, buff casing papers, such as are used by linen warehouses for the outside wrappers of pieces of linen. The firm are altogether working to order, and hope to continue to occupy that happy position. Mr. Gifford for some years occupied an important position in the firm of Messrs. Marcus Ward & Co. (Limited); Mr. Beers was a representative of some of the leading houses in the paper and printing ink trades. Both are well known and respected in the trade, and enter upon their new business under the most hopeful auspices.

Ballylorne Woollen Mills.

A very successful beginning has been made towards establishing the manufacture of Irish woollens in the Larne district by the erection of a well-equipped weaving factory at Ballylorne, about a mile distant from the town. The factory is built on a tributary of the Inver river, and is well supplied with an abundance of water for driving and manufacturing

purposes. The proprietors are Messrs. J. & S. Boyd & Co., also trading as the Shamrock Weaving Company, who for some years previous to the erection of the present factory in the autumn of 1890, carried on the woollen manufacture on a smaller scale at Mountpottinger, Belfast, in premises adjoining the handkerchief factory of Messrs. Thomas Pullman & Co. As the amount of business offering was from the first greater than their productive power could keep pace with, and any considerable extension at Mountpottinger being found impracticable, the Messrs. Boyd transferred the scene of their operations to Ballylorne, where a favourable site, comprising two and a-half acres, for building upon, had then presented itself. The factory is commodious and well arranged, and has been supplied with all woollen manufacturing appliances of the most improved and newest construction. The machinery of the preparing rooms and the weaving sheds is all of the most modern quality.

The variety of goods produced embraces a wider range than is usual in most Irish woollen factories. The usual Saxony and Cheviot tweeds are being regularly manufactured, as are also Irish friezes of the ordinary make, and other friezes of super-elastic quality. In addition to these, however, very choice dress materials, composed of wool and of wool and silk, are being made to order, as are also some very fine and well-made qualities of coat linings. A number of looms are engaged on the manufacture of travelling rugs and sofa blankets, for which the firm has steady and increasing demand from the English warehouses. The Ballylorne factory is a very complete and well-appointed one, and has been from the beginning engaged on orders to the full extent of its productive power.

(To be continued.)

Exports of Linen Yarns and Linens from the United Kingdom for the Month ended 30th September, 1892; and in the Nine Months ended 30th September, 1892, compared with the corresponding periods of the Years 1890 and 1891.

COUNTRIES.	MONTH ENDED 30TH SEPTEMBER.						NINE MONTHS ENDED 30TH SEPTEMBER.					
	Quantities.			Declared Value.			Quantities.			Declared Value.		
	1890	1891	1892	1890	1891	1892	1890	1891	1892	1890	1891	1892
LINEN YARN.	Lbs.	Lbs.	Lbs.	£	£	£	Lbs.	Lbs.	Lbs.	£	£	£
To Germany,	245,800	277,500	283,300	19,988	21,859	20,243	2,184,800	2,498,400	2,152,000	175,292	202,673	180,991
Holland,	200,000	150,500	182,600	7,250	5,014	6,883	1,801,500	1,625,500	1,352,400	57,456	56,756	49,733
Belgium,	198,900	124,600	146,400	14,999	11,026	12,250	1,355,200	1,267,900	1,087,200	102,564	107,375	85,697
France,	101,500	165,200	107,700	11,371	18,569	12,921	1,073,200	1,103,200	994,000	112,926	123,493	110,807
Spain and Canaries, ...	273,600	310,200	149,500	10,049	11,083	6,689	2,916,900	2,877,100	4,258,400	104,865	104,950	152,859
Italy,	38,000	47,400	21,700	1,732	2,045	896	396,400	312,100	296,800	19,112	14,786	13,349
United States,	107,600	9,500	67,200	2,856	444	2,242	945,500	286,000	418,200	23,902	10,734	14,021
Other Countries,	107,400	188,200	177,600	5,117	6,208	8,768	1,105,100	1,234,400	1,481,700	50,320	55,754	65,844
Total,	1,270,800	1,223,100	1,086,000	73,362	75,748	69,992	11,558,100	11,204,600	12,040,700	646,437	676,521	673,301
LINEN MANUFACTURES.	Yards.	Yards.	Yards.	£	£	£	Yards.	Yards.	Yards.	£	£	£
To Germany,	300,700	231,300	320,100	14,019	10,748	15,460	2,535,900	2,726,800	2,735,700	120,656	131,162	132,909
France,	221,500	204,500	140,200	9,531	8,499	6,720	2,113,400	1,580,100	1,456,200	95,324	70,515	66,245
Spain and Canaries, ...	106,300	92,300	36,000	3,952	3,610	1,072	1,098,700	1,234,500	1,291,300	39,911	44,664	52,186
Italy,	90,500	68,600	38,900	3,949	3,300	1,070	714,800	666,500	726,900	29,996	29,151	31,974
United States,	7,101,800	7,343,300	8,746,600	153,858	155,255	187,665	81,077,100	62,929,300	75,651,200	1,688,059	1,324,832	1,565,486
Foreign West Indies, ...	2,459,600	2,372,500	1,205,600	45,309	42,041	24,468	19,159,100	13,337,700	13,922,200	359,418	257,738	267,502
Mexico,	139,900	175,300	140,600	3,538	4,103	3,652	1,657,700	1,451,200	1,159,600	40,675	35,744	28,992
United States of Colombia,	261,200	245,600	158,100	4,652	3,909	2,528	2,783,000	2,672,000	2,692,400	45,616	46,505	45,019
Brazil,	301,600	394,300	224,300	10,433	12,394	5,754	2,348,100	2,877,900	1,927,700	80,435	91,691	54,496
Argentine Republic, ...	63,800	41,000	204,400	1,542	1,032	4,796	833,300	478,800	807,700	23,037	10,904	22,943
Philippine Islands, ...	63,400	60,400	34,100	1,545	1,189	660	647,900	775,600	257,100	12,759	14,337	4,929
British North America	551,600	492,900	677,100	12,732	9,711	15,371	5,299,800	5,786,200	7,610,100	111,238	113,279	140,124
British West India Islands & Guiana	195,600	173,400	161,000	4,164	3,061	3,105	1,527,700	1,450,900	1,255,400	31,452	28,648	25,493
Do. East Indies,	256,400	256,700	306,500	7,698	6,683	7,593	2,623,400	2,288,800	2,268,900	74,965	63,993	63,210
Australasia,	815,100	935,100	557,900	24,307	23,539	16,017	9,326,200	9,602,400	8,438,000	271,442	267,936	225,942
Other Countries,	1,478,600	1,351,300	1,181,100	35,953	32,236	29,635	13,049,800	11,823,100	11,282,600	309,856	286,512	268,263
Total Plain, Unbleached, or Bleached	13,160,600	13,164,400	12,905,100	299,401	283,789	289,323	13,225,680	10,989,290	12,174,470	2,942,707	2,470,276	2,667,027
Total Checked, Printed, or Dyed, and Damasks or Diapers,	904,400	986,400	962,400	22,297	25,169	24,846	11,687,000	9,362,900	8,898,200	266,774	241,683	226,545
Sail Cloth and Sails, ...	342,600	288,200	265,000	15,479	12,352	11,997	2,852,100	2,426,300	2,240,100	125,358	108,652	102,141
Total of Piece Goods,	14,407,600	14,439,000	14,132,500	337,177	321,310	326,166	14,679,590	12,168,210	13,283,300	3,334,839	2,820,611	2,995,713
Thread for Sewing, ...	Lbs.	Lbs.	Lbs.	£	£	£	Lbs.	Lbs.	Lbs.	£	£	£
Thread for Sewing, ...	255,900	189,400	185,700	31,147	24,416	24,454	2,247,200	1,857,100	1,828,200	270,162	232,761	228,675
Other Articles, .....	.....	.....	.....	98,307	100,695	106,427	.....	.....	.....	841,958	769,137	733,584
Total Value of Linen Manufactures, .....	.....	.....	.....	466,631	446,421	457,047	.....	.....	.....	4,446,959	3,822,509	3,957,972

Importations of Flax—Dressed, Undressed, and Tow or Codilla of:

COUNTRIES.	MONTH ENDED 30TH SEPTEMBER.						NINE MONTHS ENDED 30TH SEPTEMBER.					
	Quantities.			Value of Imports.			Quantities.			Value of Imports.		
	1890	1891	1892	1890	1891	1892	1890	1891	1892	1890	1891	1892
From Russia,	Cwts.	Cwts.	Cwts.	£	£	£	Cwts.	Cwts.	Cwts.	£	£	£
From Russia,	81,137	52,819	42,747	101,653	68,540	55,551	1,098,657	941,373	1,048,847	1,408,338	1,237,519	1,365,898
Germany,	1,970	2,741	2,493	2,669	3,962	2,718	22,961	39,766	44,891	36,308	54,053	50,039
Holland,	1,216	1,182	3,218	3,457	2,999	5,254	83,058	66,659	82,208	225,538	174,601	176,110
Belgium,	14,221	12,099	14,024	30,388	32,111	27,816	211,221	228,416	216,866	554,048	628,851	558,249
Other Countries,	5,752	1,275	1,668	6,264	1,163	2,082	37,512	73,704	34,534	47,370	88,291	41,283
Total,	104,296	70,116	64,150	144,431	108,775	93,421	1,453,409	1,349,918	1,427,346	2,272,102	2,183,315	2,191,579



The Irish Woollen Trade.

Overcoatings.

As the season progresses, the outlook for the Irish woollen trade continues bright. In last issue reference was made to the buying which had just taken place on an extensive scale for the coming spring season. A number of matters, then referred to as being in suspense, have since been finally settled very much in favour of the Irish manufacturers; thus concluding a series of orders which, when executed, will constitute the largest amount of Irish woollen business ever entered into at the opening of any season, and which gives promise of the general expectation being fulfilled—that the year 1893 will be the best, as regards volume, that the Irish woollen trade has yet experienced. As regards present trade, a very satisfactory business is passing, notably in overcoatings. When the demand for Irish napped friezes began to die away, so much had these been in vogue for some seasons previously for Ulsters, driving coats, &c., it was feared that nothing of home production would be found to supply the place that they had held, and that in future the share of Irish woollens in the overcoating branches would be but a small one. That, however, has fortunately not been the case. Very superior 6/4 Irish tweeds, of extra weight, with a bold diagonal twill, and in a great variety of shades, have been produced, and are being received with much favour by the distributing houses and the tailoring trade. It would be difficult to name any class of overcoating or wrap for gentlemen's wear that these heavy tweeds are not being used for, while some of the lighter weights are being extensively sold for ladies' mantles and jackets, &c. These tweeds alone would more than take the place in the trade of the almost departed napped friezes, especially as they sell freely alike on both sides of the channel. They are mostly sold in plain mixtures, although the ranges, which are very considerable, contain a number of effective designs, in large, covered, almost invisible checks. A smart trade is also being done in soft-finished, smooth-faced friezes, though in this department the warehouses find their chief outlet amongst the better-class tailoring houses across the channel. Our Irish climate is too moist to allow of goods of so absorptive a nature as these soft friezes are ever to become very generally popular here; but on the English side, their durability, attractive finish, and softness in handle causes them to sell very freely indeed, and orders on quite an extensive scale are being received for them by the Irish warehousemen. On this side, Meltons of all shades are selling more freely for overcoats than any other class of material. For so far, no Irish mill has made a really effective attempt to produce saleable Meltons. A limited trade is still being done in napped friezes, and it is thought by some that they may come in again.

Welsh and Yorkshire Opposition.

It is a somewhat striking piece of retribution, that while Irish woollens are making such steady headway in the British markets, the Irish makers should be opposed in their own domain by the manufacturers of Wales and Yorkshire. So it is, however, and no higher compliment could be paid to the progress made by Irish manufacturers, and the perfection to which they have brought the classes of goods at present being so successfully imitated. Welsh friezes are being sold in the English markets, and actually here in Belfast, that in finish and appearance very closely resemble soft Irish friezes, though we may be pardoned for thinking that they lack many of the other good qualities of the genuine Irish material. I do not know whether these are not sometimes sold as Irish. When the question is asked, the sellers state candidly enough that the goods are Welsh; but at the same time, it is to be hoped that the Irish manufacturers will continue to the fullest extent the laudable practice of stamping their production with their names or trade marks. That practice has served them well in the past, as it always will where the goods seeking identification are of real and sterling merit.

A very large and growing trade is being done in serges—chiefly in indigos—and here, too, the Irish manufacturers are meeting with a keenness of competition that is complimentary and dangerous at the same time. Irish serges for many seasons past have been easily first in the estimation of the maker-up and the wearer alike; but "Irish serges made in Yorkshire" are now being sold that are perilously like the genuine article. Indeed, so near an approach are they to Irish serges, until they come to stand the test of wear, that there is very great danger of them being accepted as such by the unwary buyer, who is too often heedless of the fact that the trade marks of the leading Irish makers are to be found stamped at intervals on the goods, and is, as a consequence, too often at the mercy of unscrupulous salesmen, if such still exist. Everyone knows to look for the "four-leaved shamrock" of the Mahonys on the serges of Blarney, but the trade marks of other Irish firms are not so well known. O'Brien's serges are of sterling quality, and the serges manufactured by Dinsmore, of Kells, near Ballymena, are amongst the very best made; but very little pains are taken by these firms and others to make their goods and trade marks familiarly known to the buying public. In the matter of manufacturing they are abreast of the times: as regards advertising, they are still in the dark ages.

Irish Dress Tweeds.

The course of trade in dress goods continues to favour Irish manufacturers of tweed goods; for while the demand for cheviots, in forty to forty-two inch widths, from a shilling to one-and-sixpence per yard, has fallen off considerably, the better-class tweeds, from two shillings to three-and-sixpence per yard for wide widths, in the production of which the Irish makers excel, are in strong request. There is every indication, however, that they would need to be on the look-out to produce new designs and effects. The cheviots above referred to seemed to have a strong hold on the market, but have had this season to give way to Bradford bold-twill serges and novelties from Roubaix, and a similar fate may overtake the better end of the trade if the present lines are too much run upon. Rough-faced tweeds of all shades, in extra weights, and heavy beaver-like cloths, for wraps, are selling freely.



The Making-up Trades.

The Shirt and Collar Branches.

HE shirt factories are very busily employed on wool goods, repeat orders for which are coming forward on a satisfactory scale, both from the local trade and from the houses across the channel. All-wool fancy flannels are selling freely, especially in the better qualities; union flannels and the lower qualities of all-wool goods have been to a large extent displaced by tweed shirtings, very useful and effective qualities in which are being produced at moderate prices by the Scotch manufacturers. The leading makers-up have all but completed their arrangements for the coming spring and summer season, and have purchased freely of prints and woven coloured cotton goods of various kinds. Grandrills have been in large demand, and there have been considerable quantities of Harvards and Oxfords contracted for. It is regrettable to find so little in the way of linen or union shirtings being offered. Irish manufacturers have been so successful in the production of union woven-coloured checks for the apron and pinafore trades, that one would have thought they would have made a strong effort to produce something on similar lines for the shirt factories, especially as the consumption would be so exceedingly large if suitable cloths were produced.

The Cutters' Union.

The disagreement between a few of the leading collar and cuff houses and their cutters has been brought to an end by the employers acceding to the demand of the cutters' union, and granting the minimum rate of wages asked for. The attempt to found some kind of "masters' association" has not, for so far, been very successful. The chief difficulty in the way seems to be that the interests of the various sections of makers-up employing cutters are far from being identical. For instance, the apron and pinafore manufacturers use cutting machines—revolving steel bands driven by gas or steam power—while some of the collar and cuff makers still cut by hand, using the block and knife, and others cut partly by hand and partly by machine. While there is little community of interest among the employers, the action of the cutters' union affects all cutters howsoever engaged. In the majority of factories the minimum rate demanded was already being paid, in some cases very much more.

Ready-made Clothing.

The manufacture of ready-made clothing is making steady, though somewhat slow progress in Belfast, and there are rumours that a further extension of production is in contemplation. A very considerable business is being done in men's suits and trousers, in which Irish serges and Irish tweed suitings play a satisfactorily prominent part. It is, however, in the manufacture of juvenile clothing that the chief development has taken place. At present, in a number of the factories, a very smart trade is being done, principally in sailor suits and Norfolk suits for the London market. The material chiefly used is blue serge of a low quality, and tweeds of slightly make and moderate price. The same classes of goods are also used for the summer season, in addition to which linen drills, plain and striped, are cut up in considerable quantities.

The Pinafore Manufacture.

The apron and pinafore factories are very fairly busy, though it is still rather early for the new season's trade. Some of the earlier houses, who have pretty well completed their Christmas orders, are already in the market with their samples for the coming spring. Some very effective novelties in children's fancy pinafores have been registered by local makers, and the fancy end of the trade is likely to be better than last season. One of these designs—"Le Corset Pinafore"—is highly spoken of, and an extensive sale for it is anticipated. In plain holland goods, mangle-finished union pales are selling more freely than anything else.



THE IRISH COTTON TRADE.

COTTON YARNS.—Since last report there has been a considerable improvement in the demand for cotton warp yarns throughout Ulster, and prices have advanced in the interval at least a halfpenny per lb., and are now continuing firm and steady. The run at present is principally on the lower end of the range suitable for the coarser class of fabrics, but the sales during the month comprise the Nos. 10 to 24. The manufacture of union goods continues to extend throughout the North of

Ireland, and several makes of goods which were formerly manufactured entirely of linen yarns are now being turned out in enormous quantities in union, so much so, indeed, that the bulk of all the looms in some factories are working almost exclusively on these goods. The demand for union roughs and union crashes continues fairly active, both for export and home requirements; and since the improvement in the shipping and American trades, the general tone of the market has strengthened considerably. A tolerably good demand exists for union towels and glass-cloths, which are being shipped in fairly large quantities. The demand for shirting unions is not as strong as could be desired, but there is now the appearance of an increased trade also in this article. The manufacture of union damasks is slightly larger, and there is the prospect of a further development in these goods. A fair proportion of looms continues to run on cheap white union crashes (bleached in the yarns), but the prices of this article are so much cut up that only very small profits are obtainable, and sometimes the manufacturer finds it difficult to even get out cost. There is very little doing at present in union handkerchiefs, the demand being extremely weak, owing principally to the cheapness and variety offering in the cotton article, while those requiring the superior description of goods prefer genuine linen cambrics.

COTTON CAMBRICS, &c.—Considerably more has been doing since last report in cotton cambric goods, the improvement in the American business having lent an impetus to the printed handkerchief trade, but the increase in the importation of these goods has not been so large as might at first sight be expected, as the printing and making-up of cotton handkerchiefs was continued during the slackness that prevailed during the past ten or twelve months, and the stocks on hands were abnormally large. These are now, however, considerably reduced, and all that is required are some new designs and styles to assort the old stocks. The demand from the American market has brightened up for fancy printed cotton handkerchiefs, and those firms which were comparatively idle for the past eight or nine months are now sufficiently busy to keep all their hands going. Machine-embroidered handkerchiefs are likewise in request, these goods having shared in the general improvement in the American business. Quietness still continues in the home market for all classes of cotton handkerchiefs, unless perhaps for cheap stock lots, which sell readily enough if offered at sufficiently low rates. Altogether, however, the outlook has somewhat improved, especially with the shipping houses of Manchester and London. There is likewise more inquiry from the Continent for fancy printed handkerchiefs, and some definite orders have been already received. The trade prospects in general are looking more cheerful.



(From our own Correspondents.)

Irish.

DUBLIN.—There is little or nothing to say about the markets; as they were, so they are. Linens show no change from what I had to report last month, business being still quiet, but prices firm. In the woollen trade there are not wanting signs of returning confidence, due, perhaps, mainly to the continued firmness shown in the price of wool, but also due, no doubt, to the greater disposition on the part of buyers to operate more extensively. The latest local market report for the raw material runs:—Wool remains without quotable change; tone quiet. Downs, 9d. to 9½d.; hoggets, 8½d. to 9d.; ewe or wether, 8d. to 8½d.; seaside, 7½d. to 8d.; mountain, 7d. to 7½d.; washed Scotch, 4d. to 6d. per lb.

Silks and Poptins.

Demand for these is without special change. Anent these latter textiles, "A Poplin Weaver" has been addressing the public through the medium of a letter to the papers. He says that the summer season has been a very dull one for the operatives of this Irish manufacture. He, consequently, in view of the changing season, appeals to the ladies to patronise this fabric for their winter costumes. Velvets, he says, and whole silks, satins, serges, and ribbons, have, as far as manufacturing goes, disappeared out of Dublin, hence his appeal for support to the last remaining one—poplin. This poplin weaver believes that "if a few prominent ladies in Dublin and the provinces would take up the cause of the Dublin poplin operatives, and endeavour to create a greater desire for its use, their example would be followed and appreciated." This, no doubt, is the case, and example would act to a certain extent. Though poplin appears expensive at first, its price, calculated by its wear, is, in fact, ridiculously low. In the estimation of ladies, however, it lasts too long for the whimsical tastes of the present day. They prefer the cheaper woollen and cotton materials, as they can buy three or four dress lengths of these for one of poplin, and so have the variety. Perhaps this is an overwhelming argument in the eyes of young ladies, but one would think that matrons might not go with the stream in this respect, but include a serviceable poplin among their wardrobe. I look, however, far more to other outlets, and if the dress looms were employed more on the production of clerical robes, furniture cloth, curtains, portières, &c.,

and if this branch of the manufacture was energetically pushed, a deserving and artistic industry might ere long be in a much more flourishing state than it is at present.

The Technical Schools.

The autumn session at the schools has commenced. As yet the Kevin Street establishment is the only one. Although the Corporation has decided to provide funds for the maintenance of schools on the north side of the city, yet as this action was only taken in July, it was too late for the Governors to obtain premises in time to open this winter. The Kevin Street Schools are very fully equipped, and the classes arranged both in science and art are such as to be of benefit to every student, male or female, no matter what their particular occupation may be. At the request of many persons interested in that industry, the Governors have decided to open a class in laundry work, a need which they say is much felt in the city. They have also—in order to complete the course of instruction in the commercial department—added classes in commercial penmanship and German. These additions should enable our home-born clerks to compete on better terms with the imported article, and no doubt these educational additions to the schools will be popular features during the present session. Above all would I urge upon students the necessity for regular attendance. This is a matter of vital importance, and it is one to the achievement of which managers of technical schools should give their most earnest attention.

The Irish Industries Association.

This useful body has found a generous patron in Lord Houghton, the new Viceroy. It seems from the last meeting of the financial committee that, prior to Lord Houghton's departure from London, he and his sister, Mrs. Henniker, visited the London depôt of the Association, and placed large orders for cloaks, ulsters, costumes of Irish tweed, and underwear of Irish linen, in their hands for execution. Besides this, the day after the Viceregal arrival in Dublin, His Excellency's daughters visited the Suffolk Street depôt, and made further purchases. This is certainly prompt and generous action, and the poor workers of the South and West will benefit. The Chicago Committee also seem to be getting on well with their labours. Over £1,500 has been expended in purchasing exhibits. Of this, £1,000 has gone for laces and crochet, and such has been the care taken in the selection, that this exhibit will be the finest and most complete display of Irish laces ever made. The Committee paid great attention to the designs from which these laces have been worked. Special designs were prepared by the students in the Dublin, Cork, and Convent Schools of Art. These again were submitted to Mr. Cole, Mr. Brenan, and Mrs. Power-Lalor for approval before use, and every care is being exercised in the supervision of the workers. It is also gratifying to know that Mr. Peter White's last visit to America has resulted in business. The Carrickmacross school has received an order for 500 yards of *appliqué* and *guipure*, chosen from designs by students of the Dublin and Cork schools from which "trial pieces" had been made—proof positive of the advantage of "samples" even in an industry such as that of lace. To Clones Mr. White brought an order for 1,000 yards of crochet; to New Ross a large order has been sent for needlepoint lace, and to Limerick a smaller order for tambour and run work.

Weaving in Mayo.

The Countess of Lucan is making a vigorous effort to develop and revive the industrial resources of County Mayo. She is promoting the spinning and weaving industries in several localities, and has hitherto considerably benefited the peasants. A large number are already employed, and the Countess intends to dispose of the products of their toil in London, and hand the proceeds over to those who had done the work. It is personal, private effort such as this which tells in the long run. If industry is to be revived amongst the Irish people, it will have to be to a great extent by widely separated private efforts. To get at the heart of the evil of idleness, it is useless to attack only centres such as Limerick, &c., where the idleness to be fought does not prevail, and where industry has to a great extent been established; but far away in the wilds of the West, there is no means of getting at the people—the people who should be workers—except by individual effort; hence the value of the Countess's action. May many follow her example, and extend the benefits of encouragement to other parts of the country.

The Metropolitan School of Art.

For the second time, Mr. J. Brenan, R.H.A., head-master, has succeeded in obtaining the exhibition in Dublin of the prize studies from the various schools in the United Kingdom. It was in 1889 that, for the first time, this genuinely instructive and educational exhibition took place in Dublin. In the course of a year some 500 or 600 pupils pass through the classes at the Dublin school, and it will at once be obvious of what enormous advantage it is to them to be able to see the best examples of work from other schools, especially for the unsuccessful competitors to study the works of those who have succeeded in beating them. As a matter of fact, last year over 108,000 works of art reached South Kensington; of these about 3,500 were allowed to compete, and just over 500 prizes were awarded; but of the 500 prize works 200 are on view in Dublin, including, of course, some of pupils of our own school, who were, as usual, as successful as any other in winning the approbation of the examiners. I have no fear that the number of prize-winners from

Dublin will decrease; but it is pleasant to note that Mr Brenan is determined to use every effort to increase his successes. Such exhibitions as the present one are sure to be followed by good results. Unless I am very much mistaken, when, three years ago, such an exhibition took place, the immediate results were marked. It stimulated the students to renewed effort, fired their ambition by seeing what was being done elsewhere, and very much enlarged their ideas as to what was necessary before a coveted prize could be secured. The same results will be found to follow now, and the session just opening at the School of Art will be found, no doubt, to reflect, in the exertions of the pupils and their improved work, the benefit they have derived from seeing all that is best worth seeing in the work of rival schools. They will also, doubtless, try to compensate, by the energy and interest they will display, the arduous exertions which were necessary on the part of their head-master before he could obtain for Dublin the privilege of having the prize works on view.

LURGAN.—The linen cambric and linen trade in this district now shows some signs of improvement; this event was long looked for, and will be received with gladness should it continue. Some manufacturers are now employing more hands. Linen cambric for hemstitched goods is receiving better attention, but hand-loom woven bordered goods are not yet much wanted. Power-loom manufacturers are also getting into a somewhat better position as to orders. The turn-out from hand-loom weavers from all sources is very small, but should increase shortly when the outdoor labour is over. Linen handkerchiefs (of boiled yarns) are also in better demand, and some manufacturers have now fair orders in work on these goods. Machine hemstitchers are also pretty well employed. It may be also added that hand-loom bird-eye diapers have been in good request, and so have damask cloth embroidered and fancy, pillow shams, tea-cloths, comb and brush-cases, &c., which on the whole is cheering news, after the long spell of extremely dull trade all round here.

English.

BARNESLEY.—Business in this district has varied little from last report, trade being in some branches fairly good, and in others only quiet. The insecurity still felt as regards the state of the various South American countries has a depressing effect on some kinds of linens. Drills, in fine fancy and other descriptions, especially feel it, as those countries up to two years ago were good customers. Damasks have not improved further in demand, but the new designs in lighter materials are fully expected to meet with favour shortly. Chamber linens sell fairly well, but the production at present is below what it was a few months ago. Bleached hucks in the piece are selling steadily. In towellings, in roller, twilled, bordered, coloured, fancy, and other kinds, production has been about equal to demand, the latter having been fairly good. A rather quiet business has been done in drabbets, bluettes, bandages, rubbers, and saddlers' linens. Narrow linens have not been in so much favour as recently, but the demand is still, on the whole, good, when compared with some of the other branches of the linen trade. Manufacturers generally are looking for an all-round improvement in trade, and are sanguine that business during the remainder of the year will be up to the average.

BRADFORD.—A decidedly better feeling has been apparent in trade in this district during the past two or three weeks, and although business has not been of a greatly increased volume, still it has been such that those engaged in the textile branches are in hopes of a speedy improvement in trade generally. Spinners are certainly in a much better position than they were a few weeks ago, both as regards orders and prices; for although the latter are not quotably higher, with the exception of Botany and Genappe yarns, still there is a certain firmness that denotes higher prices, and merchants seem more inclined to view the matter from the spinners' point of view, especially since the various classes of wools at the London sales have gone at rather higher rates, and have given a firmer tone to prices of wools in this district. The wool branches have been called upon for more raw material by spinners than was the case a few weeks ago, but the demand is still simply of a consumptive character, and spinners only purchase in quantities to suit their actual requirements. The piece departments are the least satisfactory of any branch, as, excepting some special fabrics, the inquiries do not result in an increased volume of business. The export trade is only quiet, and the home business is little better. Possibly the volume of trade could be increased, but for the low prices offered.

LEEDS.—In this district, with slight exception, business has been quieter. The condition of trade generally throughout the country is of a depressing character, and, of course, this has a great effect upon the woollen industries both of this country and abroad. Worsteds, which for a long time past have kept the lead in demand, have shown a falling off recently; but serges are still having a good run, and anything of a novel character, as regards design, colouring, and general effect, meets with a ready sale. In mantle cloths, a fairly good demand is expected from the new patterns now being produced, but just at present there is a lull in business, owing to its being between seasons. Tweeds and chevots have sold moderately; but prices offered are very low, and this seems at present to be the chief drawback to more business being done, and especially is this the case in the lower makes of fabrics. In the ready-

made clothing branches trade is of a rather erratic character, for whilst some firms have recently secured good orders as far as bulk goes, others have few on hand; but nearly all manufacturers complain of the low prices on offer, and the great competition at present in nearly all branches of business. The United States demand has recently shown a cheering increase, as has also South Africa.

MANCHESTER.—The Pawson-Leaf sale, though well advertised, attracted comparatively few buyers to London from the North of England, and upon the linen trade the effect of the offering was practically nil. Drapers in this district do not care to take advantage of sales in the South, especially where heavy goods are concerned, as it is found this market presents far superior facilities for advantageous buying. This is particularly true of such makes as roughs and hessians.

The Linen Market.

There has been a steady demand of late for crases and towellings generally in the home trade, and some fair orders have been booked on Canadian account. Some of the local agents have been very successful in the Toronto and Montreal trade during the past few weeks, many respectable "lines" having been booked for those markets. Business can be picked up easily enough for the Dominion, but there are frequent difficulties about credit. Where there are not likely to be difficulties of a financial character, competition for orders is keen.

Local representatives of Belfast houses are having a hard time of it just now. Their South American connections are very backward, and the struggle for orders becomes fiercer. For Rio there is not much doing, owing to the absurd quarantine regulations imposed by the Brazilian Government since the commencement of the cholera scare.

South American Markets.

A new firm—the *Campania de Fabricantes Ingleses*—has been established at Buenos Ayres for the purpose of encouraging the sale of British products in the Plate region. The active partners are twelve well-known English houses, included amongst whom is a firm well known to readers of the *Irish Textile Journal*—that of Messrs. Galloway & Co., of this city. Messrs. Robinson & Sons, and J. & W. Barlow, both of Rochdale, are also amongst the partners, whose names include some of the most highly-respected concerns in the kingdom. From what I have been able to learn of the constitution of the English Manufacturers' Export Company, the machinery element is at present the most striking feature in its constitution. No Irish or Scotch firms are, from what I have been able to ascertain, interested. A capital of £50,000 has been subscribed, and the Buenos Ayres manager is Mr. A. G. Pruden, of Messrs. Blackstone & Co. The scheme of forming such companies is one which should interest Belfast men. In the case of the English Manufacturers' Export Company, the project is not an experimental one, the concern having taken over the business of Messrs. S. York & Co., of the Calle Balcarce. I believe that the German export companies have not been uniformly successful, and the opinion seems to prevail in this country that individual energy is the best thing to rely upon in promoting our foreign trade. A company for pushing the sale of British and Irish textiles might prove useful, however, in such important centres as Buenos Ayres or Rio. Even in the case of manufacturers who send out their own travellers to South or Central America—amongst whom some Belfast firms may be included—such an organisation might prove useful. One firm cannot afford to scour the whole world with travellers exclusively devoted to its interests. It may be added that there has been a heavy falling off in the local machinery trade with Brazil and the Argentine Republic during the present year.

Irish and other Woollens.

The remarks in last month's Journal regarding the activity in the Irish woollen trade should give great satisfaction to friends of Ireland, inasmuch as on this side of the channel the woollen industry is in a depressed condition. Irish goods have now made for themselves firm friends in many of the most important buying houses in the country. There is room for a good cloth such as that made on Irish looms, provided the designs are right, and on this score there has certainly been an improvement of late. Soft finishes are still favourites amongst home trade buyers, and there is sure to be a run on Irish goods while fashion leans in this direction. The medium-class trade offers splendid inducements to Irish manufacturers. Yorkshire and Scotch competition is keener in this branch of the trade, it is true; but, on the other hand, the field is wider. Some of our ready-made clothing manufacturers are now regularly consuming large quantities of cloths equal in every respect, as far as design and quality are concerned, to the best goods consumed by what it is the custom to term the "West End" trade. Four and five-guinea ready-made suits are by no means unusual now. It is an error to suppose that ready-mades are necessarily of an inferior quality, either as regards material or fit. The trade is improving its processes every year, and in Leeds, Manchester, and London, where the business is chiefly carried on, there are scores of firms ready to encourage any manufacturer who can show them a good medium cloth at a reasonable price. Reliance upon a high-class trade can only extend to a certain point, and a few additions to the ranks of Irish woollen manufacturers would work a considerable change in this respect. It is all a matter of output. Larger productive houses would force an appeal to the medium and even lower branches of the trade.

The New Municipal Technical School.

The site for this school is an extremely suitable one, being within easy access of most parts of the city warehouse district. It is close to the Athenæum and the principal clubs, and a liberal allowance of room has been made by the Corporation. The district chosen for the site was, twenty years ago, one of the lowest parts of the city. During the past few years, however, local improvements, and the extension of the warehouse district, which once bordered on a hot-bed of crime, have resulted in many important changes. The decision of Salford to have a technical school of its own, though admirable in one respect, is in another regrettable, as it seems to emphasise the serious loss to the inhabitants of the district arising from the refusal of Salford to amalgamate with Manchester. A general technical education scheme for the city and the borough, controlled by one head, could be conducted more efficiently and more cheaply than the present system of independent organisations operating within a few miles of each other.

LONDON.—For the closing part of September the reports of the trade generally were more hopeful, but it is greatly to be feared that the extra business done was in a great measure due to the extra efforts put forth during that time by the city houses. The fact that the amalgamated houses of Pawsons & Leaf, Limited, had announced a special sale, which lasted over a week, stirred up certain other houses, which, while they made no public announcement, were whipping their customers in from all centres. Travellers also were called in to make themselves specially useful in looking after provincial friends, whom the ordinary staff of the warehouses could not be expected to recognise; so that, everything put together, business got a good temporary spurt, which showed signs of continuing, until the atmosphere became again the enemy of the trade, and the result was a relapse in many of the departments. Following closely upon the Pawsons & Leaf's spurt came the boom in the silk trade, which is likely to last for some time, and this, in its turn, has given the market some life. Prices for certain makes of silk goods have not been so high for many years. In the Irish poplin trade I learn that during the last few months there has been a greater demand for this once very popular material. Some of the Dublin manufacturers have been exerting themselves specially, and have brought out a charming tartan pattern which promises to take a lead. There is no reason why this industry should not regain some of its old vigour, if only a little more interest was thrown into the production. The Board of Trade returns which have been issued for September show again a decided falling off in our export trade; but there is a slight improvement as compared with previous months of this year. It is a noteworthy fact that the greatest decrease is shown in textile fabrics, while the only export which has held its own and gained is the chemical trade. Some timid people have been attributing the increase to the extension of manufactures abroad. Of course it is only an assumption, as there is really no basis for the calculation. The decrease in the export trade is entirely due to the unsatisfactory state of most of our colonial markets, and the consequent curtailment of business. The markets which have shown an appreciable increase in their purchases have been Bombay, Bengal, Burmah, and Egypt. Consignments to Chili, Brazil, and Argentina have been upon a much larger scale than for some months past. Strange, too, the shipments to the United States, West Indies, and British North America have improved. Generally speaking, Continental demands have decreased, and there has been a falling off in our shipments to the British possessions in South Africa and the West Coast of Africa. Australia, however, registers about the largest decline, relatively speaking. The city houses are already busy preparing for the Christmas trade. Novelties are required, so here is a chance for the ingenuity of the Ulster manufacturers in which the handkerchief trade could well compete. The German, French, and Swiss houses are not behind at this time of the year, and they are making rapid strides on the London market. The rumours which were recently spread by certain Irish papers as to the state of the linen trade, and the threatened embarrassments, did not do Belfast a good turn at the time. It may interest houses to know that for two days the discount market looked shy at Ulster paper, which is quite unusual; and the timidity of brokers was increased by London papers taking up the cry of the Belfast market, and printing *in extenso* what had already created a good deal of disturbance. At the present time the slightest hint at a market being weak sets a hundred ears pricking in the financial quarters of London; and if only those who set these rumours afloat knew how far-reaching the consequences were, they would be more careful. The Milk Street trade shows very little improvement, but a quiet steady business is maintained; if there has been any improvement, it has been in specialities which ought now to be moving out for the Christmas season. The competition is excessively keen for goods of this class. German manufacturers have been here in numbers during the month scouring the city with their English representatives, and I have seen some large orders go through for napkins and smaller articles for domestic use, chiefly sold to the larger West End houses. Tailors' trimming houses have been more active during the current month, but there is not so great a demand as they looked forward to. Some moderate parcels of canvas and hollands have been sold to the ready-made manufacturers; but this trade requires so much work in proportion to the results, that agents hardly think it worth their while to spend too much time at it, hence the distributing houses hold it

still very much in their own hands. In the shirt and collar trade of the city there is nothing special to chronicle, except the collapse of a few small makers. The West of England shirt and collar trade, particularly round about Taunton and district of Somerset, is reported to be fair. There is not much demand for the finer makes of linens. We are still looking forward to better days in the city, but they are slow in coming round.

Scotch.

DUNDEE.—There is rather more doing in this district of late, and prospects are altogether more cheerful. *Flax*—Though demand is not by any means active, there is a moderate amount doing to meet consumers' needs for short periods, and prices are without change. *Linen Yarns*—Business is mainly restricted to the wants of manufacturers from day to day, who, looking for lower rates, are unwilling to operate in advance of their ordinary requirements. Prices may be said to be quite steady all round. *Linens*—The home trade, which had been very dull for a long period, is looking up a little now, and on export account orders, more especially for the United States, have been more numerous. The declared value of linen exports through the American Consulate at Dunfermline, for the year to September 30, shows an improvement of over 20 per cent. compared with previous year. In the Jute yarn and cloth branches there is a fair business passing, and prices are better.

Continental.

LANDESHUT, October 5th.—The Yarn Exchange on 5th inst. was not so well attended, and therefore only little business was done. Spinners adhere to their former quotations and show a tendency to raise the prices still higher. On the part of the buyers there is little inclination to enter into large contracts, as they believe that the new flax crop will bring an alteration of prices; although to all appearance the new crop will hardly make any difference, as the quality is good, but the quantity seems to be less than last year's crop. *Linens*—Most of the power-looms are well employed. Hand-loom weavers still produce very little, owing to the autumn weather continuing favourable for field work. Next Exchange on 2nd November.

United States Market.

(From our Special Correspondent.)

NEW YORK, September 30th, 1892.



ALTHOUGH the business reports from Belfast are not of an exhilarating nature, nor helped along any by the stories of failures, we don't meet with much discouraging talk on behalf of linen goods affairs in this market. A fair volume of trade is in progress, and any unsettlement of prices has yet to be reported—that is to say, anything definite. There was a rumour early this week to the effect that some cutting had been done on 4/4 linens at Troy, but it needs investigation; and as four linen house representatives were there together one day recently, it may be inferred that the wily Trojans "worked" some of the young gentlemen successfully. But the boys should take heart and not be discouraged by wild rumours.

The second week of next month will be a poor one in all businesses at this city. Its Monday, Tuesday, and Wednesday will be given up to the Columbus celebration, and though Wednesday is the only one defined as a "legal holiday," the others will distract the commercial mind, for "to see the procession"—there will one of some kind each day—will be the thought of all minds, and business will practically be suspended. The echoes will last through the rest of the week, as every wise man's son doth know. Our fine Broadway is already in the primary stages of decoration, and the city will soon be gay with bunting. That Columbus did a good turn for the Irish is now generally admitted—and he was a foreigner, too.

The British mind might as well fold its arms and rest as contentedly as unpleasant circumstances will permit over the matter of the tariff. It comes high, but we must have it. It will remain upon the national statute books, though some of its idiosyncrasies may be eliminated. There is no free trade party, as such. The Democratic party, largely—at the North—composed of the working men of the country, dare not preach absolute free trade, nor anything near to it. Is it not strange, then, to find in the current *Westminster Review* an article by Peter Ross declaring that the Democracy are fighting for absolute free trade, and prognosticating the "entire removal of the slightest vestige of protection" as the consequence of Mr. Cleveland's election? Anything more absurd could not be written, though it may carry crumbs of comfort to depressed British manufacturers. Of all the countries of the civilised world this is now the most prosperous, and its prosperity is extraordinary in its own history, as all the official statistics of commerce, trade, and manufacture bear abundant witness. Free trade is not in our calculations.

To one who has been out of the handkerchief trade for a few years a visit to an importer's stock, and a run through it, impresses upon him the fact that a great change has taken place in textile representation. From

coarse to and including medium qualities, cotton has superseded flax to a wonderful extent. Six to eight years ago, cotton handkerchiefs were known only in the coarse counts, and they were sold to the jobbing trade almost solely; and not many years previous to eight years ago, few handkerchief importers would admit the cotton wares to their stocks, as the best retailers refused to handle them at all. At this writing, the mull article constitutes two-thirds of all the handkerchiefs sold for ladies' wear. The best retailers sell them in enormous quantities. They wear out fast, but they look "cheap for the money," and they take embroidering and printing in the best fashion. In men's wares our fine men's furnishing trade handles hemstitched cotton prints, on which it makes a handsome profit at 7½d. each.

So flax is no longer king in this portion of the linen trade. Business is good in general handkerchief stocks. Embroidered goods in white hold to their popularity, and will for a long time, it would seem. Initials are having the best season in many years. The M'Meehan concern, recently dissolved, will retire from the business. As against this retirement we have a new account about to be established, and a new house to be formed early in '93. In addition, Robb, Capper & Co. have opened a New York office for the purpose of carrying stock, and Glass & O'Flaherty's manufactures have taken a fresh hold of life. So the handkerchief field seems to be worth the exploiting; and between the Irish and the Swiss the merry war continues over the muslin embroideries.

NATIONAL REGISTRATION OF PLUMBERS.

THIS important movement in behalf of Sanitary Reform is making good progress, as the Annual Congress, lately held at Dundee, fully testifies. On that occasion a large number of delegates attended from all the important centres of trade throughout the kingdom, in addition to a considerable number of professional men, sanitary authorities, and experts. To render the registration movement more popular among competent workmen, the Glasgow Council suggested that, to induce a larger number of men to apply for registration, the condition of undergoing an examination might be suspended in the case of master plumbers who were twelve years engaged in the trade, and who could satisfy the Council as to their qualifications. Ultimately it was settled, that being in the trade for ten years and otherwise qualified would be sufficient without examination.

Sir Philip Magnus spoke of the importance of a technical and practical training for plumbers, and said there was often very great difficulty experienced in getting a suitable master, and that it would be well to consider whether a science teacher should not be associated and work with the practical teacher of plumbing.

Mr. Coles, of the Worshipful Company of Plumbers, pointed out the special and absolute need that existed for workmen of this class being technically educated. They stood in such a unique position among craftsmen, inasmuch as they were entrusted not only with the property but the lives and health of the community. Unlike members of other callings, the operative plumber was frequently called upon to carry out most responsible work without the supervision or inspection of employer or foreman. It was therefore necessary that he should have as much technical instruction as would qualify him to deal effectively with the complicated and difficult problems which arose in connection with the remedying of sanitary defects. In fact, he thought the operative plumber should have as much technical knowledge as was required by foremen in other callings.

A resolution to the following effect was passed:—

"That this congress of representatives of public sanitary authorities, medical profession, educationists, and plumbers, is of opinion that the technical education of plumbers is a matter of national importance, the provision of which is exceptionally difficult and costly; and it is essential to the preservation of the public health that such education should be promoted in all districts, and that the special claims for financial aid should be brought prominently before the attention of municipal corporations and county councils who have funds at their disposal by Act of Parliament for educational purposes."

RECIPES.

FOR WASHING LINEN.—Dissolve a little pipe-clay in warm water in the wash tub, or rub a little of the clay with the soap, and the result will be a great improvement in the colour of the linen, more especially where facilities do not exist for out-door drying. Linen which has been much soiled can in this way be cleaned with half the labour, as well as effecting a considerable saving in soap.

DYEING RECIPE.—For rose on 11 lbs.—Work in a boiling hot beck of 7 oz. tannin and 2½ oz. curd soap; add to the water the solution of 3½ oz. of tin crystals, and dye with ⅓ to ½ oz. saffranine at 110° Fah.

Chemicals and Dyes.

(Special Report by Messrs. SADLER & Co., Ltd., Middlesbrough.)

THERE has been quite an excited market in the Alkali trade, owing to the extraordinary demand for Bleaching Powder, and it is reported that as much as £10 10s. has been paid for prompt delivery, whilst £9 is quoted for next month's delivery. Caustic and Ash are undoubtedly flat, and with a remarkable shrinkage in the volume of business doing. Sulphate of Ammonia appears to have a better prospect, and is to-day quoted at least 5s. higher. There is an excellent inquiry from the Continent, and it looks as if it were again coming into popular favour at the expense of Nitrate; the latter, notwithstanding the lessened shipments, continues to drop.

There is a better demand for Potash Salts, and Chlorate is selling at a fraction better price. The demand for Bichromate has improved, and a fair business is doing. Oxalic Acid is in good request, but the competition of makers has brought the price down 5%. Sulphate of Copper, Tin Salts, Chloride of Zinc, Barium products, Epsom Salts, are all easier, with a slack market.

Tar products show a little more life, and the demand for Carbohc Acid, for disinfecting purposes, appears to have cleared the market of the glutted stocks of it which existed. Benzoles are a shade better, but Anilines, Alizarine, and Dyes generally, are weak and difficult to sell.

Prices:—*Dyes.*—Alizarine, 8½d.; Aniline Oil, 6½d.; Aniline Salt, 6d.; Magenta, 2/- to 3/-; Scarlets, 1/3; Chrysoidine, 2/-; Blues, from 3/-; Picric Acid, 10d. *Ammonias.*—Liquid Ammonia, 1½d.; Carbonate of Ammonia, 2½d.; Muriate of Ammonia, £16 to £22; Sulphate of Ammonia, £10 5s. *Alkalies.*—Bicarbonate of Soda, £7; Caustic Soda (77), £11 10s.; Soda Ash, 1½d.; Caustic Potash, £19; Sulphate of Soda, 25/-; Soda Crystals, about £3. *Sundries.*—Tartaric Acid, 1/6; Citric Acid, 1/10; Oxalic Acid, 3d. less 5%; Tin Salts, 5½d.; Sulphate of Copper, £14 15s.; Bleaching Powder, £10; Borax, £27; Nitrate of Soda, £8 12s. 6d.; Carbohc Crystals, 6½d.; Epsom Salts, £3.

Selected List of Applications for Patents relating to Textile Fabrics.

Compiled from the Official Records, by Messrs. W. P. THOMPSON & Co., Patent Agents, of 6, Bank Street, Manchester; 6, Lord Street, Liverpool; and 525, High Holborn, London, W.C.

E. G. A. HATSCHKE, London, No. 14,710.—"Improvements in machinery for breaking or scutching flax and similar fibrous materials." 15th August, 1892.

JOHN ESKRINE, Halifax, No. 15,222.—"Improvements in machines for feeding flax, tow, or similar fibres to carding and other like machines." 24th August, 1892.

D. M'GREGOR and A. BALFOUR, Dundee, No. 15,358.—"Improvements on the mode of dragging or tempering spinning bobbins on spinning frames, and an arrangement for releasing springs for tempering bobbins." 26th August, 1892.

F. BARBOUR and WM. KANE, London, No. 15,440.—"Improvements in the construction of bands or sheets for hackling and other machines." 27th Aug., 1892.

C. DE BAILLENCOURT, London, No. 15,510.—"Improvements in machines for combing long fibres." 29th August, 1892.

W. P. THOMPSON & Co., Patent Agents, 6, Bank Street, Manchester, Liverpool, and London (communicated by C. O. White and M. B. Lloyd, United States), No. 15,831.—"Improvements in the method of and apparatus for weaving coiled wire fabric." 3rd September, 1892.

A. W. METCALFE and W. J. HEMMING, Halifax, No. 15,868.—"Improvements in machinery for preparing flax and jute and other fibres." 5th Sept., 1892.

J. V. EYES, Belfast, No. 16,634.—"Improvements in covers for the footsteps of spindles in spinning, doubling, twisting, and similar machines." 17th Sept., 1892.

SPECIFICATIONS PUBLISHED.

The specifications of the following patents have been printed and published during the month, and copies thereof may now be obtained at the uniform price of 1s., which includes postage.

1891.

J. C. WALKER and J. E. STEPHENSON, Shipley, York, No. 15,703.—"Improvements in screw-gill machinery for operating upon fibrous materials." 16th September.

G. STANNARD, Stretford, near Manchester, No. 16,723.—"Improvements in or relating to picking bands or straps for looms." 1st October.

A. COMBE, Belfast, No. 16,881.—"Improvements in apparatus for measuring and recording or indicating the length of yarn, thread, or strands, twisted or whilst being twisted." 5th October.

R. TAYLOR, Oldham, No. 19,525.—"Improvements in means for lubricating the footstep bearings of spindles employed in textile machinery." 11th Nov.

U. BENTLEY, D. BENTLEY, and J. BENTLEY, Ravensthorpe, near Leeds, No. 20,031.—"Improvements in or connected with machinery for milling woolen or other woven or felted fabrics." 18th November.

1892.

W. P. THOMPSON & Co., F.C.S., M.I.M.E., Patent Agents, 6, Bank Street, Manchester, Liverpool, and London (communicated by J. R. Leeson, U.S.A.), No. 6,497.—"Improved cop or ball of thread, and tube for same, and method of and means for winding thread into cops or balls." 5th April.

C. SIMON, Switzerland, No. 7,887.—"An improved machine for winding yarn or thread." 26th April.



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Medals.
CALCUTTA, 1883
LONDON, - 1884
ANTWERP, 1885
LONDON, - 1885
EDINBURGH. 1886

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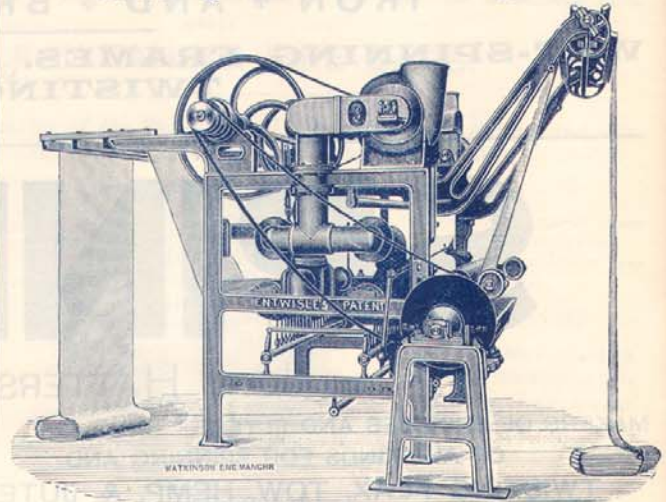
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J. B. Black, Esq., J.P., Scutch Mill, Ballymena.
J. Ross, jun., Esq., Scutch Mill, Ballymena.

Braidwater Spinning Company, Ballymena.
Lisnafillan Bleaching Company, Ballymena.
York Street Spinning Co.'s Offices, Henry St.
" " White's Mill, Muckamore.

T. Sinton, Esq., Spinning Mill, Tandragee.
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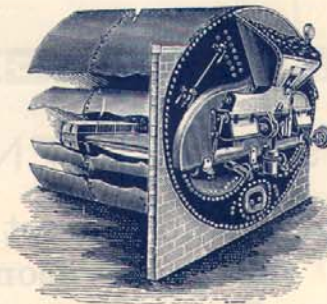
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At the High Court of Appeal of the Queen's Bench, London, LORD JUSTICE COTTON said:—"Nothing of the kind has been done before."

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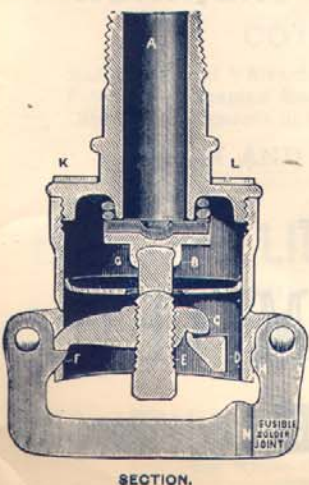
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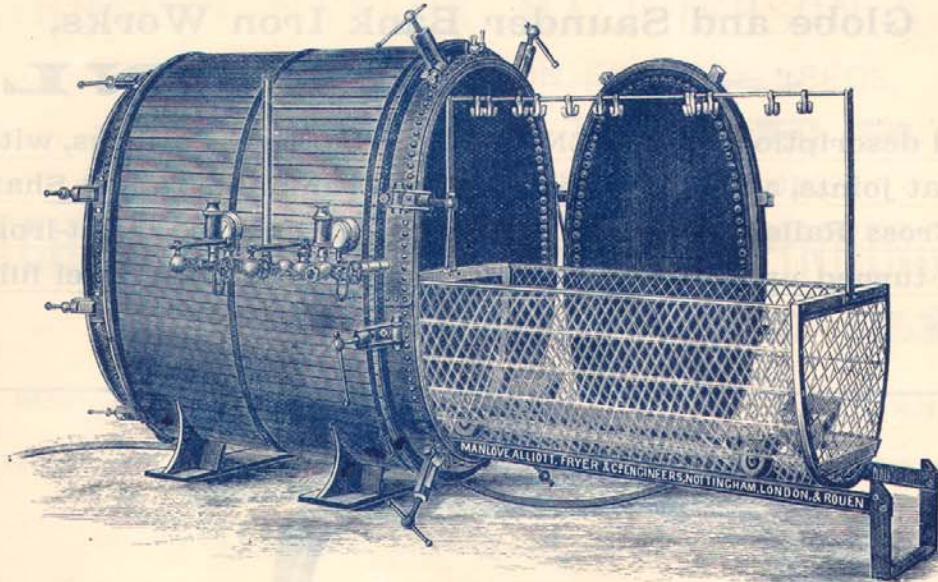
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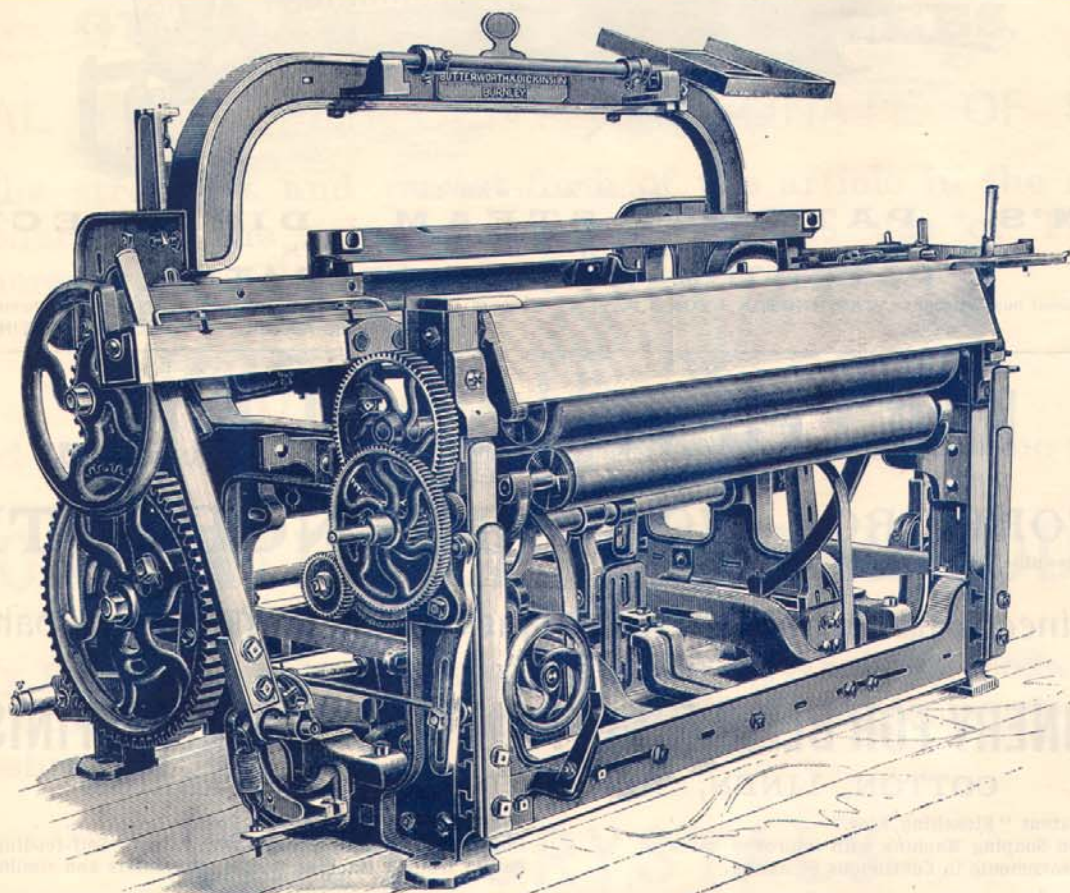
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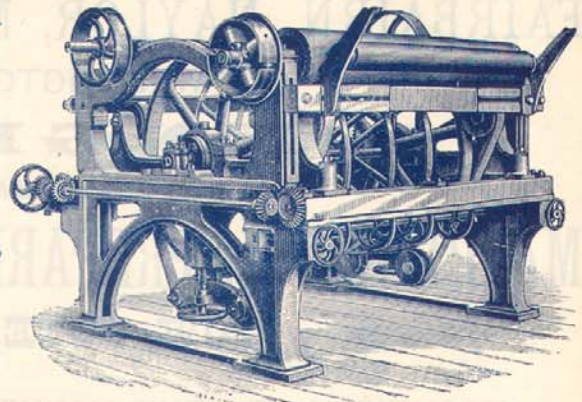
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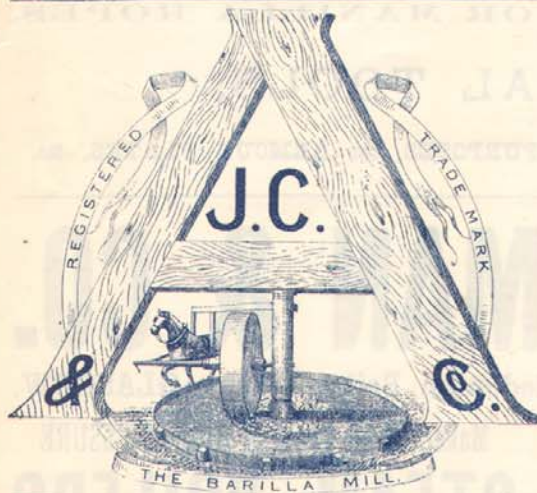
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