TEXTILE INDUSTRY AT THE VIENNA EXHIBITION.—No. II.

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GENERAL REVIEW OF TEXTILE MACHINERY; WOOLLEN INDUSTRY.

In order to give a correct idea of the textile fabric machinery at the Vienna Exhibition, it will be con- venient to criticise briefly the various exhibited machines for weaving, spinning, dyeing, &c., reserving for a future occasion the special descriptions
and illustrations of some of the more important exhibits. We find that the works as condensed as possible, bearing in mind that improvements in the details of existing machines, by means of which their value is increased, is the first object, and showing entirely new constructions intended to supersede old inventions, such as are especially to be found in commerce. The exhibition is still in a primitive state, for example.

Woolen Industry.—Wool washing is represented both chemically and mechanically. We observe that the chemical extracts are few in number and are to be found in the German depart- ment. We find, for example, the glass of Van Buree, of Worms, as a means of washing, and the exhibiting of the wool-washing establishment, machine of Duhem. The wool-washing processes are represented by McNaught and Co., of Rochdale, who exhibit an improved construction of their wool-washing machinery, formerly of R. Hartmann, and connected with it, considerable improvements have been made.

The preparation of wool for spinning is divided, according to the quality of the material into various methods, the chief of which are, combing, carding, and carding reducing. In coming, long wool is used, and a large number of the machinery employed, we find in the Exhibition two machines only, namely, worsted gin box, and a comb, both invented by Platt, Platt & Co., of Oldham, on the Little and Eastwood system. The department of carding, however, is much better represented, and of the German manufacturers of machines and carding equipment, we have to mention Mr. Oscar Schimmel and Co., of Chemnitz, who show a collection of carding machines, and combine spinning and carding machinery for carpet yarn. The Maschinenbau Verein, formerly of F. Schellenberg, of Chemnitz, and the Stollbau Fabrik, of Chemnitz, formerly of R. Hartmann, of Chemnitz, exhibit carding machines, the machines of both exhibitors showing important improvements. Belgium is represented by the numerous collection of M. Martin, of Verviers, which are of great merit, whilst the card machines of H. B. Flecher and Longueil of Verviers, deserve notice. In the English department Messrs. Platt Brothers have exhibited a fine collection of worsted gins, which are noticeable for a good combination of clearer and stripper, whilst the scutchers are well made. The doffing cylinder is provided with a grading roller, and the taking off is effected by Martin’s belt apparatus. At the taking off from the first carding machine slivers are formed, the carding apparatus for which is set in motion for long wool is used, and the rollers. The apparatus for forming the carding flax seen on the second machine acts so that the material of the doce for finishing carders is placed in front and across the rollers. All these improvements are well designed and executed, but excellent carders of this description are very important features in the Exhibition. We should add that M. Bede, of Verviers (Societe Houyet et Testu), also exhibit a collection of carding machines, which both simple and ingenious contrivances have been adopted for taking off by means of steel belts. M. Bede exhibits also a double-carding machine with small and large main cylinders, Bollette’s mechanical feed being introduced. The leading idea in the Bede carding machines—the return to the original simplicity—is worth acknowledgment, and it has been carried out here for the first time by employing the original construction of rollers. With this system, the number of threads in M. Bede’s carding machine with endless slubbings is taken very high, whilst his wool mill, which is on the usual system, is tolerated. The machines exhibited by the Erste Brünnener Maschinenfabriks-Gesellschaft are built according to the Belgian system of carding, but, however, being characterised by any noteworthy improvement, or addition. This company constitutes almost everything working cradled wool, manufacture of cloth, and supplies all sorts of gins, carding, and spinning machines, besides all machinery for wool-washing, dyeing, etc. The manufacture of shoddy is unrepresented, with the exception of a few threads and breakers, which latter are exhibited in the German department under the name of M. Ernst Gesner, of Aue.

Spinning machines for carded wool are in con- sideration, and find exhibits by the Chemnitzer Maschinen Verein, formerly of Schellen- berg, and by the Sächsische Maschinenfabrik zu Chemnitz, formerly of R. Hartmann. Both these establishments are well known, and the improvements introduced will be the subject of our special illus- tration and description. The Austrian self-actors of Messrs. Joseph’s Erben and of the Erste Brünnener Maschinenfabrik, the swastikas are imitations, and are not the original. It is, however, otherwise with the self-actor for carded wool ex- hibited by M. Bede, of Verviers (Societe Houyet et Testu), in which the self-actor of the machine has been eliminated as much as possible, and friction gearing has been substituted, so that the simple and easy working of the machine has been increased. It remains, however, to be seen whether the system adopted will work well for a long period of time, and whether accuracy will be preserved. We have now to mention four interesting spinning apparatus for carded wool, namely, the Patents of M. V. Vilernes, improved by MM. Bede and Co., of Verviers, the water-spinning frame by M. Colletin Martin, of Verviers, the water-spinning frame by John G. Avery, of Worcester, U.S., and the carding machine for carpet yarn by M. Oscar Schimmel and Co., of Chemnitz. Of the latter we need not say more at present; the construction is not new, but is very suitable for coarse yarns. Avery’s machine is very ingenious, and original, and the inventor can only have arrived at the finished result by a prolonged study of the subject. We shall shortly publish an illustration of this machine with special description, and need therefore only mention here that the machine in question—such as moving gear, carriage guide and tube apparatus—are all quite original, and further that Potter’s new annular spindle has been adopted. We must, however, reserve room for a quotation from Mr. Avery’s circular, in which he announces the merits of his invention: We call special attention of spinners to the fact, that with one half the number of spindles at less than one half the expense, occupying less time, one quarter the space than the most improved process now in use in Europe. We make, a large gain cost of saving in waste; yarn drawn by this process is even more. MM. Bede and Co. have endeavored to improve Kimont-Syke’s throttle by altering the shape of the wings, by covering the faces with cloth, leather, &c., to increase friction, and by arranging each spindle in such a manner that it can be thrown out of gear.

The improvements of the water-spinning frame, by M. Colletin Martin, are of great importance; besides many excellent details, and may be considered as a step in the right direction for solving the water-spinning problem for carded wool. The new compensating lever for flattening and stretching the thread is ingeniously arranged, and this, as well as other minor details in the construction of the machine, cannot remain without due acknowledgment. It shows besides that the final solution of the question of water spinning for carded wool is not far removed, and that the long-continued experiments made in this direction have produced at last some satisfactory results.

The exhibition of tools and details for spinning carded wool is very large. We may call attention to the numerous samples of cards exhibited in the Austrian department, amongst which, deserving of notice on account of careful and uniform workmanship, are those of M. Franz Blumenstock, of Reich- enberg, whose works comprise a wire-drawing establishment, and who also exhibits cards, the wires of which can be renewed, and which are used for flat spinning; further, Messrs. Kerker Sons, of Reichenberg, Messrs. Hachen, Maschearo, and Co., of Bieleitz, Messrs. Struck and Beer, of Britan, &c. Of German exhibitors of cards, we have to mention Württeck Brothers, of Leising, the me- chanical works for the manufacture of cards (formerly Lossius), of Mittweida, Mr. Job. Ch. Fischer, of Deggendorf, also Messrs. Hugo Hensch and Son, and Messrs. Schmitter and Marx, of Aix-la- Chapelle, whilst the first position in this branch of industry is still occupied by D. Ulbrich, of Greven- broich. The card manufacture of Wurttemberg is represented by the exhibits of Mr. J ohn G. Finke, and from Belgium excellent cards are sent by MM. Harstansfrey of Liège, and of Messrs. Th. J. Martin, of La Piscatoire-Dison, near Verviers. Belgian cards are shown by Messrs. Schelling and Co., of Horgen, and by the mechanical works for the manufacture of cards at Rasti; both works are in the canton of Zurich, and the latter establishment has already acquired a first-class name.

Generally speaking, mechanical science has done very much during the last few years for the manufac- ture of cards for the spinning of carded wool; but we regret we do not find in the Exhibition a single machine for the manufacture of cards.

It would appear that the cards with leather backs arepreferred, whilst the cards on cloth seem to be going out of favour. The size and shape of the wires used for the cards in great varieties are worthy of attention. We believe that the use of wires of the triangular section, and bent to a sharp angle, as we notice them in the Exhibition, is not to be recom- mended, because the point cut off the wires breaks and the sides edges of the triangular wires are slowly ground, and gradually get ex- tremely sharp. In connection with this subject of the wires we have to mention a very well arranged grinding appa- ratus, made and exhibited by M. Colletin Martin, of Verviers. This apparatus is provided with ro- tating discs acting alternately, which produce round points to the wires. Compared with this thoroughly finished apparatus, that of M. Ernst Gesner for grinding the wires cylindrically, scarcely merits ob- servation. A gin for colonial wool, and of excellent workmanship, is exhibited by Messrs. Roseberger and Schröter, of Chemnitz, whilst M. Rudolph Honegger, of Wetakow (canton Zurich) and of Leising, and Messrs. Bernardi and Philipps, of Chemnitz, exhibit a number of details for carding and spinning machines. These details, which have to be ex- cepted eagerly, are now in considerable de- mand amongst the makers of spinning machinery, who are thus saved the trouble of making them themselves, and can always rely upon the excellence of the workmanship.