

*The Bourse of Antwerp, built in 1485 and rebuilt in 1531, the architectural model of all similar institutions of northern and western Europe. Engraved by Pieter van der Borgh (1545-1608). Plantin Moretus Museum, Antwerp.*

## *The Exchange*



*Combination shades  
on Piece Goods*

*Fast to light and wear*

*Chrome Fast Flavine A*

*Chrome Fast Orange R*

*Chrome Fast Brown TV*

*Chrome Fast Red BL*

*Chrome Fast Grey GL*

*Chrome Fast Blue BB*



Basle . March 1939

## *The Exchange*

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## The Economic Significance of the Modern Exchange *By Charlotte Luetkens*

**Foreword.** The extraordinary development of the textile industry and of the cotton industry in particular would be unthinkable without the modern forms of trade as it takes place on the exchange. It is one of the most important functions of the produce-exchange to guarantee to industry a regular supply of raw materials with as little risk as possible. The object of this number is to sketch the function and the history of the modern exchange with particular regard to the wool and cotton trades.

Trade, that is the exchange of goods, is almost as old as humanity itself. In the very earliest stages of man's economic development, as soon as he commenced to make provision for his livelihood, a system of barter began to take shape. It was, however, only by very slow degrees that this exchange of goods from individual to individual, from tribe to tribe, and from country to country, began to go forward according to generally accepted principles. Thus, the occasional exchange from hand to hand of some coveted articles gradually developed the permanent features of buying and selling; the variety and quantity of the goods thus traded grew, and finally a means was invented of replacing the system of direct exchange; a third, universally recognized factor was introduced, which made transactions possible, even though the purchaser might not have anything to barter at his disposal; in this way money came into being, and regular commercial intercourse by means of markets was

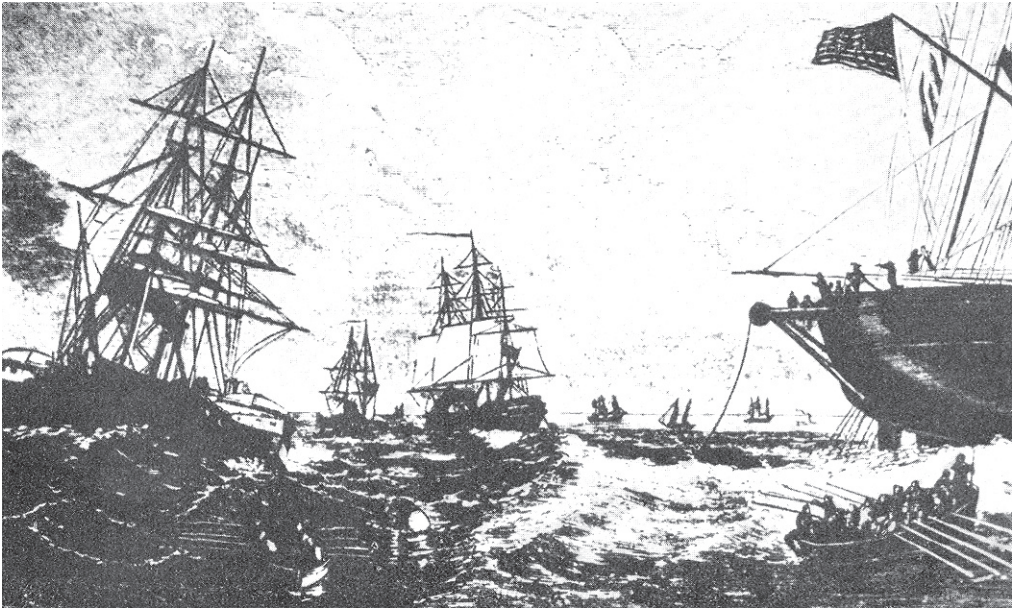
established. Merchants travelled with their stores of goods and money from place to place and from country to country (cf. *Ciba Review*, No. 10, p. 344); they knew where and when they would find purchasers for their wares, or other merchants to supply them with goods, where, even in a strange country, they might expect protection and safety for themselves and their trade. They travelled in groups for mutual protection, as the roads were bad and far from safe. Travel by land and sea was laborious and dangerous, but trade and the hope of gain drove bold men out into foreign countries, in order to dispose of their native produce, and to acquire the goods of other nations. That was the beginning of international trade.

The distance between producer and consumer grew ever greater, and the relations between the traders became more and more impersonal. The introduction of the monetary system brought an element of abstraction and generalization into the hitherto more personal transactions of trade by barter. The great practical significance of the innovation lay in the fact that there was now an object which could be given in exchange for any desired article. With the increase of trade in volume, variety of goods, and scope, the methods of doing business became more finely developed, more abstract, and finally were reduced to certain accepted formulae. Just as the substance of the token recognized as "money" within a certain economic entity—whether

*Allegory of trade.  
Mercury  
surrounded  
by amoretti  
engaged in weighing  
and entering bales  
of goods in lists.  
Engraving  
(1675).*







*Laying the first transatlantic cable in 1866. From a contemporary illustration. The rapid transmission of news is one of the first conditions of trade on the modern stock or produce-exchange.*

cattle, gold, silver, sea-shells, or paper notes—became a matter of increasing indifference, in the same manner certain conventions of trading were evolved which were soon very far removed from the original direct exchange of goods. The final stage of this development is the modern exchange.

The modern exchange is a market, where business with fungible goods is carried on between a clearly defined group of vendors and purchasers following fixed rules. According to Roman law fungible goods are “res quae in genere suo functionem recipiunt”, i.e. goods so similar in character that any given quantity may be replaced by an equal quantity of goods of the same kind. If a manufacturer can be sure that a standing order for cotton of the same type will always yield him goods of the quality which he requires for his mills, there will be no need for him to go to the warehouse and select the bales himself; he knows that every bale of cotton of this particular type is exactly like the others. In like manner, nobody wishing to buy a share issued by a certain company will insist that the share or any other bond in which he might be interested should bear a certain number, whereas the purchaser of a lottery or sweepstake-ticket, following a superstitious belief, may insist on his “lucky number”. Cotton and the share certificate are

fungible goods, sweepstake-ticket and patterned cloth are not. Really suited for trading on the exchange are only fungible goods, i.e. goods where it is not necessary to select a certain, individual piece, but where every piece of the same class will serve the purposes of trade or manufacture. In order to make this possible, the exchanges have agreed—frequently under the supervision of a public body—upon “standards” of the goods dealt in on the exchange. For cotton these are the so-called types or grades, according to which all kinds of cotton are classed, and on which modern exchange dealings are based (see ill. p. 662).

A corresponding standardization of wool according to colour, length of staple, etc. has not been possible hitherto. Differences of quality, the result of climate and the different districts where the sheep are bred, of feeding and breeding, are much greater in raw wool than in cotton. For that reason wool is not a fungible article. The wool trade does not take place on a produce-exchange, but at auctions (see ill. p. 660). It is, therefore, more akin to earlier stages of trade, where business was done only after examination of the actual goods, than is the cotton trade of today.

The produce-exchange is devoted exclusively to trade on a large scale. Only where

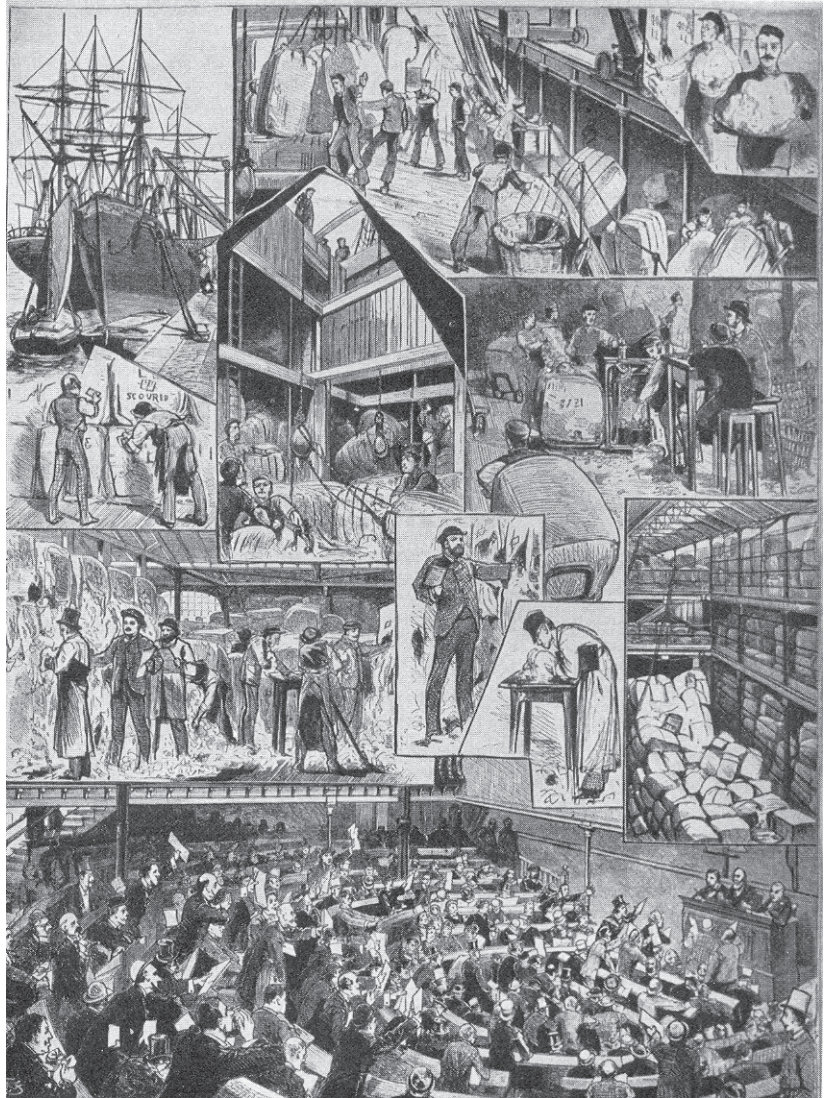


there is a large permanent demand for goods of uniform quality is it possible for the modern produce-exchange to develop. Only transactions of a specified size are made on the exchange. Certain fixed quantities of goods form the units upon which all sales are based. They simplify the process of business, and are among those abbreviations, so mystifying to the uninitiated, which figure largely in all communications connected with the exchange. On the Cotton Exchange of New York the unit of all transactions is 100 bales or a multiple of that figure, and nobody can buy or sell  $1\frac{1}{2}$ , or 2750 bales, or any other quantity not divisible by 100. On the Liver-

pool Exchange contracts in American or East Indian cotton are based on units of 100 bales; for Egyptian cotton the figure is 33, and for Empire cotton 50 bales. The Bremen Cotton Exchange quotes its prices in American cents.

All this shows that exchange business only became possible after a system of world trade had developed, after forms of transport, weights, and measures had been standardized, and these standards internationally recognized.

Hand in hand with the increase of the volume of trade and the extension of the areas embraced by international trade there proceeded a tendency towards uniformity in the methods of business procedure. Individual



*Woodcuts of 1882 showing the various phases of the wool trade, from the shipping of the raw material to the auction at the wool-market. Guildhall Library, London.*



*Auction at  
East India House.  
After a  
drawing by  
Th. Rowlandson  
(1756-1827).*



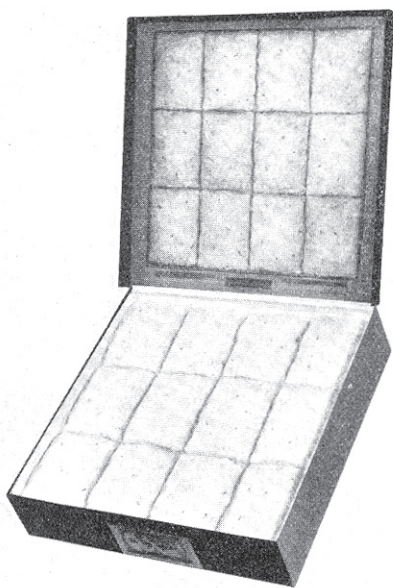
and local peculiarities proved an impediment when producers of raw material in the southern states of the U.S.A. or in India began to enter into commercial relations with the cotton-spinners of Lancashire. The regulation of supply and demand in certain staple goods, e.g. cotton, is one of the most important functions of the exchange of today.

Such rationalisation of international trade was only possible in conjunction with a very high stage of development in world transport and in the conveying of news, a stage only reached during the second half of the last century. Only if it is known on the exchange at Liverpool, what prices are being paid for cotton in the Far East or in the United States, is it possible for the Lancashire manufacturers to buy their raw material with a minimum of risk; for then there is no reason to fear that the American manufacturers might be buying in on more favourable terms, and thus gaining an undue advantage in the world market. Thus the development of the modern produce-exchange is closely linked with the laying of the transatlantic cable in 1866 (see ill. p. 659). The first great exchanges which organized the trade with staple goods which had not yet reached the country where they were to be consumed, and were perhaps not yet ready for shipping or not even harvested, regarded it as their prime consideration to organize the telegraphic news service. In 1879 already, the

cotton exchange of New Orleans spent 30000 dollars on its news service; nowadays the system has been so far perfected that cotton prices quoted in Chicago, Liverpool, Alexandria, or Osaka are known simultaneously on every other exchange. In this manner world prices are coordinated to an extent which makes these markets, situated in different parts of the world, seem as one.

It is, however, not only the natural distances across land and sea which these organized centres of world trade overcome; anybody can do that today if he is within reach of a wireless transmitting station. The most important characteristic of this rationalized system of trade is that it has to a very large extent eliminated the factor of time, i.e. the period between harvest and delivery of the raw material, which is so full of uncertainty with regard to movements of prices. By means of a complicated system of pro forma contracts, by preserving the balance between the purely abstract forward-contracts and deals in spot-goods, it has become possible to relieve merchant and manufacturer of the risks of market fluctuations. Their calculation is thus in a great measure independent of fluctuations in the price of raw materials, which, especially by reason of the uncertainty in gauging the extent and quality of the harvests, and of other, particularly political, influences, would perpetually disturb the normal deve-

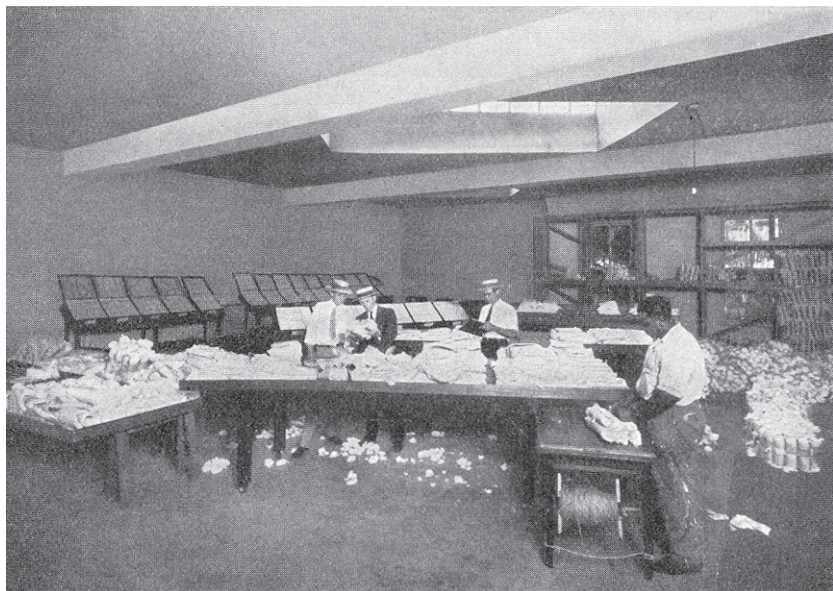




*Box of 12 types of one of the 26 grades which the U.S. Department of Agriculture has established as standards for the American cotton-trade.*

lopment. The following example may serve to illustrate the working of the forward-exchange. Early in October the manufacturer A undertakes to supply a consignment of thread. Manufacture is to begin in December. He bases his price-calculation on the October cotton prices, e.g. 14 cents per lb. His next

step will be to protect himself against the risk of price-fluctuations between October and December, especially against a rise in the price of raw cotton, if he does not wish to lose money on the contract. He does so by engaging in a forward contract for the same quantity of cotton, to be delivered to him in December. Between the price of spot-goods, that is of actually available cotton, and of forward-goods there is usually a constant correlation. In December A buys the cotton necessary for his purpose at the current price, at the same time selling his contract for the supply of forward-cotton. If the price of spot-cotton has risen above the figure on which he based his calculations in October, say to 15 cents, then he must pay 1 cent per lb. more for the raw material than he had estimated. On the other hand he gains the same amount on the sale of his forward-contract, as forward-cotton has also gone up in price. If, however, the price of spot-goods is lower than 14 cents in December, A buys cheaper than he had expected, but loses a corresponding sum on the sale of his forward-contract. In any case he secures the cotton which he requires at the figure estimated in October. Like the thread manufacturer, the cotton merchant insures himself in the same manner against the risk of price-fluctuations. The forward-contract or "hedge" is only entered upon in order to bridge the uncertainty of future price developments. The actual speculators operating on



*Classification of cotton supplied by forward-contract. Classifying Institute, Houston (U.S.A.). Photo: U.S. Department of Agriculture.*



*Rush hour on the  
New York  
Cotton Exchange.  
The members  
are grouped  
round the ring  
in the centre  
of the hall.  
Photo:  
New York  
Cotton Exchange.*



the exchange have nothing whatever to do with the production or sale of goods. They suffer heavy losses or reap large profits, and they shield trade and industry against the shocks and uncertainties of price-fluctuation.

This "buffer-effect" is the most important economic function of the forward-exchange. It was for that reason that the economist Gustav Schmoller described the exchange as "the brain of the economic system".

Alternately admired and reviled—that has always been the fate of the exchange and of speculation there. And yet, they are but the natural accompaniments of the modern competitive system of economy. Professional speculation and trading on the exchange were impossible as long as buying and selling—as in the Middle Ages—served exclusively to meet individual requirements. As long as man's needs, rooted as he was in the traditions and values of a static society, remained comparatively limited and constant, there was no scope for these essentially modern commercial activities. Only when the desire for investment of great competitive industrial economies extended its sphere of influence to embrace the vast tracts of newly discovered continents and new technical processes, in order to meet an ever-increasing demand, did the old forms give way to others more comprehensive and more suited to radically chang-

ed conditions. For a long time, i.e. during the period in which modern capitalism and modern middle-class society developed, men searched for ways and means of exploiting and finally of controlling the fluctuations of prices. In 1688 the first book on the institution of the exchange was published under the title "Confusion de Confusions" (Confusion of Confusions.) Don Joseph de la Vega, the author, states through the medium of some obviously learned share-holder that trading on the bourse is the most valuable and the most fraudulent activity to be found in Europe—the most excellent and most infamous known to the world—a manual of all knowledge and a primer of deceit—a touchstone for the prudent and a tombstone for the rash—a mine of useful things and a hot-bed of evil—no less an image of Sisyphe, who never rested from his labours, than a symbol of Ixion on an eternally revolving wheel.

A long time elapsed before speculation evolved for itself an adequate form in the modern bourse or exchange. The first condition for this development was to give up the ancient practice of dealing only with goods which were actually on the spot, and to trade with merchandise, particularly raw materials, which would not be available until a later date. The final step was to develop independently of the presence of such goods a





*"At a cotton-broker's."*  
 Painting by  
 Edgar Degas  
 (1834-1917).  
 Museum of  
 Pau (France).

regulated traffic in "abstract" goods, such as is in some respects the forward-contract. On an estimate, the sales—on all the cotton-exchanges in the world—of American cotton amount to about twenty times the value of the actual harvest, the sales of Egyptian cotton being about ten times the value of the harvest.

The historical development of the exchange began with the struggle to shake off the shackles of the pre-capitalist trading-system based on local tradition and individual privilege; the next stage was freedom of speculative interests, to be followed in its turn, during the last half-century, by the regulation and standardization of a portion of international trade, especially as embodied in the perfected system of the cotton-exchange. The liberation of competition from the restrictions of the guild-system also resulted in the abolition of the multitude of different weights and measures, which varied from market to market (see ill. p. 693). Measuring, weighing, and money-counting remained, however, for a long time the most important activities of bourse and markets, as is shown by the charming allegory of 1675 reproduced on p. 658. Unhampered competition resulted in wild and dangerous fluctuations in prices, and threatened to divert attention altogether from the primary function of trade: the production of goods, and to replace it by

the desire to achieve rapid and gigantic profits at the expense of the soundness of the economic system. And just as at the very beginning of ordered commercial relations money was introduced as a neutral element—as a medium of exchange and to bridge the time-gap between purchase and sale—a similar neutral element which counter-balanced undue risks in commerce was developed in the form of speculation on the exchange. The element in which the speculator lives is half that of the gambler and adventurer, half that of the shrewd, calculating business man. The caustic wit tinged with cynicism is a reflection of this peculiarly restless mode of life.

"Mercatores consueverunt futura prognosticare", "it is the habit of the merchant to forecast the future". This saying does less than justice to the speculator. His aim is to deal with the future as others do with the present, to credit and to discount profit and loss. A shrewd and witty observer once described the bourse as "Monte Carlo without music".

Since then it has been possible to introduce a certain system into the play of speculation, at any rate as far as forward-contracts are concerned, which has helped to do away with some of the moral and economic unsoundness formerly associated with untrammelled speculation.



# Forerunners of the Exchange

By Charlotte Luetkens

The history of economy shows a slow but steady development towards rationalization of production and marketing.

The almost accidental, half unconscious collecting and hunting common to prehistoric and primitive peoples gradually developed into systematic production. For the local distribution of goods, as yet few in number, weekly markets were held, where the inhabitants of a restricted area made their small sales and purchases. Dealings at these markets were at first for the most part incidental, but their regular recurrence may be regarded as a first element of order within a limited area.

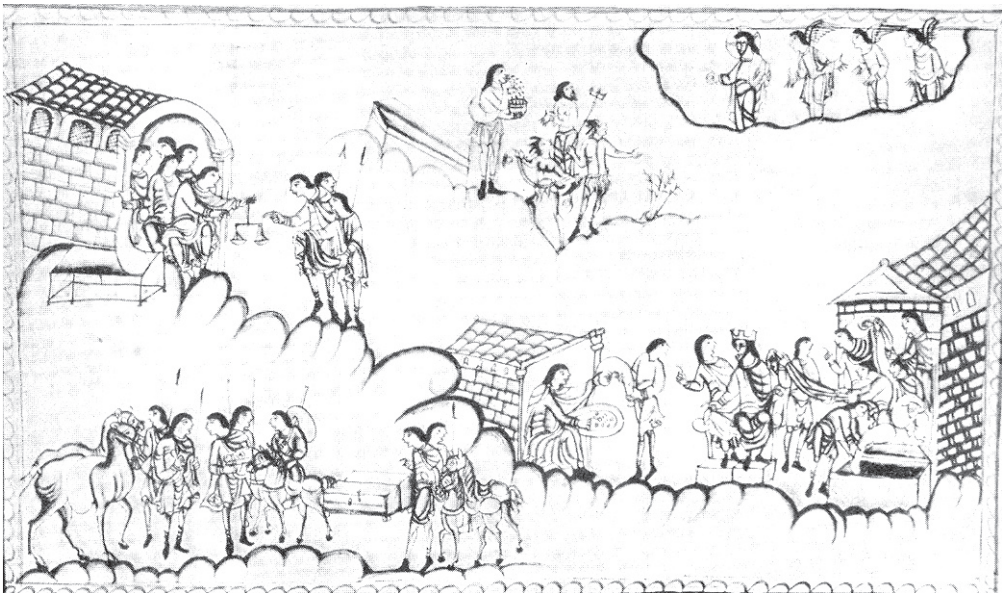
It is significant that in times and countries of early and successful concentration of political power, the conferment of market-rights was a royal privilege (see ill. p. 666). The Carolingians succeeded in establishing the principle that royal permission had to be sought for the inauguration of new markets or the transfer of already existing ones to another place. From the first half of the 10th century a law of Athelstane, King of England from 925-940, has been preserved, according to which sales were to be made only within a certain radius from the towns, as there were witnesses to sales in urban districts. In this

way the towns were made the centres of trade, or as the case might be, the concentration of trade in certain places led to the foundation of towns.

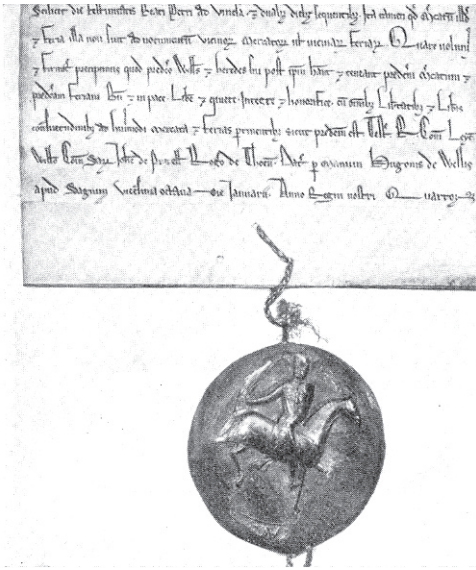
That was especially the case where markets were concerned which did not only meet local requirements, but served for the distribution of large quantities of goods brought from a considerable distance. These were the annual markets or fairs, where any one was at liberty to trade.

Fairs already find mention in the Bible. They were held in Tyre, Tarsis, Togarmah, Syria, Sheba, and Raamah. Wherever people assembled in large numbers, and were moved by joyous or festive feelings to discard their frugal routine for something new and strange, there the merchants displayed the wares which they had brought from foreign lands. They brought softer and more colourful fabrics, beautiful dyes and rare spices. The people, stimulated by the festive atmosphere of the temple sacrifice, and by the throngs of their fellows, all congregated in unwonted surroundings, bought with lighter hearts and less deliberation than usual, just as they do to this day at small village fairs after the toil of gathering in the harvest is over. The Egyp-

*Cloth trade in the Middle Ages. Miniature from the Canterbury Psalter. Ab. 1150. Trinity College, Cambridge.*







*Charter dated 1203, by which King John (1199–1216) granted to William de Belver the right to hold a weekly market and a three days annual fair at Brigford (Nottinghamshire). British Museum, London.*

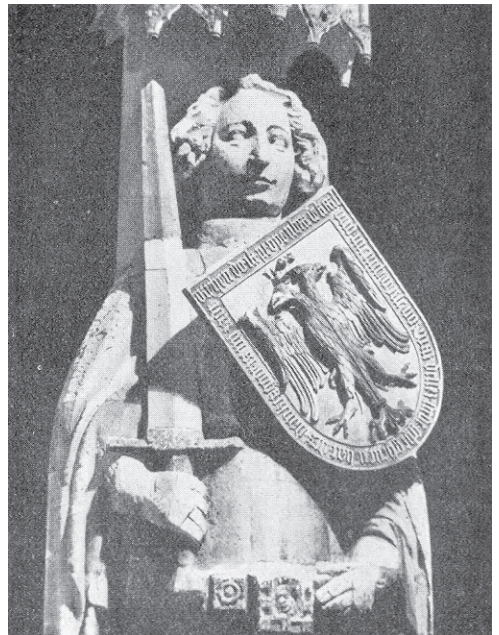
tians combined their great religious feasts and gorgeous pageants with fairs, in the same way as the Greeks, who considered a market in no way unworthy of their national feast of the Delphic Apollo. The institution of markets is ascribed to the early Roman kings, Romulus, Servius, and their successors—a proof of the close connection between the organization of the commonwealth and the promotion of trade. The Latin word for these great annual markets—*feriae*—remains to this day to tell how closely akin during such holidays were the ideas of popular amusement and trading, of festive spirit and acquisition of goods, and how these things were turned to account by the shrewd rulers of the time. It is probable that the Romans, the great preceptors in all branches of western civilization, introduced fairs into the countries of their northern neighbours. The word “*feriae*” lives on as “*fair*” in English and “*foire*” in French.

In Germany the development of fairs and markets is closely linked with that of the Church. The remunerative privileges of market-granting and of collecting market dues were frequently ceded to monasteries and bishops by the Crown. The influence of the Church on markets and their development in Germany is not surprising as—unlike in Eng-

land and France—the power of the central government declined at an early date.

Foundations of markets were very numerous during the early medieval period. They were practically the only organized form of large-scale trade at that time. The oldest fairs in Europe after the decline of Rome were those of Champagne, first mentioned in the year 427. Their period of greatest prosperity was the 13th century. The markets were held in 17 towns, some of which had as many as six every year. The principal centres were Provins, Bar, Lagny, and Troyes. Payments were made in coins the value of which was assessed by weight, and to this day troy-weight has remained the system of weights used in the trade with precious metals. The fairs of Champagne and probably very soon the Foire du Lendit, the fair of the monastery of St. Denis in Paris (founded 629), as well as those of Aix-la-Chapelle and Beaucaire, founded by Charlemagne, were visited by merchants from near and far. The Frisians travelled up the Rhine, bringing with them the products of their domestic industry, the coarse, woollen cloth known as frieze. They followed the same route to the South, which for centuries was to be used by English and Flemish cloth-merchants. On their return journey down the

*Statue of Roland, Bremen. Stone figures of similar type are to be seen in many towns in North Germany as ancient signs of market-rights and market-freedom.*







*The Halls of Bruges and the belfry. After a drawing by R. P. Bonnington (1801-28). On Saturdays a cloth-market is still held in the courtyard of the Halls.*

Rhine they brought with them wine and the finer products of the weaver's craft. For these fairs, and from the 10th century onward those of Flanders (Bruges, Courtray, Tourhant, and Mont Casel), were the meeting-places of the textile-merchants of the western world. Burgundy sent fine cloths, Genoese and Florentines brought their bales of costly silk and brocade, which the peoples north of the Alps had not yet learned to weave; from Catalonia came leather and occasionally perhaps some cotton fabrics. Everything was regulated according to plan; the sale of cloths, as the most important branch of trade, lasted seventeen days, then followed with a somewhat shorter period the trade in silk and numerous other goods. All the goods, raw materials, and articles of luxury known to the world were offered for sale at those markets.

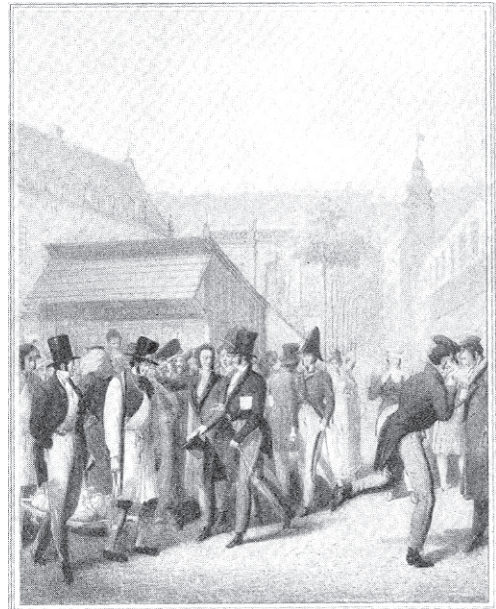
In spite of the hardships and dangers with which travel in those days was fraught, the distances traversed by medieval merchants is surprising. An epic poem of the 13th century gives a vivid description of the life of a merchant of Cologne. That England was well known to him is natural enough, but he did not confine himself to countries so close to his native city. His journeys took him to Livo-

nia, Russia, and even to Damascus and Ninive. The fair of Nishninovgorod, which existed until the 20th century, was visited by many an enterprising merchant of the Middle Ages.

Such journeys, with all the preparations, costs, and risks which they entailed, could of course only be undertaken by men of wealth. Small wonder then that men who had travelled in distant countries should regard with a feeling of superiority those of their fellows whose horizon was limited to the precincts of their native parish, who based their calculations on yards and dozens, whereas the merchant was wont to think in terms of bales and hundredweights. Constant journeys to distant countries, intercourse with people of different nations, and the wealth and power which such dealings brought, produced in the 12th century already the figure of the merchant prince, the great international trader, especially the cloth and silk merchant, who differed widely from the small trader and artisan, and who assumed a leading position in the affairs of his native city.

In that age of lawlessness and highway-robbery (cf. Ciba Review No. 10, p. 315) it was no easy task to convey large quantities of costly fabrics, exotic spices, raw materials and rare dyes for the textile crafts, and even

*Presenting bills of exchange near a stall at Leipzig Fair. On the left the old Town Hall, in the background the Bourse. Water-colour by Georg Emanuel Opitz (1775-1841).*





gold and silver from town to town. In many cases the merchants did not even speak a foreign language, witness a certain Jean-Charles Affaitadi, a wealthy merchant who traded at Antwerp for forty years in spices, metals, and dyes, and spoke only his native Italian. When the Merchant Adventurers brought cloth from their branch at Hamburg to the fair at Frankfort on Main the difficulty of language was probably not very great; but it must surely have been a great hindrance when Poles and "Greeks"—the collective term for all the peoples of the South East—came to the fairs of Leipzig or Frankfort on the Oder.

Commercial intercourse, at the same time so intensive and extensive, was only possible where comprehensive measures were taken to ensure the safety of the visitors to fairs or markets. For that reason market-peace was the necessary complement to every fair, whether in the Ancient World or during the Middle Ages, in Europe or in Asia, in Mexico or in Central Africa. Market-peace, the protection of the visitor, which was even extended to outlaws, was enforced by the patron or lord of the market. One of the most important fairs of England was that of Sturbridge near Cambridge. It was presented by King John to the leper hospital of Sturbridge in a charter of 1211. At a later date the market-rights were

transferred to Cambridge University. The University undertook the supervision of weights and measures, and also received the revenues from the show-booths. In the museum of Cambridge there is an enormous iron balance-arm with a great sun and a graceful figure of Justice as sliding-weights. This balance was used as the official instrument for weighing until the fair was abolished some years ago by Act of Parliament. At the opening of the fair, the city fathers, accompanied by officials of the University proceeded in solemn procession to the fair-ground between Stur and Cam, in order to discharge their duties as supervisory authorities for the duration of the fair. If the corn was not cut by a certain date in August before the fair, the market-authorities were entitled to have it trampled down, in order to make way for the booths.

In most cases fairs were held in the town itself, and during the period of the great market the administration of the town frequently passed into the hands of the market-patron, in Winchester, for instance, into those of the bishop, who was the holder of the market-rights. Differences between visitors to the markets were decided before a special court. The court decided each case on the spot, and no appeal against its decisions was permissible.

*The great fair in front of the church of Madonna dell'Impruneta near Florence. Engraved by Jacques Callot (1592-1635). Metropolitan Museum, New York.*

