

Manufactures' and Liberal Arts' Building.

THE WORLD'S FAIR, CHICAGO, 1893.

WOVEN FABRICS AT THE
WORLD'S FAIR.

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WITH FORTY-FOUR ILLUSTRATIONS
OF DESIGNS AND SKETCHES OF WOVEN SAMPLES.

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INTRODUCTION.

ALL writers on the World's Fair concur in the opinion that its colossal proportions distinguished it from all previous International Exhibitions. Yet, while magnitude was the quality which pre-eminently impressed the observer, there were many elements of singular beauty and attractiveness in the costly character of the buildings, the extensive grounds, and the magnificent situation of the Fair. Architects and others have adversely criticised the scheme of construction and artistic treatment of the several erections, but to the ordinary mind the general grouping of the buildings, and also the styles of architecture, were unique and beautiful, whether viewed *en bloc* or separately. Novelty and grandeur of design were paramount in all the structures.

On entering the Fair a panorama of rare composition was unfolded. Primarily the almost universal whiteness of the exteriors of the buildings imparted a freshness of tone which, however, was only saved from creating a sense of visual monotony by reason of the forcible contrast it formed with the rich diversity of artificial landscape, fringed by the waters of the Lake Michigan, and the infinite range of colourings of natural and manufactured products of all nations everywhere

PART I.

GENERAL CONSIDERATIONS.

The World's Fair, though undoubtedly the largest exposition of arts, crafts, and industries that has been witnessed, was imperfectly organised, so far as its textile sections were concerned. It afforded the observer anything but complete data on which to estimate the magnitude of the weaving industries of the Western world. On this account it must not be concluded that the Columbian Exhibition was barren of interesting and suggestive features for the British and European manufacturer. If it failed, as it certainly did, to illustrate the typical woven productions of Great Britain, France, Germany, and Belgium, it brought out with unique emphasis a most important fact—that *America is progressing rapidly in the industrial arts, and particularly in woven manufactures*. Her exhibits in woven fabrics and weaving machinery demonstrated this fact.

EXHIBITIONS AND THE LESSONS THEY TEACH.—When I was occupied in studying the textiles at the Paris Exposition of 1889, it was remarked to me by an English manufacturer that the French productions there displayed were an eye-opener to the whole world. That was a true and sound assertion. France then lavishly exhibited her best loom products; and many

PART I.

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GENERAL CONSIDERATIONS.

displayed. The monochromatic colouring gave rise to the phrase "The White City," appropriate on the ground of its colour significance, and on account of the numerous aspects, presented to the eye of the visitor, which are associated with an active and a beautiful town.

The blend of dome and pinnacle and of the various styles of architecture, observed in the principal buildings, was rendered all the more imposing by the well-planted gardens and pretty lakelets by which the latter were intersected.

A wide promenade skirted the borders of the expansive waters of the Michigan, and it was from this point of vantage that one of the most entrancing views was obtainable of the extent of the Jackson and Washington Parks, in which the Fair was located, and where the charm and vastness of the buildings were most impressive. To have seen these, illuminated, and interlaced with spacious streets, patches of green, flower beds, and waterways, busy with gondolas, and spanned by elegant bridges, was to have had a glimpse of a scene which bordered upon fairyland itself.

The Manufactures' and Liberal Arts' Building, in which the textiles were exposed, was the giant of the exhibition. Its dimensions beat the record. It is said to have been the largest building ever erected, being three times the size of St. Peter's at Rome, and capable of receiving under its roof the entire standing army of Russia.

The frontispiece to this treatise is a photogravure of this immense structure.

On the whole, the Columbian Exposition may be regarded as one of the most gigantic enterprises undertaken and successfully completed by the intellectual force and technical capabilities of mankind.

The illustrations in this volume, which have been so admirably prepared by my publishers, are not in all cases exact analyses of the styles they typify. Considering that the samples were under glass, perfectly accurate dissections were impossible. Still, the sketches and sectional drawings afford a good idea of the actual samples and of the scheme of weaving practised in their manufacture.

R. B.

REGENT PARK AVENUE,
LEEDS,
February, 1894.

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textile experts expressed their amazement at the uniform excellence of the silk manufactures of Lyons, St. Etienne, and Paris. The textile producers of the world were enlightened as to the capacity—both artistic and technical—of the French designer. Perhaps it is hardly feasible to draw a comparison between France and the United States in regard to their respective exhibitions, the points of difference between their loom productions being so marked and numerous; yet, in one important particular, what was true of the former country and its specimens is also true of the manufactures of the States recently exposed at Chicago. They practically exemplified the degree of skill possessed by the makers of woven fabrics in the New World. One thing is certain: American and Canadian designers had, in this instance, done their best to make their exhibits typical of the conditions of manufacturing in their respective countries. Their performances may therefore be considered as a criterion of what they are capable of accomplishing in the loom. Earnestness and painstaking effort were evident in all their work. Many of the principal firms in the States and in Canada—whether utilising wool, cotton, or silk materials—were not only exhibitors, but they had spared neither expense nor labour so long as they might appear to advantage in the eyes of the world. A serious effort such as they made cannot fail to show the degree of excellence they have arrived at in the weaver's art. When a manufacturer exposes his finest productions the

outsider may judge at once of his knowledge, skill, and craftsmanship. As an artist's genius is evident in the works he transfers on to canvas, so the manufacturing acumen of the textile producer is seen in the construction, design, and finish of the fabrics he makes. The United States, France, Japan, and the silk manufacturers of Crefeld all entered seriously into this enterprise; hence, by consulting their exhibits, it is possible to ascertain the extent of their knowledge of, and skill in, textile manufacturing and designing. A casual glance at the Fabrics' Departments of the Fair was sufficient to enable one to distinguish four of its most important features—namely, the scarcity of British and German exhibitors, the ample display of United States manufactures, the surpassing excellence of French silks, and the position which Japan is gaining by degrees as a people skilled in the manipulation of the loom.

BRITISH MANUFACTURERS AND INTERNATIONAL EXHIBITIONS.—The dearth of English and Scotch exhibitors was primarily due to the indisposition on the part of home manufacturers to expose their best efforts to their would-be competitors. It has been said—and with some show of reason—that England was the loser, and not the gainer, by the great London Exhibition of 1851. German and French craftsmen had then afforded to them every opportunity for studying English machinery and systems of work, and, what is more, the skilful machine attendant imparted information freely on all difficult points affecting the proper setting and working

of the machinery exhibited. Thus, that Exhibition, in the eyes of some, was the vast technical school—the great factory—in which Britishers helped to educate their Continental competitors. There are manufacturers (viewing the subject in this light) who will on no account forward samples of their goods to Exhibitions where they may be inspected for months by those seeking to become their rivals. They act upon the policy of the old proverb, “Once bitten, twice shy.” This is proved by the inadequate displays of English fabrics in the Paris Expositions of 1871 and 1889, as well as in the World’s Fair of 1893. Still, as subsequent analysis of the exhibits will indicate, Great Britain had, in spite of her exhibitors not being numerous, some creditable woven textures at Chicago. When such firms as Collinson and Lock, London (silk mercers); Barlow and Jones Limited, cotton manufacturers; Apperly and Curtis, Stroud; Marling and Co. Limited, Stonehouse; Hudson, Sykes and Bousfield, Leeds; and Neilson, Shaw and McGregor, Glasgow, exhibit, one may expect to find some interesting and typical specimens of the weaving industries of Great Britain. The fabrics shown by these makers were second to none in excellence of manufacture and genuine novelty of pattern in the Fair, and they served to illustrate to those who visited Chicago that had the manufacturers of the Old Country exerted themselves, they, at least in woollen, worsted, cotton, and linen textures, would have appeared advantageously side by side with other countries.

AMERICAN AND CANADIAN MANUFACTURERS.—There are obvious reasons why the United States and Canada should have made an extensive show. Their textile producers were determined that the Old-world manufacturers should see them at their best; and they accomplished this purpose nobly. As might be anticipated, there were many exhibits of mediocre work, and there was, moreover, a fair display of styles fashionable one, two, and even three decades ago; but apart from these drawbacks the States gave evidence in their woven productions of the remarkable, if not phenomenal, progress they have made in the weaving arts during the past few years.

INDICATIONS OF GROWTH IN THE AMERICAN WEAVING INDUSTRIES.—With energy and the unique capacity for labour the American possesses, combined with his enterprise and intelligence, it may be taken for granted that it is only a matter of time and the manufacturers of the New World will run neck-and-neck with English, German, and French producers. The American exhibits in woollen, worsted, and silk fabrics indicated the strenuous endeavour being made by the textile producers in the States to improve their manufactures. Some of the silks shown by New York and Philadelphia firms were most skilfully made and artistically ornamented. They were the productions of well-trained craftsmen and of designers fully acquainted with the principles of silk weaving and of the decorative arts. Either in the States or elsewhere they have been

systematically educated. Their work bears the stamp of the true craftsman. In the matter of technical training the Americans are not found wanting. The go-ahead manufacturers in both Canada and the States have their sons and employés educated either in English, French, or German schools, or in their own textile institute in Philadelphia. It is well known that they attend the Yorkshire and Bradford colleges, and I have met them at Crefeld, Reutlingen, and Roubaix. The information they acquire abroad is imported into their own works. While in Toronto I called upon an old Yorkshire College student, who had recently commenced the first dyeing and cloth-finishing plant that had been run in the city. At the time of my visit his machines were engaged upon English and French fabrics, which he was dyeing and finishing on the most improved systems. There is quite a number of English designers, who have attended British technical schools, in the States. If the New World manufacturers were not introducing this highly-skilled labour into their works, and at the same time educating their own hands, they would certainly not be so successful, as their exhibits at the Fair prove them to be, in producing the various classes of woven goods. It is only necessary to examine the fabrics produced by the manufacturers of Massachusetts, New York, Connecticut, New Jersey, and Pennsylvania to have the fact accentuated that the ordinary American does not intend to rest satisfied until he obtains a place in the front van of the world's textile producers. If we learn nothing else from these

exhibits than the invaluable lessons of the dead earnestness of the manufacturers in the States and the creditable standard of work they have already attained in the arts of yarn and cloth construction, we shall be the better for carefully analysing their wool, worsted, silk, and cotton fabrics.

FRENCH SILK EXHIBITS.—With regard to European-made goods, France had in silks by far the most excellent display. The manufacturers of Crefeld also exhibited some good specimens, but the German silk textures were neither so diversified nor so artistic as those found in the French section of the Fair. The Lyonnaise silk designers are both artists and weavers; and hence they combined in their productions every element that contributes to the weaving of beautiful fabrics. The exhibits were not so numerous as in Paris, but they were typical of the best loom efforts of Lyons and St. Etienne. They comprised plain, sateen, rep, and twill fabrics, as well as decorative textures, and elaborately-ornamented articles for ball costumes, opera cloaks and mantlings. There was also a magnificent display of altar-cloths and church furnishings; and the lovers of the eccentric in weaving found the woven *Livre de Prières*, beautifully illuminated on every page, and the patterns, of which the subjects were the waves of the ocean and the Niagra Falls, exceptionally interesting. The French section saved the textile show from mediocre uniformity. In treating of the fabrics in detail some of the lessons they teach in design, colour, and manufacture will be explained.

VARIOUS EUROPEAN COUNTRIES AND THEIR EXHIBITS.—Amongst other European countries whose textile craftsmanship was illustrated in this Exposition were Belgium, Austria, Denmark, Norway, and Sweden. Belgium is a progressive manufacturing country. In Verviers there are several large concerns engaged in the production of fancy woollen and worsted fabrics, and in Ghent a considerable volume of trade is done in cottons and linens; hence, it was only in keeping with the status the Belgian manufacturers have acquired in textile work that their exhibits at Chicago—whilst very limited in number—should have been uniformly good. The worsted styles were perhaps the most satisfactory, being novel in pattern and smart in finish. The woollens in a few instances lacked brightness of colouring and beauty of texture.

Two or three Italian firms had some remarkably fine decorative silks and tapestries—a branch of weaving evidently practised with an uncommon degree of excellence, both as to design and technical execution, in Milan and Venice. The very small display of Austrian textures included some admirable mantles and plushes; and the exhibits of Denmark, Norway, and Sweden were chiefly artistic embroideries and lacework.

WOVEN SPECIMENS OF THE ARGENTINE REPUBLIC.—Judging from the fabrics classed as emanating from the Argentine Republic and Japan, these countries are making rapid strides in the manufacturing arts. The former was chiefly distinguished by its pretentious

display of woollen and worsted textures for gentleman's and ladies' wear. The fancy shawls, mantles, and also trouserings and suitings were soundly made, and, in not a few instances, cleverly executed as to design, construction, and colouring.

JAPANESE TEXTILES.—Japan had some exceedingly fine specimens in silk. The embroidered articles were unparalleled in choiceness of design and execution. It is remarkable how skilful the Japanese weaver is. He can develop the most complex forms in the loom. Originality of pattern and freshness of colouring are elements of Japanese textiles that at once attract the eye. Incongruity of form and of shade are rarely seen in these manufactures. The Jap appears to possess a natural genius for design and colour assortment, and in certain styles of silks he has gained unique success. Japanese weavers make a fine white silk texture, with twill or fancy weave ground and warp and weft floating for figure, that is equally meritorious whether considered as a well-constructed fabric or as an example of woven ornamentation. Generally the pattern is more original in style than those seen in Western manufactures, but it has an excellence of composition which characterises it as a work of art. It is evident, from the show in silk products made by the Japanese, that they are seeking to extend their export trade, which has undergone remarkable expansion during the last decade, and if they continue to produce articles of such merit as those exposed by

them in the World's Fair they must succeed. Many of these Japanese fabrics are hand-woven, and in some instances the threads which form the pattern are elevated by hand, only the sheds which give the ground of the texture being acquired by automatic appliances. In addition to silks the Japanese exhibited several kinds of pile carpets and rugs, and a limited supply of cotton specimens.

WOMEN'S EXHIBITS.—As a result of women's handiwork, there was displayed in the Women's Building an interesting collection of embroidered woven productions. The most valuable specimens of this class were exhibited by the members of the Society of Associated Artists, New York, and by the members of the Baltimore Decorative Art Society. Indiana and Delhi also exhibited some excellent tissues ornamented by needlework. Great Britain had only one or two clever exhibits, its women's work in embroidery, and the kindred arts of hand lace making and fancy needlework, not comparing favourably with those of the United States. The choice specimens in fabrics, neat in colour and construction, skilfully embellished by the needle, which were to be seen in this section of the Fair, were specially interesting as showing that there is, in this branch of decorative art, a field for the exercise of artistic and technical skill in the application of certain types of pattern, which cannot be satisfactorily developed in the loom, to the surface of woven textures. The embroiderer's art ought not to be

neglected. In combination with the sister art of weaving, it may be made to yield some of the most exquisite tissues that it is possible to produce. As examples of this one only need mention the exquisite embroideries—pictorial and otherwise in treatment—which were displayed in the Japanese department of the Exposition.



PART II.



WOOLLENS AND WORSTEDS.

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COUNTRIES WHICH EXHIBITED ALL-WOOL GOODS.—

The principal countries exhibiting woollens and worsteds were the United States, Great Britain, and Germany. The former had by far the most extensive assortment of these textures, but its exhibits, when compared with those made by English and Scotch firms, did not possess the fineness of construction and softness of touch which characterised the generality of British cloths.

Germany ranked next to Great Britain in excellence of woollen manufactures. Certain classes of fine all-wool goods of German production, with a ribbed ground, and weft figure, were novel in colour and design; but the doeskin, box, and dress-face cloths, and the better qualities of worsted coatings and trouserings, were not comparable with those belonging to West of England firms.

Belgium had a limited range of choice worsted styles, but the woollens were too loud in colour and design.

France was most indifferently represented in these fabrics, only two or three firms exhibiting.

GREAT BRITAIN'S WOOLLENS.—As it may be advantageous to consider the manufactures of each country separately, reference may, in the first place, be made to the special features in the British textiles of carded and combed yarns. In illustration of the variety of woven textures producible with these yarns in this country, no more typical exhibit was to be seen in the Fair than that of Messrs. Bartrum, Harvey and Co., City merchants. They had an admirable case of specimens, which contained woollen cords in various sizes of reps; neatly-coloured checkings for overcoat linings; vestings of the plush class, with a small silk weft spot; tennis trouserings; cover coatings, such as Venetians and other fine twist-warp fabrics; and a choice assortment of Scotch tweeds. They also displayed some beautiful garment linings, with the lustrous permanent finish obtainable by Messrs. Kirk's process, of Leeds. The woollen cords, vestings, and linings were specially good, and the general exhibits were choice as to style of design and textural construction. More than ordinary pains had been exercised in the preparation of the case, resulting in the arrangement of a series of textiles equally interesting, whether considered *en masse* or examined in detail. There was not a single specimen displayed that one would have removed. All the samples harmonised, were neat and attractive in design and finish, and were in reality illustrative of the skilful manufacturing practised by the best firms in Yorkshire, the West of England, and Scotland.

Before considering the exhibits of actual manufacturers, the specimens of Messrs. Dormeuil Frères, of Burlington-street, London, in fine worsteds, woollens, and vestings, should be described. The waistcoatings were particularly handsome and varied in style. Those with a silk groundwork in a neat, pretty weave and a checking of fine white plush were most exquisite productions. The worsted vestings were equally excellent. A style made in about 2-fold 22's worsted warp and weft and extra silk spotting in two shades is illustrated in Fig. 1. Only one-fourth of the complete pattern has been executed. The principal spot occurred twice in a space of about 96 ground threads and picks. By having a weave of a Mayo type to form the structure of the fabric proper, a neat foundation was provided on which the colouring of the spotting was advantageously seen. In weaving, extra cards would be necessary for the spotting. The small squares seen in the sample were developed, in the woven texture, in a subdued shade of silk, but the effects in grey in a brighter yarn.

This house also exhibited some choice styles in the better classes of both woollen and worsted textures.

SCOTCH TARTANS.—There was one unique display of tartans by Messrs. Neilson, Shaw and MacGregor, Glasgow. It comprised a typical collection of these fabrics in wool, worsted, and silk materials. The one hundred and forty Highland clan patterns exhibited showed the vast utility of this species of woven effect in the hands of the ingenious designer.

It is a form of design applicable to dress textures, mantlings, shawls, mauds, wraps, and scarfs of every description. The fact that tartans, more or less modified, are seen in woollen, worsted, and silk goods, illustrates their special usefulness in textile ornamentation. Messrs. Neilson, Shaw, and MacGregor had a

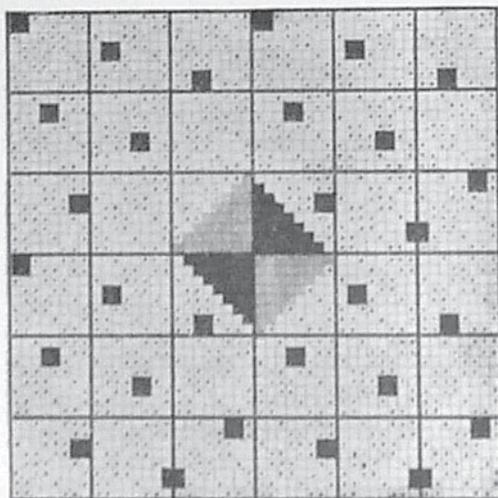


FIG. 1.
(Black squares and grey equal extra weft.)

splendid exhibit of their specialities in the Paris Exhibition of 1889, but it was neither so elaborate nor so comprehensive as the one at Chicago, in which tartan patterns were developed in fine woollen yarns in

Saxonies and cheviots for dress and mantling fabrics, shawls, and mauds; in worsted yarns for similar textures; and in silk warp and weft for scarfs, neckerchiefs, and ribbons. One further application to which the tartan base had been put by this firm was to curtains, hearthrugs, and Brussels pile and other carpets. The manufacture of the numerous fabrics exposed, both as to neatness and softness of texture, was excellent. The colourings were clean, bright, and cheerful, and the checkings smartly defined whether they occurred in thin or stout fabrics composed of fine or thick yarns. The interior of the stand, in which the exhibits were displayed, was carpeted with a Brussels pile of a tartan check pattern, and the walls were draped with tapestries of a similar order of design. Hearthrugs were also shown to match these productions. Whether this scheme of utilisation of tartans is likely to become popular, or is even appropriate, need not be discussed here; it is, however, worthy of note that Messrs. Neilson, Shaw, and MacGregor have, by applying the historic colourings and checkings of the Highland clans to this type of woven article, developed this principle of design in a new form. To all interested in the variety of choice effects obtainable in the loom by altering and elaborating the numerous tartans, the complete and varied collection of this famous house was of more than ordinary importance, for it illustrated how perfectly these goods are now manufactured in a diversity of materials, counts of yarns, styles of fabric construction,

and finish, and also the several types of texture for garment and decorative purposes in which tartan designs are executed.

In their hosiery exhibit this firm had some most beautiful knitted shawls made by the natives of the Shetland Isles. These were particularly interesting on account of the yarns of which they were composed having been spun by hand; and when it is remarked that a shawl $2\frac{1}{2}$ yards square only weighs $2\frac{1}{2}$ oz., and is made of two-ply yarn, or contains twelve miles of single thread, something of the extreme fineness of these productions will be understood, which serve, moreover, to illustrate that it is still feasible, by manual dexterity, to spin carded wool to a degree of extenuation difficult to exceed by machine operations. But it is not simply the fineness acquired that is remarkable; there is also uniformity of thickness—another quality of a good yarn indicative of the perfection attainable in spinning on the distaff. The designs of these shawls were chiefly worked out on the pine base, and were most elaborate in character.

WEST OF ENGLAND FIRMS.—The West of England manufacturers—including Messrs. Marling and Co. Limited, Messrs. Charles Hooper and Co., Messrs. Apperly, Curtis and Co., Messrs. Isaac Carr and Co., and Messrs. T. P. Pocock and Co.—had excellent exhibits. Their cloths were the redeeming feature of the all-wool textiles at the Fair. The various styles of fabrics they exhibited were soundly made, had a

satisfactory handle, and possessed exceptional wearing properties, being invariably made of good materials.

Messrs. Marling's collection included specimens of the finest makes of woollen and worsted goods. One sample of a worsted coating was remarkable in this respect. The make appeared to be a 18-shaft weave, and the yarns used probably 2-fold 60's counts, and woven in a set of about 144 ends per inch. Considering that the ordinary corkscrew has been excessively used for piece-dye coatings, one was a little surprised to observe the extent to which this species of crossing occurred in their goods. The worsted trouserings, with a floating warp back, were neat both in colour and pattern, but not strikingly new in design. Of the worsted fabrics, the suitings in worsted and silk twists were perhaps the most creditable in point of novelty. No firm in the Exhibition had such an excellent display of Vicuna cloths as these well-known manufacturers. The handle, texture, construction and finish of these fabrics were all that could be desired. In the line of beaver overcoatings, box or livery cloths, and meltons, the same standard of excellence of manufacture was evident in the several specimens exhibited. To produce goods of such uniform qualities as to shade, finish and elasticity, suppleness and stability of feel, indicates two things—first, the use of appropriate wools for the class of fabric required; and second, skilful manipulation of the material in every process of yarn-making, cloth-construction, dyeing and finishing. Extended experience and practice,

coupled with the intelligent supervision of the operations of manufacture, are the only factors which can secure the high standard of cloth-making which was apparent in almost every class of fabric exposed in Messrs. Marling's collection of woollen and worsted textures.

Messrs. Charles Hooper and Co. exhibited similar woollen goods to the previous firm, but they had a more important display of livery cloths in white, light drabs, blues, and greens. These were beautiful fabrics, cleverly manufactured, and most skilfully finished. The nap or pile was uniform in density and lustre, and the cloths possessed firmness combined with softness and elasticity of handle. Woollen textures so intricate in manufacturing as box cloths, characterised by these desirable qualities, would be most difficult to excel. The more closely these cloths were examined the more one realised the care and skill which had been bestowed upon their production, the excellent results which had been attained, reducing apparently the scope for subsequent improvement to a minimum. Messrs. Hooper also exhibited some interesting specimens of stockinette cloths, whip-cords, and double plain trouserings. The latter, however, were somewhat deficient in newness of shade and style of design. So far as producing a fabric well built, soft in texture, and of a bright surface is concerned, Messrs. Hooper had succeeded admirably; and they had unquestionably one of the most meritorious exhibits of fine woollens in the whole Fair. Whether one considered their dress-faced goods of medium and

heavy weights, the whip-cords, twist-warp cover-coatings, or the fancy carded yarn trouserings, there were specimens of unique excellence.

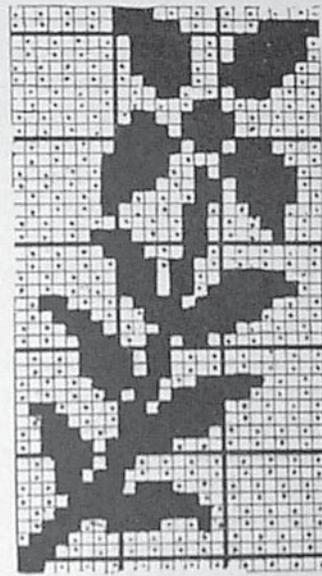


FIG. 2.

If the two West of England houses referred to had collections of fabrics of a creditable description, the same may be reported of the specimens of Messrs. Apperly, Curtis and Co., which should, in consideration of the diversity of design and textural construction they

possessed, be classified amongst the most important textiles in the Exposition. Their case was, *en bloc*, a work of art. It was admirably designed and coloured for displaying advantageously the lengths of fabrics in novel shades exposed by these manufacturers. Here was to be seen the largest variety of fabrics exhibited by any single firm, and made of woollen and worsted yarns. But it was not alone in quantity and diversity of samples that these exhibitors excelled; for their fabrics—fancies and piece-dyes—would bear the closest examination. Their case contained, in addition to the ordinary classes of worsted and woollen cloths used for coating, trousering, and suiting purposes, an attractive assortment of fancy vestings, figured bordered trouserings, tennis fabrics, and twist-warp overcoatings. The Venetians (the shades in which were novel and pleasing to the eye) and serges were well made, being clear and smart in appearance, and possessing a substantial and supple handle. In fine-bordered trouserings the firm showed several novelties; a section of one of these is reproduced in Fig. 2 as illustrating the scheme of designing and weaving practised in the origination of these interesting specimens. Only a part of the border design is supplied in the illustration, several fancy crossings being used for the trousering proper. The small figure (developed in black in the example) was extra mohair warp, so that the rib groundwork—in dots—ran in all probability through the border, yielding a small figured design on a fast woven ground fabric. On this principle of

designing—capable of indefinite development—a desirable degree of newness was imparted to the fine dress trouserings. There can be no doubt that the application of elementary ornamentation of this type to this particular class of goods is a new departure—or rather the revival of an old principle in a modern form—that will be appreciated. Over-elaboration is the danger to be avoided. Fortunately, Messrs. Apperly and Curtis had in this particular hit the happy medium, for while they

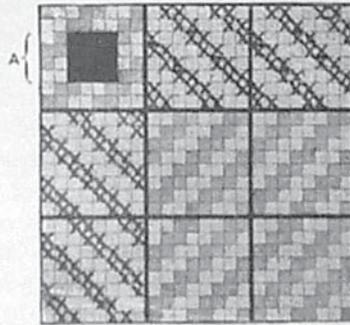


FIG. 3.

■'s = Extra silk spot.

had produced genuine novelties they had not exceeded the bounds of neatness, and their styles generally were effective, smart, and choice. The tennis patterns were also attractive in design and colouring. All the vestings exhibited had been constructed on the weft-figuring system of design. An example of the weave construction required here is given in Fig. 3. It is a minute

check with small silk spots at intervals. The picks lettered A are prepared for weaving in the pattern chain twice—first for the ground, and second for the spotting. Another species of textures in which this firm had been successful was fine worsted mixtures, the shades in browns, slates, smokes, and blue or bloomed greys being exceptionally good. After carefully comparing the cloths of other exhibitors in the British, United States, and German sections, with those of Messrs. Apperly and Curtis, I came to the conclusion that their piece-dyed and fancy fabrics surpassed in novelty of pattern anything exposed in the Exhibition.

Messrs. Isaac Carr and Co. were exhibitors of woollen and worsted cloths, and had a splendid collection of Venetians and meltons, from a light to a heavy fabric. They had, moreover, one of the best shows of all-wool and camel's-hair nap textures. It was interesting to compare this assortment with that of the Worumbo Manufacturing Company, of Lisbon Falls—an American firm who had a good range of nap overcoatings. The fulness of colour, and density and richness of nap, of Messrs. Carr's productions were by such a comparison made doubly apparent. The fine beaver and melton cloths of this firm were also of a high-class quality. One of them was a novelty, being a fine warp twill and a texture characterised by unique softness of surface—a quality which had been enhanced by the style of dress finish to which the cloth had been submitted. As far as one could judge, the weave of this admirable piece of goods

was similar in construction to that given in Fig. 4, which, in order to give a stout fabric, might be backed with warp, as illustrated in Fig. 5. By experiment with this design in fine-carded yarns, I know that it is capable of yielding a cloth of similar qualities as the beautiful overcoating exhibited by this firm.

Messrs. Pocock and Co. had made fine dress-suiting fabrics a speciality, and their goods were remarkable for elegance and brightness of surface.

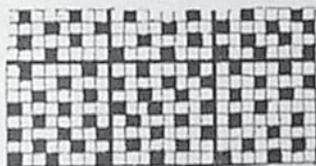


FIG. 4.

One discovered in the cloths of the few West of England houses, as well as in the exhibits of Messrs. Hudson, Sykes and Bousfield, alluded to below, the highest standard of British woollen and worsted manufacturing, in which term is implied the processes of yarn making, cloth construction and designing, and cloth finishing; and the productions and exhibits of these firms, however tested and examined, compared most favourably with the samples exposed by the manufacturers of other countries.

YORKSHIRE MANUFACTURES. — Only two Yorkshire houses exhibited woollen and worsted cloths—namely,

Messrs. Thomson and Sons Limited, Deighton, and Messrs. Hudson, Sykes and Bousfield, Leeds. The "fancies" of the former firm were not particularly good. The serges and fine worsted and silk-twists fabrics were more creditable. Messrs. Thomson also exhibited, as a speciality, a pattern of thick woollen goods somewhat resembling in stoutness and texture an Irish frieze, the yarns used in its manufacture having been spun by hand and woven into cloth on the hand loom. This sample was shown by the makers to indicate what may be done in the way of manufacturing at home, and purely by manual manipulation.

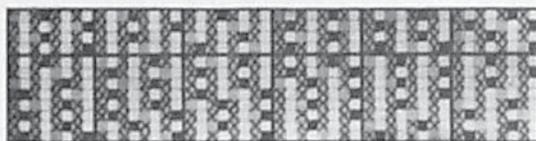


FIG. 5.

■'s = Face weft effect. ☒'s = Backing warp.

In some respects the exhibit of Messrs. Hudson, Sykes and Bousfield was unique. They were the only British firm who displayed Jacquard mantle cloths, in which class of textile they had a novelty of considerable importance. It was a fine fabric, with a worsted warp ground and a mohair weft figure, and had in all probability a woollen back. A small twill, such as a buckskin, was used for the foundation of the fabric, while the mohair yarn was flushed as required to develop the integral

parts of the pattern on the surface. So far there was nothing uncommon in the construction of this article. What imparted or lent novelty of appearance was the curly effects in which the design proper was formed. Such curls varied in size according to the length of the floats which had been allowed in producing the figure; and they were due to, or might have been obtained by, a process other than that of weaving. When a texture of this class leaves the loom it is as free from curliness in the pattern details as a velveteen fabric is of pile prior to cutting. Thus, if a cloth woven on this system were taken and felted slightly, the mohair, or lustrous weft yarn, where it flushes over groups of warp threads, would buckle or curl. This arises from the expeditious way in which the warp yarns are compressed together, and the freeness at intervals of the figuring weft to assume (as this lateral shrinkage is continued) a curly form, which, it should be observed, was so pleasing and permanent as almost to seem a natural and not an artificial condition. Now, on the degree of freeness which was afforded to the weft yarn—or, in other words, on the number of warp threads, combined with the rankness of the set of the cloth, which it had been arranged to flush over in the preparation of the design—depended the kind of curl acquired. It is exactly on this principle that the common classes of Astrachans are now produced. The warp, in this instance, is invariably cotton, and the weft mohair or lustre worsted. The weave is so contrived as to interlace

plain or tabby for a number of threads, and then to float over a group of them. In felting, where the texture is plain, the mohair weft, whilst drawing the warp yarns into closer relationship with each other, is effectively prevented by them from curling, but in such sections of the piece, as it has been allowed to float, curls of various sizes appear on the face of the fabric. This invaluable element of shrinking, which is present in cloths constructed on the principle described, and which is assisted by combining worsted, wool, and mohair yarns, or by introducing into the same fabric a lustrous and a non-lustrous material, had thus been ingeniously employed in the production of a beautiful novelty in worsted-warp mantlings. All the mantle textures of this firm were good, being new in design and neat and interesting in texture. The general aspect of figured textiles may be considerably marred or improved by the ground weaves used, and the competent designer always pays attention to this matter; and this was one of the details in the design of these cloths that had been skilfully manipulated. These manufacturers had also a fair range of fancy fabrics in woollen and worsted yarns for gentlemen's wear, and a collection of serges of various weights, which was probably the most important and comprehensive in the British section. Most of the serge fabrics were bright in finish and of a good colour, and a few of them were novel in weave effect. The fine trouserings, twist-warp goods, and mixture worsteds were also satisfactory, though not

equal to the mantlings in novelty of design. But for the exhibits of Messrs. Hudson, Sykes and Bousfield, the fancy woollen and worsted industries of Yorkshire would have been most indifferently represented at this Exhibition; but by the general excellence and variety of their specimens they formed a collection of fabrics which afforded the visitor an opportunity of inspecting the various types of all-wool and mixed cloths made in Leeds and the neighbouring localities.

TWEEDS AND FANCY WOOLLENS.—These were unsatisfactory. Practically there was a dearth of novelty in these fabrics. Messrs. Ward and Taylor, of Bradford-on-Avon, made one of the completest displays, their exhibits comprising West of England tweeds, fancy trouserings and suitings, cover-coatings, whip-cords, buckskins, and fine Bedford cords, but the check patterns were too loud in colouring and style. The remaining types of fabrics were well made and finished. The Athlone Woollen Company, an Irish firm, had an interesting collection of Cheviots, friezes, serges, home-spuns, and dress materials. Some of the samples were of a very meritorious character, being effective in design and shade assortment; but even these did not serve to lend that desirable excellence to the fancy woollen exhibits as was noticed in the collections of fine worsteds and dress-faced woollens.

CARPETS.—Of the exhibitors in carpets, Messrs. Yates and Co., Wilton, had three most attractive specimens. The finest of these contained the large number of

2,289,488 knots, and the two others 1,555,200 knots each. As these were hand-made and of beautiful early Persian designs—the colourings being exquisitely toned and most congruously combined—one may judge of the amount of labour expended in their manufacture when it is considered that each knot is tied separately. One additional feature of interest about these carpets was the substances used in obtaining the fast and permanent shades of yarns utilised in their construction—these, with the exception of the reds, which were of ingrained cochineal, were vegetable dyes. The beautiful drawing-room and library carpets of the Victoria House, at Chicago, made in fine and real Axminster quality, had been supplied by Messrs. Yates, whose exhibits further enhanced their reputation as the producers of fine and artistic carpets.

UNITED STATES.—The woollens and worsteds of the United States comprised almost every description of trousering, coating, and suiting cloths, also Venetians, whip-cords, beavers, meltons, naps, shawls, blankets, and dress and mantle goods. Frequent inspections of these fabrics impressed one with the thoroughly comprehensive and effective displays made by individual manufacturers, whose machines had evidently been engaged upon a fair range of productions. (It was chiefly in the piece-dyed goods where the American succeeded, and produced fabrics which most closely resembled in quality and texture those made by British concerns.) In many classes of "fancies" there was scope for marked

improvement. The styles, colourings, and textures lacked novelty and smartness of surface. Of course there were several firms who exhibited good specimens in both woollen and worsted patterns for gentlemen's and ladies' wear, but this is the department of textile craftsmanship—the designing, colouring, and finishing of novelties—in which the fancy textile producers of this country are materially in advance of the manufacturers in the States. (When we consider the heavy woollens—*e.g.*, doeskins, livery and military cloths, beavers, and naps—it is another matter. The makers of these goods in the States run their competitors in Great Britain a close race. True, there were not those qualities of lustre and beauty of texture in many of the American exhibits which were observed in the West of England cloths already referred to, but there were in these productions evidences of skilful manufacture which, we may presume, only needs to be combined with extended experience to effect results of similar excellence and quality to those seen in the doeskins, liveries, beavers, etc., of the British section of the Exhibition. A detailed analysis of the collection of styles of the principal exhibitors will make these points all the more prominent.

With the object of describing effectively the essential and salient features of the all-wool textiles of the United States, the exhibits may be dealt with in styles of fabrics, such as heavy woollens; piece-dyed worsteds; fancies, including Saxonies and cheviots; worsted trouserings; and shawls and dress materials.

HEAVY WOOLLENS.—Here we have a species of manufacture in which unquestionably considerable excellence of construction and finish has been attained. The beavers, naps, and livery cloths should be classed amongst the most successful woven manufactures of the States. Certain makers appear to be devoting special attention to the development of these branches of the woollen trade, and they are to be congratulated on the creditable samples of their work which were displayed at the Fair. Particular mention may be made of the productions of the Worumbo Manufacturing Company, Berkley Woollen Mills, Germania Mills, Bound Brook Woollen Mills, Charlottesville Woollen Mills, Waterloo Woollen Mills Company, and Sanford Mills. The Worumbo Company had a really good collection of camel's-hair cloakings, neat in weave and evidently soundly manufactured. They also exhibited a fair assortment of box cloths ranging from 34 to 40oz. per yard. In beavers they make a patented speciality which possessed all the qualities of what is known as a double-make sateen or Moscow. There may have been some other peculiarities about the structure of this fabric, but they were not obvious by such examination as was feasible in the Exhibition. Some distinctive success had also been attained by this concern in stout meltons and naps of various descriptions and shades. They had an admirable show of the latter cloths, as had also the Germania Mills—which had, in addition, an

excellent display of curl fabrics, individual specimens being particularly effective—and the Bound Brook Mills, whose ranges of diagonal naps were of special merit and ingenuity of design. These were the principal exhibitors of that useful overcoating cloth, the woollen nap. The kerseymeres and meltons of the Berkley Mills were beautiful in shade and finish, whilst the military cloths and doeskins of the Charlottesville Mills were characterised by evenness of colour, uniformity of nap or pile, and soundness of manufacture. (A striking exhibit of blankets and raised-pile goods was made by the North Star Woollen Mills Company. The ends of the blankets were cleverly designed, being choice in colour and novel in style. These fabrics formed one of the most meritorious features of the United States display of stout woollen textures.)

The Sanford Mills, whose specialities were plushes for robes, rugs, and blankets, had a most attractive collection of samples. The pile goods were excellent, and the colourings and designs of the fabrics generally were in every sense satisfactory. The patterns shown by these exhibitors indicated how effectively certain important sections of plush manufacture are being practised in the States, whilst the rugs exposed by this firm would, in style, figuring and quality, do either the Dewsbury or Austrian manufacturers of similar textiles more than an ordinary degree of credit.)

PIECE-DYED WORSTEDS.—In this class of fabrics the textile producers of the States had not been specially

successful. Where novelty of design had been aimed at the result had been a texture too elaborate in pattern. This, for example, was particularly observed in the productions of Messrs. Hetzell and Co. The fine worsteds of this firm were certainly full of design, the styles being composed of various crossings, but the results were not consistent with the technical work that had been bestowed upon their execution. Simplicity is a desirable element of woven patterns that should never be sacrificed to elaboration of style. Some of these fabrics were like a building that has been architecturally over-ornamented, and in which the true beauty of the design is lost in a mass of details which, instead of being of secondary importance, appear to form the primary features of the building. There was ample ingenuity displayed in the patterns of Messrs. Hetzel, and they possessed a novelty of appearance which was too frequently absent from the specimens of other exhibitors; but this ingenuity had to some extent been misdirected. The antiquity of the styles of some firms was forcibly illustrated by a fine worsted mantle-cloth of the Ottoman rib class exhibited in several shades by Messrs. Thomas Dolan and Co. This type of design was fashionable in the Old Country considerably over a decade ago, but here it was grouped with the latest novelties. Unfortunately, this is only one of several examples which might be furnished as showing how the designer in the States copies, imitates, and reproduces the inventions of his brother craftsman in Great Britain. Amongst the more

important exhibitors of worsted fabrics pre-eminence must be given to the fine piece-dyes of the Worskuck Mills, which were admirably constructed and smart and bright in finish. The weave effects in minute and large patterns were in many specimens quite new; but the most pleasing novelties shown were based on the diagonal, rib or rep, and warp-face weave scheme of designing. The goods of this concern were cleverly woven, fine in structure, and deserve to be classed with the most important worsteds exhibited by the manufacturers in the States. The Peace Dale Manufacturing Company had also a fairly satisfactory display of solid worsteds for coatings.

WOOLLEN FANCIES.—The fancy woollens were generally too complex in pattern arrangement, and the colourings too loud and occasionally incongruous in tone. The textures, moreover, were frequently coarse, and did not show that skill and science in manufacturing exhibited in the production of some of the finest worsteds. There was no lack of fancy yarns—all kinds of twists, two-ply, three-ply, knop, curl, and cloud threads occurring in these fabrics. If anything, such threads were too liberally employed. They should, generally, simply be used to impart novelty to the pattern, and not be allowed to form the principal part of the design. Borders were applied by one concern—the Hockanum Company—to whip-cord patterns, which is a revival of a species of designing practised in the “fifties” by manufacturers in the West Riding of Yorkshire. In other respects the fancy

woollens of this company were both neat and effective in pattern. The Harris Wool Company had several classes of ordinary trouserings to which borders had been applied, but (in some cloths the designs were too pronounced in character.) Their knop-yarn fancies and other styles of woollens were considerably above the average. The Somerset Manufacturing Company, Messrs. William Wood and Co., and the New England Company may be bracketed together as the exhibitors of indifferent patterns. The styles of the Somerset Company and of Messrs. Wood were old-fashioned and defective in colour and manufacture. After inspecting these samples it was an agreeable change to consult the pleasing assortment of trousering patterns displayed by the Germania Mills, whose exhibits in these and other woollen goods were exceptionally neat in texture and colouring. In check patterns Messrs. Folwell Brothers and Co. had some good work. Their styles were simple in arrangement, but were generally attractive in colour element, while the cloths had a good appearance. Messrs. L. L. Allen Bros. and the Plymouth Woollen Company both exhibited excellent fine woollen fancies, the cloths in these instances having been well woven and finished, and the designs being new, stylish, and satisfactory as to colour. The Concord Manufacturing Company had rather a unique show of mixture doeskins, while Messrs. Thomas Dolan and Co. make drafted patterns in ulsterings a speciality. These goods were exceedingly fancy in design, and elaborate heading drafts must

have been necessary in their construction, showing that the American designer is fully conversant with this principle of pattern development, and also that the American weavers are competent of following such drafts when the cloths are being woven. For smart and fine fabrics, cleverly designed and manufactured, the productions of the Sawyer Woollen Mills deserve to be particularly noted.

WORSTED TROUSERINGS.—The distinguishing feature of this class of exhibit was lack of novelty. In no single instance was there a display of cloths that could be designated new. There was a fair proportion of neat and useful styles, but newness either of texture or colour there was none. The generality of firms appeared to have made fabrics of a good quality; but it is to be regretted that in the States, as in some parts of Yorkshire, there are concerns who make a speciality of what are known as "cotton-warp worsted" trouserings and suitings—a most ambiguous phrase. Manufactures of this class have materially contributed to degrade the genuine worsted in the eyes of consumers, and they will have the same effect wherever introduced and regarded as a branch of weaving that ought to be encouraged. The Mississippi Mills had ranges of these cloths in their case of specimens. They can hardly be termed bastard worsteds, for the warp is cotton and the weft a material which it might be difficult to classify. In better yarns the styles would be passable, but in these materials the styles were anything but attractive. We have no word of commendation for

a species of manufacturing which feeds and exists on practices of adulteration and on debasing the novelties which are brought out from time to time in high-class goods.

Messrs. Dolan, of Philadelphia, exhibited fabrics of a fair quality and of more than ordinary merit as regards style of weave-combinations and diversity of well-toned colourings. There were three concerns — the Saxon Worsted Company; the Globe Mills, Utica; and the Springfield Company—who had good all-round displays, and who had gone to the labour and expense of decorating their trousering patterns with elaborate borders. Both the latter companies had used the events of the landing of Columbus in America, and of the Columbian Exposition of 1893 as subjects for a border—resulting in a form of pattern which was more ingenious than useful. The Springfield Company had also some worsted and silk twist styles, with neat borders, that were excellently made, and an extensive range of good patterns in fine-warp twill fabrics and fancy vestings. As to the Saxon Worsted Company, they had an extremely neat exhibit of checkings, particularly 4-and-4's, to which suitable borders had been added. Check goods were, in addition, shown by the Hockanum Company, whose fabrics were in standard shades and smartly finished. But one of the most satisfactory collections of top and hank-dyed worsteds was made by the Blackstone Woollen Company. Their textures were well diversified, the designs in trouserings being particularly meritorious. These might have been improved by ranker setting, but

the choiceness of the shades combined, and the neat and effective manner in which they were arranged, were sufficient to give to the various samples a desirable degree of smartness and novelty of appearance.

SHAWLS AND DRESS MATERIALS.—The Racine Woollen Mills were the chief exhibitors in shawls. They make a similar article to what is produced in Slaithwaite and Holmfirth—that is, a reversible fabric with a cotton warp and fine woollen weft, figured, raised, and finished on both sides. The exhibits of this class were original in pattern, good and bright in colour, and of a most creditable description.

Of the exhibitors in dress materials, only the productions of two houses need be alluded to—namely, the Arlington Mills and Messrs. L. L. Allen Bros. The former firm had some pretty shades in both worsted and woollen goods, and a fine assortment of really admirable fabrics. The styles were pleasing in colour and weave and figuring elements, and the textural appearance of the cloths was excellent. The fabrics of the latter firm—especially the flannels and fine dress textures—were also very neat in colour, and though not so varied in cloths and patterns as the exhibits of the Arlington Mills, yet the assortment was in every particular satisfactory.

In this survey of the woollen exhibits at Chicago, I have necessarily had to pass over the fabrics of some exhibitors, but I have endeavoured to touch upon the principal features of interest in the displays of the different countries mentioned.

PART III.



COTTONS AND LINENS.

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BRITISH COTTON EXHIBITS.—Though in these fabrics there was only a very limited number of British firms exhibiting, still in their productions was seen much of the best work in cotton and linen yarns of the Exhibition. This was obvious, whether the specimens were considered from a designing or manufacturing standpoint. One of the most interesting and suggestive shows was made by Messrs. Barlow and Jones Limited, Bolton. It included a remarkable assortment of fabrics for ordinary as well as decorative purposes. The patterns they displayed may be aptly regarded as being typical of the large variety of cotton goods made in Lancashire looms. Such samples show that it is not in plain and elementary builds of textures alone that Lancashire firms have acquired their world-wide reputation. It is a hopeful sign that this is not the case, for a new country—not to name a country which imports trained and experienced craftsmen—expeditiously masters the art of producing common fabrics. Palpable evidence of this is found in the colossal concerns in the States and Canada manufacturing such goods. When passing through the Pacific Cotton Mills at

Montreal I observed what was also apparent on an examination of the cotton fabrics produced in these countries, and exhibited at Chicago—that as yet the cotton factories of the American Continent are mainly occupied in the manufacture of plain fabrics, but these they produce successfully. Does not this suggest the importance of seeking to excel in this country in making the fancy and more complex classes of textiles? Of course, there are various firms who combine both branches of work. The exhibits, for example, of Messrs. Barlow and Jones denoted that they are the makers of plain and twilled sheetings, calicoes, linings, dimities, flannelettes—the samples in these for pyjamas, dresses, and other purposes were particularly neat in colour and pattern — and of simple pile and fancy towellings, as well as of an extensive range of dress and vesting cloths, counterpanes and quilts of various descriptions.

TOWELS.—The display of towels may be considered first. It was so comprehensive as to deserve close and specific examination. Primarily, it illustrated the degree of weaving ingenuity now exercised in the manufacture of this common article. This firm recognises in its productions the modern and rational view that, however ordinary an article may be, it need not necessarily be vulgar in design. The old makes of towels, such as huckaback and diaper, have all been partially superseded by novelties in cloth and weave; hence, amongst the towellings shown

were fabrics with a pile or loop surface, of which the Turkish bath towel is an example, and in which Messrs. Barlow and Jones produce a speciality designated the "Osman"—a soft texture, possessing great absorbent properties, and being so constructed as to induce friction without rough usage of the skin. In "Viennese" towels, most pleasing designs of a striped class were exhibited. Pretty borders were attached to these productions. Another important style of towel, of which specimens were displayed, is the "Tyrolese," with a canvas heading so prepared as to admit of cross stitching. In reversibles a fabric was shown made of two kinds of yarn—linen and cotton—one series of threads forming the under, and the other the upper side of the towel. Both surfaces of this texture were pile-woven, and, inasmuch as it was composed of these two materials, it possessed their combined properties.

WAISTCOATINGS. — Messrs. Barlow and Jones had, moreover, many neat and ingenious effects in fine cottons for waistcoatings and dresses. These had invariably a rib or *piqué* ground and were spotted with extra colours in the weft. They were made of high counts of yarn, rank in the setting, and were soundly-built and well-finished goods.

QUILTINGS.—In quilts and counterpanes these makers exhibited by far the most elaborate and richly-diversified productions in the Exposition. Only one type of these fabrics need be described, that designated the Patent Satin Quilt, which has no doubt derived

its name first from the scheme of weaving practised in its construction — the weaves used yielding a texture resembling in appearance a sateen fabric ;



FIG. 6.

The Empire Quilt.—Manufactured by Messrs. Barlow and Jones Limited.

and, second, from the unique softness, uniformity, and firmness of its surface. "Jerry" building is

feasible in the construction of woven fabrics as in the erection of other and more substantial structures, and too frequently cloths wear indifferently, in spite of being made of good materials, because the plan of interlacing the warp and weft yarns in their manufacture has been unsound and defective. The satin principle of weaving, as also the double-plain make, to which this peculiar build of fabric is perhaps more closely allied, have been used from the earliest historic times in the production of textiles. They give a texture which, for smoothness, density, and lustre of surface, is unsurpassed. This accounts in a measure for the excellent qualities of this celebrated quilt, which combines with durability and strength a texture of such fine, compact, and level characteristics as to be unliable to retain dust, to give a clear and smart development of design, and to be washable with a possibility of its newness being effectively restored. Specimens of these quilts were displayed in several classes of yarns and qualities of fabric, but in both the costly and inexpensive articles the designs were novel and attractive. Two of the more important of these may be illustrated. They are both the inventions of Dr. Dresser, and are known as the "Empire" and "Columbian" quilts respectively. The "Empire" (Fig. 6) was originally manufactured for, and exhibited in, the Manchester Jubilee Exhibition. The subject is the British Empire, typified, firstly, by the Royal Arms woven into the centre of the quilt, which are surrounded with an interlacing pattern of which

seaweed is the motive, suggesting that Britannia's rule extends on the ocean. This garland of running figuring is surmounted with the Star of India, over which appears

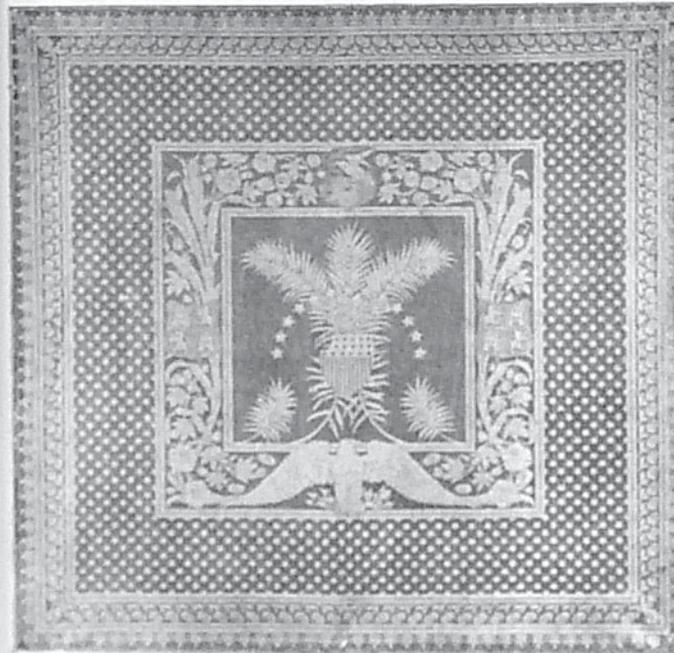


FIG. 7.

Columbian Quilt.—Manufactured by Messrs. Barlow and Jones Limited.

the motto, "Heaven's Light our Guide." Each corner of the oblong space thus embellished is tastefully

decorated with the Prince of Wales's plumes, and the whole is compassed by a border designed from the various arms of the British colonies and foreign possessions, and cleverly wrought into this fine fabric. A liberal band of diamond figures, interestingly filled in with minute ornamentation, throws the principal elements of the design into bold relief, and also effectively develops the pretty edging of the quilt, composed of a charming pattern into which the rose, thistle, and shamrock are ingeniously introduced.

The "Columbian" quilt (Fig. 7) is perhaps hardly so happy in decorative treatment. The central object is slightly incongruous with the free and graceful forms composing the rest of the design. This quilt has both a national and a historical significance. Thus the introduction of the Arms of Spain under Ferdinand and Isabella, into the side borders of the central figuring, is intended to be suggestive of the 400th anniversary of the discovery of America. The national emblems are cleverly interwoven into the scheme of decoration. First, there is the American Shield, which appears to bind together a triplet of spreading palm branches; and then, arranged in crescent form and passing across the branches, are the thirteen stars of the original States. Underneath this ornamentation is the American Eagle, with outspread wings, and bearing arrows and olive branches in its claws. The agricultural wealth of America is suggested by the pretty bordering, obtained by a clever treatment of the maize and cotton plants.

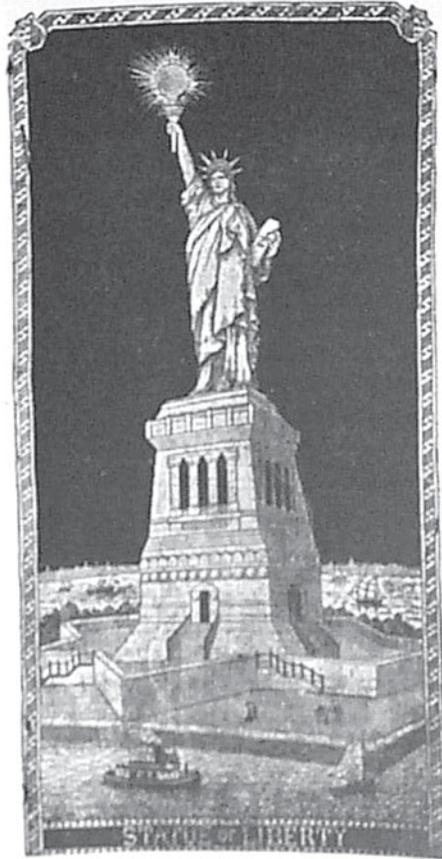


FIG. 8.

Woven by Messrs. Farlow and Jones Limited in their Patent "Satin" Fabric.

Even Chicago has not been omitted, for the city of the World's Fair is necessarily associated with the Arms of the State of Illinois, of which it is the capital, occurring in the upper part of the inner border.

Four other novel specimens of weaving of this firm's, executed in the patent "satin" cloth, are faithful depictions of the chief national monuments of England, America, France, and Germany, and include the Albert Memorial, the Statue of Liberty (Fig. 8), the Eiffel Tower, and the magnificent "Victory" monument erected by the Emperor William I. on the banks of the Rhine. What is particularly interesting about these productions is the cleverness with which every element of form is accurately delineated. Fabrics of this type prove the immense possibilities of this system of designing. On the whole, it will be apparent that Messrs. Barlow and Jones, in their case of specimens at Chicago, gave abundant evidence of the skilful manufacturing practised in their works at Bolton.

It is only necessary to allude to the fabrics of one other British firm of cotton manufacturers—namely, that of Messrs. Swainson, Birley and Co., who had an exceptionally neat assortment of fine cottons in stripe, figured, and gauze patterns. Several of their textures, with a rib groundwork (sometimes striped and at others checked), and with a figure developed in extra colouring, were attractive novelties; indeed, most of the specimens of these makers were pleasing in design and manufacture.

PRINTED FABRICS: CRETONNES AND VELVETEENS.—
During recent years great advancement has been made
in printing woven fabrics. Wool, cotton, and silk



FIG. 9.
Messrs. Turnbull & Stockdale. (Registered Design.)

materials are nowadays all more or less ornamented by
the printer's block. Occasionally it is the yarn—as in
variegated threads—that is treated in this way, but

more frequently the loom product. Crêtonnés form one of the commonest but one of the most artistic types of fabrics in which the design is a result of printing. When velveteens are embellished in this way very beautiful and softly-toned patterns are obtained, for the peculiar structure and dense fibrous surface of these textures lend to the printing process a characteristic style of decorative treatment. While the colours are somewhat mellowed by the pile of filaments, they are rich in tone and possess in some degree the tinted qualities of the genuine plush. Messrs. Turnbull and Stockdale, of Manchester, had a most elaborate display of these important classes of textiles. The fact that the designs were the work of Mr. Lewis F. Day is sufficient to denote excellence of execution and elegance of composition. The specimens exhibited were true works of art, alike beautiful in treatment of form and colour. In some patterns the blend of tints was most pleasing. Such was the case, for example, in Fig. 9. This clever design, with graceful running leaf filling-in, had a dark but mellow blue ground; green and lavender tints were used for the leaves, and the flowers were white with the petals edged with olive-green and veined with lavender. It is impossible to give an adequate idea, by a mere verbal description, of the exquisite harmony of colouring in this style. To enumerate the shades used, and to indicate the positions assigned to them by the designer in the pattern, only very imperfectly defines the beauty of this *mélange* of colours. It should be observed

that increased softness was imparted to the several hues by applying them to a pile or velveteen, and not to an ordinary fabric. Here the influence of the material, and also of the build or structure of the cloth on the



FIG. 10.
Cretonne.—Messrs. Turnbull & Stockdale. (Registered Design.)

pattern development, were forcibly brought out. If the fabric had been twill or rib the colour-composition would have suffered in saturated richness. The daffodil style

(sketched in Fig. 10), which was printed in two colours—the flower being in yellow and the groundwork in green—was a texture made by employing a twilled weave. It formed a bold, effective design, but one lacking the choice colour qualities of the previous example. Fig. 11 is a sketch of another velveteen embellished with an effective scheme of ornamentation and colouring. All the hues combined in this instance were of a warm tone, comprising a deep crimson, a light shade of crimson, an intermediate shade of the same colour, and a bright salmon colour. As a decorative fabric it possessed many elements of beauty. The printing and colouring of these textures were so true and effective as to render them uniquely adapted for the purposes for which they were intended. Messrs. Turnbull and Stockdale were the only exhibitors of these exquisite goods, and obviously their display was a most valuable acquisition to the British textiles, and one which impressed the observer with the rich and highly-artistic effects now acquired by the process of printing on woven fabrics. In regard to clear definition of design, beauty of colouring, excellence of craftsmanship, and richness and novelty of design, the cretonnes and velveteens of this firm were genuine masterpieces.

LINENS.—Belfast manufacturers exhibited many varieties of linen textures, from the coarse canvas to the fine cambric, and from the simple towel to the elaborately-ornamented tablecover. These fabrics were soundly made and pleasing in design. As showing the

fine textures producible in linen yarns, the Brookfield Linen Company exhibited a specimen with some 6000 threads in 36in. But, for diversity of style and beauti-



FIG. 11.

Cretonne.—Messrs. Turnbull & Stockdale. (Registered Design.)

ful goods, the Old Bleach Linen Company had a most creditable display. The special line of this firm is fancy

towelings of every description, and amongst their exhibits were samples of very fine diapers, damasks and huckabacks, and also towels in choice designs with figured ends and centres so constructed in the border as to admit of embellishment by embroidery. The founder of this firm—Mr. C. J. Webb—commenced operations about twenty years ago, with the fundamental idea of imitating as far as feasible the old practice of bleaching by longer exposure of the linens to the sun than is generally customary, and thereby avoiding the excessive application of strong bleaching liquors, which are liable to tender the cloths. The result of this practice, and that of giving to the woven productions an extra amount of "grassing," is a most durable texture, and one characterised by pearly whiteness of colour.

An examination of this Company's samples brought out some interesting elements of woven design. The textures were particularly novel in weave effects, in addition to being rich in design composition. Through the kindness of the makers I have had an opportunity of dissecting some of the samples in detail. The first illustration in these goods (Fig. 12) was a pattern strikingly effective in the medium counts of yarn in which it was developed. Here there were lozenge figures worked out in a species of mat weave, separated from each other longitudinally by lines of weft rib, and transversely by a series of bold diamond spots. Contrast of textural surface due to blending different schemes of weaving was the special feature of this pattern.