

ON THE  
INDUSTRIAL TRAINING INSTITUTIONS  
OF BELGIUM,

AND

ON THE POSSIBILITY OF ORGANIZING AN ANALOGOUS SYSTEM

IN CONNECTION WITH

*The National Schools of Ireland.*

BY

TRISTRAM KENNEDY, M.P.,

AND

WILLIAM K. SULLIVAN,

PROFESSOR OF CHEMISTRY TO THE MUSEUM OF IRISH INDUSTRY.

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DUBLIN:

BROWNE & NOLAN, 21, NASSAU-STREET.

LONDON: T. & W. BOONE, 29, NEW BOND-STREET.

1855.



Houses of the Oireachtas



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# CONTENTS.

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Preface	...	...	..	...	...	...	5
CHAPTER I.							
Causes which have led to the present backward condition of industrial skill in Ireland	...	...	...	...	...	...	7
CHAPTER II.							
§ 1. Rise and present position of Belgian Industry	...	...	...	...	...	...	11
§ 2. Gradual decline of the Belgian Linen Manufacture	...	...	...	...	...	...	20
§ 3. Charitable Workshops	...	...	...	...	...	...	25
§ 4. Establishment and organization of Apprenticeship Workshops	...	...	...	...	...	...	27
§ 5. Results of the establishment of Apprenticeship Workshops	...	...	...	...	...	...	35
§ 6. Apprenticeship Schools	...	...	...	...	...	...	41
§ 7. Special School of Design applied to manufactures and weaving	...	...	...	...	...	...	43
§ 8. Other Institutions founded in Belgium, and measures adopted by the government to diffuse industrial knowledge	...	...	...	...	...	...	45
CHAPTER III.—INDUSTRIAL TRAINING MOVEMENT IN IRELAND.							
§ 1. Dublin Manufacture Boards	...	...	...	...	...	...	46
§ 2. Independent Industrial Schools	..	..	...	...	...	...	48
§ 3. Industrial Training in connection with the National Schools	...	...	...	...	...	...	51
§ 4. National Agricultural Schools	...	...	...	...	...	...	68
§ 5. Industrial Training in Workhouses	...	...	...	...	...	...	76
CHAPTER IV.							
Suggestions	..	...	...	...	...	...	78



# Houses of the Oireachtas



## PREFACE.

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ALTHOUGH the excitement of the Manufacture Movement got up three or four years ago has completely subsided, the necessity for promoting manufactures by means of Industrial Schools is as urgent as ever, while the probability of their success has considerably increased, owing to the experience which the country has acquired in their management. Many of the schools established at that period, and prior to it, still exist—some in successful operation, and others in a languishing condition, from the want of the stimulus of a central organization. With the view of directing public attention to this subject, by showing what had been effected elsewhere, a short account of the Apprenticeship Workshops and other Industrial Training Institutions of Belgium was published in the “JOURNAL OF INDUSTRIAL PROGRESS.”\* That account would have possessed additional value had it also pointed out the materials which we possess in Ireland for developing an analogous training system.

We purpose supplying that deficiency in the following pages. The whole of the part relating to Belgium is simply a reprint, with a few trivial additions, of the article above alluded to. To this we have added some remarks upon the results already attained in Ireland with an imperfectly organized system of industrial training, and made a few suggestions as to how that

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\* It is just that we should mention here, that about two years ago, Mr. Lucas, M.P., published in the “*Tablet*” several interesting notices of the Apprenticeship Workshops of Belgium, and forcibly pointed out the benefits which a similar system would confer upon Ireland. His account was, we believe, the first and only one which appeared on the subject in English.



system might be improved and extended, so as to assimilate it to the Belgian one.

Our aim in drawing up this pamphlet is simply to direct the attention of all well-wishers of the country, irrespective of party and creed, to the great importance of industrial training; and to indicate that there exists in the National School organization a mechanism by which as perfect a system as that of Belgium could be devised.

The subject is a delicate and a difficult one, and requires much consideration and careful discussion, in order that the merits and demerits of the scheme may be fully understood. In this spirit we hope all our readers will take up the subject, and bestow that earnest attention upon it which it demands and deserves.

We take this opportunity of returning our most sincere thanks to M. L. Vandewalle, (Chef de Division et Inspecteur des Ateliers Modèles d'Apprentissage, au Gouvernement Provinciale de la Flandre orientale à Gand,) and to M. Rennie, of Bruges, who fills the corresponding office for West Flanders, for the kind readiness with which they communicated every information, and for the facilities which they afforded in obtaining access to the various institutions.

In addition to the information directly obtained from the inspectors, and by visiting several of the workshops, we have consulted the following works upon the subject of the Belgian system :—

Rapport sur la situation des Ateliers d'Apprentissage et de Perfectionnement dans les Provinces de la Flandre orientale, de la Flandre occidentale, et de Hainault. Présenté à la Chambre des Représentants dans la Séance, du 5 Mai, 1854.

Le Travail Industriel dans la Flandre orientale; extrait de l'exposé de la situation de la Flandre orientale pour l'année, 1852. Gand.

Die Elemente der Gewerbebeförderung Nachgewiesen an der Belgischen Industrie. Von Dr. F. Von Steinbeis, Stuttgart, 1853.

Observations au Parlement Belge, par le comité des Houillères de Mons, 1852.

Annales du Commerce Extérieur, (Ministère de l'Intérieur) No. 691, Belgique. Faits Commerciaux, No. 8.

Résumé de la Statistique Générale de la Belgique Publiée, par le Department de l'Intérieur pour la période décennale de 1841 à 1850. Bruxelles, 1853.

De l'Industrie en Belgique, par M. N. Briavoinne, 2 vol. Bruxelles, 1839.



# ON INDUSTRIAL TRAINING,

ETC.

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## CHAPTER I.

### CAUSES WHICH HAVE LED TO THE PRESENT BACKWARD CONDITION OF INDUSTRIAL SKILL IN IRELAND.

THE most important problem which could occupy the attention of statesmen is undoubtedly the study of the causes which lead to the development or retardment of the industry of a country. Those causes are very various, partly natural and partly accidental. The natural are, geographical position, physical conformation of the surface, geological structure, and climate. The accidental are chiefly the character of the government and the previous fate of the country, by which the moral and intellectual character of its people have been formed.

Truly speaking, however, there are few causes which can be called accidental, for the history of nations show how much their civilization has been influenced by their physical position; or what is the same thing, that the accidental causes are themselves in a great measure the result of the action of the natural ones.

The climate and physical conformation of a country regulate the agriculture, and therefore the food and domestic economy and the internal intercourse of its people, and consequently facilitate or retard the growth of population and the amalgamation of races. Upon its geographical position depends the nature and extent of its external commerce, its tendency to conquest or its liability to be conquered. Sometimes one cause, and sometimes another, exerts the guiding influence upon a nation's destiny, but geographical position is evidently that which does so most frequently. Hence it is that notwithstanding the action of all other causes, civilization appears to have attained its highest development where the geographical position was most favorable, and that even in countries in which other conditions could not be considered to be so.

The same cause does not universally continue to be the one which exerts the dominant influence upon a nation's destiny. At one period geographical position may be the chief agent in raising it to the highest pitch of greatness, and at another time may lead to its decline. Now, as the condition of one nation always reacts upon that of all surrounding



ones, the relative importance of the causes which rule the destiny of a nation's life are constantly varying from the modifying influence exerted by neighbouring countries, themselves in a constant state of transition.

Ireland affords an excellent example of the truth of these propositions, for its past history, and hence its present condition, have been almost entirely the result of its peculiar geographical position.

In the time of the Romans it was at the periphery of the then known world, and no wave of civilization passed over it which could have leavened the masses of the people, as it did in Gaul, and lead to the growth of art, knowledge, and the cultivated industry of the Mediterranean countries.

The same causes preserved it to a great extent from the desolating invasion which swept over Continental Europe towards the fall of the Roman Empire, and enabled it to gradually develop a peculiar kind of civilization. But unfortunately, that isolation which preserved it from the ravages of foreign war, led, as isolation always does, to internecine feuds, which retarded the progress of the country, and finally destroyed its liberty. These perpetual feuds preserved the system of semi-independent petty chieftains, which marks out the earliest development of government amidst a barbarous people, and whose power would have been gradually absorbed, had a wider field existed for the growth of one or more powerful petty states.

In the twelfth century its close proximity to England rendered an invasion of its territory extremely easy, whilst the same cause prevented the invaders from being absorbed by the invaded people, owing to the facility with which their ranks were perpetually recruited. Although too small in extent to allow of two or more states being formed out of it, it was too large to permit of its being conquered at once; and its subdivisions between rival petty sovereigns prevented it from offering a successful opposition to the invaders.

Centuries passed, and still the struggle continued; but, in the mean time, Europe had emerged from darkness; arts revived, industry, science, and literature gradually grew up. These are incompatible with a perpetual strife, and hence, Ireland, owing to its geographical position, was not able to take much advantage of the change.

In the eighteenth century maritime commerce made considerable advance; a new world began to develop itself in America, and Ireland, from being out of the highway of nations, might have become, in a degree, a centre; unfortunately, the centuries of war and devastation had developed a system of government, whose intolerance and utter incapacity of expansion made it a barrier to all progress. Manufactures, no doubt, grew up, and new branches of trade were fostered with the greatest care. But the industry of the country was entirely artificial; it was confined to certain districts, from which the original inhabitants had, either in part or altogether, been driven by famine or persecution, and replaced by a new population, drawn from England or elsewhere, and differing in race and religion from the former inhabitants. All the skilled industry of the country was thus monopolized by one section of the nation, and, except as tillers of the soil, and as affording all the brute labour of the towns, the great mass of the people had no share in it.



This monopoly of skilled labour by one section of the population, arose partly from legal enactments for the purpose, and partly because all traditional aptitude for skilful craft had been obliterated in the great mass of the people, by the isolation and poverty in which constant war had kept them, and by the oppression of a dominant party. The effect of these causes might even have been traced up to a few years back, inasmuch as, until recently, gem-setters, glass-blowers, silver-smiths, engravers, watch-makers, saddlers, braziers, gun-smiths, and many other skilled artizans, were almost without any exception Protestants, which in Ireland is almost synonymous with being of English origin, as is well shown by the class of persons who were eligible to become "freemen" of our corporate towns.

The existence of a traditional aptitude in certain districts and among certain persons may be considered very problematical by some, and even if admitted, to be without any decisive influence upon the industry of a country. A careful consideration of the question, however, must lead to the opposite conclusion. Thus, for example, all cities or districts which have become the chief seats of certain branches of trade, have been, in almost every instance, previously more or less distinguished for their success in skilled labour of some kind. We might indeed consider that the most essential basis for the growth of manufacturing industry and commerce in a nation, is the existence throughout the whole country of those small branches of trade destined to supply the common wants of the community, and which we might call domestic manufactures.

The rapid substitution of mechanical for human labour which commenced towards the end of the last century, and still goes on, soon swamped, by its powerful competition, this limited and artificial industry. The comparative prosperity of the small class who enjoyed the monopoly of skilled labour and of education of any kind, soon vanished in the few towns where any manufacturing industry had begun to spring up. But, unfortunately, it destroyed in its decay the promising germs of skilled industry, which, spite of the exclusive character of the monopolists, their success and example could not fail to engender among those upon whom they were almost entirely dependent for a market, and for a supply of food and rude labour,

The prosperous condition of the linen industry of the north of Ireland, and of the general trade of Belfast, does not invalidate the truth of the preceding conclusions; because that manufacture from its very nature had become a domestic one, and gradually lost its artificial character. From various causes, also, especially the tenure of land, the obliteration of skill among the people had not proceeded so far in certain districts of the North of Ireland as in the other parts of the country.

An adequate idea of the true condition of a people can only be formed when we have taken into account that the ideas and extent of language of a people, as of an individual, are in proportion to the number and qualities of the objects upon which he is called upon to exercise his powers of observation. The peasant, whose abode is a mere hut, without light, and often without even the common articles of first necessity, and whose occupation is the brute tillage of the soil, is necessarily inferior to the



neighbouring proprietor, supposing them both originally endowed with equal capacity, who lives in a comfortable house, containing not alone the necessary articles of furniture, but also many luxuries, who reads books, visits large cities—just in proportion to the number of things he sees and studies, or, in fact, in proportion to his superior education.

In this point of view the Irish peasantry may be said to have rather retrograded than advanced from the commencement of this century up to within a few years, until indeed the action of the National Schools began to be felt. With the decay of industry the quality of the people's food diminished, and was at last reduced to a single article, the potato, and their clothes to imported rags. Thus all notions of domestic economy disappeared, and that best of all schools, a home, became inoperative, because it had ceased to exist. The female portion of the population were ignorant of everything which in other countries constitute the most essential part of their education; they did not know, in many cases, even how to mend their clothes, and it may be truly said, that the simplest elements of cookery are unknown to fully three-fourths of the Irish population.

This utter ignorance of all industrial knowledge and of domestic economy contributed materially to render the results of the famine of 1846, 1847, and 1848, more disastrous still. So evident indeed became this deplorable want of the people, that for the first time an organized effort was made to supply it by teaching the youth of the country how to live as well as how to read.

The first efforts were made, as was to be expected, by private individuals, then by voluntary associations, which, in some instances, received assistance from the state, and lastly, by the state itself. The two greatest occupations of mankind being the production of food and clothing; the attempts made to give the males an industrial education took this direction. Benevolent proprietors, in a few instances, procured persons to give practical instruction in the mode of tillage and in the best mode of cropping, and agricultural societies imitated these, with the assistance of the state. Similar instruction was given in the cultivation of flax through the medium of the Flax Improvement Society. And lastly, the organization of a thorough system of agricultural education was commenced by the state, under the auspices of the Commissioners of National Education.

The importance of agricultural education to a country like Ireland will readily account for the great exertions to diffuse it, made in so short a space of time. It could not be expected that the same exertions would be made to diffuse a knowledge of the textile manufactures; all efforts of this kind were accordingly confined to a few private individuals, or to philanthropic associations.

The industrial education of females had reference chiefly to the production of embroidery, lace, and other fancy work, although some more useful and important branches were also occasionally included. Here, too, the first attempts originated with private individuals or religious communities; in some cases associations were formed for the same objects; and lastly, the state has intervened directly by the establishment of a normal lace school,



and, through the medium of the Commissioners of Education, by the allocation of various sums to provide work-mistresses in different schools already established.

These various efforts have been attended with the greatest possible benefit to the country, although had they been made in accordance with a well organized plan, that success would have been still more striking, and instead of having been confined to one or two branches of manufacture, might have been instrumental in diffusing a spirit of industry generally throughout the country.

But it may be asked, can such an organization be established as will effect the desired objects without the outlay of a large sum of money, or without interfering with the legitimate interests of trade? The best answer which can be made to such a question is to point to a perfectly successful example, such as that offered to us by the Apprenticeship Workshops of Belgium. With the view of enabling our readers to estimate the exact value of this successful example, we shall give in the following pages a brief but complete outline of the Belgian organization, to which we would direct the serious attention of our readers.

Admitting that in Belgium such an organization has been eminently successful, do we possess the materials for commencing an analogous one in Ireland? We are of opinion that we do, although of a somewhat different character from those which exist in Belgium. The exact character of those materials we will discuss when we have described the system carried out in Belgium.

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## CHAPTER II.

### § 1. RISE AND PRESENT POSITION OF BELGIAN INDUSTRY.

From its geographical position and physical conformation, and the character of its soil, Belgium was at all times distinguished for its industrial habits and manufacturing skill. Indeed, during the 11th, 12th, and 13th centuries, Belgium was for the north of Europe what Genoa and Venice were for the south. And even up to the 16th century it continued to be the chief source from which surrounding nations obtained the highest class of manufactured articles, and the skill to improve their own industry, notwithstanding the civil wars which at that period devastated Belgium.

On the accession of Philip I., in 1555, Belgium became, in the full sense of the word, a Spanish province, and from that period until it passed from the dominion of Spain to that of Austria, at the Peace of Utrecht, in 1713, it gradually lost its wealth, its power, and a part of its territory. It became a sort of European battle-field, on which its own inhabitants contended with one another as frequently as with strangers. Governed



by Spanish officials, often ignorant even of its geography, its interests were invariably sacrificed for the advantage of Spanish policy, which did not even stop at a partition of its soil. Its most skilful artists and bravest citizens emigrated to other countries, carrying with them a knowledge of the arts which had raised Belgium to the first position in Northern Europe. How much does not even England owe of its present manufacturing greatness to this emigration!

The transfer of Belgium from the Spaniards to the Austrians could scarcely be considered a change for the better, inasmuch as the rivalry and intrigues of Holland and England counterbalanced whatever disposition the Austrian Government might have exhibited to encourage the advancement of the country. The result of their intrigues was, that the commerce of Belgium was systematically suppressed, whilst its inhabitants were told that they had not the genius for Commerce and Manufacture, and that Belgium was quite intended by nature to be a purely agricultural country! an opinion which then and at a later period found more than one advocate among Belgians themselves, men in fact who recommended that the wisest policy would be to discourage manufactures and maritime commerce, and direct the entire attention of the people to its agriculture and its coal beds, for the working of which nature intended them—a kind of argument which must be very familiar in Ireland also.

A new era opened for Belgium by the accession to power of Prince Charles of Lorraine, in 1741, and more especially when, a few years afterwards, in 1748, the Peace of Aix-la-Chapelle, in which the rights of Belgium were, for the first time for centuries, respected, restored peace to it. For a period of forty years, from the conclusion of that peace, public tranquillity remained undisturbed, population and capital increased, commerce extended, the fisheries revived, and every branch of manufacturing industry prospered. The chief cause of this happy state of things was entirely to be attributed to the wise government of Cobenzl, from 1753 to 1770. His government, although under an Austrian prince, was thoroughly national in spirit, and all the measures proposed by him had for their object the protection and advancement of Belgian interests.

The government of Prince Charles, who died in 1780, was succeeded by that of Joseph II., by whose meddling with the constitutional privileges, although it must be confessed very often for the correction of great abuses, and the imposition of new taxes on the country, a spirit of resistance was raised which ended in a general insurrection, even before the breaking out of the French revolution. The result of this policy was the complete prostration of Belgian industry, and the loss, in the space of twelve years, of all the fruits of the golden reign of Prince Charles, that is, even before the breaking out of the war of 1792. That war sufficed, in two years, to utterly annihilate whatever commercial prosperity had escaped the troubles in Brabant. And when Belgium was united to France, in 1795, all outlets for external commerce were closed; her internal consumption stopped, her workshops idle, her capital and her best men drained off in military requisitions.

The union of Belgium with France was for the time of the greatest



possible benefit to the former. All its old institutions, customs, and laws, which fitted a different condition of things, and were now only barriers to progress, were swept away for ever. A new territorial division was adopted, which gave to the rural districts the same advantages of administration as could only be enjoyed by privileged towns previously. The organization of public instruction was commenced, and the principle was enunciated, not for the first time, but still with more precision, that each person should, in addition to the ordinary course of education, receive that kind of instruction which befitted the calling or profession which he or she might adopt. In accordance with this opinion, the School of Mines of Paris was founded, for the instruction of scientific mining engineers, while schools of a lower degree were established at Pezay and Geislautern, with the object of instructing practical miners in the theory of mining, metallurgy, &c. It was also proposed to establish in the chief towns trade or art museums, where the workmen might be able to examine the newest models, &c. Nor were the poor forgotten, but instead of punishing poverty as a crime, by degrading the recipient of charity, and rendering him unfit to enter into society again, charitable workshops were established, where he might contribute to the utmost of his power to his support.

Every encouragement was offered to the development of trade and manufactures; even the honour of having merited well of the Republic was voted to him who established a factory or drained a marsh, as well as to him who defended it by arms.

Many of the schemes for the development of industry and the education of the people which emanated from the extraordinary fecundity of the revolutionary mind of that period could not be fully realized at the time, owing to the whole energies of France being devoted to the defence of the country. But Napoleon in overthrowing the republic appropriated many of its important ideas, and carried them into effect, and the result was, that a new era of prosperity again arose for Belgium.

It is to this period that Belgium owes some of its most magnificent public works, such as the dock and port of Antwerp, as also its consultative chambers of commerce, arbitration councils, and much that constitutes the basis of its present condition. New branches of industry sprung up; the old established ones were extended so much that an individual house was found to employ as many as 3,000 workmen; cloth, cotton, tapestry, lace, linen, and other important articles of manufacture found an unlimited market opened up to them by the great French Empire. It is true its mercantile marine was annihilated and its ports blockaded, but it was more than compensated by gaining the whole of Continental Europe as a market.

In studying the history of Belgium one is struck with the extraordinary rapidity with which that country regains its commercial prosperity after its repeated destruction. In this it presents a striking contrast to Ireland, as indeed it does to most countries. The cause of this difference may perhaps be found in the great subdivision of property, in the absence, at all periods, of great distinctions of class, or of antagonistic religions, and in a great degree also to that traditional instinct of labour and skill, which



centuries of manufacturing and commercial prosperity engenders. In Ireland the converse of this is unfortunately the case.

On the fall of the French Empire in 1814, Belgium, in defiance of all sound policy, was united to Holland, simply because diplomatists thought fit to do so, and the results of the union were such as might have been anticipated, where the justice of the case and the rights of the people or their feelings, were looked upon as nothing compared to the convenience or interest of neighbouring large states.

The few years which succeeded the peace of 1815 were very disastrous to Belgian manufactures, owing, on the one hand, to the great French market having been closed up by the separation from France, and to the competition of English manufactures, which had only to encounter very light duties, rendered so to favour Dutch commerce. The first real step taken to revive manufactures was the grant, in 1817, of the old archiepiscopal palace of Seraing, to the brothers, Charles, James, and John Cockerill, on the condition that they would establish an iron works and machine factory, according to the English fashion, upon a gigantic scale, which might serve at once as a model and as a source from which machinery might be obtained, without being obliged to have recourse to foreign nations. Seraing, situated two leagues from Liege, on the banks of the Meuse, in the midst of abundance of iron and coal, was admirably adapted for the purpose. As great difficulties stood in the way of the execution of this project, a flax spinning factory was first organized in the building. In 1819, the original idea of creating an iron works was revived under the immediate encouragement of the King of Holland, who personally visited the factory during the first trials, which consisted in the construction of flax spinning machinery and steam-engines. But it was only between the years 1822 and 1823, that the foundation of the present gigantic works, perhaps the most complete in the world, was laid.

The first effect of the establishment of Seraing was, to produce a number of good mechanics, and to bring the use of steam power and labour-saving machines into general use. It also paved the way to the creation of large fortunes, and the working of coal mines, and the manufacture of iron on a large scale. And here we may remark, that John Cockerill was also one of the first who introduced into Belgium the English method of making iron by means of coal.

The sudden impulse thus communicated to Belgian manufactures demanded a new organization of the public credit; and accordingly steps were taken to found a great bank, under the name of the *Société Générale pour favoriser l'industrie nationale*, with a capital of 50 million of guilders, (about £4,166,000,) in 60,000 shares of 500 guilders (£40) each, but with power to commence operations so soon as one-half of the capital should be subscribed for. Part of the capital, to the extent of 20 millions, was to be invested in land, which the King sold on favourable terms, the Society paying the purchase money by gradual instalments.

This Joint Stock Bank, having its head quarters at Brussels, was in a position to establish branch banks throughout the country, for the discounting of bills, in which its operations would be very much facilitated by



its privilege of issuing notes, payable to bearer, to the full extent of its capital; and in addition it was made the medium for receiving and paying the state funds. Besides its discount business, it was also a bank of deposit; but its most important feature was, that it could make loans on public securities, on goods, and even upon manufacturing plant.

Notwithstanding the advantages which such an institution, then so much wanted, held forth, and the fact that the King guaranteed 5 per cent. upon the capital, it did not meet with much support when first originated. Only 6,500 shares out of the first issue of 30,000, were subscribed for. The King of Holland was accordingly obliged to take up the remaining 23,500 shares, in order to prevent the whole project from falling to the ground. In the course of a year, however, the shares rose above par, chiefly owing to the ordinance of the 30th of August, 1823, which raised the import duties upon several articles, by way of reprisal upon the hostile tariffs of other countries. Capital now flowed in abundance to the bank, which being in turn thereby enabled to discount freely, and to make advances upon goods and upon plant, gave an immense impulse to manufacturing industry, whilst the general commerce of the country was improved by the increase of its circulating medium from the issue of the notes. The extent of this impulse may be judged from this, that in 1827 the bank discounted to the extent of half its capital; and in 1830 the amount of its discounts exceeded its capital.

The success of the *Société Générale*, after the first year of its existence, called another joint-stock bank into existence, under the name of the *Société de Commerce*, and whose chief seat was at the Hague. As its name imports, it was destined for the encouragement of commerce, and especially of the Dutch export commerce in Belgian manufactures, by discounts and loans in connection with exports. King William also patronized this bank, not in name, but in reality; for besides taking shares to the amount of four million of guilders (about £320,000), and pledging himself to the extent of twelve millions (about £960,000)—the whole capital being thirty-seven millions (about £2,960,000)—he further guaranteed the shareholders four and a-half per cent. In a few days the subscriptions amounted to seventy millions of guilders (about £5,600,000).

Through the active support of the credit system thus organized, new manufactures sprung into existence; new machine factories were established, especially in the district of Charleroi; the iron and other metal trades extended at Liege; the use of coal as a fuel for the manufacture of iron rapidly increased, as did similarly the cloth manufacture of Verviers, and the cotton-spinning at Ghent.

The spirit of association also grew up, chiefly in consequence of the example afforded by the banks, and their active assistance in all projects. Companies were formed for working mines, the construction or completion of canals, and for insurance and assurance of property and life. In 1830 the total capital of all the joint-stock companies got up in connection with the two banks, amounted to £10,000,000.

The Revolution of 1830, in giving freedom to Belgium, at the same time diminished its trade; for, by its separation from Holland, it lost the im-



portant market of Java, and the benefits derivable from the extended commerce and wealth of Holland.

Under the impulse of a national Government, and especially under the direction of the enlightened minister, M. Rogier, it was resolved to counterbalance this loss, by stimulating internal commerce, by improving the means of communication, and of giving a new impulse to foreign commerce, in making Belgium the highway of German commerce, by connecting the Rhine with the sea by a railway. Not only was this done, but the whole country has been covered with a net-work of railways; new canals have been cut, others completed, and the navigation of the rivers improved.

The great benefits conferred upon Belgian Industry by the financial enterprize of the King of Holland, were very naturally lost sight of in the struggle for independence. The General Society was especially taxed with being imbued with the single object of accumulating wealth, and with being anti-national, in consequence of the large share which the King of Holland had in its property. Another cause of unpopularity arose from its relations with the public funds before the Revolution. As already remarked, it had been made the depository of the taxes raised under the Dutch government. When the Revolution broke out, therefore, they held large sums of this kind, which the Dutch government would have claimed, had it succeeded in conquering Belgium, but which the national Belgian government naturally claimed as its property. The bank delayed meeting the claim of the latter as long as possible; and hence, although it could not be denied that the General Society had rendered eminent services to the country, it was considered indispensable to its perfect independence that another and similar institution should originate with the national party. This institution was the Bank of Belgium, which, in its chief features, resembled the General Society. Its capital was, however, much smaller, and the state did not guarantee any interest, but, on the contrary, stipulated that at least one per cent. interest should be given upon all public funds with which it may be entrusted.

By the establishment of the Bank of Belgium, a good deal of French capital was imported into Belgium, and a rivalry at once sprung up between the two banks, which did immense service to the country. Numerous industrial undertakings were set on foot; and many proprietors of mines, iron works, and factories, who had not the capital to work them effectively, formed companies under the auspices of one or other of the banks, and in this way made large fortunes.

Two new societies or banks were also formed as offshoots of the General Society, called the Society of Commerce, and the National Society, and having the same objects as the parent body and the Bank of Belgium. Under the patronage of the General Society and of its two offshoots, thirty-one companies were formed between 1830 and 1838, whose total capital amounted to 102,640,000 francs (£4,144,090). These companies included projects of all kinds, such as canals, railways, steamboats, beet-sugar factories, sugar refineries, carpet and mirror factories, iron works, &c.

Under the direct patronage of the Belgian Bank, twenty-two companies were formed, chiefly for the working of mines, and for the extension or



establishment of various manufactures, among which may be mentioned the celebrated company of the Vieille Montagne zinc works, the iron works of Ougrée, and the glass works of Charleroi. The total capital of these companies amounted to 54,150,000 francs (£2,186,306).

The united capital of the General Society and its two offshoots, amounted to 125,000,000 of francs (£5,046,875). To this must be added a reserve of more than 22,000,000 of francs (£888,250), existing in 1838, and also the sum of 12,000,000 of francs (£484,500), representing the capital of one of the companies formed—an insurance company, whose capital was not sunk in plant, and could be therefore employed to meet a crisis. That is, a total capital of 159,000,000 of francs (£6,419,625), to meet liabilities to the extent of, at the utmost, 100,000,000 of francs (£4,037,500).

The Bank of Belgium was not in an equally favourable position, for its whole available capital, inclusive of 12,000,000 of francs (£484,500), representing that of a company included in the twenty-two companies above-mentioned, whose capital could be at once made available, was only 32,000,000 of francs (£1,292,000), against which there were liabilities to the extent of 42,150,000 of francs (£1,701,806); that is, 54,150,000, less the 12,000,000 of realizable capital. And accordingly, when a crisis occurred in 1838, the Bank of Belgium suspended payment, and the greatest commercial disasters would have occurred, if the General Society had not succeeded in weathering the storm.

The spirit of association thus developed, and which was not confined to the formation of joint-stock companies alone—for a great number of private companies, on the principle of limited liability, were also formed—raised the mining operations, the manufacture of iron and other metals, and many branches of Belgian industry, to a level with the most improved of other nations.

The effects of the application of steam-power to manufactures, the invention of labour-saving machines, and the improvement of processes by the application of science, which commenced with the end of the last century, were now beginning to exert a decided influence upon the industry of Europe. It soon became evident that not only would the first rank in industry belong to that nation which would most fully take advantage of the revolution effected in manufactures, but that it was absolutely necessary to do so at once, in order to prevent the manufacturing industry of a country from being gradually destroyed by the competition of the more advanced nations.

Were it not for the credit system thus organized, whatever its intrinsic defects may have been—and they were numerous—Belgium would not have been able to maintain its position as a manufacturing country. The extent to which it has taken advantage of the revolution in industry, may be best judged by the progress which it has made in several great branches of trade; as, for example, the working of its coal, iron, and zinc mines, its glass and iron, and even its woollen and cotton manufactures, which have greatly increased in importance, notwithstanding the check which they received in 1834, by the entrance of the greater number of the German



states into the Zollverein, or German Customs Association, by which its best market was cut off.

Thus, for example, the average number of persons employed in coal-mining from 1840 to 1845, was 38,992, and in the next five years 45,839. The total average quantity of coal annually raised from 1831 to 1835, was only 1,575,000 tons, while in 1851 it was 6,234,000 tons.

In 1841, 2,286 persons were employed in metallic mining; in 1850 there were 5,700; at the same periods, the number of steam-engines employed increased from 8 to 36, or from 107 to 1,208 horse-power. The quantity of zinc ore raised, increased from 19,000 tons to 62,000 tons, and the iron ores from 179,000 to 473,000 tons. The manufacture of zinc from the ores of the Vieille Montagne district increased enormously since 1840. In 1851, 2,640 persons were employed in raising the ore, and extracting the zinc, and rolling it into sheets. The total quantity produced was 11,593 tons, or about one-fourth of all the zinc produced in Europe, and four-fifths of all made in Belgium.

The imports of raw cotton for home consumption, rose from 16,548,752 lbs. in 1841, to 26,712,060 lbs. in 1852. The export of cotton fabrics in 1841 was 1,159,187 lbs., and in 1852 it had risen to 3,695,127 lbs.

The woollen industry of Belgium has greatly increased. The export of cloths and other fine fabrics of pure wool, amounted to 1,398,989 lbs. in 1841, and to 1,842,444 lbs. in 1851. The number of spindles engaged in spinning woollen yarns has also greatly increased, but large quantities of yarns are still imported. The production of woollen fabrics other than cloths, is also still far below the annual consumption of the country.

The various manufactures dependent upon the cheap production of iron and upon abundance of fuel, have naturally followed the general progress. For example, the export of nails in 1841 was 4,526 tons, but in 1851 it had risen to 9,061 tons, or fully double. The total export of fire-arms in 1841 was 2,418,277 francs (£97,637), and in 1850, 4,923,900 francs (£198,802), or more than double. Similarly, the value of the exports of machinery in 1850, exceeded that of 1841 by 1,315,000 francs (£53,093).

In 1840 the Belgian glass-houses produced 20,000,000 square feet of glass; in 1847 the produce had risen to 32,000,000 square feet. The export of all kinds of glass in 1841, was 106,496 cwts., and in 1852 it had reached 348,214 cwts., exclusive of plate glass to the value of £49,490, the manufacture of which commenced only in 1840.

In 1841 Belgium imported paper to the value of 378,000 francs (£15,261), and exported to the value of 220,000 francs (£8,882). In 1850 the export rose to 1,500,000 francs (£60,562), while the import fell to 240,000 francs (£9,690).

The influence of the Belgian credit system, and of the development of internal communication, as well as of the active interest exhibited by the Belgian legislature and government, upon the progressive development of the manufactures and commerce of the country, may be thus summarized. If we classify the commerce of the country for the year 1851 into—1st, raw materials; 2nd, food; 3rd, manufactured articles; and represent the



whole importation and exportation each by 100, the following will be the per-centage of each of the three classes of articles:—

	Importations.	Exportations.
Raw materials .	43 per cent.	43 per cent.
Articles of food .	40    "	15    "
Manufactured articles	17    "	42    "
	<hr/> 100	<hr/> 100*

The export of the products of labour is, therefore, nearly two and a-half times more in proportion than the imports of the same kind of products.

A comparison of the commerce of the five years from 1840 to 1845, with the corresponding period from 1845 to 1850, gives the following interesting results:—

The import of raw materials increased to the extent of	7 $\frac{1}{10}$	per cent.
The import of food to	15 $\frac{9}{10}$	"
Whilst the import of manufactured articles had, on the other hand, fallen to the extent of	17 $\frac{8}{10}$	"
The export of raw materials increased to the extent of	41 $\frac{8}{10}$	"
" " food	53 $\frac{1}{10}$	"
" " manufactured articles	13 $\frac{3}{10}$	"

This increase in the export of manufactured articles is the more remarkable, as the second period of five years includes the years 1848 and 1849, which were highly unfavourable to commerce.

The spirit of association which was developed to so extraordinary an extent in the first ten years of Belgian freedom, appears to keep pace fully with the progress of its manufacturing industry. In the five years between 1845 and 1850, no less than 511 new partnerships of the ordinary kind, and 110 companies on the system of limited liability, were formed and registered before the tribunals of commerce. In 1852, the number of joint-stock companies had increased to 191, with a nominal capital of 880,347,298 francs (£35,544,022). This capital was thus distributed:—252,000,000 of francs (£10,174,500) were engaged in banks and similar institutions; 40,000,000 of francs (£1,615,000) in commercial undertakings; 185,000,000 of francs (£7,469,375) in mining and the manufacture of metals; 20,000,000 of francs (£807,500) in manufacturing industry, especially in the textile manufactures; 10,000,000 of francs (£403,750) in sugar factories; 10,000,000 of francs (£403,750) in glass factories; and the remainder in various other branches of industry, such as roads and canals, navigation, railroads, insurance companies, &c.

From the foregoing statements it is evident that Belgian industry is in a highly prosperous condition, so far as production serves as an index of its condition. The position which its cloths, its glass, its fire-arms, and its machinery hold in foreign markets, is sufficient proof of the degree of perfection which it has attained in several branches, and which was amply attested by the part which it took in the London Exhibition of 1851.

\* Journal of Industrial Progress, vol. i, p. 59; Statistics of Belgian Commerce.



## § 2. GRADUAL DECLINE OF THE BELGIAN LINEN MANUFACTURE.

There is one branch of Belgian manufacture, however, which we have not hitherto mentioned, which forms a great exception to the general state of prosperity, namely the linen manufacture, one of the oldest, most celebrated and considerable branches of the trade of Belgium.

The Belgian linen industry, like that of Ireland formerly, to a considerable extent, was a domestic manufacture, which only occupied the leisure hours of the family, or in winter, when out-door agricultural labour was impracticable. The farmer or labourer who tilled a little land, planted a patch of flax, which he steeped, scutched, and hackled, and which his wife or daughters spun and bleached; the yarns thus made were either woven into fabrics by the owner of the flax himself, or sold to others; in either case the produce was sold at the local markets or fairs to the merchants.

This kind of industry created a new class of workers, that is, weavers who were not rich enough to possess land, and consequently did not grow flax, but who possessed a loom and a cottage, and either purchased or obtained on credit from some farmer sufficient yarn to make a piece of linen, which they wove in winter and then sold, whilst in summer they hired themselves as agricultural labourers.

The latter class soon divided itself into two others, one composed of men who had acquired some capital, and who purchased the flax in the straw, and had it steeped, scutched, spun, and woven—small manufacturers in fact; and the other composed of those who did not even possess a loom, and who worked by the piece for others.

Such was the classification of the people engaged almost exclusively some years ago in the linen manufacture of Ireland; such is to this day that of those employed in it in Belgium.

An agricultural population being notoriously the slowest to progress or take advantage of improvement, the direct connection of the linen manufacture with the cultivators of the soil was, judged from a merely manufacturing point of view, injurious to its development. The same processes for the preparation of the fibre were followed for centuries, the same rude looms were used in weaving the fabrics.

The linen manufacture in parts of Ireland was to some extent an exception to this rule, for in many respects it assumed a forced or exotic character, because it suited the purposes of the English government to specially encourage the linen manufacture after their infamous suppression of the woollen trade. The appointment of a board of trustees for the linen and hempen manufactures by the Act of 1699, but which was only definitely constituted in 1711, stimulated improvements in the processes for preparing the flax, and in the looms used in weaving; it furthermore endeavoured to separate the linen manufacture to some extent from its too close alliance with agriculture. The means which they adopted for this purpose were the importation of Russian and Dutch flax seed; the distribution of the most improved implements; the appointment of competent persons in different localities to superintend the



management of the flax crop ; the numbering of the yarns ; the appointment of inspectors and seal-masters to superintend the localities where the manufacture was carried on, and to brand the seed ; the giving of bounties for the sowing of flax seed, for the building of scutch mills, for the spinning of fine yarns ; the establishment of spinning factories, and the manufacture and exportation of particular kinds of linen fabrics. From 1711 to 1737 the board had £6000 a year at their disposal for these various purposes ; and in the latter year it was increased to £20,000 per annum, at which it remained for very many years. Although a large amount of these funds were squandered in jobbing, many of the objects for which the board was established were effected, more especially the communication of a more manufacturing spirit to the whole industry.

The invention of the machinery for spinning cotton naturally led to similar attempts being made to spin flax ; and accordingly, so early as 1793, machinery for spinning flax was erected in England, and soon spread, and in 1805 the first mill was erected in Ireland. Although a bounty of thirty shillings per spindle led to the establishment of several factories, whose aggregate number of spindles in 1809 was 6,369, flax spinning by machinery made but little real progress in the linen districts of Ireland previous to 1825 ; for out of fourteen flax spinning factories existing in 1815, only five were in Ulster.

In the early stages of flax spinning the yarn was dry spun, and was necessarily coarse, and was only employed for canvass, sail cloth, and coarse drills for trowsering. The machines were gradually improved, and yarns of higher numbers made ; but the greatest improvement effected was the invention of the process of wet spinning, by which much finer yarns, and of remarkable uniformity, could be produced. In 1825, English and Scotch yarns made by this method were largely imported into Ireland, and completely undersold the hand-spun yarns.

Mere cheapness was not however the sole cause of the preference shown from the first for mill-spun yarns ; they are more uniform in thickness, and consequently an even fabric, and one more uniform in quality, can be made with them than with hand-spun yarns. A linen merchant could now make up an order for any quantity of linen fabrics, and be certain that all the different pieces would have the same degree of fineness and the same appearance, and be exactly the same as the sample. This he could not formerly do with hand-spun yarns ; indeed it was an extremely difficult task for a linen merchant, and required considerable skill, to assort his parcels of linen correctly, from the variations in the quality of the yarns employed ; even the same piece of linen often exhibited considerable variation in the uniformity of the threads composing it.

It was fortunate for the Irish linen trade that the struggle between hand-spun and mill-spun yarns was not protracted, and that flax mills were rapidly erected in the north of Ireland, for otherwise Irish linens would have been driven from all the markets of the world.

A large portion of the fabrics made in Ireland did not require very fine yarns for their production, being chiefly medium numbers ; the flax produced in Belgium, on the other hand, is of very superior quality, and admits



of being spun to very fine numbers, fitted for muslin, lawn, &c. Mill-spun yarns accordingly came into competition first with Irish hand-spun yarns, and did not much affect the finer Belgian ones, which could not as yet be spun by machinery; gradually however this took place, and with the exception of the yarns, from 400 to 800 lea, used for making cambrics and lawn, all those required for the production of the great mass of linen fabrics can be mill-spun.

From the more intimate relation existing between agriculture and the linen trade, the struggle between human labour and machinery was continued longer in Belgium than in Ireland, and, for the reasons just stated, it also commenced later. During the first few years after the establishment of Belgian independence, the linen industry may be said to have maintained its ground, its total production being still valued in 1840 at £2,400,000, whilst in the commencement of the century it did not exceed £1,000,000, sterling. Owing, however, to the competition of cheaper fabrics, made from mill-spun yarn, prices rapidly fell, so that but little profit was made, or in other words, the wages fell enormously. This state of things did not naturally encourage the employment of capital in such a branch of industry, when so many more profitable fields were then open to it. So precarious was the condition of the Belgian linen manufacture in 1834, that the government protected it by an import duty.

This had some effect for the moment, but it is evident enough that such a measure could do little permanent benefit to an exporting country, since it was not at home that the protection was so much required as in the foreign markets.

In the years 1838 and 1839 the condition of the population engaged in the linen manufacture was pitiable in the extreme, in consequence of the continual diminution in the rate of wages, and the stagnation in the exports, owing to the competition in machinery, which was every day becoming more formidable. With the object of mitigating their misery, a society was formed under the name of *Association Nationale pour le progrès de l'ancienne industrie linière*. It proceeded by way of inquiry: experiments were made to determine the best processes of manufacture, and the usage of those pronounced to be the best recommended; useful notions were diffused by a monthly publication, and by small books, adapted to the comprehension of those to whom they were addressed; agents were sent to foreign countries to study the different markets and the taste of the consumers; prizes were established to recompense those who effected any improvements, and for excellence of manufacture. Another of the ways by which it proposed to effect its object was the establishment of schools, where the practice of the most improved method might be taught, and of model workshops for the purpose of varying the products. This remarkable association effected a large amount of good, but the evil to be cured was too great and too wide spread, and demanded more exertions than a single society could bestow. The society accordingly recommended that the government should take the matter up, and institute an inquiry into the condition of those engaged in the linen trade.



The government named a commission in the beginning of 1840, and received a report from it in October, 1841. From this report, and a correct census made in 1843, it appears that the two Flanders had a population of about 1,400,000, of whom not more than 1,000,000 were rural. Of this population 70,054 families, comprising 287,527 individuals of all ages, were engaged in the linen industry! The total number engaged in this branch of industry in the same year, 1843, in the two Flanders, Hainault, and Brabant, was 346,249, who were thus classified:—

Weaving	...	...	75,821
Spinning	...	...	194,091
Scutching and hackling	...	...	76,337

From these figures we can at once understand how easily the population of these provinces could be reduced to starvation by a sudden crisis in the linen trade, and the magnitude of the impending pauperism.

In 1838 the export of linens was still valued at 37,000,000 francs (£1,493,875), but in 1839 it had fallen to 24,000,000 (£969,000). It had not, however, then reached its lowest point, for in 1848 it was only 11,000,000 (£444,125), but rose in 1849 and 1850 to 16,000,000 (£646,000). In addition to the competition of machinery, the Belgian linen industry had now to contend with other difficulties. Its chief market, France, had so greatly developed its own linen trade, that a protecting duty, which, in its beginning, permitted the entrance of the Belgian fabrics, was gradually rendered prohibitive; another market from which much was hoped, Spain, shattered those hopes in 1841, by imposing a duty of 60 per cent. upon linens.

An idea of the diminution in the rate of wages which had taken place, and to which allusion has already been made, may be formed from the report of the Commission of 1840. According to that report it would appear that the wages of those engaged in the linen trade varied from  $1\frac{1}{3}d.$  to  $10d.$ , but that the majority did not earn more than  $5\frac{1}{3}d.$  This miserable rate of wages could not, however, be altogether attributed to the competition of machinery, for, in the opinion of the Commission, it arose also in part from the backward condition of the manufacture in a technical point of view. It accordingly recommended the employment of the fly shuttle, which had not yet made its way into the rural seats of the industry; it also recommended the use of the compressing templet, instead of the old one with points, and a better system of assorting the yarns according to a fixed scale; the improvement of the bleaching and finishing establishments, and a careful maintenance of character, by keeping back low quality articles from the great markets; and finally, it suggested the formation of a company for the export of linens.

For the purpose of giving effect to these recommendations, the commissioners proposed the employment of local employment-committees. This proposal was sanctioned by the permanent provincial councils of Ghent and Bruges; and regular instructions were accordingly drawn up for the guidance of the local committees, which received the royal sanction in August and October, 1843.

Some few were at once constituted and set to work. In the years 1845,



1846, and 1847, the price of provisions had risen so enormously, that thousands were reduced to starvation, which was soon accompanied by its attendant, disease. Great numbers of the local employment-committees were now organised; in East Flanders alone, there were no less than 248, of which 243 were in the villages. Each committee consisted of five or seven members, of which the mayor of the commune was *ex-officio* president, and the parish clergymen *ex-officio* members. The business of these committees was, in the first instance, to determine by what means the distress of the locality could be relieved, by affording employment; to provide a stock of raw materials, according to the means disposable, and to the wants of the locality; the introduction of the system of classifying hand-spun yarns; and to recommend the production of fabrics of genuine quality, and the employment of the best methods and the best tools; and, lastly, where possible, the introduction of new branches of industry.

In order to direct these numerous committees, and to regulate the expenditure of the money granted for assisting the linen industry, and increasing the sources of employment of the working classes, a central industrial council was created at Ghent. The formation of another was subsequently authorized at Bruges, but was never called upon to act, as the governor preferred acting through a qualified and energetic officer, who would execute with dispatch and accuracy whatever may be required.

In the greater number of cases, the local committees employed the destitute in spinning flax and in weaving linen; some also in making roads, and the females in embroidery and lace working. The object in these cases, was not so much the amount which they might earn, as to give the assistance afforded the name of wages, and thus save as many as possible from the demoralization attendant upon the reception of alms.

The majority of the persons to whom the carrying out of these measures was entrusted, however well-intentioned, were but ill suited for the responsible duties which devolved upon them. So far as distribution of relief, and the alleviation of the sufferings of the population was concerned, they did good service: but, as usually happens in similar cases, the majority of the members composing the committees did not possess the energy, or technical skill, or mercantile knowledge necessary to reorganize the industry of the nation. Whenever they attempted to employ the people, the articles produced were, perhaps, those not in demand, and, in most cases, they were of so inferior a quality as to injure the market. The roads, too, which were made, were not always properly constructed, or of much utility, forming, in these respects, a perfect parallel to the far more famous case of the Irish Relief Works.

For the purpose of enabling our readers to contrast the measures which were taken in Belgium to mitigate the dreadful destitution of the years of famine, with those adopted in Ireland under the same circumstances, we shall give a few statistics of pauperism, which will show that its amount was little, if at all inferior to what it was in Ireland. But how different the results!

In 1818, after the prostration of trade by the separation from France, and the general stagnation in all branches of industry which followed the



peace of 1815, and before the organization of the public credit by the King of Holland, the proportion of persons receiving relief in East Flanders was equal to  $10\frac{3}{4}$  per cent. of the whole population (69,424); but in 1848 it was 26 per cent. (201,760), or, in other words, every four persons had to support a fifth. Matters were still worse in West Flanders, where already, in 1837, owing to the decline of the linen trade, 113,343, or 18 per cent. of the whole population, was in a state of pauperism; but in 1848 there were no less than 213,574, or 34 per cent. of the population, that is to say, every three persons supported, in whole or in part, a fourth.

Many of these required only temporary relief, but there were some districts where fully 30 per cent. of the population had to be wholly supported; and in West Flanders 21 per cent. of the whole population was in the same condition. The dreadful state of some communes may be judged from that of the arrondissement of Roulers-Thielt, on the 1st of May, 1847, when the proportion of the population whose names were on the relief lists to the remainder who were still able to support themselves, was as 1 to 2·37; that is, for every 237 self-supporting persons, there were 100 paupers.

The extent to which the decline of the linen trade contributed to augment this pauperism, is shown by the fact, that out of 201,760 persons requiring relief in 1848, 90,595 were reduced to that position solely from the inadequacy of their wages. Out of the whole number relieved, were 18,616 weavers, 49,512 spinners, and 14,586 lace workers; or a total connected with the linen industry, of 82,714.

### § 3. CHARITABLE WORKSHOPS.

The National Convention of France, by a law passed on the 15th of October, 1793, proposed to establish, in such localities as were adapted for sedentary work, a workshop or communal hospital, where those who might stand in need of relief, and whose physical condition prevented them from seeking employment of a very laborious kind, might be provided with tools and raw materials, to enable them to gain a livelihood, and be thus saved from the demoralization of mendicancy. When Belgium was united to France, these workshops, or *Ateliers de Charité*, were introduced into several of its towns; as, for example, Louvain, Brussels, Antwerp, and Ghent. From thence, although but slowly, they spread into East Flanders, where they have continued to exist up to the present day. In 1838 there were 18 such institutions, which afforded support to 1,197 persons. In the winter of 1835-6, 43 towns or communes of East Flanders established workshops. The total expense incurred, including wages paid to those who sought relief, and the purchase of raw materials, was 177,387 francs; the sale of the manufactured articles realized 162,583 francs. There was, therefore, a loss to the extent of 13,804 francs; but with this sum,—that is, with six francs per head—2,165 persons were provided with work during the entire winter, and their independence preserved, who would otherwise have become degraded mendicants. And even in 25 out



of the 43, the expense did not exceed two francs, and in some cases was as low as sixty centimes; whilst in four there was actually a profit.

The government has, at various times, encouraged the establishment of *Ateliers de Charité*, and accordingly, within a few years past, their number has considerably increased. In these workshops the strictest economy is preserved, and the inmates are made, as far as possible, to support themselves. With this view, they weave the fabrics required for their clothing, and make their clothes, shoes, hats, &c., besides the articles which are made to order or for sale.

Perhaps the most perfect of these institutions is that of Sleydinge, a village of between 5,000 and 6,000 inhabitants, in the neighbourhood of Ghent, the chief features of which it will be interesting to mention here.

The inmates consist of—

- 1, the old and sick local poor;
- 2, the deserted orphans;
- 3, those who cannot by their own exertions earn a livelihood, and who are consequently found begging;
- 4, the sick, who have no parents or family.

The educational part of the establishment consists of—

- 1, a spinning school;
- 2, a lace school;
- 3, a knitting and sewing school, in which other domestic employments are also taught, and which may be considered a servants' school;
- 4, an elementary school for poor children, and an elementary school for children whose parents pay for them.

The trades and other occupations followed consist of—

- 1, the spinning of tow;
- 2, the manufacture of lace;
- 3, every trade, so far as it can be carried on in the place, which one or other of the inmates is master of, such as shoemaking, tailoring, the making of sabots, or wooden shoes, coopering, baking, &c.;
- 4, agriculture.

Attached to the establishment is a small farm of land, part belonging to it, and the remainder rented. The farm operations are performed by the inmates, aided by two horses. The produce of the crops and of 11 cows which are kept, supply most of the wants of the inmates. The commune and benevolent persons give the remainder.

The general management is vested in a committee appointed by the communal council, and the immediate carrying out of their instructions is entrusted to fifteen Sisters of Mercy; each sister keeps a register of the receipts and disbursements in her department, which is laid before the commissioners every quarter. The whole expense, over and above the value of the farm produce and the profits derived from manufacture, for the maintenance of 142 persons, including sick, children, &c., was 6,300·73 francs, or £254 7s. 10d.

In communes where such institutions have been established, the greatest exertions are made to suppress mendicancy, and the children who receive gratuitous education are obliged to attend with great regularity. This,



according to Doctor Steinbeis, is only a matter of difficulty during the first few weeks after their entrance into the school. The children being only occupied during, at most, two hours in the day with elementary instruction, and the remainder of the time in labour which is remunerative, they soon receive wages, which is a matter of great importance to the parents, who accordingly become themselves anxious that their children should be regular in attendance at school. Thus not only have the children to pay nothing for their education, but they bring home money, or the equivalent of money in food or articles of clothing.

The elementary instruction given in these schools, as Doctor Steinbeis further remarks, has peculiar merits; because, as the school time of each individual does not last long, they can be subdivided into a great number of classes, and the capacities of each duly taken into account. The children can thus be more thoroughly and rapidly taught than in schools where they are crowded in greater numbers, and where they sit together during the long school hours, until the more intelligent lose their energies and get accustomed to idleness.

In all the measures taken by the Belgian government to alleviate the distress of the working classes, they endeavoured as far as possible to avoid mere alms-giving, which would only perpetuate the evil while it would degrade and demoralize the people. The report of the Commission of 1840 into the condition of the linen trade, having shown, as already mentioned, that one of the causes of the decline of that branch of industry arose from the defective technical education of the workpeople, joined with the success of the *Ateliers de Charité*, suggested the idea of getting up similar institutions for teaching, on the one hand, tradesmen generally, improved processes and the use of better tools and instruments; and on the other for apprenticing a number of young persons to different trades, who would otherwise add to the already sufficiently large class of unskilled labour, and thus increase both poverty and crime. The new institutions were called *Ateliers d'Apprentissage et de perfectionnement*, apprenticeship and perfecting workshops.

#### § 4. ESTABLISHMENT AND ORGANIZATION OF APPRENTICESHIP WORKSHOPS.

The school established by the provincial council at Ghent, in 1841, with the view of carrying out several suggestions of the commissioners for inquiring into the state of the linen trade, was an institution of this kind, and may therefore be considered as the parent school. The chief object of this school was to teach the best known methods of weaving, but it also afforded an opportunity of determining by direct experiment the relative value of the different new looms then in use, and also of the different processes of preparing the warp, &c. Among the benefits which the establishment of this school conferred, was the more general diffusion of the fly-shuttle, which, strange to say, although invented nearly a century before, and known in Belgium during a period of 50 years, was only partially employed in the towns, and was almost unknown in the rural seats of the linen manufacture. The advantages of the substitution of metallic dents in the reeds



was also encouraged, by which much greater uniformity in the quality of the fabric was secured. The batten was also made heavier, by which the weft was driven home with one blow to whatever extent the closeness of the texture required. The compressing templet was also substituted for the old one with points, which strained and otherwise disfigured the cloth.

On the establishment then of the apprenticeship schools, by the royal ordinance of the 27th of January, 1847, it was but the mere extension of a system which was more or less understood, that was to be carried out. It is a mistake to suppose that a system which has been found to work well in an isolated instance must necessarily do so when applied to a great organization. The individual parts may be well contrived, but the difficulty lies in putting them together. A good system of management was then what was required to secure the success of the project, and this could only result from the comparative experience of several methods.

In West Flanders the government adopted two courses, according to circumstances; in one case the school was directly instituted by the government, who appointed a local commission to manage it, to purchase the raw materials required, and to effect a sale of the manufactured goods; in the other case it confined its exertions to merely fitting up the workshop, and placing it, as in the other case, under the direction of a competent master, the workmen being obliged themselves to procure the necessary material and seek orders or effect sales.

In East Flanders a different system was adopted; the government entered into an agreement with some person, generally a manufacturer, to found a workshop, and to conduct it upon certain stipulated conditions, in consideration of which the State either made a loan or gave a grant of money, according to the circumstances of the case. Beyond the right of supervision, which the government always reserved to itself, the contractor was free to manage the institution as he pleased within the terms of his contract.

Experience soon showed that the latter system was the best in practice, as it was also the least in opposition to the commonly received laws of trade, and accordingly it gradually, almost universally, superseded the other system; occasionally, however, it was found desirable to establish a workshop in a locality where a competent contractor could not be found, and in such cases the government had no other alternative than to undertake the task itself, through the medium of a local committee.

The profit which was realized by some of those contractors soon induced a number of persons to propose for contracts, even in districts where no one could at first be found to do so. This was not the least valuable result of the workshops, for not only did they develop a supply of skilled labour, but they generated that very species of enterprise and skill, without the assistance of which in a country manufactures cannot grow up. In the latter respect, indeed, many useful enterprises have arisen from the spirit thus evoked.

The foundation of an educational workshop, which, for example sake, we shall suppose is intended to teach some branch of weaving, is very simple. Before describing the manner in which it is done, it is absolutely necessary that we should describe the machinery by which it can be done.



Whatever may be said of the Continental central governments, the local ones are certainly superior to ours in many respects. The government by a mayor or council is not confined to towns, but extends over the whole country. As we have only to do with Belgium at present, we shall confine our observations to it. Besides the central government, consisting of the ministers appointed by the King, responsible to the parliament, each province has a special government, consisting of a governor and provincial council, who perform many of the functions of our grand juries, and similar county boards. Each province consists of a number of communes, each of which has its mayor and sheriffs, or representatives of the executive authority. In the rural districts the commune in almost every case corresponds with the ecclesiastical division which we call a parish, but in the towns it does not, as very large towns containing several parishes constitute still but one commune. The advantages which this system of government possesses for rural districts over the utter absence of all local government in the rural districts of Ireland, must be obvious to all, and has, no doubt, contributed materially to bring about the successful results which have followed the adoption of educational workshops.

In the establishment of a workshop, the three authorities mentioned are concerned, namely, the central government, which we might term the state, the province, and the commune. The idea of the formation of a workshop may originate in two ways; in one case the commune, finding that some branch of manufacture, as, for example, the linen, which had previously been in a flourishing condition, has begun to decline, from the imperfect technical knowledge of those engaged in it, or in order to diminish the pauperism of the district, it may wish to introduce some new branch of industry, would apply to the governor of the province, stating that the commune would be desirous of establishing a workshop, and would give a proper building, and would in addition contribute to its maintenance. The governor would then bring the matter before the provincial council, which we shall suppose to be favourable to the project, and which would accordingly co-operate by voting a certain sum. The governor then brings the matter before the central government, which we shall suppose likewise sanctions, and allocates to its support a certain portion of the fund voted by parliament for the creation of such institutions. The workshop is then organized by the communal authorities in the manner which we shall presently describe.

In the second case the formation of a workshop may originate directly with some manufacturer, who would wish to revive some sinking branch of trade, or to introduce some new one, which unaided he would be unable to accomplish, but who would be willing to do so as the contractor for a workshop. In this case he would write to the governor offering to enter into a contract for carrying on a certain branch of trade, and stating the reasons upon which he founds his belief that the project will be successful, the terms upon which he will undertake the organization of a workshop, and the amount of aid which he will require. The governor then consults the commune as to whether it is in favour of the project, and to what extent it will be disposed to assist. If the reply be favourable it is then



submitted to the provincial council, and afterwards to the minister, as in the other instance.

When in either case the sanction of these parties has been obtained, a proper building, generally some old store or factory contributed by the commune, which sometimes lights and heats it also, is procured. In this are mounted a number of looms, and the other necessary machines and utensils, of the newest and best construction, supplied at the expense of the government, or at the joint expense of the government, the province, and the commune. The next step is to appoint a foreman, who must not merely be a skilful workman, but one able to inculcate technical instruction, superintend the entire establishment, and maintain discipline. This foreman, who is, properly speaking, an industrial teacher, is employed usually for a fixed term of one or more years. In the case of workshops for females, the function of teacher is also usually performed by a woman. Where the workshop is got up by a contractor, he very often appoints and pays the teacher, and in some instances even provides the building, in consideration of the assistance accorded by the government. These arrangements made, the workshop is ready to commence operations.

The contract between the government and the contractor, when there is one, implies mutual conditions, which must be fulfilled during the period in which the contract remains in force, which is usually for a term of three or five years. The conditions imposed by the government upon the contractors may be briefly summarized as follow:—1, they have to provide constant employment for a fixed number of workpeople, and a supply of the necessary raw material; 2, they are bound to give those workpeople, when they have acquired a certain degree of skill, commensurate wages, the maximum daily hire being fixed, piece or contract work being however permitted to the fullest extent; 3, the admission of new scholars instead of those who leave, after having acquired a satisfactory degree of skill, is left to the judgment of the authorities appointed to control the management of the workshop; 4, a contractor cannot in any case object to the transfer of skilled workers to another contractor, for the purpose of perfecting their instruction; 5, no foreigners can be admitted as apprentices, but may in the capacity of teacher, whether male or female; they are also bound, in selecting persons for admission, to give the preference to such persons as may be specially pointed out by the local authorities; 6, the contractor, in addition to the fixed number which he is obliged to keep employed in the workshops, is obliged to provide employment in their homes, equivalent to a certain number of looms, stocking frames, &c., for persons who have received instruction in the workshops; 7, the governor of the province may empower any person or persons to visit the workshops and report upon their condition and efficiency; 8, no other class of goods than those stated in the original contract can be manufactured without the consent of the government; 9, in some cases the proportion of the goods manufactured which must be exported, is prescribed; 10, when the goods manufactured require to be dyed, or to undergo a special process of finishing in a separate establishment, the latter is included in the contract; 14; wherever literary instruction can be combined with the industrial,



the contractors are bound to require the attendance of those under apprenticeship; 12, and finally, the contractors pledge themselves to endeavour to induce the apprentices to participate in the advantage of the system of saving and benefit or annuity funds established by the government.

The government, on the other hand, binds itself—1, to pay a yearly sum as a salary for a proper teacher, who is provided either by the contractor or by the communal authorities, and for whose final discharge the contractor must, as a general rule, be responsible; 2, to pay a certain sum as compensation for the necessary loss of material attendant upon the instruction of beginners; 3, in those cases where the contractor provides the looms and other plant, to give a supplementary contribution. Where it was necessary to secure the services of a particularly energetic and enterprising undertaker, a loan, at a certain interest, and even sometimes without interest, has been granted. This has been done especially in cases where the erection of dyeing and finishing establishments were found to be indispensable in order to prepare the goods for market.

Any disputes which may arise between the contractor and the government on foot of their contracts are adjudicated upon by the arbitration courts (*Conseils de Prudhommes*).

In order to protect itself, the government usually inserts a clause in the contract, setting forth that it would not hold itself responsible for a greater sum than that stated in the contract. In some cases, however, especially in the early stages of the movement, it was obliged to depart from this rule, as it had to give aid to a number of persons to enable them to complete their apprenticeship. Without such aid many persons would be unable to support themselves upon what they could earn, owing either to want of skill in the beginning, or, as too often happened, because they had become weak through want of adequate food. Generally speaking, however, the government itself was not called upon in this way, as the commune, or private benevolence, was usually adequate to meet the necessity.

In those communes in which workshops have been established by the direct intervention of the government, the management is entrusted to a local committee, appointed by the government, as we have before observed; but even where it is conducted by a contractor, a similar committee is formed for the purpose of controlling the undertaker, and for the better application of its benefits to the immediate wants of the commune. The mayor of the commune is usually president, and the members in turn, or the whole body together, oversee the workshops. The contractor is bound to submit to this supervision, which, so long as he fulfils his contract, is a decided benefit to him.

In addition to the supervision exercised through the local committees, the government has appointed a provincial inspector in each province, who is the chief of the department under the provincial government, or, more properly speaking, under the governor, to whom he directly reports, and from whom he also directly receives his orders. This inspector is always in direct communication with the local committees, and personally visits every workshop from time to time. They are the soul of the whole of this unique organization, for upon their capacity, energy, and the devotion



which they display in their noble but laborious and usually thankless office, depends its success. And truly the manner in which these workshops have been fitted up, and the minute attention bestowed upon their management, reflect the greatest credit upon the Belgian government, the governors of the two Flanders, and upon the zeal and singlemindedness of the two provincial inspectors. Nor must we forget to add, that in almost every instance they have met with a like zeal and devotion in the local committees and the inhabitants generally. A visit to the offices of the governors of the two Flanders at Ghent and at Bruges, where the productions of the Educational Workshops are exhibited, as well as the other arrangements for conducting the business of this department, show, as Dr. Steinbeis well remarks, that as much care is bestowed upon the means of increasing the productive industry of the country, as in the collection of the revenue or the maintenance of justice.

The formation, in the spring of 1844, of provincial central industrial boards, for the surveillance and guidance of local relief and employment committees, has already been mentioned. In the early stage of the system of industrial workshops, it was proposed that these boards, composed of delegates, and under the presidency of the governor, should carry out the organization: with this view the provincial inspector of the province was appointed *ex-officio* referendary and inspecting member. It soon became apparent, however, that such boards were not adapted for such a novel and still growing institution, which required a single active and energetic direction. In consequence of the experience of the working of this commission in East Flanders, the formation of a similar one in West Flanders was renounced, while that of East Flanders was allowed to drop into desuetude. In name it still exists at Ghent, but no sitting has been held for three years. On the 13th of March, 1849, the King raised the inspecting member to the rank of independent provincial inspector, an arrangement which has been very successful.

The first organization of the system consisted in the establishment of six workshops for teaching the weaving of ordinary linen fabrics. This first essay was very successful; the weavers were soon able to earn double their former wages, the goods were also of a much superior quality, and the distribution of alms to persons able to work almost ceased. Another step in advance was then taken, the manufacture of artistic or fancy goods, such as damasks, muslins, and jacquard fabrics, the use of the jacquard loom being scarcely known in Belgium. Success also attended this attempt, and it was accordingly decided to vary the fabrics, and to introduce, one after the other, the manufacture of a number of articles which had hitherto been largely imported from other countries. In this way a great number of workshops sprung up, in which the manufacture of almost every kind of linen, woollen, cotton, silk, and mixed fabrics were manufactured, except fine broad-cloths, which constitute the trade of Verviers.

As many of these fabrics had not hitherto been made in Belgium, teachers were invited from all parts of Europe; these men, after having fulfilled their contracts, have passed into the service of Belgian manufacturers,



and are thus still contributing to educate a new generation of Flemish workmen. The effect of this variation in the products produced, and the introduction of a number of new branches of trade, will materially tend to ward off the greatest danger which threatens the Belgian people, and which has within the last twenty years been the chief cause of the misery which overspread the two Flanders, namely, that when their great branch of industry, the linen manufacture, found no outlet, the greater part of the population would be at once reduced to starvation. Had the workshops been confined to the resuscitation of the linen manufacture alone, the benefits conferred by them would have been momentary, and would perhaps rather lead to a repetition of the disastrous state of things caused by the stagnation of that branch of industry.

It is, however, necessary to observe, that unless under special circumstances, fancy weaving was only encouraged in the neighbourhood of towns, and in densely-populated districts—the improvement of the linen industry being kept in view in the remote districts. The government also judged that it would be unwise to endeavour to spread this branch of industry in thinly-peopled districts where it did not previously exist, or where it had died out, as they considered that it could not thrive there at present.

In the end of 1847, 20 workshops had been established; in 1848, 25 more were added; in 1850 the number was increased by 50. In the commencement of 1853, the total number in operation amounted to 95; of which 2 were in the province of Antwerp, 4 in Brabant, 7 in Hainault, 37 in East Flanders, and 45 in West Flanders. At the end of 1853 and the commencement of 1854, there were only 27 in operation in East Flanders; there were 38 workshops in West Flanders at the same period. The greater number were occupied with weaving, but other branches of industry were also commenced, as, for example, the making of gloves, domestic utensils, nails, &c.

It was in the two Flanders, as will be seen by the preceding statistics, that the system was chiefly developed; but there, too, many of the workshops have been given up. In a very few cases this has occurred from the concern having been mismanaged, or, in other words, from the difficulty of finding a competent conductor; but in the greater number because private enterprise had sprung up, and rendered them unnecessary. The greater number of them will gradually pass into private hands sooner or later—a result which the government desires to promote, by giving the machinery and tools upon very favourable terms, upon the condition of its being allowed to maintain the system of superior inspection a few years longer.

In order to give our readers a more exact idea of the results of the system of educational workshops, we shall describe the condition of those existing in the two Flanders at the end of 1853.

During the year 1853 there were 27 workshops in operation in East Flanders, which may be thus classified according to the articles made:—



- 5 for the improved manufacture of plain linen fabrics, of all qualities, such as canvass, sailcloth, sacking, tarpaulin, woolpacks, packing cloths, bolting cloths, shirtings, sheetings, huckabacks, russias, crash, &c.
- 2 for the manufacture of damasks, table cloths, diapers, tickens, drills.
- 1 for the manufacture of cambrics, lawns, &c.
- 2 for the manufacture of handspun thread, from 400 to 800 lea, employed in the manufacture of cambric and lawn (called *fil de mulquinerie*).
- 11 for the manufacture of different fabrics of pure cotton, pure wool, and mixed fabrics of wool, cotton, and linen, such as embroidered muslins, twilled cottons, dimities, cotton velvets, plushes, merinos, fabrics for ladies' dresses, tweeds and other trowserings, vestings, woollen shawls, tartan shawls, fancy plaids, flannels, swanskins, kerseys, baizes, blankets, druggets, doe-skins, horse cloths, and travelling rugs; cashmeres of wool and silk, and of alpaca, sewed muslin, carpets, fancy blinds, and window curtains, and other fabrics made by the jacquard loom, &c.
- 2 for the manufacture of silk fabrics.
- 1 for the dyeing of silk.
- 1 for dressing and finishing silk fabrics.
- 1 for hat plush.
- 1 for the cutting of cotton velvet.

## 27

In 22 out of 27 workshops, the industrial operations were conducted by manufacturers who had made special compacts with the government. In five others they are carried on either directly for the account of the workers, or for that of some trader or manufacturer who furnishes the raw materials, without being bound by contract.

The greater part of them are now the property of traders, or are organized in such a way that the pecuniary intervention of the state may be restricted, in proportion as the operations develop and prosper, and be finally in a condition to continue their operations without aid. Already three workshops—those of Wetteren, of Lede, and of Ninove—have ceased to receive any subvention from the state. In many others, the subsidies accorded in the first instance have been considerably diminished. Among those may be mentioned the workshops of Sleydinge, Bellem, Alost, Audenarde, Lokeren, Grammont, Deynze, Leupegem, Eecloo, Evergem.

Those workshops which serve simply as schools where the workmen are admitted in succession to make their apprenticeship, and whose industrial operations are not undertaken by some energetic manufacturers, who commit their position and future to their success, could not necessarily exist except by means of subsidies from the state, the province, or the commune, as the labour of the apprentices does not produce sufficient profit to cover the salary of the teacher, and the other expenses demanded by the apprenticeship. It is not intended, however, to render such workshops permanent in the same locality, but to transfer them to a new commune when they have accomplished their mission in the locality where they were first established. Thus the workshop established at Grammont in 1849, having fulfilled its mission in that town, has been transferred to Nazereth, a commune having 5,600 inhabitants, a large portion of whom was without work or resources, owing to the decay of the spinning and weaving of linen. In this way aid can be given successively to localities which suffer, of which there are, unfortunately, still a considerable number, without increasing



the grants which the state and the province actually make in favour of industry.

The total number of workshops in West Flanders, on the 31st of December, 1853, was 38, which may be classified as follows:—

- 23 were solely occupied in the various branches of the linen manufacture, including sail cloth, canvass, bagging, tarpaulin, glass cloths, huckabacks, russias, sheetings, shirtings, plaited shirt fronts, damasks, diapers, drills, tickens, muslins, cambrics, handkerchiefs, in imitation of Indian.
- 10 were occupied, in addition to the linen manufacture, with the production of various fabrics in pure wool, wool and cotton, alpaca and mohair and cotton, pure cotton; swanskins, cassimeres in wool and cotton, flannels in ditto, fancy trowserings, merinos, fancy plaids, lastings, mixed fabrics for dresses, orleans, paramattas, thibets, nankins, twilled cottons, &c., carpets.
- 3 were occupied in the manufacture of fabrics of pure wool or of mixed wool, and other textile materials, such as tissues of pure wool destined for printing, montpensiers, fancy plaids, cassimeres, barege shawls, fancy trowserings, swanskins, fabrics for dresses, thibets, lastings, light fabrics in pure wool and wool and cotton.
- 1 in the manufacture of silk ribbands, and ribbands of silk and cotton for hat bands, &c.
- 1 for females occupied with Swiss embroidery and other kinds of similar ornamental needle-work.

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38

#### § 5. RESULTS OF THE ESTABLISHMENT OF APPRENTICESHIP WORKSHOPS.

We have now to speak of the results of the system. It is unnecessary to observe that all the workshops have not been equally successful—the amount of the success depending in a great measure upon the local guidance, the capacity of the foreman or master, and upon the energy and ability of the contractor, where there is one. The character of the local committee is, however, that which would seem to exert the greatest influence upon the results. The testimony of M. Rennie, the inspector for West Flanders, is sufficient upon this point. According to him, wherever the committees have taken up the matter seriously—and, as he takes pleasure in stating, that is the case in the greater number of instances—the workshop prospers; where the committee is indifferent, the workshop languishes. He easily accounts for this from the fact that the majority of the members of the committee live in the commune where the workshop is established; they are in contact with the people, and can act upon them by persuasion, and by the authority which their position gives them, and thus overcome the prejudices which are so much opposed to progress. It has been already observed that, as a general rule, workshops conceded to contractors succeeded the best. There are, however, many cases where workshops have fully succeeded under the direct management of the government. In such cases, however, a good deal of the success depended upon the patriotism and philanthropy of some one individual who has devoted himself to their management. By whomsoever managed, the direction should not be in the hands of *dilettanti*, but of active, energetic, and singleminded persons, thoroughly understanding the business, and desirous to see it succeed; otherwise workshops of this kind only produce mischief, as several examples in Belgium have proved.



In the following tables we give a brief summary, in a statistical point of view, of the chief results of the working of the educational workshops during the year 1853, and which, we are convinced, will convey a better idea of their success, than any words of ours could do:—

*Apprenticeship Workshops of East Flanders subventioned by the State.*

Nature of Manufacture.	No. of Workshops.	Public aid accorded in 1853.	No. of persons actually employed in workshops.	No. of persons already trained.	No. of cases in which the establishment of a workshop has raised the rate of wages in the locality.	No. of cases in which the establishment of a workshop has led to the creation of factories or establishments for the production of similar articles.
		Francs.				
Plain linen fabrics ...	5	7,085	176	979	4	1
Damask, diapers, drills, &c.	2	2,450	68	302	2	2
Cambrics, lawns ...	1	700	15	50	..	...
Fine linen thread ...	2	1,425	174	452	2	...
Fabrics in pure wool, pure cotton, and mixed fabrics of wool and cotton	10	11,401	307	1,249	8	5
Silk fabrics, including dyeing and finishing, and the manufacture of hat plush	3*	10,500	180	264	1	2
Cutting cotton velvets ...	1	325	...	...	...	...
Total ...	24	33,886	920	3,296	17	10

*Apprenticeship Workshops of West Flanders subventioned by the State.*

Linen fabrics of all kinds	23	23,200	490	3,101	22	7
Linen fabrics in conjunction with fabrics in pure wool, and in wool mixed with cotton, &c.	10	14,935	406	2,469	8	5
Fabrics of silk and of silk and cotton	1	...	11	9	1	...
Fabrics of pure wool and mixed fabrics of wool and cotton, or alpaca, &c.	3	7,000	139	66	3	2
Embroidery ...	1	800	27	...	...	...
Total ...	38	45,935	1,073	5,645	34	14

The remaining 3 workshops, to make up the 27 already mentioned as existing in East Flanders, do not any longer stand in need of state assistance. Two of these, concerning which we have information, employ together 165 persons, and had trained 376 persons up to the end of 1853; in both cases the establishment of the workshops had raised the rate of wages in the locality, and in one case had led to the establishment of a similar manufacture by private enterprise. One workshop was for teaching

\* Exclusive of a dyeing and finishing establishment.



embroidery, and employed 155 persons, and had trained 300; the other was for the manufacture of linen, and employed 10, and had trained 76.

In the table for West Flanders two workshops have been included which do not now receive permanent assistance from the state; a single sum was given to them in the first instance instead of a yearly grant.

In the two Flanders then there were in the commencement of 1854, 65 workshops in full activity, of which 60 were subventioned by the state; 64 of these workshops had 2,148 persons in apprenticeship, and had already trained 9,317 persons, or a total of 11,465. In 53 localities out of the 65 in which workshops had been established, the rate of wages had been increased in consequence of the workshops, that is, 81·5 per cent. In 25 cases, or 38·4 per cent., the foundation of a workshop had led to the establishment of factories or workshops of the same kind by private enterprise.

The extent to which the improvement in wages took place varied according to the state of depression existing in the locality, the importance of the workshop, and the nature of the manufacture. In many cases the wages of the trained workmen was double, in a few instances even treble, and in most cases at least from 30 to 50 per cent. more than that of the untrained workmen before the establishment of the workshop. Even in many cases where the rate of wages was not increased, the general standard was preserved from further depression. It is worthy of remark, that the elevation of the standard of wages was in most cases in direct proportion to the skill required for the manufacture of the article; thus the improvement was greater in the case of damasks than of plain linens, and, above all, in fabrics made by the jacquard loom.

The influence of the educational workshops upon the development of local industry has been quite as marked as upon the rate of wages. In the table given above the whole extent of this influence is not shewn, for even where no new factories or distinct establishments have been formed, a great impulse has been given to those already in existence, and a number of persons have been provided with employment in their own homes. As an example we shall make a few extracts from the official reports of the provincial inspectors, in answer to the following questions:—

*“Has the establishment of the workshop influenced in a visible manner the local industry? Has it appreciably affected the public morals and well being?”*

*“EAST FLANDERS. Workshop of Sleydinge.”*—This establishment has had decisive effects on the condition of the labouring class of the commune, which contains about 5,200 inhabitants. In 1847 the number of indigent persons requiring assistance from the relief fund (*bureau de bienfaisance*) and alms amounted to 2,200; another part of the population, without being reduced to misery, were in extreme want, and threatened to very largely increase the number of paupers; 24,000 francs were devoted to the support of the indigent. Still this sum was not sufficient, and the misery was frightful. Now a beggar is scarcely to be seen in the commune, and all the good workmen can find employment. The number of persons who received relief in 1853 was 1,648 (the greater number being old persons, infirm, and orphans); of this number 998 only received very temporary relief, and only in consequence of the excessive dearth of food. The expense of the *bureau de*

\* Rapport sur la Situation des Ateliers d'Apprentissage et de perfectionnement dans la Province de la Flandre Orientale.



*bienfaisance* has been reduced to the sum of 11,084 francs, to which the inhabitants in good circumstances added as contributions, or in alms, 5,000 francs. It is easy to conceive, that the sum distributed in the commune as wages by the workshop has visibly influenced the general comfort, and has especially acted upon the position of the small traders, such as brokers, tailors, &c. \* \* \* \*

*“Workshop of Alost.”*—The workshop has influenced in a visible manner the local industry, for other similar factories have been set up, and these in their turn favour other branches of industry, such as the bleaching and the dyeing of linen fabrics, calendering, finishing, &c. All these contributed to the public wealth, and to the general well-being, and the more so, that the employment which they afford extends to localities in which the working classes were reduced to a state of fatal inaction.

*“Workshop of Eecloo.”*—This influence is evident. The establishment of the workshop has given a prosperous impulse to the industry of the town, and awakened among the inhabitants a spirit of enterprise. It has also produced excellent moral effects; the young persons who have made their apprenticeship, and who still do so, accustom themselves to order, economy, and discipline. Instead of being a burden and a danger for society, they are become useful members.

“Two new factories have been established in this town since the creation of the workshop. Since, more than two years, three other manufacturers have taken up the manufacture of the same fabrics as those made by the contractor of the workshop.

*“WEST FLANDERS. Workshop of Roulers.”*\*—Nowhere has the spirit of industry developed itself in the same vast proportions. Since the creation of the workshops a considerable number of industrial establishments have been erected at Roulers. We may mention the factories of MM. Berlaimont, senr., Vervaecke-Vandekerkhove, Lenoir-Cannoot, Vandamme Brothers, Deys Son, D'Hont, Joseph van Gheluwe, Soenen - Vandekerkhove, Delabeau De Burges, Bonten - Holvoet, Latour-van-Isacker, Moerman-Dobbels, Rodenbach-Mergaert, Rommelaere-van-Hollebeke, Loontjens, &c.; without counting the manufacturers who have undertaken the manufacture of articles which they did not make previous to the erection of the workshops. Roulers reckons besides, four spinning factories which are in full activity, and one in process of construction. Power-weaving is also annexed to one of these spinning factories.”

These examples could be multiplied if our space admitted of it; we believe, however, that those given, taken in conjunction with all the other facts which we have brought together in the present article, place beyond a doubt the success which has attended the establishment of educational workshops in Belgium. On this point then we shall say no more than quote a few extracts from the official reports as to the general success of the movement.

Mr. L. Wandewalle, the Inspector of East Flanders, says:—

“They have influenced public prosperity; for they have awakened the spirit of enterprise, demonstrated the possibility of reviving industrial labour in Flanders, and provoked the creation of other establishments; the workmen whom they occupy, instead of being a burthen to the inhabitants in good circumstances, have encouraged, especially in the localities where they have been created, the formation of new establishments, resuscitated the retail trade and the labour of the artisans, by the circulation of wages which amount annually to a considerable sum.

“The workshops have also very appreciable moral effects; for they have efficaciously served to combat with mendicity and vagabondage; the local authorities

\* Rapport sur la Situation des Ateliers d'Apprentissage et de perfectionnement dans la Province de la Flandre Occidentale.



have been able to employ it as a means of repression; liberated criminals have become honest and industrious workmen, and the young persons given up to a fatal idleness, the support of their parents."

Mr. G. L. Rennie, the Inspector for West Flanders, says:—

"After the reading of the preceding reports, we believe that it is no longer possible to call in question the utility of the apprenticeship workshops, as agents for industrial improvement, and for the moral and material amelioration of the population.

"Besides their direct results, one of the advantages of the workshops is also to form excellent foremen, who, distributed afterwards in private establishments, put in practice and propagate the industrial knowledge which they have acquired at the workshop. The foremen who are only acquainted with the manufacture of plain linen, are initiated into the processes of several kinds of manufacture, and all the recent improvements, by passing a few weeks in one of those establishments.

"The great manufacturers of all the provinces appreciate the value of the workshops, and send raw materials to them through their agents. The amount of wages thus annually distributed by one manufacturer of Brussels, in East Flanders, may be estimated at 300,000 francs (£12,112 10s.).

"The conclusions to be drawn, in our opinion, from the preceding statements are, that the workshops have largely answered the object proposed by their establishment; they form good workmen, and create new kinds of manufacture hitherto unknown in the localities where they have been instituted. They have resuscitated the linen industry by the diffusion of the best processes of manufacture; they have moralized the working population and ameliorated their material position by labour; they have greatly relieved the relief funds (*bureau de bienfaisance*) from the crushing burdens which weighed upon them, and at the same time improved the financial condition of the communes."

Our review of the condition of the apprenticeship workshops would be incomplete without a statement of the expense at which they were erected. A project may be very excellent in every way, but may yet cost more than the benefits to be derived from its realization would be worth. The following summary will show that the workshop system, judged from this point of view also, has been fully successful. In East Flanders the total expense incurred in the creation and maintenance of workshops from their establishment in 1847, to the 31st of December, 1852, was as follows:—

	francs.	cents.	
Building and purchase of workshops ... ..	56,370	26 =	£2,275 19
Purchase of machines, tools, vessels, &c. ... ..	89,441	31 =	3,611 3
Small moveable necessities ... ..	2,331	50 =	94 2
	148,143	07 =	£5,981 5
To which is to be added various sums granted or loaned with or without interest to the contractors	150,200	00 =	6,064 6
Total for plant, &c. ... ..	298,343	07 =	£12,045 11

Of this sum there was contributed by:—

The State ... ..	274,780	62 =	£11,094 5
„ Provinces ... ..	6,078	89 =	245 8
„ Communes ... ..	9,556	23 =	385 8
Miscellaneous private contributions ... ..	7,927	32 =	320 1
	298,343	06 =	£12,045 11



The working expenses for the same period were:—

	francs.	cents.	
Rent of workshops ... ..	12,943	03 =	£522 11
Compensation to contractors and salaries for literary and industrial teachers ... ..	157,123	47 =	6,343 17
Assistance to apprentices until able to earn sufficient to support themselves ... ..	39,082	69 =	1,577 19
Purchase of raw materials, &c. ... ..	1,498	08 =	60 9
Management and office expenses ... ..	5,749	18 =	232 2
Heating, lighting, and sundries ... ..	21,125	67 =	852 18
	237,522	12 =	£9,589 16

Of this sum there was contributed by:—

The State ... ..	224,569	38 =	£9,066 19
„ Communes ... ..	11,700	06 =	472 7
Various private contributions ... ..	1,252	68 =	50 10
	237,522	12 =	£9,589 16

The sum contributed by the province was employed in the purchase of apparatus and tools for distribution among those who had completed their apprenticeship. The government also allocated a considerable sum of money for a similar purpose, and a large number of improved tools were thus distributed. For example, from the commencement of the industrial movement up to the year 1851 there were distributed, of

Looms ... ..	231
Reeds with steel dents ... ..	2,064
Battens or lays ... ..	2,064
Fly shuttles ... ..	3,307
Compressing templets ... ..	3,140
Metrical reels ... ..	147
Numerating balances ... ..	70
Spinning wheels and their adjuncts ... ..	730

Besides a number of articles required in spinning and lace making, and the establishment of dépôts of reeds with metallic dents in various parts of the country. The total sum expended in this way was 116,304 francs 66 cents (£4,695 16s.) In 1853, 5,350 francs (£216) were expended for the same object in East Flanders, and 650 francs (£26 4s.) to a manufacturer of Alost, to encourage him to manufacture jacquard looms. The Province of East Flanders also allocated a sum of 2,750 francs (£111) towards payment of the salaries of foremen employed to mount looms and other apparatus in the houses of the workmen.

The expenses of the 24 subventioned workshops of East Flanders for the year ending the 31st of December, 1853, amounted to the sum of 34,586 francs (£1,396 8s.), of which there was contributed by—

	francs.	
The State ... ..	27,666 =	£1,117 0
„ Province ... ..	4,050 =	163 10
„ Communes and relief funds ... ..	*2,870 =	115 17
	34,586 =	£1,396 8

\* Exclusive of the workshops furnished, and the assistance given to workpeople to enable them to complete their apprenticeship.



The expenses in the same province for the year ending the 31st of December, 1852, amounted to 38,022·81 francs (£1,535 3s.)

The total sum expended in East Flanders for the five years ending the 31st December, 1853, was therefore 608,473·99 francs (£24,567 2s.,) of which there was contributed by

			francs.	cents.	
The State	...	...	554,823	81	= £22,401 0
„ Province	...	...	17,378	89	= 701 13
„ Communes*	...	...	36,271	29	= 1,464 9

a sum less than has been squandered in some Irish Unions during the same time.

The information is less precise with regard to West Flanders, but the following figures will convey an idea of the annual expenses of the system in that province, where the larger number were erected:—

1849	...	...	...	114,943	41	= £4,640 16
1850	...	..	...	81,214	67	= 3,279 0
1851	...	...	...	45,162	75	= 1,823 8
1852	...	...	...	34,000		= 1,372 15 (about?)
1853	...	...	...	45,935		= 1,854 12

Total expenditure for five years ... 321,255 83 = £12,970 13

## § 6. APPRENTICESHIP SCHOOLS.

(*Ecoles Manufactures et d'Apprentissage.*)

According to the census made in 1840, by the commission appointed to inquire into the condition of the linen trade, which we have already so frequently mentioned, there were in Belgium 280,396 females whose chief means of living was the making of handspun linen yarn; 122,226 of these belonged to the province of East Flanders, 98,383 to that of West Flanders, 33,358 to that of Hainault, 16,730 to that of Brabant, and the remainder to the other provinces. There were besides a number of women who spun at intervals, as a means of supplying some domestic wants. The first victims of the contest between hand and millspun yarns were naturally these females, and already, in the year of the inquiry, they were on the brink of starvation, so that the government had not only to concert measures for employing this immense female population, as well as the thousands of males; but it had also, as in the case of the latter, to look to the future generation, and see that a race of paupers was not produced.

In this case also, the charitable workshops afforded a model upon which to found a system of instruction combined with relief. At that period there existed a number of schools for teaching the working of lace, in connexion with the charitable workshops, and also many which had been established upon an independent basis; sixty-three of these were in towns, and twenty-one in rural communes. A number of additional ones were set up, under the name of *Ecoles d'Apprentissage*, or apprenticeship schools, which must not be confounded with the *Ateliers d'Apprentissage*,

\* Exclusive of the sum allocated for the distribution of tools, &c.



or apprenticeship workshops, which we have above described. These schools are supported in the same way, but not to the same extent, as the workshops, that is, by grants from the state, the province, and the commune, but none of them are, we believe, directly managed by the government, although they are placed under the inspection of the provincial inspector, and their condition and success as much cared for as the workshops.

The workshops are intended for males alone, of all ages, but the apprenticeship of boys is of course that most encouraged in their present stage. The apprenticeship schools are, on the other hand, exclusively intended for girls, who remain in them the whole day, and receive elementary instruction, as well as industrial training. Experience has shown, not only in the apprenticeship schools, and in the charitable workshops, but in the educational workshops, wherever elementary education has been combined with industrial training, that an attendance of about two hours a day for about two years, in the classes, is sufficient to enable a pupil to learn, not only to read, write, and calculate, but to acquire a knowledge of French as well as of Flemish. By the system of small classes described in speaking of the charitable workshops, learning becomes a pastime and a relaxation from the bodily labours of the industrial training; and in this way the lesson is soon looked forward to with pleasure. Children thus receive instruction without being obliged to forego such employment as would enable them to contribute to their support. This system, then, obviates one of the greatest barriers to the education of the poor, who cannot afford to leave their children at school, either because they require them to earn wages, or because they cannot provide them with clothes.

A system of this kind naturally attracted a great number of girls, and schools in great numbers were opened throughout the country, the movement having been greatly assisted by private benevolence. In 1852, no less than 740 such schools existed in Belgium, attended by about 45,000 pupils, chiefly young girls. Of these 363 were under the special management of, and supported by private persons; 169 were conducted by religious corporations or convents; 72 by parish priests and curates; 24 by relief committees; and 49 by communal schoolmasters. In the commencement of 1854, there were 342 in East Flanders alone, attended by 22,246 pupils, of which 215 were conducted by private persons; 71 by religious corporations or convents; 30 by parish priests and curates; 26 by local committees, &c. The total aid afforded by the government in 1853, amounted to only 2050 francs, (£82 15s. 4½d.,) and most of them appear to have been in a self-supporting condition.

As lace was almost the sole article made in these schools, this branch of industry rivalled, in a short time, the ancient one of flax spinning. Mr. Wandewalle, the inspector of East Flanders, estimates the number of lace workers in that single province at no less than 40,000. So great an extension of one manufacture, which is besides one subject to great fluctuations from the caprice of fashion, must be looked upon as an evil, and would, unless guarded against, sooner or later lead to the same disastrous results as followed from the decline of the manufacture of handspun linen yarns.

The government has very properly begun to discourage the further



growth of this manufacture, and affords it scarcely any aid; but it has, on the other hand, encouraged the introduction of other branches of industry adapted for women, so as to vary as much as possible the employment of the working classes. Among the employments thus introduced are, the making up of ready-made clothes, shirts, every kind of embroidery and sewed muslin, knitting, fringe, gimp, fine handspun yarn for lawns, sewing of gloves, &c. Out of the 342 apprenticeship schools above mentioned, 63, attended by 5,572 pupils, only were occupied with these new branches, 279, attended by 16,674 pupils, being still exclusively occupied with the working of lace.

The amount of money distributed by these schools has been enormous, and were it not for the fear of such another catastrophe as that above alluded to, and the tendency of parents to compel children of a too tender age to earn wages at such schools, and, among others, boys who should never be employed at sedentary work, their extension would be a blessing to Belgium. We are glad to find, however, that the Belgian government is taking every measure it possibly can to avert those evils.

#### § 7. SPECIAL SCHOOL OF DESIGN APPLIED TO MANUFACTURES AND WEAVING.

The inventions of engraving, calico-printing, electrotpe, the improvements in the working of metals, in glass and ceramic manufactures, have effected a kind of democratic revolution in art, similar to that effected in literature by the invention of printing. This revolution was not made by works of high ideal art, but by giving to various articles in common use artistic forms, and by decorating them with designs and colours, such as could only be indulged in as the highest luxury of princes during ancient and mediæval times. Art, in some form, has, in our days, become a necessity of life, and hence it is now indispensable that the development of a nation's industry should be accompanied by a corresponding development of its art.

The immense disproportion which exists between the value of even the most important brute products, and the same materials, after they have been fashioned into artistic forms, and decorated with designs and colours, is sufficient to point out to us that the palm of victory in the industrial struggles of nations, must finally rest with that one which does most to develop its intellectual powers, both of knowledge or science, and creation or art, even though the advantages of geological structure of the soil and geographical position, may tend to favour other nations more.

In pure art Belgium now maintains, as it has ever done, a high position, but the same causes which led to the decline of its linen manufacture, prevented the intimate association of art and industry which has gradually taken place in France, and the necessity of which is now so strongly felt in these countries. The Industrial Exhibition of Flanders in 1849 showed in the strongest manner this deficiency in Belgian industry, and convinced all interested in the success of the country, that it was necessary to purify the public taste, introduce better forms and chaster designs into those



manufactures in which so much of the value of the products depends upon form and design. The great Exhibition of London afforded still stronger proofs, that no national industry perhaps stood more in need of artistic improvement than that of Belgium.

With the fact before it, that France, which possesses almost a monopoly of art manufactures, still considers it necessary to make the most incessant efforts to diffuse and increase a taste for form and colour among all its artisans, and that England, the most naturally-favoured industrial country in the world, now spends thousands to develop a system of artistic education; the Belgian Government determined to encourage the application of art to industry, more especially in those branches recently introduced through the Apprenticeship Workshops. With this view it concluded an arrangement with the communal authorities of Ghent, for the establishment in that city of a school specially intended to give instruction in the composition and execution of the different kinds of design employed in manufacturing industry, particularly in design applied to calico-printing, damasks, table linens, trouserings, waistcoating, *mousselines de laines*, carpeting, shawls, woollen damasks, embroidery, lace, room papers, &c.

In order to render this system of industrial art instruction as fruitful as possible, an entirely new and novel course is to be added, by which the students will learn the most rational and most economical methods of weaving, and the practical realization of the designs. It will include:—

1. Lessons on the technology of textile materials.
2. The transfer of designs to the Jacquard cards, and the mounting of the looms, and also the stamping of the designs for embroidery.
3. The mounting and arrangement of looms for the different kinds of fabrics.

This course is not merely a necessary corollary of the course on design, but it will also add to the resources of the students on leaving the schools. They will not only be fitted to be designers for factories, but will also be capable of acting as managers or foremen of factories, or mounters of looms.

The course on design was opened at the end of August, 1852, under the direction of M. François Vandersyp, a pupil of the Royal Academy of Design of Ghent, *who having spent ten years in France and other countries at the expense of the city of Ghent, in order to complete his studies*, was recalled by the government for the purpose. His course is at present attended by seventeen pupils, who, with few exceptions, have made the most remarkable progress. This number cannot be increased, in consequence of the special nature of the instruction, which requires the undivided attention of the professor.

Hitherto the course upon the technology of the textile materials, and upon weaving, could not be completely organised. This kind of instruction being altogether new in Belgium, no one fit to deliver the course immediately could be found. Under those circumstances the government and the administrative council of Ghent empowered a student of the Engineering School of Ghent, and assistant Professor of Teaching, to attend the lectures on the theory of manufactures, and especially those on weaving,



at the *Conservatoire des Arts et Métiers*, in Paris, and at Lyons, &c., and thus acquire the necessary knowledge to open the intended course as soon as possible. In the mean time the students are instructed in the different styles of weaving by a competent foreman.

The sum allocated by the Government to this institution for the year 1854 was 5,927 francs, 50 centimes (£239 6s. 5½d.)

§ 8. OTHER INSTITUTIONS FOUNDED IN BELGIUM, AND MEASURES ADOPTED BY THE GOVERNMENT TO DIFFUSE INDUSTRIAL KNOWLEDGE.

It is not merely by means of the institutions just described that Belgium is endeavouring to stimulate its industry. If our space permitted, we might describe the various financial arrangements of the banks; the establishment of a great annuity fund for old workmen; the infant schools for the working classes; the industrial exhibitions; the societies for promoting export trade, and establishing Belgian agencies in all parts of the world; its elementary schools; its juvenile criminal schools, such as that now so well known of Ruysselede; its academies of painting, &c.; and its trade schools at Ghent and Liege; its Industrial Museum at Brussels; the numerous pensions or scholarships attached to its colleges and trade schools, some expressly established to enable the holder to travel into other countries, &c. There is, however, one other plan which has been adopted which deserves notice and imitation, it is the publication, under the auspices of the government, of small books and prints. One set of these books, called the "*Bibliothèque Rurale*," is intended to diffuse information upon all subjects connected with agriculture and rural economy; and the other, entitled "*Bibliothèque Industrielle*," for subjects connected with manufactures. There also exists a society, called the Society for Intellectual Emancipation (*Société pour l'Emancipation Intellectuelle*), who publish a popular Cyclopædia (*Encyclopédie Populaire*), in 125 little volumes, each volume treating upon a distinct subject, a large number of them being upon industrial topics.

The government has also ordered the issue of a collection of popular prints, under the title of "Popular Museum of Belgium" (*Musée Populaire de Belgique*). This collection comprises six series, namely—1, a series of religious prints; 2, a series of historical prints, chiefly of Belgian worthies; 3, a series of monumental prints for the purpose of diffusing a correct architectural taste among the people; 4, a rural and agricultural series, illustrative of agricultural and rural operations, the implements employed, the breeds of domestic animals, plants, trees, &c.; 5, a technological series, illustrative of the different manufactures and trades, and the different tools, machines, and apparatus therein employed; and 6, an ethnographic and picturesque series, showing the civil and military costumes and customs of different nations, and views of the most remarkable Belgian landscapes, ruins, &c.

Finally, another circumstance which assists in the diffusion of new and accurate technological information, is the existence of no less than seventeen



considerable public libraries, independent of the National Library of Brussels, the City Libraries of Ghent and Liege, and the University Library of Louvain. Some of these contain over 20,000 volumes, and most of them over 10,000; and among the towns which possess libraries of this kind are some containing less than 5,000 inhabitants. The large libraries are increased by about from 400 to 500 volumes yearly, and the smaller ones by from 100 to 150, and among these are now almost universally included the best technological works recently published.

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## CHAPTER III.

### INDUSTRIAL TRAINING MOVEMENT IN IRELAND.

Having fully described the chief features of the Belgian organization for the creation of industrial skill, we will now examine what has been done at home with the same object in view. The attempts hitherto made may be classed under the following heads: 1, Industrial Societies; 2, Independent Industrial Schools; 3, Female Industrial Schools in connection with National Schools; 4, National Agricultural Schools; and 5, Workshops in the Workhouses and Jails.

#### § 1. DUBLIN MANUFACTURE BOARDS.

Early in 1850 Mr. Thomas Mooney returned to this country, after an absence of some years in America, and drew public attention to the wretched condition of the Irish emigrants while attempting to assimilate themselves to the industrious habits of the United States. He very justly concluded, that one of the greatest sources of Irish misery was the want of adequate remunerative employment, and that this was owing less to any existing barriers to the development of manufacturing industry, than to the absence of skill and organization among the people. With the view of remedying this deficiency, which operated upon the Irish emigrant as much as upon the man who remained in Ireland, he founded in Dublin the Board of Irish Manufacture and Industry.

The mode in which it proposed to fulfil its objects was, in the first place, by meetings and addresses to call public attention to the industrial condition of the country; by correspondence with different parts of the country to gather information as to the condition of the different branches of local manufacture, or the existence of unworked mines, beds of clay, glass-sands, &c., and the diffusion of technical knowledge by means of tracts, reports, &c.; by the foundation of industrial schools or workshops



to educate skilled artizans in new branches of manufacture, or to improve existing ones; and finally, to stimulate boards of guardians to establish workshops in Union Workhouses.

The programme was extensive, and demanded for its successful realization great perseverance, labour, and immense knowledge of manufactures in the committee which undertook the task. The former qualities might readily be found, but, unfortunately, extensive technical knowledge was the very thing the country stood most in need of. We need not therefore be surprised if the reports and tracts circulated by the board, and the information furnished by correspondents, contained, in some cases, many crudities and quaint nostrums.

Despite these almost unavoidable faults, this Board, and the "Society for the Promotion of Irish Manufacture," subsequently formed by the secession of some of the members of the original body, in consequence of some differences connected with management, did a vast amount of good. They stimulated public opinion, irrespective of creed or political party, upon the subject of industry generally; they opened up communications with most of the Boards of Guardians, and were the immediate causes of the introduction of trades and manufactures into many of them; they created a certain degree of enterprise, which tended to support and revive some old and sinking branches of industry, and even to promote, in a few instances, the establishment of new ones. But the greatest benefits which arose from their establishment was the organization of industrial training schools throughout the country. The original board alone claimed to have established no less than 120 of them during the two years of its prosperity.

The greater number of the schools thus called into existence were for the education of females in embroidery, lace-working, and other forms of ornamental work, the manufacture of which had taken about that period an immense development, under the name of the Sewed Muslin Manufacture. Here and there also some efforts were made to find employment for males, but the experiments in this direction were in most instances of a desultory character, and led to no permanent results.

Many of the schools thus called into existence have since been closed, but many are still in operation, the greater part being now, however, under the management of the Board of National Education; some few are still under independent management; and perhaps it may be well to remind our readers, that many Industrial Schools, and among them the most successful, as we shall see when speaking of the industrial schools in connection with the Board of Education, existed throughout the country long before the establishment of the Board of Manufactures, and that many were also formed subsequent to that event, without the participation of that body in their foundation, but, nevertheless, as the direct result of the impulse given to the industrial movement by it.

As the history of the manufacture movement is only of importance in connection with its existing results, and as the bodies which set it going no longer exist, we need not devote further space to its operations, and will therefore proceed to describe what these results are.



## § 2. INDEPENDENT INDUSTRIAL SCHOOLS.

Many of the schools which existed prior to the establishment of the Industrial Societies in Dublin, as well as those which owed their origin to the movement initiated by them, gradually declined, or got into connection with the Board of National Education. Some few have, however, survived the decline of the enthusiasm created by the novelty of the thing, and still continue their labours independent of any state assistance. Of these we shall select three, as examples, two for males, or for males and females, and one for females.

*Bonmahon Industrial School.*—One of the most extensive, and at the same time successful, results of the industrial school principle with which we are yet acquainted, is, perhaps, that obtained in the obscure village of Bonmahon, on the sea-coast of the County of Waterford. The Rev. David A. Doudney, the present Protestant curate of the parish, being the editor of a religious periodical, called the *Gospel Magazine*, secured a number of subscribers to a three-guinea edition of Dr. Gill's Commentary on the Holy Bible. He was naturally anxious to find some employment for the youth of the wretched village, when the bold idea struck him, that it might be possible to print it in the village of Bonmahon! To most men, such a proposal would, no doubt, appear absurd, and it was not to be wondered that his friends deemed the project an utter impossibility, and one gentleman, who had given his name for one hundred copies, even withdrew it.

This novel and hazardous enterprize was entered upon, nevertheless, in October, 1851. Neither press or type, as may be supposed, had ever been seen before in Bonmahon, and yet, in six months, twenty poor village boys had set the first volume of the work, containing upwards of 1,000 large royal octavo, closely-printed pages. In two years and a-half, and within a few days of the specified time, *the whole work was completed*. It comprises six volumes, contains 46,200,000 letters, and consumed 900,000 sheets of royal paper.

The boys were paid at so much per thousand letters from the fifth week of their entrance. Within the first year a boy has been known to set up nearly 10,000 single letters in a day, and some are at present earning as much as 10s. to 11s. per week.

The plant and materials cost about £800, the whole of which was repaid by the work alluded to, leaving, in addition, a balance of £500, which was expended upon the erection of a glebe-house. The establishment is still in operation, and constantly employs sixteen boys and three printing presses. Two of the boys trained there have obtained employment in connection with newspapers, and two have gone to England. No literary instruction is given during the day, but an evening school has been established for that purpose.

More lately still, Mr. Doudney has established an embroidery school, which is now nineteen months in operation, and employs forty-seven girls, and, like the printing establishment, is nearly self-supporting. And lastly, he has, within the last few months, established an agricultural school, in which fifteen boys are instructed, and are making rapid progress.



The Bonmahon Industrial School is, as our readers must perceive, very similar to the Belgian Apprenticeship Workshops, and is therefore a most encouraging example for showing the practicability of organizing a similar system here. Like the majority of the Belgian workshops, Bonmahon School has conferred material benefits upon the locality, for upwards of twenty pounds a week are paid in wages in the different schools just mentioned, whilst habits of industry and self-reliance are at the same time inculcated, which have resulted in the most undeniable improvement in the appearance, habits, and morals of the youth.\*

*Spiddle Industrial School.*—Up to the year 1852 no attempt had been made to introduce a system of industrial training into the district of the County of Galway in which Spiddle is situate. But in that year a Protestant clergyman, the Rev. J. M'Cready, organized a sort of training workshop, for both males and females, at an expense in plant, &c., of about £200, derived from subscriptions, but not from local sources. The males received instruction in the weaving of tweeds, gingham, and linens, for which six looms were in the first instance erected, a number which was subsequently increased to eighteen; and the females in plain-work, crochet, and similar work. The average wages which persons trained in those kinds of employment are able to earn, averages from  $4\frac{1}{2}d.$  to  $1s. 6d.$  a day. The result of this low rate of wages has been, that, with the exception of a few who are working off some gingham and linens, the weavers are at this season all engaged in agricultural labour.

The number already trained is about fifty, of whom thirty were weavers, and twenty-eight girls taught plain-work and crochet; the number of girls at present in the Industrial School is about twenty-five. Some of those who have been trained are employed in Galway and other places, and some still remain in Spiddle.

It does not appear that the establishment of the school has exerted any influence upon the rate of wages in the district; other causes have, however, contributed to double it, and this, no doubt, has reacted upon the school, inasmuch as the wages earned at weaving by even half-trained persons rarely exceeded, and were often lower, than that which could be gained by agricultural labour, now that in some districts there is a deficiency of labourers.

*Claddagh Piscatory Industrial School.*—The Bonmahon School affords an example of what may be done in the higher and more skilled branches of industry. Spiddle School represents the ordinary class attempted in different parts of the country, while the one of which we are now about to speak, affords an example of a special school adapted to the wants of a locality. This school, which is held in one of the rooms of the Claddagh National School, a circumstance which appears to constitute the only link

\* The high opinion which we have above expressed of the Bonmahon School, must be understood, of course, to refer solely to it as an industrial experiment. With the ulterior object for which, according to some, that experiment was made, namely, for proselytising purposes, we have nothing whatsoever to do. We would, however, express a hope, that any philanthropic efforts made to improve the physical condition of the people, be not nullified by connecting them with such an immoral object as that of endeavouring to influence the religious principles of poor persons by an appeal to their misery.



of connection between the school and the Board of Education, was originated by the Very Rev. Mr. Rush and the other members of the Dominican Convent of Galway, for the purpose of teaching the young women of the fishing village, or rather suburb of Galway, called Claddagh, the best method of making fishing nets, and the mode of spinning hemp and flax into twine for the purpose.

During the year 1853, the number of girls in training under the superintendence of a master net-maker, employed for the purpose, was 16; in the spring of 1854 this number was reduced to 12, and during the summer and autumn the school was altogether closed, owing to the high price of hemp, and perhaps also to the general decline of the fishing industry along the whole coast of Ireland. Operations again commenced in December last, but the number now employed is only 9.

The chief object of the promoters of this school was the amelioration of the condition of the fishermen of the district, and no idea was accordingly entertained of making it self-supporting; the nets, made at the school of the best material, were sold at cost price to the fishermen, and deserving ones were, in many instances, allowed to pay by instalments. The committee endeavoured to raise by subscription, or otherwise, the balance between expenditure and the proceeds of sales. The expenses of the school for the year ending the 31st March, 1854, including the disbursements for the purchase of raw material, wages, &c., amounted to £446 14s. 3d., and the receipts from all sources to £459 7s. 8½d. Instruction is now given in sewed muslin and guipure work, but, owing to the firm who supplied the sewed muslin work having met with reverses, that department is for the moment at a stand-still, but hopes are entertained that business will be resumed in a short time. During the year ending the 31st of March, 1855, the expenditure amounted to £605 9s. 6d., of which £220 5s. was for flax and labour employed in the manufacture of nets, and £385 4s. 6d. for wages, for sewed muslin and guipure work. During the same period there was received by the sale of 291 nets £80 18s. 6d.; for sewed muslin and guipure work, £385 4s. 6d.; as subscriptions, £50; by a fancy fair, £47 1s. 8d.; making a total of £563 4s. 8d., which left a deficit of £42 4s. 10d. To meet this, there remained a balance from the preceding year of £12 13s. 5½d., and 108 nets unsold, which were considered value for the balance, £29 11s. 4½d.

It would thus appear, that upon the principle upon which this school is managed, aid to the extent of about 15 per cent. of the expenditure is required, a sum small indeed in comparison to the amount of good which it has, and might in an increased degree be made to yield.

The manufacture of nets and fishing gear generally, would, no doubt, afford a good deal of employment of a remunerative character if the fisheries were in a prosperous condition; we may mention, as an instance, that in the Claddagh School some young women could earn 7s. 6d. per week. But as we have already remarked, the fisheries along the whole coast are in a declining condition, as a comparison of the number of vessels and men registered as engaged in fishing in 1853, with those similarly engaged in 1854, will show:



		Vessels.		Men.		Boys.
1853,	...	12,381	...	52,122	...	3,086
1854,	...	11,079	...	45,123	...	3,104
Showing a decrease in		1,302 or		6,999 or		
1854 of		10.5 per cent.		13.4 per cent.		

This decrease was most apparent upon the southern and western coasts, and affected Galway in a very remarkable manner, as the following figures will show:

	1853.	1854.
Number of vessels registered in Galway	988	602
Number of men employed	3,952	1,675
Number of boys	340	355

or a decrease in one year in vessels, of 39 per cent.; and of men, to the extent of 57.6 per cent.

Here then we have a very sufficient cause for the comparative ill success of the Claddagh School during the year 1854, and at the same time a reason why industrial training has become an absolute necessity.

### § 3. INDUSTRIAL TRAINING IN CONNECTION WITH THE NATIONAL SCHOOLS.

For the last ten years or more, considerable attention has been attracted to the effects of Industrial Training Schools upon a young mendicant population, by several interesting reports in the Minutes of the Committee of Council on Education, and in tracts upon the same subject published by English writers. Their valuable suggestions struck upon many philanthropic minds in Ireland, as presenting an excellent means of diminishing pauperism. Religious communities too, especially convents, whose close relations and religious sympathies enabled them to become acquainted with the wants of the poorer classes, were also impressed with a similar notion. The result was some desultory and partial efforts here and there. When the famine came, however, what had only been the idea of a few, became the conviction of all, and several attempts were accordingly made to establish Industrial Training Schools.

At the very outset of these attempts, the benefits which would be derived from grafting such new institutions upon the common schools under the Board of Education, must have struck those engaged in getting them up, especially as such persons would naturally be also the chief promoters of ordinary National Schools; from the first establishment, then, of Industrial Schools dates the attempts to unite industrial training with the National System of Education; that is, several years before what is called the Manufacture Movement was set on foot in Dublin.

It was not, however, in the districts where the shock of the famine was most severely felt that the new system was first introduced. On the contrary, it was in comparatively prosperous districts of the country, in the towns of Belfast and Ballymena, that industrial schools were first established in the year 1847; and thence they gradually spread throughout the Island as the intense distress became mitigated.



Those of Belfast and Ballymena were in fact ragged schools. In 1847 the managers petitioned the Commissioners to be placed in connexion with the Board; the Commissioners instantly and cheerfully acceded to their application, and in doing so, pledged themselves to give the establishment of industrial schools every encouragement in their power. It may be interesting to quote the emphatic manner in which the Commissioners at this early date expressed their sanction, and pledged themselves to encourage the system:—"How far such schools will permanently succeed is a question not yet decided. Their influence in preventing crime, and their value in reclaiming the young from immoral habits, seem to be generally admitted. The subject is one of the greatest importance to the welfare of the rising generation, and shall receive our best attention. Wherever it is practicable to ingraft a school of industry upon the system of literary education adopted in our National Schools, we shall encourage the experiment by every means in our power."

In both these schools the children, who were of the lowest and most destitute class, were fed as well as taught. In the first year the average number in Ballymena was 55, consisting of both males and females; in Belfast 81, consisting of females alone. The first work attempted was of the simplest kind, knitting, sewing, mending, and making up plain clothes. In Ballymena they succeeded in teaching shoemaking and tailoring to a few of the boys, but the only general employment they could find for them was sweeping the streets of the town, and the cultivation of a small garden granted to the school by Sir R. S. Adair. The schools were supported by subscriptions, and were not expected to pay; but we have the strong testimony of the inspector, Mr. Hunter, that they were attended with the most excellent effects, physical and moral, upon the children. "In the literary department," he says, "the progress of nearly all has been surprising." And again, "the improvement of the wretched outcasts, mentally, physically, and morally, is most evident; their very countenances have undergone a remarkable transformation—the fact has been noticed by many." So quick and happy were the results of even such an imperfect experiment.

Counting the Claddagh Piscatory School, which we have already noticed, the Commissioners had five schools of industry under their inspection at the close of the year 1847. In the following year four were added to the number. Three of them were in the southern towns of Thurles, Limerick, and Kinsale, the fourth was the Central Industrial School of Carrickmacross, the *nucleus* of Mr. Kennedy's operations in Farney. Hitherto we have only seen in the schools of Ballymena and Belfast a praiseworthy eleemosynary effort. The schools added in 1848 are of a new character, are really schools of industry, and aim directly at a self-supporting existence. They are of two classes,—the Convent School, and (what we may call) the School and Workshop.

Thurles, Limerick, and Kinsale are Convent Schools, and the first report of the inspectors of the Board represents them to us as working with signal enterprise. In its first year the Thurles School had a contract to supply the 71st Regiment with socks and mittens; neat diaper, linen,



and towelling to the Catholic Colleges of Maynooth, Carlow, and Thurles; executed a supply of bags for the Southern and Western Railway, and an order for sheeting from the Guardians of the Roscrea Union. Every opportunity seems to have been turned to account. In the Kinsale School there were employed at a time, spinners, 30; lace workers and muslin embroiderers, 92; at fish-netting, 40; plain work, dress and stay-making, 56; knitting, 50: the average weekly amount of wages paid on Saturday was £35." In Thurles, after defraying all expenses, the original stock was maintained. In Kinsale a large stock of all kinds of work, the lace and muslin work of the very finest kind, remained on hands. Here we recognise the great difficulty experienced by all the industrial schools in the first instance, that of bringing their goods to market.

The Carrickmacross Central Industrial School is noticed for the first time in the Report of the Commissioners, under the date, April, 1849. It had come into operation three or four months previously, and had already collected 138 female pupils. Knitting, sewing, and quilting, were the ordinary works; but a class of 15 had undertaken fancy and lace-work. We may quote as illustrative of the independent character at which the Farney Schools aimed from their first foundation the following significant sentence from Mr. Butler's first report. "It is worthy of remark that from the first start, this work is made productive, their motto is, *In instruction it needs not there should be waste.*" Mr. Butler also perceived that the Carrickmacross School naturally formed the centre and depot of a series of suffragan schools in the same district. "This school," he reports "has been, in my judgment, happily styled 'Central.' From the many vested National Schools, building, or already built in Farney, it may insure and select the full attendance it can accommodate, from these schools; the good conduct and proficiency of the girls will be a passport to an instruction of a higher order, and more productive of emolument."

In the year 1846, immediately before the famine, Mr. Kennedy became agent of the Marquis of Bath's Irish estates, in extent 15,000 acres, occupied by 13,000 souls, and comprehended in the Barony of Farney, County Monaghan. He found a mass of population\* miserably ignorant, and without any adequate educational provision. Hardly one in four of the population could read and write, and the standard of agriculture was the lowest. There was no other industry of course. Mr. Kennedy became speedily convinced that "the first and most necessary step was to provide ample means of literary and industrial education for all the children of the peasantry." But the overwhelming necessities of the times swamped his earlier designs. In the letter which we have just quoted he mentions, "This course, though entered on, was suspended almost immediately until 1848, as my whole time was occupied in the attempt to procure employment and support for the population during the famine consequent on the potato failure." The moment, however, that the severe pressure of distress was removed, seven National Schools and one Agricul-

\* Appendix to 16th Report of Commissioners of National Education.



tural School, with model farm buildings, were erected within the year; eight industrial teachers had been appointed with the express sanction of the Board. For the results, which were tolerably rapid, we quote Mr. Kennedy's report, made by desire of the Commissioners:—

“The pupils are taught in a progressive course, commencing with the plainest and simplest, and advancing to the most delicate and difficult operations of needlework and the kindred arts, so as to enable them to administer to the wants of all classes, from the humblest cottager to the most liberal encourager of industry. After spending a period of twelve months in this training, it is no uncommon thing for them to be able to earn from 3s. to 5s. per week, each according to their artistic skill; very expert hands, of whom there are not a few, often gain even more. These sums are earned by the manufacture of various descriptions of lace; for the work of superior execution there has as yet been a demand in the London market equal to the supply from this district; the inferior work, or produce of those in course of training, fetches but small prices, and cannot be disposed of without much difficulty. The best of the work in question is considered of higher quality than that produced in Switzerland, and little inferior to Brussels and Valenciennes lace. When it is considered how short a time many of these persons have been engaged in this work, they may well be expected to attain even a higher degree of excellence. Instances have come under my knowledge of pupils having within the past year earned by their work at school sufficient means to convey themselves to America, they having within the same period been taught to read; the success of parties emigrating under such circumstances cannot be the subject of much doubt.”

During the year a sum of £500 had been expended in the purchase of raw material and in wages; and of this sum £434 17s. 1d. had circulated through the barony, earned by a class who had never dreamed of earning money before. The District Inspector speaks of the result with enthusiasm. We quote his words:—

“The system thus carried out has already been attended with the best results. Through a wide portion of the barony of Farney the casual looker-on cannot fail to observe the neat appearance and gentler manner of the younger females, and in their looks an expression of self-reliance and content. To those who had known them ill-fed and ill-clad, careless of cleanliness, and dejected, if not morose, the transition is at once extraordinary and most cheering. Assuredly, the project is most judicious, and no less humane, which, by a remunerative employment of its younger members, seeks to ameliorate the condition and raise the tone of an entire population.”

At the end of the year 1850, there were in all twenty Industrial Schools connected with the Board. Of the new schools, several had sprung up in Dublin under the stimulus of the manufacture movement originated in that year, and several were founded upon the same principle as the Carrickmacross Schools.

Of the latter class were the Castlehacket School, established by Denis Kirwan, Esq., and which had made a small profit at the end of its first year; the New Ross and the Templeorum Schools. The New Ross School had been established for three years, but had only come under the sanction of the Board in 1850. The Report upon it presents the local effects in a most encouraging light, but laments the inadequacy of the remuneration. The work executed was all transmitted to a Scotch house,



which afforded the worker only a small fraction of the profits. Nevertheless, the moral and material effects of the school had been equal to those described in Farney; and Mr. Graham, the Inspector, writes:—"The amount received for the work done, trifling though it be, has been found to insure, not only a more constant and regular attendance upon the literary department, but owing, I suppose, to the habits of order acquired, to have caused a visible improvement in the personal appearance and demeanour of the children attending; and in many instances the parents have attended to request for themselves a supply of work, to enable them to add their mite to the general fund, for the support of themselves and families." The Templeorum School had the benefit of better management, and proportionate success. It had been established by the Countess of Bessborough, and was most skilfully superintended by Mrs. Blackett. We shall quote a passage from a note of this lady's, to illustrate her system:—

"The work is provided from private funds, and is disposed of by private sale. Three-fourths of the whole consists of work ordered by ladies in all parts of the kingdom, some of whom send their materials. The Bessborough family and their friends procure a great many 'orders,' my own family a great many more, and I have several correspondents, who are entire strangers to me.

"I have generally more orders for work than I can execute, and my only difficulty is in disposing of the 'common work' done by '*learners*'—even that never accumulates much. I have never been able to derive any benefit from 'Industrial Societies.' They have returned to me, as unsaleable, work for which my friends have been eagerly applying. My system is, when a child brings me a tolerable specimen of her work, to give her muslin and a pattern, and a pass-book, in which is entered her name and the quality of her work. When she brings me the work done, the price is entered in her book and paid, if she wishes it, and fresh work given to her. They often prefer, however, to leave their earnings till they have enough to buy some particular thing; first—a new frock, then shoes, then a bonnet and shawl for the summer, or a cloak for the winter; afterwards a pig or the rent is the desired object. Two sisters, one under fifteen years of age, have lofted the house, so as to have a room for themselves.

"I should observe that the work is *never* washed till sold, but is generally fit for wear as it comes from the worker's hands, so that their personal cleanliness is secured."

Accordingly, some of the best workers in this school easily earned from 3s. to 4s. a-week; and even the "*learners*" made a little. Remarkable the extraordinary cleanliness of the cottages, and the taste bestowed upon decorating them, and tending the little flower-gardens attached to them, the Inspector confidently ascribes it to the habits of order, cleanliness, and industry acquired at school; and referring to the miserable prices paid in other schools by manufacturers, he urgently advises that the schools should, as far as possible, be worked by private agency.

In the Convent Schools, although they are generally reported as remunerative, the same complaint of the bad terms given by manufacturers is urged. Throughout the South of Ireland at this period, two or three Scotch houses engaged in the muslin trade had extended their business, and supplied work wherever they found a school or a family willing to undertake it. The wretchedness of the people enabled them to make their own terms. In one school, for instance, the Inspector, Mr. Graham, reports, that "even the person supplied by the Messrs. Wallace (of Glasgow,



the principal house in this trade), to teach, could not (working ten hours) earn more than one penny per day, at the description of work supplied, and the rates offered." Throughout all the Convent Schools, the same complaints of the difficulty of dealing with managers abound; but the zeal, intelligence, and devotion of the nuns, wrought great success out of such unpromising conditions. In recommending one of the schools to be closed, in which, during the ten months of its operation, Messrs. Wallace had only allowed one pound for the work executed, Inspector Coyle writes his opinions so clearly and forcibly, that we are tempted to reproduce them.

"As I stated on a former occasion, I believe that such an experiment cannot succeed, unless it is under the guidance of a number of ladies, such as Nuns, who can devote their time exclusively to it, putting their heads, hearts, and hands to it zealously and perseveringly, and *combining instruction in this peculiar art of embroidery* with other branches in a school **EXCLUSIVELY INDUSTRIAL**, or almost entirely detached from literary instruction. Other branches are not so difficult to learn; the profits arising from them are more immediate, and therefore, when taught along with embroidery, would give the pupils spirit to learn it, and patience to wait for its ultimate advantage, at least as much patience as can be exhibited by a poor people whose poverty obliges them to grasp at immediate profit, or drives them to hopeless inactivity when the profit is slow and remote.

"There is no doubt that the cultivation of this branch of industry would be as profitable in Munster as it is in Ulster, to families in which there may be many females wholly or half idle, or at periods of the year when there would be little or no other occupation, if as many could be taught as would afterwards teach it at home, and make it a domestic occupation, like spinning or knitting; and I have no doubt that it will yet become so in Munster, through the agency of the nunneries, or some such establishments.

"I think it right to inform the Board, that I have heard frequent complaints in most respectable quarters, and from persons long conversant with the working of such a system of industrial education and with the sales of work produced by it, that the prices allowed by the manufacturers who supply the material for this embroidery are *discouragingly low*, even for *well-finished work*. If this be the case, a remedy should be sought, and I think would be found, by throwing the matter open to the most public competition. No obstacle that can be removed should for a moment be allowed to impede an undertaking likely to produce great public benefit."

The success of the Carrickmacross School had become established, and every year enlarged it. The next notice of it which we find in the Reports of the Commissioners, is in a letter from Mr. Fleming, District Inspector, detailing a visit to the school in November, 1851. There were then 144 pupils on the roll. Some of them earned from 5s. to 8s. a-week; more than half of them earned from 3s. to 5s. The considerable sum of £430 15s. 11d. had been earned and divided among the workers of the Central School and its four suffragans in the course of the year; and a branch school of design had been already established, and was engaged in improving the working patterns. Let us ask the reader to contrast Mr. Fleming's opinion upon the system adopted in these schools, with those of Mr. Coyle, above quoted, on the difficulties with which the schools in his district had to contend.

"It is pleasing to be in a position to state, that the success indicated by the statement of accounts just made, has been obtained without the help of eleemosynary subscriptions, and that the usual methods of forcing sales, by appealing to the



benevolence and generosity of the benevolent, have been sedulously avoided. The temporary assistance derivable from such sources produces but too often a forced, and as it were an artificial existence, which usually terminates when the zeal of those who, in the first instance, contribute, chances to be engaged by some more novel attraction. This opinion conveys more than mere theory, for I am sufficiently acquainted with the history of some Industrial Schools, which owe their origin and subsequent support to local patronage and eleemosynary aid, to put forward the statement with perfect confidence, because it is supported by facts which have come within my own experience.

"But, as regards the Carrickmacross Industrial School, the sound simple principle has always been kept prominently in view, that continued success can only be attained by producing no other kind of work than that for which (it has been previously ascertained) a remunerative price can readily be obtained: added to this, the producers of the work know, from personal experience, that their portion of the profits altogether depends on their own diligence and promptitude, in making the most of the time left at their command. Hence they spare no efforts to produce work of the best finish, and of the most novel design—with what result last year's accounts sufficiently testify. How gratifying to know, that the work thus tastefully executed has commanded so much attention, solely on its own merits; and that, in many cases, it has been found impracticable to supply the demands of private individuals, owing to the large orders on hands from the wholesale purchaser. Money received in this way is regarded as a just recompense for one's time and labour, and not in the light of an alms or gift conferred by private benevolence; for, after all, it is well to bear in mind that kindness is misplaced, when, through its injurious, yet well-meant influence, the young lose that laudible feeling of independence which springs from a salutary shame of mendacity.

"It is probable, that in very impoverished localities, this principle cannot be adopted in the management of Industrial Schools, nor would it have been possible to carry it out to such an extent in Carrickmacross, but for the assistance of Mr. Kennedy, (former agent of Lord Bath,) by whom this school was first established in 1849, and who still continues to take the greatest interest in its well-doing. Owing to that gentleman's continued efforts in its favour, I think it certain that the accounts for the current year will present still more favourable returns than those now published, as I find from an accurate return handed me by the teacher, that the orders now on hands will, when completed, exceed £400. It will, of course, require great attention and application to get through so much work within the time required, but the late change made by Mr. Kennedy's suggestion, in the drawing and copying of the patterns will effect a great saving of time. Until recently the tracings were drawn by an experienced hand with pen and ink, and although all possible dispatch was used, still the operation was necessarily tedious, because requiring extreme accuracy and neatness. Under the new arrangement, the patterns are carefully lithographed, so that copies of them to any extent, and at a very trifling cost, can be struck off at a moment's notice; by this means, neatness, accuracy, and cheapness, are equally secured, and the workers are no longer kept idle, waiting, in turn, to have their patterns drawn, which frequently occurred under the old system, owing to the small number capable of drawing accurate patterns, and the large quantity of those tracings required for the current use of the school. Owing to the improved method of procuring an adequate supply of patterns, an increased amount of work has been completed during the last three months of the year, as compared with the quantity finished, during a corresponding period, when the drawings were made with pen and ink."

We cannot forbear, again, to remark the excellent moral tone which every report observes in those schools. Says Mr. Fleming:—

"I feel called on to notice the quiet gentle bearing of the teacher towards those under her charge, and yet the strictest order and discipline prevail, the more lasting and steady, because the pupils' better feelings and self-respect are appealed to. I also observed, that all present, (mostly of the poorer class,) were scrupulously



neat and clean, both in person and dress. I am also in a position to state, that, although the attendance consists of persons professing different religious beliefs, yet no quarrels, no mutual revilings on the subject of religion, have ever occurred to interrupt the harmony of the school; on the contrary, all appeared animated with reciprocal feelings of love and charity. In short, the moral tone pervading this admirable institution could not fail to strike the most casual observer. How fortunate for this country if similar schools were spread over the land; the good resulting from their operation would be great indeed."

Of the southern schools, one of the most remarkable successes was that of Kinsale Convent. In the first two or three years of its management, it had suffered severely from the chief cause which impeded all the schools of its class—the difficulty of meeting a remunerative market. Through its early struggles it was mainly assisted by the benevolent aid of an English gentleman, named Biggs, who provided woollen yarn for knitters, and purchased the stockings when made. In this way good knitters were able to earn 2s. a week, and still attend to their household duties. He also occasionally gave premiums to the most meritorious pupils. Operations were commenced in the year 1850, with a balance of £247 against the school; yet it had been totally cleared away within the year, and had left a balance of £54 on the other side.

No better illustration could be given of what may be done with juvenile industry well directed. Another year's operations placed the Kinsale School beyond the risk of failure. The amount received in the year 1852, for work sold, was £717 2s. 10½*d.*; and, dwelling with pride upon its success, the Inspector under whose superintendence it had been founded, and worked its difficult way to success, says:—

"This institution does not require praise, its success is its best eulogy. It is independent even of charity, for the excellence of its work commands a market at home and abroad; and in compliance with orders, there are parcels now on their way to the Cape and Australia. Co-operation will be gratefully acknowledged, but the purchaser will receive full value; and, though his patronage will confer a favour, it will not be attended by any loss. This triumph of patience, zeal, and perseverance, affords a lesson to all Ireland.

"But much as the nuns have accomplished, they could have done far more if they had more funds at their command. They complain of the small amount of aid given them by the Board—whilst their efforts confer such advantages on society—the results of which it is difficult to calculate—whilst they have nerved the arm of industry, and inspired poverty with hope, they feel deeply disappointed that the Board only allows them £30 per annum. I do not mean or wish to play the advocate; but as a member of society, as well as officially, I consider it my duty to endeavour to impress the Board with the importance of this institution, and the inadequacy of the support it receives, convinced that if I succeeded, the Board would act in a manner befitting the occasion, not only in this case, but with regard to the industrial question generally. The good effects I have witnessed in this and similar schools—the result of small means administered with great skill, and the most persevering zeal, industry, and economy, give a foretaste of the vast benefits that might be realized with more extensive co-operation, and more generous endowment."

The Kenmare School, founded in the year 1852, also rapidly succeeded, under the enlightened and vigilant care of the Rev. John O'Sullivan, P.P., "by whom," the Report says, "all the preliminary expenses, rates, rent, &c., have been personally undertaken. Its foundation, and whatever suc-



cess it has since attained, are ascribed to the same wise zeal for education and improvement which induced him, notwithstanding many obstacles, to co-operate with the Commissioners in erecting in the surrounding district no less than eleven National Schools, all vested by him in the Commissioners in their corporate capacity, and distributed over an extended range of remote and mountainous country, where only the rudest degree of social life previously existed, and where the elements of progress had scarcely penetrated." The school was mainly dependent for work upon local supplies.

"Materials for plain sewing are furnished to the school by many of the shopkeepers of Kenmare, and by other residents of the town and of the surrounding district. The supply of work varies in amount, being sometimes abundant and at other times scanty, but it is always fairly remunerative to those employed at it. It may be observed, that whatever diversity of opinion may exist regarding the ultimate benefits of the other branches of industrial instruction, of the advantages the girls obtain in acquiring skilfulness in plain sewing no doubt can be entertained. For economy and convenience in every locality, it is obviously a matter of great importance to females of the humbler classes, to be skilled in an art of such continual requisition in domestic management; and in no locality, from its poverty and backwardness in almost all the arts of industry and civilized life, was an effective means of this accomplishment more wanted than in Kenmare and its neighbourhood. In contiguous localities, I am assured, so unskilled are the females, that the arts of a sempstress and dressmaker are practised by the rural tailors, whose notions, it may easily be conceived, of what is neat or graceful, are crude in the extreme."

During the course of the year, however, the support of the Marquis of Lansdowne was enlisted, and a direct communication opened with a London house. Altogether, a sum of £90 was realized upon the first year's operations—a greater relative degree of success than we have observed in other schools. We quote the excellent remarks in which Inspector MacNamara records his testimony to, not merely the success of this particular school, but to the advantages to be expected from a general diffusion of the system under the active patronage of the Commissioners:

"I deem it superfluous to remark on the general utility of establishments, whose object is the simultaneous cultivation of the minds, morals, and industrial energies of female youth, the importance of which every one admits, and modern civilization attests; nor do I think any question should arise regarding the policy of their foundation and support, except such as is applicable to ordinary National Schools, or other public institutions, viz.: referring to funds for the purpose, and to the probabilities of there existing the requisite local facilities which would promise efficient management. The particular benefits likely to result from Industrial Schools in the South of Ireland should appear obvious to any one acquainted with the habits and social condition of the people. It may be remarked, that schools in which a combination of literary and industrial instruction is skilfully and successfully adopted, are certain to be attended with one good result,—from the prospect of emolument they hold out, they are calculated to remove, in a great measure, the chief impediment to female education that exists in the South of Ireland—viz., irregular or non-attendance at School. This great evil originates in many causes, prominent among which is a conviction in the minds of the people, that females need little or no education, and may, without injustice done them, be employed from their tenderest years in domestic servitude. A necessary consequence of this false supposition, is the improper training of the female youth, and thereby the perpetuation of those obnoxious habits which so long have so-



cially degraded the South of Ireland; and the evil effects which the low standard of domestic comfort and living has exercised on the energy, industry, and forethought of the people, have been, within the last past years, but too fearfully illustrated. From the healthful influence of mental culture, associated with industrial training, and its consequent pecuniary results, making attendance at school sensibly felt at home, it may be anticipated that the mischievous notions respecting female education, might, in the sphere thus happily influenced, gradually disappear."

The same Report from which we quote, chronicles the continued success of the Carrickmacross School. During the year 1852, £867 18s. 11d. had been paid to the pupils, and the work of the schools had become, not merely profitable—it had become fashionable.

"During the course of the last year, the Countess of Eglinton patronized these Schools, by appearing at her first Drawing-Room, at Dublin Castle, in Carrickmacross lace; and during the current month, on the very last day I visited the Carrickmacross Central Industrial School, I had the satisfaction of seeing an order which had arrived that morning, to execute, for Her Majesty's use, a large and handsome piece of guipure lace-work. It is gratifying and significant to know, that the order in question has been forwarded from a London house, in the ordinary course of trade, and that the pattern of the work selected has been designed in this school."

The local effects, though distress had been much mitigated, were universally apparent.

"Instances have occurred where parties could not pay their rents, or crop their small holdings, unaided by the industrial employment afforded them through the medium of these schools; and the accounts kept by the mistress of the Central School with the shops in town, prove that a great portion of the bread they eat, and almost all the clothes they and their families wear, are purchased from the money earned at school by the lace workers. As far as my own judgment goes, aided by the opinions of persons with whom I have conversed on the subject, the humanizing effect produced on the female portion of the community by the extension of *appropriate* remunerative employment, presents a happy contrast to the less profitable, and almost only resource before the introduction of Industrial Schools—*field-work*."

The system of management is described in the following passage:—

"Mr. Kennedy supplies material for all the work he orders, and, with his permission, the work sold to private parties has been made from material also supplied by him—he being repaid for the material so appropriated, when the articles worked from it have been disposed of; the object being to take advantage of the good material furnished by him, which cannot be procured so advantageously here. Mr. Kennedy's arrangement is, to pay for all work received by him, as soon as he can dedicate time to the purpose, after the work has been delivered.

"Much of the success hitherto attained appears to be derived from the untiring energy and great zeal of the mistress of the Central School. Besides keeping several accounts, answering correspondents, posting work, and receiving visitors at the school, Miss Smyth's other duties are multifarious. She corresponds with the trade through Mr. Kennedy, and receives all orders and instructions contained therewith for work executed on the estate,—copies extracts from the General Instructions on any essential point, and furnishes a copy of same to each mistress. She receives material for all work executed at the several schools; cuts out all work ordered, and keeps an account of the portion issued to each School in a book for that purpose. She must copy, or get copied, all original designs received from the trade, and correct them if defective; arrange others; remodel and appropriate



the patterns of one branch to that of the other (*guipure to appliqué, and vice versa*), and furnish the Branch Schools with copies of all. About twice a-year, she must give a return of stock on hands, raw material, and finished work. When summoned to forward the work to London, she is obliged to write to each mistress to bring in her work, after which each list is checked, examining the work *seriatim*, returning what is unsaleable, and sending back for repair that which is defective.

"All the work being collected from the several schools, Miss Smyth furnishes Mr. Kennedy with a duplicate of each list, which comes back as a 'pay-sheet;' and next follows the most pleasing of all her duties—paying the schools. This generally occupies four days,—the first three for the Branch Schools, the fourth for the Central School. Each worker is paid in presence of the workmistress, who, having ascertained that all have been paid, signs the pay-sheet, after which it is countersigned by Miss Smyth, and returned to Mr. Kennedy. Thus, each worker on the estate is paid through the hands of the teacher of the Central School; and though the arrangement occupies much time, and entails expense in car-hire upon Miss Smyth, it gives satisfaction to all parties, and secures perfect accuracy, as the workmistress in each school and the mistress of the Central School are a check upon each other."

At the time the last Report of the Board of Education was issued, the Inspectors reported favourably upon all the Schools in operation.

In Kinsale there was an average attendance of 435, and the earnings of the workers ranged between 2s. and 9s. At Thurles, during the year, £661 had been divided in wages. At Charleville, one of the nuns had undertaken the correspondence and agency of the School. Accordingly, a year's receipts amounted to £270, the average attendance being 84. At Templeorum, £230 had been divided among 51 pupils. In the Tallow School, the receipts had risen from £52 in 1850, to £270 18s. 7d. in 1853. We take these figures almost at random, to show how the schools were gradually shaping themselves into a self-sustaining system. In 1854, there were 46 schools in operation, in which Industrial Training formed a predominant element, one half of them Convent schools, all well managed, and all paying well.

Up to the period of the last Report of the Commissioners, the operations at Farney continued to be still favourable, as the following interesting summary will show. The Report of Inspector Conwell says:—

"During the last four years, as will appear by examining the foregoing returns, there passed through Mr. Kennedy's hands, to the girls employed at the schools alone, the sum of £3,218 18s. 6d., in addition to several hundred pounds earned by workers on local sales at the schools; besides an estimate of additional amount earned outside of the schools by trained workers in the district, considerably exceeding £2,000.

"These results, so forcibly expressed in figures, are well deserving the attentive consideration of the educationist and the philanthropist, supported as they are by the fact that the whole operations of these schools have been conducted in strict conformity with the ordinary principles and operations of trade, precisely as if the workshop had been a noisy factory in a city, instead of a quiet country school-room."

In order to convey to our readers a correct idea of the value of this, perhaps the most systematic, and certainly one of the most successful experiments in the industrial training system made in Ireland, we subjoin a table which contains a summary of the results obtained during the five years ending January, 1854, while under the management of Mr. Kennedy.



# RETURN

Exhibiting the amount earned by Females attending the CENTRAL and DISTRICT SCHOOLS of CARRICKMACROSS, in the Barony of Farney, and County of Monaghan, on combining Literary Education with Industrial Instruction; seven out of the eight Schools referred to being the ordinary National Schools, open to and attended by children of both sexes.

Name of School.	Number of School capable of accommodating	Date.		Workmistress's Salary now payable by Board yearly.	Number of Females on Roll on 31st March in each year receiving Literary and Industrial Training.					Amount earned by Female Workers pending the period in which their Industrial Training was promoted by Mr. Kennedy.												Total Amount earned by Workers to January, 1854.							
		Of Building School.	From which Salary awarded by Board.		1849	1850	1851	1852	1853	1849		1850		1851		1852		1853											
										£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.				
1. Carrickmacross	130	1849	Feb. 1849	50	0	0	157	234	178	117	149	26	9	4	257	10	9½	173	4	0	340	8	5	519	4	0	1,316	16	6½
2. Drumlusty	120	1849	Feb. 1849	8	0	0	...	244	162	88	104	111	14	7	326	19	7	79	2	0	174	3	6½	164	10	1	856	10	4½
3. Blackstaff	100	1849	Nov. 1849	8	0	0	..	218	67	76	70	...	...	...	83	18	7	28	6	0	91	4	6	62	8	3	265	17	4
4. Ballymackney	109	1849	Jan. 1850	8	0	0	...	164	92	76	82	...	...	...	127	18	7	100	9	2	131	7	8	108	18	7	468	14	0
5. Kidnaminsha	100	1850	April, 1850	8	0	0	...	125	101	87	67	...	...	...	23	16	1	29	9	6	40	15	4	35	12	9	129	13	8
6. Broomfield	100	1849	May, 1853	8	0	0	...	65	46	69	55	...	...	...	5	14	0	21	1	4½	49	0	8	53	0	11	128	16	11½
7. Aghnafarcon	100	1849	Feb. 1851	8	0	0	...	...	47	44	35	...	...	...	4	12	5	2	17	6½	10	18	8	15	3	2	34	11	9½
8. Ashburton	100	1849	Feb. 1851	8	0	0	...	...	59	46	36	...	...	...	3	4	3	2	6	2	7	10	10	4	16	7	17	17	10
Totals				106	0	0	157	1,050	752	603	598	138	3	11	833	14	3½	436	16	4	846	9	7½	963	14	4	3,218	18	6

OBSERVATIONS.—The reduced amount of workers' earnings in 1851, as compared with that of either the previous or succeeding year, is accounted for by a partial suspension of operations on Mr. Kennedy's retiring from the district, and from the direct management of the Schools, in January, 1851.



The chief feature of these schools is the combination of literary and industrial training, and in this point of view alone they are exceedingly interesting. The preceding table puts the success of the industrial element beyond all question, and, judging from the reports of Mr. Conwell, Inspector of National Schools, the literary element has also been attended to. In his report, dated February, 1854, he says:—"Owing to the short time daily devoted to reading, writing, arithmetic, geography, grammar, &c., by the pupils receiving industrial instruction, their literary proficiency, as ascertained at my periodical examinations during the year, though moderate, was, on the whole, considering the peculiar circumstances of the pupils, encouraging and satisfactory."

This testimony is extremely important, and coupled with the experience acquired in the Charitable Workshops of Belgium, to which we have already alluded, there seems no reasonable ground for supposing that the union would be detrimental to the literary education. In the districts where great misery prevails, the desire to earn money predominates over all other considerations, so that the pupils have a tendency to neglect literary instruction altogether, so long as they can find employment. Upon this subject Mr. Sheridan, Inspector of Schools, makes the following remarks in his Report, dated 20th May, 1854, upon the Rahoon Convent Industrial School, which is situate in Galway:—

"The nuns complain, with much reason, that the introduction of fancy needlework amongst the poorer classes has produced a remarkable distaste for literary instruction; that it is with the greatest difficulty the girls, whose parents are in indigent circumstances, can be persuaded to devote even one hour in the day to any occupation except embroidery or muslin work, and that, consequently, as soon as they acquire at school, even a slight degree of expertness, they finally discontinue their attendance, in order to give up their entire time to the work in their own houses.

"I cannot help regarding this as a social evil of great magnitude, inasmuch as it bids fair to put a stop to the progress of intellectual and moral cultivation amongst the females of the lower classes, by inducing them, as soon as they are old enough to handle a needle, to devote all their time to a mere manual occupation, from which, after all, it would seem there is not the least likelihood of their ever being able to earn anything like a decent subsistence."

The great difficulty which the National System of Education has hitherto had to contend against is the extreme poverty of the people. Limited as are the sources of employment available to children, especially in country districts, and trifling as the wages may be, the parents, in many districts, cannot afford to send their children to school, and sacrifice even the miserable pittance which picking stones may bring. Unfortunately, even the chance of obtaining a few halfpence by begging is sufficient inducement to parents to deprive their children of all hopes of moral and intellectual advancement. Hence it is that there always exists such a great disproportion between the number of children upon the roll of a school and the actual average attendance. Another cause which operates in diminishing the attendance at schools is the inability of the parents to provide proper clothes for their children, and without such, they are reluctant, or at least careless, in sending them to school.



The only remedy for this state of things is to cure the evil, if possible, or at least to strive to diminish it, by holding out equal pecuniary inducements to attend school as is now offered to remain away, and, where want of clothes is the obstacle to attend at school, to make such attendance ancillary to procuring them. The best agent for effecting this result is evidently to graft upon the National Schools an Industrial Training Class, *in which employment would be the reward of literary progress alone.*

That the evil so strongly deplored by Mr. Sheridan, in the passage above quoted, is more of a local than general character, we think could be easily shown, and certainly could be remedied in the way just indicated. We need not go farther for proof of this than the same volume from which we quoted Mr. Sheridan's remarks. At page 33, vol. ii., of the Twentieth Report of the Commissioners of Education, Mr. Coyle, Inspector of National Schools, makes the following remarks upon the Sunday's-Well National Schools, at Cork:

"The parents are not only willing, but extremely anxious, that their children should be employed at work; and if the school go on prosperously, as it is likely to do, many others who are now prevented by poverty, would contrive to send their children, now kept at home, watching for a chance of earning the smallest trifle, or begging. And it is to the beneficial action of Industrial Schools upon that class I would wish especially to direct the attention of the Commissioners, convinced that every shilling spent in their instruction will save a pound in the punishment of young delinquents led to crime by want of industrial knowledge.

"Embroidery, crochet, and netting, are the principal branches taught; but shirtmaking and plain work of every kind receive due attention.

"The amount earned from January to August was only £6 8s. 10d., because, at first, and for a good while, none could work well, and the materials employed were either damaged or received very little additional value. This first difficulty being got over to a great extent, there is reasonable ground for the expectation of considerable success ultimately. At the time of my visit a good number were able to do work, which got a ready sale at a fair price, whilst the remainder were fast progressing to a like proficiency. It is certain that many are induced to attend and thus receive literary instruction by the prospect of earning a livelihood in the Industrial School; and there can be no doubt the combination of both is the best system of education for the poor."

In another Report, on the Mallow Industrial National School, he says:

"All receive literary instruction, which many of them would never have a chance of but for the industrial business, on account of their great poverty; and this is the case in *all* the Industrial Schools, at least in this district, and that circumstance should make them objects of peculiar interest and patronage. It is a happy reflection for their founders and supporters, that whilst they create and reward industry, they rescue numbers from gross ignorance.

"The great majority of the pupils are of the very poorest class, yet they were all tidy and neat."

We have a still stronger proof that such a combination would increase the benefits to be derived from the National Schools, by increasing the regular attendance of pupils, from a comparison of the proportion existing between the number of males and females attending all the National Schools now in operation, and that between the number of males and females in attendance in those districts where the female schools are provided with workmistresses, that is, where Industrial Training is com-



bined with Literary Instruction. The following table contains a summary of the number of schools in operation, and the attendance thereat, for the year ending 31st of December, 1853, in each of the four provinces.

*Summary of the number of Children on the Rolls of the 5,023 National Schools in operation on the 31st December, 1853, according to Province.*

	No. of Schools.	Males.	Females.	Total.
Ulster ...	1,906	89,449	63,163	152,612
Munster ...	1,219	77,101	80,142	157,343
Leinster ...	1,200	66,920	68,297	135,217
Connaught ...	698	39,708	35,771	75,479
Total ...	5,023	273,178	247,373	520,551

According to this table the number of males on the rolls exceeds the females by 25,805, or about 10·4 per cent.

On the 30th of September, 1854, there were 292 female National Schools in which there were workmistresses and teachers of embroidery, being about the same number as existed in December, 1853, which, according to vol. i., page 239, of the Commissioners' Report, was 294. The following tables show the number of female children on the rolls of these schools, according to counties, and in a summary according to provinces, and also the number of male children on the rolls of the corresponding male National Schools of the same district.

*Number of National Schools having Workmistresses in each County; Number of Females in attendance upon them, and Males in attendance at the corresponding Male Schools.*

#### PROVINCE OF ULSTER.

	No. of Schools.	Males.	Females.	Total.
Antrim ...	15	705	929	1,634
Armagh ...	8	678	448	1,126
Cavan ...	10	500	537	1,037
Donegal ...	15	729	648	1,347
Down ...	11	721	546	1,267
Fermanagh ...	5	239	180	419
Londonderry ...	11	454	512	966
Monaghan ...	11	650	595	1,245
Tyrone ...	15	843	727	1,570
Total ...	101	5,519	5,122	10,641

#### PROVINCE OF MUNSTER.

	No. of Schools.	Males.	Females.	Total.
Clare ...	13	894	1,281	2,175
Cork ..	17	762	2,143	2,905
Kerry ...	10	580	621	1,201
Limerick ...	7	527	655	1,182
Tipperary ...	12	562	968	1,530
Waterford ...	3	258	230	488
Total ...	62	3,533	5,898	9,481



## PROVINCE OF LEINSTER.

	No. of Schools.	Males.	Females.	Total.
Carlow	1	—	177	177
Dublin	11	55	3,169	3,224
Kildare	2	46	219	265
Kilkenny	4	427	298	425
King's ...	7	429	328	757
Longford	1	87	82	169
Louth	5	458	302	760
Meath	10	585	655	1,240
Queen's	7	453	430	883
Westmeath	6	307	490	797
Wexford	—	—	—	—
Wicklow	3	129	254	797
Total	57	2,676	6,404	9,080

## PROVINCE OF CONNAUGHT.

	No. of Schools.	Males.	Females.	Total.
Galway	9	362	720	1,082
Leitrim	18	1,281	999	2,280
Mayo	14	889	886	1,775
Roscommon	12	737	815	1,552
Sligo	19	1,602	1,611	3,213
Total	72	4,871	5,031	9,902

*Summary according to Province.*

	No. of Schools.	Males.	Females.	Total.
Ulster	101	5,519	5,122	10,641
Munster	62	3,583	5,898	9,481
Leinster	57	2,676	6,404	9,080
Connaught	72	4,871	5,031	9,902
Total	292	16,649	22,455	39,104

According to these tables, and taking the average of the whole schools, the females exceed the males by 5,806, or 34·8 per cent., or more than one-third. A fact of importance exhibited by these tables is, that in Ulster, where, as is well known, there is less necessity for female instruction, both on account of the fact that the sewed muslin trade has been extensively carried on in Ulster for a considerable time, and where, consequently, there are other means of learning it than at school, and because the linen trade affords other sources of employment; and we might also add, as another reason, that the population is not so miserable as in other parts of Ireland; the males are in excess of the females in nearly the usual normal proportion. This is also the case in Leinster, except in Dublin, where there is a large unemployed juvenile population which does not attend school. In Munster and Connaught, on the other hand, as might be expected, the females are in great excess over the males—the excess in Munster being no less than 64·6 per cent. of the whole male attendance.

Strictly speaking, all schools having workmistresses may be considered



as Industrial Schools; the Commissioners of Education appear, however, to restrict that term to such schools as either develop the industrial element to a considerable extent, or make it even the primary feature, literary instruction being held subordinate. On the 31st of December, 1853, there were 43 schools of this class in connection with the Commissioners, which were thus distributed according to county:—

	No. of Schools.	No. of Girls on Roll.	Average Attendance for half-year ending 30th of September.
Antrim, ...	3	283	218
Monaghan, ...	1	140	20
Cork {County, 9) {City, 1}	10	5,364	3,074
Kerry, ...	5	2,049	1,351
Limerick, (City)	4	1,388	834
Tipperary, ...	3	614	376
Waterford, ...	1	517	365
Carlow, ...	1	554	235
Dublin, (City)	6	3,169	1,939
Kilkenny, ...	1	135	57
Louth, ...	1	773	509
Westmeath, ...	1	87	42
Wexford, ...	1	748	225
Galway, ...	4	1,022	540
Sligo, ...	1	—	...
Total, ...	43	16,943	9,765

The branches of industry taught in these schools consist of plain-work, such as shirtmaking, dressmaking, &c., knitting, crochet, Berlin work, embroidery or Scotch muslin sewing, Valenciennes, guipure, appliqué and Honiton lace, tatting, artificial flowers, gold and silk embroidery, and, in one instance, the spinning, winding, and weaving of flax and wool, sack-making, &c. The greater number are, however, devoted to embroidery or sewed muslin work.

We have already had occasion to mention several times that the average wages earned by the pupils of the schools is exceedingly small, and that even the best and most skilful workers can earn only five or six shillings a week, after the most incessant toil from dawn to sunset. This condition of things, we regret to say, still continues in several localities, while in several cases a considerable improvement has taken place, owing to the managers having taken the sale of the articles into their own hands, and also because the manufacturers are no longer able to dictate their own terms. A further improvement might, no doubt, be effected, if measures were taken to vary the nature of the employment more, and prevent any branch from being overdone. In the mean time, the value of the system should not be judged of according to a mere money standard, for its greatest good is that which can only bear fruit in time, namely, the *spirit of industry* which it has created.



## § 4. NATIONAL AGRICULTURAL SCHOOLS.

The first attempt made in Ireland to introduce a system of industrial training applied to agriculture, was the establishment, under the auspices of the North Western Farming Society, of an Agricultural School at Templemoyle, in the County of Derry, in the year 1827. This school, which was modelled upon the celebrated one of Fellenberg, at Hofwyl, in the Swiss Canton of Berne, consisted of two departments, one for the education of the wealthier classes, and the other for that of the sons of farmers. Such a system was simply absurd, and accordingly the higher department was abandoned, and the other still continues in operation, and has effected a great amount of good.

This school was not only local in its character, but its advantages were necessarily confined to the limited class who could afford to avail themselves of them. It was not merely the wealthy and comfortable farmers, however, who stood in need of improved methods of cultivation, but rather the small farmers and agricultural labourers. It was indeed among this class that the absence of skill, of which we have spoken in the commencement of this pamphlet, became so painfully evident, when the country began to show signs of returning animation after the torpor of the first thirty years of the present century. Books and pamphlets were published in great numbers, drawing attention to the miserable state of Irish agriculture; and of course hundreds of philanthropic nostrums for the cure of the evil were proposed, wrapt up in the usual disquisitions upon the inherent failings of Irishmen, and the imaginary superiority of certain races.

In 1837 the Commissioners of Education turned their attention to the subject, with the view of supplying the agricultural classes with a rational system of industrial training. In their report for that year (the fourth) they thus pointed attention to the necessity of adopting such a system:—

“Considering too the very backward state of agriculture in Ireland, and that it forms the only source of employment for a vast number of the labouring poor, we think it particularly desirable that a better knowledge of it should be promoted; and that the schools under us should tend, as far as practicable, to bring forward an intelligent class of farm labourers and servants.”

The mode adopted in the first instance to carry out this object was simple, but yet involved a grand principle, namely, a combination of literary and industrial education. This system was inaugurated in 1838 by the establishment of the Model Farm and Agricultural Training School at Glasnevin, near Dublin. Here the teachers of the National Schools, when called to Dublin to undergo a system of training, to fit them for the more efficient performance of their duty, were to receive such an amount of instruction in the theory and practice of agriculture as would enable them, wherever favourable circumstances may have occurred, of combining industrial with literary instruction.

It is unnecessary to observe, that the time which a teacher could devote to agriculture amidst his other arduous studies, must have been very small, so small indeed, as to be apparently insufficient to enable him to derive



the slightest benefit from it. But when we take into consideration that the National Teachers of that day, especially of the south and west of Ireland, were almost all derived from the small farmer or agricultural labourer class, and usually boarded with the farmers in the districts where they taught, and very frequently, and, we may add, at one period of their lives, almost universally worked as farm labourers during part of the year, whilst endeavouring to complete their studies, it will be evident that they were especially qualified to take advantage of this brief opportunity, and from our own experience we know that in many instances they did.

For several years no further development of the system took place, but gradually minor institutions began to grow up, and already, in 1845, there were no less than five minor Model Agricultural Schools, and seven ordinary schools, in which instructions in agriculture formed part of the regular business. From that period the progress has been very rapid, until at last a gigantic organization has been created. It would occupy too much space and would be beside our purpose to follow the progressive development step by step; we shall content ourselves accordingly with stating in a few words the nature and extent of the organization, and its present condition.

The Agricultural Schools under the Board are divided into three classes:—1, Model; 2, Ordinary; and 3, Workhouse.

*Model Agricultural Schools.*—After the Model Farm at Glasnevin had been some time in operation, a desire arose in many localities for similar local institutions on a small scale; the Commissioners accordingly agreed to give £10 additional to the teacher of any National School who would undertake to give instruction on some farm at a convenient distance, on the theory and practice of improved husbandry, to a class of the more advanced pupils, and to a certain number of boarders, for whom he would undertake to provide accommodation. In order to insure a proper opportunity for obtaining a good practical knowledge, the Commissioners stipulated that the farm should not be less than twelve acres, and be provided with suitable offices for the accommodation of an adequate number of cattle, and for other farm purposes. A school so circumstanced would have been a model farm; and it was immaterial whether the land was provided by the teacher himself, or whether some local proprietor or committee subscribed the funds necessary to organize a small farm for the special purpose. In some instances the farms thus organized were much larger than twelve acres, and required the undivided attention of one person to manage them. In such cases the Board granted a separate salary of £30 a year to a competent agriculturist to superintend the farm operations, and give instructions in agriculture.

All the schools thus organized were necessarily on a limited scale, and their management was very simple and inexpensive. But although productive of great benefit, they did not supply all that could be demanded of such institutions. To do so it would have been necessary to establish them on a more extensive and efficient basis, and this would of course involve a large annual expenditure to keep them in an efficient working order, and enable them to serve as the experimental ground upon which all new modes of culture, new plants, &c., which it would be desirable to



introduce into the locality, should be tried. However anxious the generality of proprietors and school patrons might be to encourage good husbandry, there were naturally few who would be willing to undertake so great an immediate and annual expenditure. The Commissioners of Education accordingly resolved to undertake such risk themselves, in all cases where it might be deemed advisable to incur a large expenditure in the erection of an efficient model school, and where the locality had given proof of its desire to possess such an institution by the lodgment in bank to their credit of local subscriptions to the amount of from £200 to £400, according to circumstances, before the buildings were commenced.

The first model schools established were under the control and management of the local parties who subscribed the funds, but when the Commissioners built a school upon the terms just stated, they wisely took the entire management into their own hands. This important change in organization was announced in 1849, and since then nineteen Model Agricultural Schools have been brought into operation. In all these schools the agriculturist manages the farm for the Commissioners, and not for himself, as is the case in many of the farms under local management. He is provided with all the necessary implements, stock, &c., and also receives a sufficient "imprest" to meet all "petty expenditure," that is, of all sums not exceeding £3; for sums exceeding that amount he must have the sanction of the Commissioners through their proper officer. He is required to transmit monthly accounts of all expenditure and receipts connected with his farm, which undergo the most rigid scrutiny in the central establishment in Dublin, and are then submitted to the Agricultural Inspector, whose certificate is necessary for their final approval.

The establishment of these model schools, vested in and under the sole control of the Commissioners, does not, however, preclude the establishment of similar ones under local management, or prevent local parties who had contributed to found the earlier schools from retaining the management, provided they are willing to furnish the funds necessary to work them properly. Model Agricultural Schools may, therefore, be classed into:—

1. Those under local management.
2. Those vested in and under the exclusive management of the Commissioners of National Education.

Each "Model" Agricultural School is provided with accommodation for a certain number of boarders, composed of young men who are desirous of acquiring a perfect knowledge of agriculture and farm management, with the view of taking farms of their own, or of becoming land-stewards or agricultural teachers, and who reside for one or two years on the farm. The charge for maintenance is fixed at the extremely moderate sum of £6 a year, the Commissioners contribute the remainder. There is besides, in each school, a free scholarship, which is bestowed upon the most deserving pupil of the school, whose circumstances may render him unable to pay the £6 a year, and the other necessary expenses.

It is the existence of the class of boarders which, besides that they are larger, constitutes the essential difference between the *model* and the *ordinary* agricultural schools.

*Ordinary Agricultural Schools* are simply common National Schools,



in which the teacher forms an agricultural class of at least *ten* pupils, for the purpose of giving them *theoretical* instruction in the school, and *practical* instruction on a farm of not less than three statute acres, situate at a distance from the school of not more than half a mile. The farm must be cultivated in an efficient and proper manner, so as to serve as a model to the neighbourhood of improved management, a regular system of rotation, the house-feeding of cattle, and the careful collection and skilful application of manures. Wherever these conditions are fulfilled the Commissioners grant an additional salary of £5 per annum to the teacher. But where the farm continues to be properly managed, and the class to make a satisfactory progress, the Commissioners may, on the recommendation of the Inspector of Agricultural Schools, recommend the allocation of a sum of money to enable a paid class to be formed to assist in the working of the farm.

*Workhouse Agricultural Schools.*—For some years after the establishment of the present workhouses, no effort of any kind was made to give the juvenile inmates, but especially the male ones, any kind of industrial training which would enable them to become independent members of society. And whenever they were employed at any occupation it was merely in breaking stones, or the absurd and degrading labour of working a mill. The greater number of the workhouses being situated in rural districts, and a large proportion of their inmates being agricultural labourers, it naturally suggested itself to those engaged in their management that the youthful male inmates might be usefully employed in tilling any ground attached to the workhouse, or even that ground might be rented for that purpose.\*

In the early efforts made to put this idea into practice, the management of the agricultural operations was generally entrusted to some workhouse officer, utterly unacquainted with the duties which he was called upon to perform. This was, however, a necessary evil, for in all countries where there exists but little industrial skill, candidates for any particular office are more usually called upon for certificates of "respectability," and of having either done nothing, or failed in doing something, than for special fitness for the duties of the office. As the agricultural department of the National School system developed itself, however, a desire was naturally expressed to place the workhouse agricultural class and farm under its superintendence, as a number of the workhouse schools had already been placed under the superintendence of the other department. The Commissioners of Education accordingly accepted the charge in all cases where the boards of guardians thought fit to entrust them with it; and resolved upon awarding gratuities of from £10 to £15 per annum to all agriculturists of workhouses in connection with them, in which the management should be found satisfactory, and also to grant the books necessary for the instruction of those pupils placed in the agricultural class.

A certain number of Boards of Guardians have taken advantage of the

\* The advantage of connecting a large farm with all the rural workhouses was indeed perceived even before the passing of the legislative enactment for the relief of the poor, and the most strenuous efforts were made to have a clause to that effect introduced into the bill, but in vain.



assistance thus offered, but it is to be regretted that the number is still very small. This is chiefly to be attributed, in our opinion, to the absence among the class of persons from whom guardians are chosen, of any correct and progressive notions upon subjects of social economy. This ignorance is the cause of the narrow-sighted policy which prevents many boards from offering such a salary to an agricultural teacher as would ensure the services of a man competent to render the management of a farm successful. We may also observe, that to the same cause must be attributed the fact, that the progress, moral and physical, of the country is often sacrificed by Boards of Guardians and others to a mean and false economy, which ultimately entails five-fold expense upon the country.

This comprehensive system of agricultural education is administered by an Inspector and two Assistant-Inspectors, whose business it is to visit the various agricultural schools in operation, and to report fully on the state of each, and the degree of efficiency with which it is conducted; to afford suggestions for their more improved and judicious management if deemed necessary; to report on all applications for the establishment of agricultural schools; to examine and certify all the accounts transmitted by the conductors of the agricultural schools, under the exclusive control of the Commissioners; to examine the reports transmitted at the close of each year, from the various agricultural schools in connexion with the Board; and to make an annual report on the state and progress of the agricultural department generally, and many other duties which it is unnecessary to specify.

The original Model School at Glasnevin, which served as the starting point of the whole scheme, has been gradually enlarged until it has assumed the proportions of a College, where a still higher class of education is given than could be obtained in any of the District Model Agricultural Schools. Here, too, the pupil is enabled to see the most perfect implements of husbandry and farming on an extensive scale, both as regards tillage and the feeding of cattle. A Horticultural department has been added, and is about to be more fully developed, and facilities will be afforded for the study of Arboriculture also. Finally, a small museum, illustrative of the various objects which it would be desirable that the student should be acquainted with, is to be formed, and in order to complete the means of conducting systematic experiments upon cattle feeding, as well as to teach the proper and economic modes of killing and curing meat, so little understood in a proper manner in many parts of Ireland, a Slaughter-house is to be erected.

Accommodation is provided in this college for 90 boarders, who are maintained entirely at the expense of the Commissioners. These pupils may in general be considered as the sifted ability of the other agricultural schools throughout the country. From this point of view alone this institution is calculated to do an immense service to the country, by sending back to the rural districts every year, 45 well educated men, (the course of study extends over two years,) whose natural abilities would never have had an opportunity of being other-



wise developed. Hitherto it was only the large towns which afforded facilities of sifting out men of ability from the mass of the people, but this institution affords a perfect means to the rural districts also.

The Glasnevin establishment being founded chiefly for the use of those who could not afford to pay for a superior education, the majority of the pupils belong to that class, but the wealthy are not necessarily debarred from the advantages which it affords, as young men in good circumstances can attend upon all the classes, both literary and practical, as Extern Pupils.

On the 31st of December, 1853, the number of each class of National Agricultural Schools was as follows:—

Model Agricultural (both classes)	...	...	33
Ordinary	...	...	43
Workhouses	...	...	50
School Gardens*	...	...	3
Total	...	...	129

The following table shows the extraordinary rapidity with which this branch of the National System of Education has developed itself within the last four or five years.

*Table shewing the progress of the Agricultural Training Department of the system of National Education, for the four years ending 1853.*

Items of Progress.	1850.	1851.	1852.	1853.	Increase per Cent. in		
					1851 over 1850.	1852 over 1851.	1853 over 1852.
Agricultural Schools of all classes..	69	81	92	129	17·4	13·5	40·2
Do. Boarders .. ..	94	96	101	118	2·12	5·2	17·0
Do. Day Pupils learning Agri- culture .. ..	1,212	1,726	2,355	3,249	42·4	36·4	37·5
Do. Pupils receiving Payment in Industrial Classes .. ..	173	181	207	298	4·6	14·3	44·0
Land cultivated as Model Farms ..	A. R. P. 949 3 0	A. R. P. 1,086 2 11	A. R. P. 1,281 2 3	A. R. P. 1,789 2 14	14·4	18·	39·5
Amount paid for Labour ..	(Not	£ s. d. 1,339 7 3½	£ s. d. 1,680 5 8	£ s. d. 2,244 13 0	.	25·4	33·4
Value of Labour of Pupils ..	stated in	648 8 4½	976 19 0	1,770 16 2	.	50·7	81·2
Net acreable Profit on cultivation of Model Farms .. ..	statistics for this year.)	1 11 2	2 3 8	2 13 10	..	40·	23·2

In order to illustrate the working of the system we shall select two examples, one the Model Farm of Loughash, in the county of Tyrone, and the other the School Garden of Glasnevin.

The Loughash Model Agricultural School belongs to the class having local management. It consists of 40 statute acres 10 perches of a rather poor land, for which a rent of 13s. 10d. per statute acre is paid. The system of rotation adopted by the intelligent agriculturist, Mr. James Moore, who conducts the farm, is a five course

\* School gardens are simply plots of land attached to schools, less in extent than what would entitle them to be considered agricultural schools, and by means of which a class may be instructed in the management of a culinary garden.



shift; the stock, during 1853, consisted of 9 milch cows, 14 heifers or calves, 2 horses, 19 pigs, and 50 poultry. On the 1st of January, 1854, there were 14 boarders who paid, and 16 day pupils. In 1850, the year's balance sheet showed a loss of £45 13s. 6½d. but during that year implements and cattle were purchased, drainage and subsoiling effected, and the farm put in working condition. The following year showed a gain of £29 7s. 9d., the year succeeding, (1852,) the profit was £80 7s. 1d., and in 1853, it was £127 4s. 7d. or an acreable profit of £3 3s. 7d., as the following balance sheet will explain:—

*Balance Sheet of the Loughash Model Agricultural Farm for 1853.*

<i>Dr.</i>						£	s.	d.
To Amount of Inventory and Valuation at commencement of year ... ..						326	3	6
,, Paid for Labour .. ..						39	12	1
,, Free Labour of Pupils ... ..						45	16	7
,, Paid for Farm Seeds ... ..						6	12	2
,, " Manures ... ..						5	10	0
,, " Cattle ... ..						12	4	0
,, " Feeding Stuffs ... ..						5	14	6
,, " Implements and Repairs ... ..						7	18	1
,, " One Year's Rent of Farm ... ..						27	16	8
,, " " Poor Rate .. ..						2	6	5
,, " County Cess ... ..						1	10	0
,, Profit and Loss for Balance, being gain on the year						127	4	7
						£608	8	7
<i>Cr.</i>						£	s.	d.
By Amount received for Grain ... ..						45	19	4
,, " " Roots, &c. ... ..						21	10	0
,, " " Cattle sold ... ..						42	14	4
,, " " Dairy produce ... ..						62	13	6
,, " " Eggs and Poultry ... ..						4	14	5
,, Inventory and Valuation taken at the close of the year, inclusive of proportion of permanent unexhausted improvements ... ..						430	17	0
						£608	8	7

The excellent management proved by this balance sheet is still the same; nor is it a single isolated instance, but is becoming a characteristic of all the schools, as the progressive increase from year to year in the average acreable profit of all the lands under model farms shows. (See the table at page 73.)

Loughash Farm has been chosen as an illustration chiefly because it offers an example of a farm of considerable size and with a rather poor soil, which has been exceedingly successful, and at the same time that the literary element in the pupils' education was carefully attended to. The following extract from the Agriculturist's Report will be read with interest, as bearing upon the great question of a union of industrial and literary education:—



"The pupils in general conducted themselves most satisfactorily, displayed considerable energy and proficiency in acquiring a knowledge of the various branches of study brought under their notice, and I have no doubt, on examination, would be capable of exhibiting a fair specimen of the progress which pupils are capable of making, not only in agriculture, but in literary acquirements, though but half the day is devoted to study, the other half being for labour on the farm. The studies to which their attention is chiefly confined are of a practical nature, having relation to the management of land, as surveying in theory and practice; laying out and levelling roads, water courses, and drains; a knowledge of chemistry, geology and botany; of the rearing and feeding of stock, and management of land, all conducted on a small scale, but suited to the wants of the generality of Irish farmers, and on such principles of economy as cannot fail to insure success wherever it is practised."

Among the small model farms, that of Larne, which is only about 7 acres in extent, and upon which, under the management of Mr. J. Macdonnell, an acreable profit of £4 7s. 2d. was realized in 1853, being the maximum attained in any instance by the cultivation of common crops, is, perhaps, the best example of the perfect possibility of attaining successful results in both departments of a combined system of education.

Our second example will be taken from among the school garden class, which is as yet the least developed branch of the system, but which we hope to see, by-and-by, one of the most important elements in the National System of Education. The Glasnevin National School, which is situated near the village of Glasnevin, and in the neighbourhood of the great Model Farm, has been formed into an Industrial School, in which market gardening constitutes the branch of industry taught. The industrial class consists of fifteen boys of from ten to sixteen years of age, who work a plot of ground 1 acre 2 roods and 18 perches in extent. This small extent is divided into two portions, one of which is worked by the whole class, and the second portion is divided into seven lots, one of which serves as a species of nursery for the other six, and each of the others is allotted to one of six of the most deserving pupils of the class. The extent of each lot is from 10 to 12 perches, for which the pupil pays a rent to the Commissioners at the rate of £5 per acre. Upon these lots each holder must follow a specified system of cropping, and is required to keep a regular "Dr." and "Cr." account of all the receipts and expenses of the allotment which has been confided to him, in order that he may be able to render a satisfactory account to the Commissioners of Education of the balance in his favour at the end of the year. Mondays, Wednesdays, and Fridays are devoted by the holders of the lots to their cultivation, and on Tuesdays, Thursdays, and Saturdays they are employed in the other part of the garden, receiving practical instruction with the other members of the class, each of whom receives 6d. per week remuneration. This system does not take away from the time devoted to literary studies, as the Industrial Training is carried on out of school hours, the pupils being employed for two hours each day after the ordinary school business has terminated.



In 1851 the six lots, containing 66 perches, produced a profit in favour of the cultivators of £12 6s. 1½d., or at the rate of £29 16s. 8d. per statute acre; in 1852 they produced £17 1s. 10½d. or at the rate of £41 8s. 9½d. The whole garden in 1853 produced a profit of £52 16s. 6½d., or at the rate of £32 12s. 3d. per statute acre.

### § 5. INDUSTRIAL TRAINING IN WORKHOUSES.

Our space will not permit us to enter into this portion of the question at present; this is the less to be regretted, as our present object is unconnected with it. It is a great and important question for the country, however, and should be taken into serious consideration without delay. By way of directing attention to the subject, we shall give a few statistics, showing the condition of the juvenile inmates in the 163 Poor Law Unions of Ireland at the commencement of last year, the date of the latest official information published respecting them:—

*Table showing the Total number of Boys between the ages of 9 and 15 years, in all the Irish Workhouses, in September, 1853; the number receiving Industrial Training; the quantity of Land in Cultivation; and the average daily duration of Training.*

Number of boys between the ages of 9 and 15 years who had received instruction in a trade—					
Shoemakers	..	...	..	765	} ... 3,196
Tailors	...	...	...	1,213	
Weavers	...	...	..	835	
Bakers	...	...	...	195	
Carpenters	...	...	...	115	
Tinsmiths	...	...	...	34	
Other trades	...	...	...	39	
Number of boys under 15 years of age who formed agricultural classes, and who were wholly or partially employed on the farm					
...	...	...	...	...	... 3,783
Number of boys between the same ages not undergoing any Industrial Training					
...	...	...	...	...	... 5,341
Total number of boys between the ages of 9 and 15 years in all the Irish workhouses					
...	...	...	...	...	... 12,320
Total quantity of land attached to workhouses, or auxiliary workhouses, available for cultivation					
...	...	...	...	...	A. 1,506 R. 2 P. 8
Quantity under crop in September, 1853, cultivated wholly or in part by boys					
...	...	...	...	...	1,070 3 23
Average number of hours a day devoted to Industrial Training					
...	...	...	...	...	... 5 hours.

This table shows a very low state of industrial organization, not only because of the small number of trades taught, but of the nature of the trades themselves, with few exceptions, if we can indeed apply the term trade to the making of workhouse garments. We are fully



confident that five per cent. of those who learn the art of making workhouse shoes and clothes, would never get employment outside the walls of one. So far from looking upon such employment as Industrial Training, we believe, except for the mere economy of the thing, that it is rather subversive of skill than otherwise. And yet we are convinced that a style of dress might be adopted for workhouse inmates, which, at the same time that it would be as economical as the degrading one now in use, perhaps even more so, would enable them to exercise some skill in the manufacture of the different articles, and be such as would inculcate habits of taste and cleanliness, and give that feeling of personal dignity to the wearer, without which it is in vain to look for moral improvement. As long, however, as poverty and crime remain synonymous in the ideas of the wealthy portion of the public, and be equally confounded in all legislative enactments, it would be vain to expect our Boards of Guardians to entertain so philosophical an opinion of the importance of clothing.

Even this employment is better than being left in a state of absolute idleness, a crime which is committed by the Guardians of several Unions, as the following table, taken from the truly admirable Report of Mr. Kavanagh, Head Inspector of National Schools, upon workhouse and prison schools, contained in the Appendix to the Twentieth Report of the Commissioners of National Education, will show:—

Provinces.	No. of Unions in which no boys work at trades.	No. of Unions in which no boys work on the land.	No. of Unions in which there is no industrial training for boys.
Ulster	15	5	5
Munster	24	17	9
Leinster	9	14	7
Connaught	6	11	5
Total	54	47	26

The Industrial Training of the girls in the workhouses is perhaps not so low as that of the boys, for out of 14,273 between the ages of nine and fifteen years, who were inmates of the Irish workhouses in September, 1853, 9,166 were returned as receiving some industrial education, and some even of a superior kind, relatively to that given to boys.

The remarks which we made in speaking of Workhouse Agricultural Schools, apply with equal force to the teaching of trades, the value of which should be judged of rather by the future benefits which would be conferred upon the unions, by relieving them of the paupers as they get trained, than by a mere paltry gain or loss upon the annual balance sheet.

Industrial Training in Prisons involves many considerations unconnected with the general subject to which we wish to draw attention. It is rather a subject to be treated by those who make a study of Prison Reformation.



## CHAPTER IV.

## SUGGESTIONS.

A perusal of the foregoing pages must, we feel assured, bear us out in our preliminary statement, that we possess in Ireland at this moment the materials with which an industrial training organization, analogous to that which has been so successful in Belgium, might be constructed. Indeed in the case of agriculture the organization is already complete, and leaves nothing to be desired except its extension to localities where agricultural schools have not yet been founded, and the further development of the system of school gardens, one of which ought, in our opinion, to be attached to every rural National School in Ireland. The existence of such a system, and its perfect success in combining literary with industrial training, goes even a step in advance of the Belgian workshop experiment, in which there was no such combination, and removes all objections which might be urged against the principle of industrial training.

We may reasonably ask, then, why not try the experiment of connecting the Female Industrial Schools at present in connection with the Commissioners by means of an analogous organization, of increasing their number, the branches of industry taught, and of establishing a number of manufacturing schools for males also? Such workshop schools might correspond to the District Model Agricultural Schools, and, like them, should only be established on the demand of the inhabitants of a locality, and after they had contributed towards its erection to the extent, say, of half the cost.

Once established, the Commissioners should provide a competent industrial teacher, there being no necessity to appoint a literary one, as the new establishment should in all cases be grafted upon an existing National School. They might then enter into a contract with some small manufacturer to carry on the manufacture upon certain terms, and under the control and subject to the strict inspection of the Commissioners. Or if, in the first instance, some small manufacturer could be found who would undertake the risk of building and working a similar workshop, (subject to a similar inspection, and to the union of literary instruction with the industrial training, a condition which should be imposed in all cases,) upon receiving a certain sum of money in the first instance, or an annual contribution, the Commissioners might dispense with any further local aid, and enter into such a contract.

In the case of certain difficult branches of industry, the Commissioners might even work the school themselves, in the same manner as the vested Model Agricultural Schools, or at least do so until its success would warrant its being taken up by private enterprise.

The kind of manufacture or manufactures proposed to be estab-



lished in a locality should be carefully considered, so as to adapt them to the circumstances of the place, and to the facilities which it might offer of becoming a centre of industry. With this view, it would be most desirable that the workshops should not be confined to large cities and towns, but be established in certain small towns also. When a workshop would have trained a sufficient number of persons in a locality to enable private enterprise to take advantage of the skill created, it may either be allowed to pass into private hands, or be transferred to another locality.

In all cases an effort should be made to manufacture the greatest possible variety of articles, so as to prevent one from being overdone. In the selection of manufactures care should also be taken to observe a due proportion between the numbers of workshops allocated to each, and the extent of market available. Of course it is unnecessary to observe, that only those manufactures which would require a small and inexpensive plant, in no case exceeding the cost of buildings, &c., upon a model farm, could be attempted. Even here too the number would be limited by other circumstances, such, for instance, as that, although an article might be made with very inexpensive plant, it might yet be so connected with other large branches of trade, that it could only be attempted where certain large factories already existed. The following list will convey an idea of the articles, the manufacture of which might, under favorable circumstances, be attempted; the greater number being adapted for male schools.

*Articles, the manufacture of which might be attempted in Industrial Training Schools.*

1. Cutting, turning, and polishing of marble, serpentine, &c. for ornamental purposes.
2. Manufacture of lucifer matches, german tinder, &c.
3. Manufacture of wooden and brass clocks.
4. Weaving of cotton fabrics—cotton velvets, cords, &c., jacquard made goods, window curtain muslins, satteen and twilled jeans, Marseilles and other quilts, cotton, damasks.
5. Weaving of woollen fabrics—single and double milled cloths, beavers, pilots, mohair, tweeds, &c., cassimeres, doe skins, fancy trouserings, Welsh and other flannels, blankets.
6. Weaving of worsted and mixed fabrics—damask table covers, moreens, union double twills, figured cobourgs, orleans, union damasks, silk warp cobourgs and orleans, tabinets, poplins, silk warp damasks, silk warp alpaca lustres, shawls, &c.
7. Weaving of silk fabrics—shot, watered, checked and chiné silks, damasks, brocade, floret, tobine, figured handkerchiefs, &c., furniture damasks, gold and silver tissues, plain velvets, terries, plush, lisse, areophane, blonde, and other gauzes and crape, fancy ribbons, shawls, &c.
8. Weaving of linen fabrics—damasks and diapers, and in general all woven fabrics of whatever material, requiring a certain amount of skill, but not in any case of plain fabrics usually made by power-looms.
9. Ornaments in feathers—muffs, &c.
10. Manufacture of stamped paper—linen bands, card boxes, lace, gilded, silvered, and embossed ornamental paper, artificial flowers in paper, doll's heads, snuff boxes, and other articles in German papier-mache.
11. Manufacture of British papier-mache.
12. Manufacture of card cases, pocket books, writing cases, blotting cases, portemonnaie, and other articles usually made at Offenbach and other German localities.
13. Manufacture of carpets of all kinds.



14. Manufacture of lace of all kinds, Valenciennes, Honiton, Mechlin, Guipure, blonde, Grammont, &c., Brussels, sewed, and tamboured muslins, embroidery, &c.
15. Manufacture of fringes, gymps, tassels, girt-web for saddlery use, elastic web, &c., in cotton, worsted, and silk, or mixed.
16. Manufacture of boys' caps, &c.
17. Manufacture of felt hats.
18. Manufacture of plaited straw bonnets, poplar or British chip bonnets, willow bonnets, crinoline or horse-hair bonnets, &c.
19. Manufacture of cotton, woollen, and silk hosiery.
20. Manufacture of gloves.
21. Manufacture of bits, stirrups, buckles, corkscrews, tweezers, nut crackers, locks, latches, bolts, and other small hardware (already partially carried out in one district in Ireland, in the case of the first articles in the list).
22. Manufacture of cheap cutlery, steel toy trade, &c.
23. Manufacture of tinplate, wrought zinc, and copper-ware, as kettles, coffee and teapots, saucepans, dish-covers, coal scuttles, &c.
24. Manufacture of German silver, Britannia metal, argentine, pewter, &c. ware, as teapots, basins, spoons, cover dishes, inkstands, &c.
25. Manufacture of buttons, coffin furniture, and stamped brass, tin and zinc ware.
26. Manufacture of wire-work, wire gauze, paper webs, winnowing cloths, bolting screens, &c., pins, needles, hooks and eyes.
27. Manufacture of artificial flowers.
28. Manufacture of carvings in wood, common turning of domestic articles, baskets.
29. Manufacture of paper hangings.
30. Manufacture of haircloth for furniture, spermaceti bags, mohair and starch cloths, brushes of all kinds.
40. Manufacture of horn and bone buttons, combs, and other articles in horn.
41. Manufacture of cocoa nut and similar fibre, cordage from hemp, flax, &c., Jute, Sunn, and Manilla hems, fishing nets, garden netting, &c.
42. Manufacture of common pottery.

The greatest encouragement should be afforded to deserving pupils by offering prizes, *and the permission to attend the workshop should be made a reward for literary progress.*

Drawing Schools connected with any of the National Schools, might be converted into Schools of Design, in connection with the workshops established in the locality. And in order to further improve the taste and skill of the pupils trained to a trade, a small museum might be fitted up in each school, containing the choicest samples that could be anywhere found of the articles manufactured in the locality, in order to serve as models.

Scholarships might also be established for the most deserving pupils, to be held for a certain time, so as to enable them to obtain a complete technical education to fit them to be managers of factories.

Similar workshops might also be established in workhouses, and might, as the common and agricultural schools, be included under the new organization. But we would observe, that industrial training can never succeed in workhouses, unless those who work have more incentives to labour than pauper food and workhouse clothes, unless, in fact, they receive a certain portion of their earnings, to enable them to start in life.

We might go more into detail upon the subject of such an organization, but until it would be about to be inaugurated, it would be clearly of no use. The few remarks which we have made, will, we hope, set people to think upon the important subject. May they also lead them to act.