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## NOTES AND DOCUMENTS

### THE TULIP MANIA IN HOLLAND IN THE YEARS 1636 AND 1637

N. W. POSTHUMUS

*Schane*  
THE years of the well-known tulip speculation fall within a period of great prosperity of the Republic of the United Netherlands. During the sixteenth century the center of gravity of international commerce had been removed from the Mediterranean coast to the western coast of Europe, owing to the growing commercial activity in newly discovered America. Lisbon and Antwerp had been the principal places to benefit from these changes, Holland in a slighter measure. When Antwerp's position became unfavorably involved in the revolt against Spain, Holland began to take a leading position. Between 1585 and 1650 there was a continuous rise in economic activity. Amsterdam became the chief commercial emporium, the center of the trade of the northwestern part of Europe. Its Exchange (there exists a list of price quotations as early as 1585) expanded steadily; the number of goods dealt in increased considerably during the sixteenth century. The need was soon felt of regulating the circulation of currency; the Bank of Exchange (*Wisselbank*), which really was a transfer bank, was founded in 1609 for this purpose.

The number of great companies also grew: the East India Company (*Oost-Indische Compagnie*) came into being in 1602. Its shares were quoted on the Exchange soon afterwards. Even about 1609 such an important bear speculation occurred in these shares that the authorities deemed it wise to interfere. A similar popularity was enjoyed by the shares of the West India Company (*West-Indische Compagnie*) established in 1621. The part which it played in the foundation of New York is well known.<sup>1</sup>

<sup>1</sup> Wieder, F. C., *De stichting van New York in Juli 1625* ('s-Gravenhage, 1925).

### TULIP MANIA IN HOLLAND

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Trading in futures was common. Holland found the requisites to a fully developed trade in futures in her abundance of currency, the great number of speculators, and the necessary technical organization of the market. Amsterdam grew to be an opulent city, its population increasing continuously and its numerous visitors including traders from all parts of the world. This accumulation of riches made it also a very important consuming center. The surrounding parts of Holland felt the economic influence of Amsterdam very strongly, and it may be said that the speculation in tulips in 1635, 1636, and 1637 finds its objective explanation in the influence of that city.

Many bulbgrowers, living in Amsterdam, were in close contact with the great speculations of the time. It is, however, uncertain whether their rôle was a leading one. Perhaps the initiative in the tulip trade and mania came from elsewhere; but the nearness of Amsterdam with its commercial and speculative spirit was certainly a very powerful stimulant.

The tulip speculation in the Netherlands has been studied by a number of foreign scholars. Several references to this crisis may be found in modern literature on the history of business fluctuations. Mentor Bouniatian<sup>2</sup> sees at work the same forces which produce the modern form of business cycle. Max Wirth<sup>3</sup> takes a whole chapter to describe the tulip speculation without throwing any new light on the subject. It is, however, not mentioned separately by Wesley C. Mitchell.<sup>4</sup>

In the Netherlands this feverish trade in tulips attracted much attention at the time, and many contemporary authors wrote on the subject, mostly after the crisis had taken place. These pamphlets contain many data on the extent of the transactions, although most of them are written in a moral-

<sup>2</sup> *Crisis économiques* (trans., Paris, 1922), pp. 41-42.

<sup>3</sup> *Geschichte der Handelskrisen* (Frankfurt a. M., 1858, 4th ed., 1890).

<sup>4</sup> *Business Cycles: The Problem and its Setting* (New York, 1927).



izing tone. At least fifty booklets written by defenders and by opponents were published, as well as a great number of prints and caricatures. The tulip mania was not confined to a few insiders, but caused an upheaval in the whole western part of the Republic.

We learn most from three contemporary pamphlets, in the form of dialogues between two symbolical persons, Waermond and Gaeragoedt ('True-Mouth and Greedy-Goods'). They were published separately in 1637 by an unknown author. The full titles are: 1. Dialogue between Waermond and Gaeragoedt on the rise and decline of Flora;

2. Second dialogue between Waermond and Gaeragoedt, being the continuation of the rise and decline of Flora;

3. Register of the prices of flowers, being the third dialogue between Gaeragoedt and Waermond, containing the continuation of the rise and decline of Flora.<sup>6</sup>

Next we have solicitors' acts and a few governmental efforts to counteract the effects of the crisis. The acts are of special value, being original documents from the traders themselves who, as an additional security, concluded their transactions before the solicitors.<sup>7</sup>

On the early history of the tulip itself I can be brief. It seems that the tulip as a cultivated flower was imported into Western Europe from Turkey. The first mention of it in Eastern Europe was made in 1554 and soon thereafter tulips were mentioned in several parts of Europe — such as Vienna, Augsburg, and Brussels. Before the passing of the sixteenth century the tulip came to the Northern Netherlands.

The scarcity of tulips and their beautiful colors made them

<sup>6</sup> 1. *Samenspraeck tusschen Waermond ende Gaeragoedt nogende de opkomst ende ondergang van Flora.*

2. *Tweede samenspraeck tusschen Waermond ende Gaeragoedt, zijnde het vervolg van den op- ende ondergang van Flora.*

3. *Register van de prijzen der bloemen, zijnde de derde 'samenspraeck tusschen Gaeragoedt ende Waermond, inhoudende het vervolg van den op- ende ondergang van Flora.*

The first editions of these three pamphlets are very scarce, but the Netherlands Economic History Archives (Nederlandsch Economisch-Historisch Archief) has them and has issued a reprint of them in the yearbook (*Economisch-Historisch Jaarboek*, vol. xii, 1926).

<sup>7</sup> About eighty of the most important acts have been reprinted in the Yearbook (*Economisch-Historisch Jaarboek*, vol. xiii, 1927).

very valuable and high prices were paid from the beginning. The great favorites were the flamed or double-colored ones; in the list of prices for tulips the plain shades, which we now usually see, were quoted very low.

The culture in Holland extended rather rapidly. Its center was Haarlem, as indeed it is today. To the North and to the South the fields expanded, covering a stretch of some forty miles, between Amsterdam and The Hague.

The trade was always in bulbs, even before the mania began; the blossoming flower was never the object of wholesale trade. In the beginning, bulbs were sold by the piece; but as early as 1610, when the culture was of moderate importance, it was usual to trade in beds of tulips; only very rare items were sold individually. In 1624, \$480 (fl. 1,200) were asked for one bulb, one of the most beautiful tulips, the *Semper Augustus*. Soon a new trade developed in future bulbs, the so-called excrescences which were still attached to the motherbulb. As it was uncertain whether the outgrowths, once planted, would be a success, the buying of such future bulbs brought a new risk for the owner. At first, bulbs were usually delivered at once. In the beginning of June, bulbs could be taken out of the beds, whilst they had to be planted again in September. Delivery could therefore take place in summer, and this indeed was the season when business was done.

When the trade was extended to excrescences or outgrowths, immediate delivery became impossible. They could be separated from the main bulb only after considerable time. Accordingly, excrescences could be bought and sold during the whole year. It is likely that soon afterwards main bulbs were also sold without being at once deliverable. In this way the speculative element was increased enormously.

There were different ways of selling. Sales by weight were introduced probably to hold speculation somewhat in check. The number and the quality of the outgrowths increased the weight of the bulb; the buyer paid a bigger price for a heavy



bulb, but he also had a much better chance of buying viable excrescences. The unit of weight was an ace (in Dutch *as*) being about 1/20 gram (or 1/625th part of an English ounce). This selling system was introduced in the spring of the cultivation year 1635-36.

The weight of the bulb when planted was registered. This facilitated the selling and buying during the whole year, and, contrary to expectations, brought another possibility of speculation, as the tulip was now bought "on the grow."

To further the interest in tulips, growers, and also private citizens of standing (mentioned in the solicitors' acts), promoted a more general culture of the flower, which at first had been of interest only to the wealthy people. The culture extended in amount as well as in kind, new varieties being discovered by the dozen.

Until 1633, or the beginning of 1634, the trade was still limited to professional growers and experts. The real speculation came when outsiders joined in. People who had no connection with bulb-growing began to buy after this date. Among these were weavers, spinners, cobblers, bakers, and other small tradespeople, who had no knowledge whatsoever of the subject.

About the end of 1634, one may say, the trade in tulips began to be general, and in the following months the non-professional element increased rapidly. Rumors about rising prices paid for tulips in Paris and in the North of France accelerated the movement. New ways of selling were organized. The more common bulbs were sold by the thousand aces; and, soon afterwards, speculation became interested in the very common varieties, which had been hitherto disclaimed, such as the plain tulips or as they were called *gemeene goed* (common goods) or *voddertij* (rags). These were sold by the pound or by the basket; even the very poor now had a chance to participate. Varying with the time of year and the sort of flower, one could now trade by the piece, the bed, the garden, the ace, the thousand aces, the pound, and the basket.

The distinction between the rarer and the more common bulbs was made by calling the former piece-goods and the latter pound-goods. For instance, the Gouda, the Vice-Roy and several other tulips were sold by the ace, being valuable, whilst the Lack van Rhijn was sold by the thousand aces, and the Swisiers and Gheele Croonen (Yellow Crowns) were traded by the pound.

The great difference in prices is mentioned in the conclusion of the first dialogue referred to above. A few examples may suffice here. A grower had sold a Gheelen Root van Leiden of 515 aces for \$18; the new owner sold it a little later for \$220. Also a Gouda of 20 aces was first bought for \$8, then sold at \$90. Gheele Croonen at \$8 to \$9 per pound were sold a month later for \$430 and over. A pound Witte Croonen, which cost \$50, was sold for \$1,440! It is said that for one town in Holland the total sales amounted to ten million florins.

It often happened that the price was not fixed in money; the most heterogeneous lot of goods was accepted in payment, such as cows, fruit, wine, yards of cloth, clothes, silver dishes, horses and carriages, land, houses, shops, and paintings.<sup>7</sup> The usual condition was for these various goods to be delivered at once, often long before the bulb had been taken out of the ground. Towards the boom in 1636, however, buyers of bulbs often knew that the seller possessed none; so they did not pay or deliver their goods till they were certain the tulip would really come into their possession. At the height of business most transactions took place without any basis of goods. The trade in futures had degenerated into purest gamble, the seller selling bulbs he did not have against a counter value, mostly money at this period, which the buyer did not possess. Each succeeding buyer tried to sell his ware for higher prices; and, in the general excitement, one could make a profit — at least on paper — of several thousands of florins in a few days. The craze spread rapidly with these high profits. All classes of the population ended by

<sup>7</sup> This shows how early the products of the Dutch artists were popularly appreciated.



taking part in it — intellectuals, the middle classes, and the laborers.

When the number of deals had increased so rapidly, the ways of making them were also changed. Previously a written contract had been made out, often before a solicitor. For the man in the street this was too costly and too unusual; the wild speculation could not use such elaborate and troubling ways. New organizations were founded, in which the novice buyers and sellers could meet; these were meetings of private people without any control by, or co-operation with, the authorities. A comparison between these organizations and exchanges has sometimes been made, but this is not quite correct. There were far too many of them to speak of them as a center where this trade was focussed. They were private societies, called colleges, into which newcomers were admitted. They met in public houses, where the speculators also ate and drank. The task of these colleges was to bring about the deals, applying a few rules, which were apparently the same in the different organizations. Probably they were copied, one from the other.

At the colleges there were two special methods of trading. One was called "with the plates," the other, "in the naught."<sup>8</sup> In both cases wine-money or wine-seal had to be paid if the deal came off. At the colleges the name of each prospective buyer or seller was inscribed. When the first method was followed, each in turn got the plate, that is, had to bid for something. These plates were wooden discs on which were inscribed the units, the decimals, the hundreds, and the thousands. Those who wanted to sell also had plates, but could not offer their own goods. If they discreetly hinted they wished to sell, they would probably get the plates for it. In that case, the buyer and seller, together with their proxies, went whispering into a corner, and, by over- and under-bidding, finally agreed on a certain price which they said

<sup>8</sup> Besides this there was ordinary Dutch auction. This means beginning with an extremely high price, then coming down slowly, till someone cries out "mine," therewith becoming owner. In Dutch this kind of auction is accordingly called "to mine."

aloud and which they also indicated on the plates by putting a dash behind the corresponding numbers. This was done to prevent any quarrels as to the exact amount at which the deal was to be concluded. Leaving these dashes meant agreeing; wiping them out, refusing. If either buyer or seller refused to deal and wiped out the dashes, he had to pay a few pennies to the other as a kind of consolation money, the amount of which had been previously fixed, being from two to six pennies. A halfpenny out of every guilder was to be paid by the buyer as wine-money, when the transaction had been completed, the maximum being three guilders for each deal. This was then spent by the seller on his food and drinks, with the obvious aim to keep up spirits. Consequently the wine-money was the same for all contracts above 120 guilders. When prices rose, this was the usual amount paid or received; accordingly in the *Dialogues* Gaergoet speaks of the wine-money simply as the "three's." Concluding a certain number of deals per day, he made quite a profit out of wine-money alone, besides being provided with plenty of food and drink.<sup>1</sup>

Whilst "with the plates" the price was fixed by private bargaining, buying "in the naught" meant price determination by auction. On a slate a simple design was drawn, having in the middle a naught.<sup>2</sup> In this way the seller could not only take the initiative, but he also could stimulate the desirability of bidding by putting a number of pennies in the "naught," mostly between two and six pennies as premium for the highest bidder. Someone acting as a secretary wrote this amount in the circle; then the bidding proceeded by ordinary auction till the highest bid was reached. The money in the "naught" was for the highest bidder whether the deal was concluded or not. If the transaction was completed, the wine-money was paid for by the buyer in the same way as "with the plates."

It is curious to note that the real tulip amateurs, those who had the means and who were willing to pay a very high price

<sup>1</sup> See below, p. 451.

<sup>2</sup> See below, p. 457.



for rare varieties, kept outside the speculative current. Of course prices rose for them, as the mania reached its climax, and went down after the crisis; but they continued to buy bulbs for large amounts, when they were unsalable amongst the speculators.

The big merchants showed but little interest in the tulip speculation, being more interested in the exchange of securities and goods. Many of the lower middle and the working classes were involved in this craze. Satirical songs of the day are mostly about these happenings, and the authors were fond of enumerating all the trades of which the members had taken part in the speculation. The weavers were very conspicuous; Gaergoedt, in the *Dialogue*, was himself a weaver and may be taken as an example of his fellow-sufferers. The weavers were passing through economic difficulties and their position as independent masters was threatened. This was the main reason for their greedy reaching out towards this seemingly favorable opportunity. They had a few possessions, not only looms, but often also small houses; this made it easier for them than for other laborers to take part in the tulip trade. They at least had a small capital to begin with, and it seems they were held in special esteem at the colleges. They constituted a relative élite, refusing to join those who traded in the common bulbs.

The speculators themselves may be divided into several categories. At the colleges two classes can be distinguished: those who sold bulbs they had in their possession, and those who sold "in the wind." Towards the end of the boom the latter were rapidly exceeding the number of bona fide sellers.

Outside the colleges a number of equally speculative deals were engaged in by people who objected to the social standing of the people meeting at the inns. At first all these groups were held more or less in check by the fact that they sold especially designated bulbs of a certain weight; the classical instance is one "Gouda" of a number of aces. When sales began to take place per thousand aces, or per pound, new vistas opened out. No one cared which bulbs were to be

delivered. Not "Goudas" of a certain weight, but any number of bulbs weighing a pound were good for delivery. It was not the fact that one sold without possessing — this had happened quite often before — it was the unlimited possibility, created by sales of fungible goods, which made active speculation of the colleges run into such madness that a crisis became inevitable.

The effects of the débâcle varied widely. The big merchants and the genuine consumers were untouched, but the higher and lower middle classes suffered heavy losses, while again many speculators could not lose because they had nothing to lose. The weavers and similar people lost the little they had. They had often come into possession of a number of artistic objects, or things of luxury, which contrasted strangely with the rest of their surroundings, and which, in so far as they did not consist of eatable goods, could not be saved when the final settling of accounts came. Gaergoedt says: that he had put a mortgage on his house to have some money to start with. Debts had been incurred which could not be evaded afterwards, and which were, of course, the heaviest for those who had but few possessions. For well-to-do people the losses were not heavy, compared with the extent of their speculation, as will be seen later.

The degeneration of speculation into a pure craze may be placed in the autumn of 1636. Gaergoedt says in his *Dialogue* that "this year" (meaning the season 1636-37) "it has been a madness."

A decision of the Burgomaster and Governors of Haarlem, dated March 7th, 1637,\* says that the deals in flowers which have taken place since the last planting time should be annulled. That would have been in September or October, 1636. In the conclusion of the first *Dialogue* the same time is indicated: "It is not till the last planting, which is in October, earlier or later, that people have sold the bulbs and brought the prices to a great height."†

\* See below, p. 463.

† See below, p. 463.

‡ Cf. below, p. 453.



I think the sequence of events may be seen as follows. At the end of 1634 the new non-professional buyers came into action. Towards the middle of 1635 prices rose rapidly, while people could buy on credit, generally delivering at once some article of value; at the same time the sale per ace was introduced. About the middle of 1636 the colleges appeared; and soon thereafter the trade in non-available bulbs was started, while in November of the same year the trade was extended to the common varieties, and bulbs were sold by the thousand aces and per pound.

The crisis came unexpectedly. There is no reason to disbelieve the author of the *Dialogues* when he says that the trouble began on February 3rd, 1637. At Haarlem, where the mania was more especially localized, insiders still advised people to buy on February 1st, with a guaranty on their part of eight days against possible losses. On February 4th the possibility of the tulips becoming definitely unsalable was mentioned, which puts the stagnation on February 2nd or 3rd.

It is curious to see how very quickly the florists took action to regulate the impending difficulties. In the previous months they seem to have constituted a commission, which decided between buyer and seller in case of disputes. They formed a kind of voluntary court of law, which in this way looked after the deals concluded by the florists. This institution was taken into consideration by the authorities when they tried to make new regulations for the tulip trade.<sup>6</sup>

As early as February 7th a number of florists met at Utrecht to assign delegates to represent them at a general meeting at Amsterdam. To whose initiative this Amsterdam plan was due is unknown, but it took place on February 24th, 1637.<sup>7</sup> Present were delegates of the florists from the towns of Alkmaar, Amsterdam, Delft, Enkhuizen, Gouda, Haarlem, Hoorn, Leiden, Medemblik, Rotterdam, Utrecht, Vianen, and de Streek. Their aim was to find a common

regulation to prevent the ruin of the bulbgrowers. They were not very successful, for the florists of Amsterdam refused to accept the resolution. The reason for their attitude is not mentioned. So the decision was accepted by only twelve cities, while Enkhuizen, Hoorn, and Medemblik gave their adherence on condition that their mandators approved of it.

The resolution which aimed at bringing order into the chaotic situation till the government took things in hand, decided that sales of tulips on November 30th, 1636, or earlier, were to be executed. Transactions of a later date the buyer was given the right to reject, if he paid 10 per cent of the sale price to the seller, and if he definitely made known in March whether he wanted the deal to be performed or not.

The "States of Holland"<sup>8</sup> which was the only body competent to intervene in these matters, still kept aloof. The Governors of the City of Haarlem declared it as their opinion that the contracts should be cancelled, but as long as the highest authority had not spoken, this was of little value, as the uncertainty remained. At last several cities, amongst which were Haarlem and Hoorn, sent a petition to the Government of the Republic.

The general desire of the buyers of bulbs was to be discharged of their obligations towards the sellers "without damage." The States of Holland did not make a decision at once. On April 11th, more than two months after the beginning of the crisis, they appealed to the Court of Holland<sup>9</sup> to give them counsel in these matters. All these weeks commerce was left in uncertainty. A fortnight afterwards the Court gave an important decision.<sup>1</sup> The data which the Court possessed, were stated to be insufficient for a definite sentence; new information was to be asked for. In the opinion of the Court, this could be done most efficiently by the Governors of the different cities. On the basis of these data the said magistrates had to bring together the persons between whom

<sup>6</sup> The highest authority of the Province of Holland.

<sup>7</sup> The High Court of Justice in the Province of Holland.

<sup>1</sup> See *Economisch-Historisch Jaarboek*, vol. xiii (1927), p. 58.

<sup>6</sup> *Economisch-Historisch Jaarboek*, vol. xiii (1927), p. 7.

<sup>7</sup> Cf. below, p. 462.



a dispute had arisen. If this was impossible, the information was to be sent on to the Court. In the meantime the Court proposed the following temporary rules: the bulb-growers were to be authorized either to keep or to sell the non-accepted tulips at the risk of their owners. If, later on, the government decided to maintain the contracts, the growers could recover the eventual difference from the former owners. Till then all contracts for the sale of tulips were suspended. This actually meant the proposal of a moratorium for non-growers, generally speaking for speculators, pending another regulation.

The States of Holland accepted this advice almost literally in their resolution of April 27th, 1637.<sup>2</sup> The proposition of the growers, much more onerous for buyers, was put aside. To my knowledge, the definite regulation of which the States spoke was never promulgated.

The matter was now in the hands of the city governments. The course of action of many of them is unknown; the data available are only for a few of them. But it is likely that most of them, the notable exception being Amsterdam, which professed a different opinion as seen in the meeting of February 24th, followed the measures taken by the Governors of Haarlem.

On the first of May, solicitors and notaries were informed by the Burgomasters and the Governors of Haarlem not to issue any protests or summons, whilst the order was given to ushers and messengers to abstain from bringing them.

This was, practically speaking, a moratorium for Haarlem, as appeal to the law for these contracts was now impossible. The results can be judged from a declaration of one of the Haarlem solicitors, Van Bosvelt, that honest people met their contract by paying 4 or 5 per cent at the most; many paid nothing at all.<sup>3</sup> As the solicitor put it: "Only a few honest people compromised by paying one, two, three, four, yes, even five, which was the utmost, out of a hundred . . . Yes, there are also a great number of persons unwilling to pay or

<sup>2</sup> See below, p. 463.

<sup>3</sup> See below, p. 464.

to compromise." Many growers made use of the authorization given by the States to sell the bulbs at the risk of their owners, hoping to recover the difference from their persons or their goods. This met with little success. A similar situation occurred elsewhere, in the city of Gouda and in the Northern Quarter.<sup>4</sup>

It appears clear that the action of the States was insufficient to bring order into this complicated situation and that the parties were left too much to themselves in trying to find a satisfactory solution. A supplementary measure was taken by Haarlem in 1638, which was in harmony with the resolution of the States and which may be seen as an extension given to the above-mentioned commission,<sup>5</sup> which during the boom controlled the fulfilment of the contracts. On January 30th, 1638, an instruction was published, setting forth rules for the commissioners nominated on "the questions which have come forth from the flower trade." This time the commission was composed of five members and had an official status. They could summon anybody who was in a dispute concerning the fulfilment of a contract of flowers. The sittings were to be held twice a week, at least three members being present. This commission could not be considered as abrogating the moratorium; their aim was to find a compromise for the many unsolved difficulties. A few months later the character of this commission was changed; instead of trying to promote amicable agreements, their decisions were to be binding. This power was granted to them by the city council on May 28th, 1638,<sup>6</sup> with the stipulation that the contracts could be bought off by paying 3½ per cent. After payment of this percentage by the buyer, the contract became void, the bulbs remaining with the seller. The commission sat during the whole of 1638. So, at least in Haarlem, measures had been taken to allow an indemnification to the sellers. But, as seen above, this was not of very great importance.

<sup>4</sup> Meaning the cities to the north of Amsterdam.

<sup>5</sup> See below, p. 465.

<sup>6</sup> Cf. below, p. 465.



This was the end of the liquidation of the tulip mania. Of course the economic life suffered a severe shock from the crisis in 1637, but several factors prevented it from becoming a general disaster. Naturally, displacement of wealth took place and losses were suffered, much heavier for the relatively poor to bear than for the wealthy. A certain number lost all they had paid in anticipation, but the majority came off with a payment of a small percentage. For many, however, there was no loss at all; they had sold what they did not possess, to someone who lacked the means of paying them; these sales were all annulled. Considering the enormous sum of several tens of millions of guilders, to which the total of the deals amounted, we may say that socially the losses had been very small. The growers had been affected most of all by the crisis, having grown and sold their bulbs, without getting any money in return. Although they made use repeatedly of their right to sell the bulbs at the owner's risk and tried to get from him the difference in price, they hardly ever succeeded in getting more than a small percentage. Another consequence was the necessity of reducing the extension of bulbfields. The culture was again limited to those grounds between Haarlem and Leiden, which by nature seem particularly suited for bulb-growing.)

Viewing the tulip speculation and its crisis in the light of the knowledge of modern cycles and their turning points, we find this seventeenth century example of a very curious nature. The conditions now generally associated with the first period of a boom were all present. An increasing currency, new economic and colonial possibilities, and a keen and energetic class of merchants, together had created the optimistic atmosphere in which booms are said to grow. The country was increasingly prosperous.

Amsterdam constituted a center of consumers, and the tulip — a novelty — was growing in favor as a flower for gardens. We may assume a steadily increasing demand for tulips which continued even after the crisis. The propaganda of the bulbgrowers was the first move on the side of the producers,

whilst rumors of high prices in France fanned the growing interest. An explanation for the further development may perhaps be found in the very peculiar character of this object of speculation. It was a familiar and well-known thing, even to the poor, who saw the tulips growing in their immediate environment. The cultivation was something easily learned; the buying and selling of bulbs was a matter which a man of very limited intelligence could understand, needing none of the involved, and to them, awe-inspiring technical and financial complications which accompanied a deal in spices or in shares of the East India Company.

As soon as the movement was started, it began to show the features of a speculation of non-professional people of small means. They had no control, no knowledge of the market beyond the very limited circle in which they moved, and no discrimination, believing all the rumors and fancies with the credulity of the simple minded. This fluctuation would do very well as an example of the "psychological" theory of business cycles. The heated imaginations went on and on; the craze spread, till at last doubt began to arise; and, as soon as this uneasiness was expressed, the whole tower of prices collapsed in one or two days, everybody now disbelieving in any future possibilities.

After the crisis, the tulips continued to enjoy increasing popularity; in 1734 a reprint was made of the *Dialogues* of Waermont and Gaegoeedt to warn people against a threatening speculation, this time in the bulbs of hyacinths. The rise of prices, however, was very limited, compared to that of 1636 and 1637. A very small speculation in gladiolas in 1912 served to recall the spectacular boom of older days.

Since 1636 the cultivation of bulbs has increased enormously. The land suitable for bulbs, limited to a certain strip between the dunes and the clay soil, now fetches very high prices; and the total of exports in 1925 amounted to 45,000,000 guilders or about \$18,000,000.



## I

EXCERPTS FROM THE THREE DIALOGUES<sup>7</sup>

## (1) FIRST DIALOGUE BETWEEN WAERMONDT AND GAERGOEDT ON THE

## RISE AND DECLINE OF FLORA (1637)

*Waermond:* God give you good-day, my special old friend Gaergoedt, how are you?

*Gaergoedt:* All is well with me and the florists. We live in joy and remain content. But come in; we'll have a talk near the fire.

*W.* I thank you, but I have to go elsewhere.

*G.* No, you are not in such a hurry. I must tell you something and I will let you leave, when you will.

*W.* Well, because you want it, I will do so.

*G.* My friend, sit down there. Here, Ann, bring wood and peat; I have to speak with my old acquaintance. Where have you been for so long? Give me the bottle of brandy, or do you prefer Spanish wine, or a good drink of French, or a nice draught of beer?

*W.* You name so many things that it is difficult for me to choose.

*G.* We florists have now everything that is needed, for a little flower can pay for it all.

*W.* All is well when payment goes as fast as hope goes. For many a farmer sows corn but reaps stubble.

*G.* No, this commerce goes too certainly. Now do drink: Your health.

*W.* I thank you. I drink yours. But what delicious stuff is this?

*G.* This all comes from the noble Flora. Lately I was with a brandy distiller to whom I gave a flowerlet in return for this bottle. This I do, as a rule, for my meat, my wine, my beer; I have it all for nothing; so many transactions I have done this whole year.

*W.* That is good business, getting so easily such profits; all tradespeople and workmen complain of the great dearth and the small turnover. Yes, the merchants speak of their great losses, as well from piracy as from heavy storms spoiling the goods by leakage or losing them entirely.

*G.* Well, I too know something about that. But now that I have the flowers, I have done nothing but make profit; and, let it be said here, I have earned more than sixty thousand guilders, and that within four months. You need not repeat this.

*W.* Well, that's a big profit. Have you already received it?

*G.* Not I, but have the people's writing.

<sup>7</sup> The language of the dialogues between Waermond and Gaergoedt and of the solicitors' acts is that of the seventeenth century, involved and obscure. The translation into modern English presented some difficulties, but the aim has been to change the phrasing as little as is compatible with clarity. The name "solicitor" is used here for the person who made out acts and who also had the right to issue summons but who was no barrister. In Dutch he is called notary, but his position would be a blend between a solicitor and an attorney as their professions are nowadays usually understood. By "prodcent" is meant one who brings a case before the solicitor, without necessarily asking for summons.

The unit of money in Holland was, and is, the guilder (gld.) or florin (fl.). It is perhaps not necessary to say that the purchasing power was then considerably higher than now. The present gold parity between the guilder and the dollar is gld. 100 to \$40 3/16.

For these *Dialogues* in the Dutch, see *Economische-Historische Jaarboek*, vol. xii (1926), pp. 20-95.

*W.* That is much. You would almost make me want to join in.

*G.* Well, if you feel like it, I will sell you a small shipment and because you are a good man and my special friend, I will give them fifty guilders cheaper than to another. And I add that, if you have not gained a hundred rix-dollars within a month, I will meet you for so much.

*W.* Well, what shall I say, and how good an offer is this? But if I had this stuff how should I get rid of it? Will people come to me or must I go and present it? I will tell you. You must go to an Inn; I will name you a few. I know of few or none, where there are no companies or colleges. Being there, you must ask whether there are any florists. If you then come into their room and because you are a newcomer some will squeak like a duck. Some will say, 'A new whore in the brothel,' and so on, but don't take any notice; that goes with it. Your name will be put down on a slate. Now the plates go round. That is, everyone who is present at this company has to give plates, beginning with the one at the top of the slate. He who holds the plate must ask for some goods. You may not put on auction your own goods, but if you drop a hint in conversation, and somebody is interested, you are almost sure to have it bid for or to get the plates on it.

If the plates are given on your wares, the buyer and the seller each choose a man. The seller first goes to the man, and claims for his goods two hundred, if it is worth a hundred, by way of speaking. Then comes the buyer, and very indignantly, when he hears the claims, offers as much less as the other has asked in excess. The men find the value: each gets a dash on his plate. Then the men say the price aloud: if you have found it to your liking, you leave your dash on your plate or disc. If the buyer and the seller both leave their dashes, it is a deal. If, on the contrary, both wipe out their dashes, there is no deal. If one of them leaves his dash, the other one is put down for a sum which has been fixed beforehand by the company. At some places it is twopence and at others three, even five or six pence. If the deal has come off, the buyer gives a halfpenny for every guilder and if the deal is a hundred and twenty guilders, he gives three guilders, even if the total were a thousand guilders or more.

*W.* What is done with this money?

*G.* Should one not drink? Tobacco, wine, fire, light, are paid with it; the poor are remembered and the girls.

*W.* Can this amount to such a sum?

*G.* Yes, the wine-money often produces more than that. I have been on several journeys, when I brought home more money than I brought to the Inn. And then I had eaten and drunk wine, beer, tobacco, cooked or roast fish, meat, even fowls and rabbits and sweets to finish, and that from the morning till three or four at night.

*W.* It is very pleasant to be treated like that.

*G.* Yes, and I made a beautiful profit too. I made six or seven little three's, for I dealt in about twelve thousand; the three's fell like drops off the thatch when it has rained.

*W.* Most unheard of things I am told, but will it last?

*G.* If it only goes on for two or three years, it is sufficient for me. . . .

*G.* Now take a drink and if you want a shipment, I will give it to you on writing, or whatever way you like. I have a register from which you may choose a few, which you can take with you; you may go freely to someone who knows something about it, and ask him.

*W.* You offer me a lot and I do not know whether I dare accept. I fear once I



start, I will want to go on with it, again and again. And as one wave drives on another, so one deal would bring forth the other, and so, methinks, it is better I stay with my poor business and my own profession. I make no great profit and suffer no great loss.

G. That's well said. But could you not venture a little? You give no money till it's summer and then you have sold all your stuff; or if you have any on hand you plant it and it brings still more profit.

H. It is well for those who have enough money, but for me I do not find it good advice. For if I have a penny, I must put it into my business.

G. You can barely earn ten per cent on the money that is in your business, and even then only by giving a caution, but with Flora it is cent for cent. Yes, ten for one, a hundred for one, and sometimes a thousand.

H. Vainly have I done such hard labor, and have many parents slaved and toiled. What need is there for merchants to have any style, or to risk their goods overseas, for the children to learn a trade, for the peasants to sow and to work so hard on the soil, for the skipper to sail on the terrible and dangerous seas, for the soldier to risk his life for so little gain, if one can make profits of this sort? . . .

G. Here is a register of the most important bulbs which I still possess:

|                         |  |
|-------------------------|--|
| Admiraal van Enchuyzen. | Columbijn de Meester.                  |
| " van Enghelandt.       | Camelot Cromhout.                      |
| " Crijnghes.            | Columbijn with white, red, and silver. |
| " van Hoorn.            | Camelot Coopal.                        |
| " Liefkens.             | Cenekourt.                             |
| " de Man.               | Cent.                                  |
| " Rotgans.              | Cesar.                                 |
| " van Eyck.             | Dr. Balten.                            |
| " Ghelder.              | Duyck meen ick.                        |
| " Catelijn.             | Duck Flory.                            |
| " van Weenen.           | Dolabella.                             |
| Anvers.                 | Elsevier.                              |
| Argentiers.             | Egmond or Rechteroogh.                 |
| Alexander.              | Fabri.                                 |
| Audenaerde.             | Gouda.                                 |
| Bryne Purper.           | Gideon.                                |
| Brandenburger.          | Ghelutste.                             |
| Buseloo.                | Gheeneal de Man.                       |
| Beschuyt-lacker.        | Gheedeclde.                            |
| Brabanson.              | Ghevlunde van Ceneourt.                |
| Brabanson Spoor.        | Goliat.                                |
| Bellaert.               | Gheel ende Root van Leyden.            |
| Bruydt van Haerlem.     | Generalissimo.                         |
| Bruydt van Enchuyzen.   | Ghemarmde van Cacr.                    |
| Blienborger vroege.     | " van Goyet.                           |
| Blienborger laete.      | Generaal Nieuwlander.                  |
| Butterman.              | Grebber.                               |
| Branson Clompmacker.    | Groote Staandert.                      |
| Coorenact.              | Groote Gheplumiceerde.                 |
| Croon Gheele.           | Hoe langer hoe liever.                 |
| " Witte.                | Haghehaer.                             |
| " Verkeerde.            | Helena.                                |

Jory Naby.  
Incarnadijn ghevlant, van Quaeckel.  
Incarnadijn Branson.  
Joffrouw.

Jan Gherritsz.

Latour.

't Landjuwel.

Le Grand.

Lack Paspoort.

" van Rijn.

" de Hooghe.

" Pieter Christensz.

Lion.

Moytjes Moy.

Max van de Prins.

Meternan.

Marveije van Quaeckel.

Moye Duyck.

Mercurius.

Nons Wit vroege.

" late.

Neete Branson.

Nieuwlander.

Nieuwborgher.

Olinda.

Parsmacker.

Purper ende Wit Jeroen.

" " Vervint.

" " Bosschaert.

" " Laeckeman.

" " Kramer.

Petel.

Palo.

Provenier.

Petter.

Present Liefkens.

Parragon Liefkens.

Rijswijcker.

Root ende Gheel verwint.

Root ende Wit verwint.

Rattebeet.

Roosjen.

Sayblom van Spoor.

" " Coningh.

" " Bol.

" " Gheneene.

Sori Liefkens.

Swijmende Jan Gerritsz.

Seylstract.

Spits Lack van Quaeckel.

Schilder.

Schrijverker.

Scipio Africanus.

Spinnepok Verbeterde.

Tourlongh.

Tourmay Catelijn.

" Heenskerck.

Tulpa Bitter.

" Stam.

" Ghelder.

" Reynout.

Trojaen.

Vice Roy.

Violet gheboordt Rotgans.

't Weeskint.

Wit met roo tippen.

G. Of these I have several plants, big and small, each classified as to its value. Often you will need pound-goods as Croonen, white or yellow, Switsers, Rijswijckers, Gebiesde van Coorenact or other rubbish, or a thousand-acre Admiraal de Man, Gheel ende Root van Leyden, Audenaerden, Coorenact, Centen, or other stuff. I have many others with me, possibly for eighty- or ninety-thousand guilders.

H. You must have given quite a lot of wine-money for it.

G. Yes, that is true but I am glad to give it. The wine-money is as a seal to a letter.

H. I could not gather so much money.

G. In the beginning it has been somewhat difficult for me also, for I took and sold all I could move, and I have also mortgaged my house. I had to have something to start with, and I had to establish relations, but after that, when I sold a big consignment, I commonly claimed a part in cash. From that I got all this silver. And so from the one to the other, that is true navigation. . . .

G. When the last planting had taken place, which is in October earlier or later, the plants were rising to very high prices. Until the suspension of sales the



business was so extensive that it is said that in one town of Holland over ten million guilders of flowers had been dealt in. To mention a few out of so many, so that you will know, just as you know the lion by its claw. A plant Gheele en Root van Leyden of 515 acres had been sold in the first instance for 46 gld., and then for 515 gld.; a Gouda of 4 acres first for 20 gld., later for 225 gld.; an Admiraal de Man of 130 acres first for 15 gld., then for 175 gld.; a Generalsissimo of 10 acres first for 95 gld., and then for 900 gld.; and so on with the other plants. This only lasted for a month or six weeks; then they started selling by the thousand acre and by the pound.

A pound yellow Croonen could be bought first for 20 or 24 gld.; in a month's time it was 1,200 gld. and over.

A pound of Switzers first cost 60 gld., later 1,800 gld.

A pound of White Croonen first cost 125 gld., later 3,600 gld.

A thousand-acre Admiraal de Man first cost 90 gld., then 800 gld.

A thousand-acre Scipio first cost 800 gld., then 2,200 gld.

A thousand-acre Vice-Roy first cost 3,000 gld., then 6,700 gld.

A thousand-acre Coorenaerts first cost 60 gld., then 450 gld.

A thousand-acre Audenaerden first cost 70 gld., then 600 gld.

A thousand-acre Centen first cost 40 gld., then 350 gld.

A thousand-acre Gheele en Root van Leyden 100 gld., then 750 gld.

A pound of Goliats, Rijswijkers, Ghebiecke van Coorenaerts, and Rattebeten which one could get first for a small price, has been sold for heavy money. The Goliats for 700 gld., Rijswijkers for 800 gld., Ghebiecke van Coorenaerts for 250 gld., Rattebeten 300 gld. In short, all that carried the name of tulip was sold.

Yes, it has gone so far that the stuff which used to be weeded and thrown in basketfuls on the dung-heap has been sold for heavy money. Such as: Double Coleuren (early ones) up to 150 gld., late ones 40 and 50 gld. Yes, even Single Coleuren were getting value, and were auctioned in thousands of acres. Everything was worth money and so current that one could get in exchange almost anything one desired. And all this with promises and vouchers, when the bulbs were in the earth. If this had gone on, all payments would have taken place in flowers, as they say in some places of East India with conches, and many payments had already done so. How harmful this was for trade, I need not say. Also it was scandalous and improper that youngsters and children were brought into this commerce and at these colleges. And although the flowers surpass all pearls and precious stones in which Solomon was clad in his glory, still they are not a necessity and should only be paid for from the superfluous. . . .

## (2) SECOND DIALOGUE (1637)

G. I should like to hire a man or two, but I can't find anyone.

Cristiaan. I have been everywhere but I can't find anyone. I have interviewed one or two, but one said he had signed for a sea-voyage, the other wanted to peddle, still another would not stay here; each was afraid of the summer.

W. Why is that?

G. They all have traded in flowers.

W. What do you say?

G. Who has not been in it?

W. I have not touched it and I suppose there are others with me.

G. That is good luck.

W. That commerce seemed to me too dull and too brainless. Everyone thought he would be rich this summer. All the coach-builders were fully booked up to make coaches and light carriages, horses were bought, and all grandseurs were imagined. No one knew how high he would rise in his estate. Each was a bigger master than the other.

G. That is the truth; I was just glancing at my book.

W. Is that the one lying near you?

G. Yes, it is.

W. Such a big book; show it to me. But that is strange bookkeeping!

G. Look, that is how I planted them, and also how I sold them.

W. For curiosity's sake I should like to draw it.

G. You may do so, but not the price for which I bought or sold; I will do that another time, but not now.

W. I am only interested in the method.

G. Draw freely what you desire.

|                           | Aces |                            | Aces |                               | Aces  |                                | Aces |
|---------------------------|------|----------------------------|------|-------------------------------|-------|--------------------------------|------|
| 10<br>Admiraal<br>de Man. | 370  | 24<br>Latour               | 600  | 38<br>Lion                    | 280   | 42<br>Groote ge-<br>pluineerde | 780  |
| 62<br>Tourion             | 150  | 68<br>Tournay<br>Cateijn   | 670  | 70<br>Groote<br>Standaert     | 1,180 | 90<br>Goliat                   | 135  |
| 92<br>Gouda               | 100  | 95<br>Admiraal<br>Cateijn  | 320  | 101<br>Vice-Roy               | 510   | 112<br>Grebbe                  | 440  |
| 116<br>Petter             | 112  | 120<br>Provenier           | 307  | 125<br>Spinnekop<br>Verbeerde | 600   | 130<br>Audenaerde              | 500  |
| 145<br>Le Grand           | 900  | 150<br>Parsema-<br>maecker | 205  | 155<br>Bellert                | 270   | 160<br>Brabantson<br>Spor      | 532  |

With the letter A, the bed is indicated. The number above the name of the flower is the folio, where one can find how one has bought and sold: the number next to it indicates the acres of the weight.

For example: folio 101. Sold 1 Vice-Roy to N. N. of 510 acres, which I had bought from N. N. for 900 gld., standing on bed of the letter A, for the sum of 3,400 gld.

W. I see it sufficiently.

G. Yes, when I used to take this book in hand, I thought I was sufficiently rich and possessed one estate or another. I never thought I would weave again.

G. Yes, I wish there never had been flowers in the country. But have I not heard, my friend Waermond, that the delivery will continue?

W. Yes, I have heard so too.

G. My dear, what is this about?

W. I have heard that a few deputies of the companies of florists of different



towns have met on February 23rd, 1637, and have thought of a remedy, seeing the great inconveniences which have come in the selling and buying of flowers, and that the money which has been promised cannot be found. Each should pay to out of a hundred, that is from 1,000 guilders a hundred.

G. That brings me no help, even if I paid all I have still with me.

W. O, what a man you were last time; have you now so little! And understand it is like this: supposing you were a planter, and you had sold a Gouda of ten acres for thirty guilders which had been sold again for 60 gld. and again for 100 gld. and again for 200 gld. and there it stops. So that the one who has sold for two hundred gld. should pay ten gld., and if he did not care to keep it, it comes to the one who sold for a 100 gld., who could, in the same way, give ten per cent of 60 gld., and so on, till it reaches the planter.

G. What a commotion!

W. Well, can you think of anything else?

G. I do not know of any good advice. I even do not know, whether I want to go on. But is it always to be, as they have now decided, or is it only provisional? There have been so many transactions, and so many by insolvent people, yes, by children and boys who live from alms, that, since all comes to such a bad end, the people with any means will have to pay the piper.

W. I hear what all this business has been. A brainless commerce, as I said, and against all good business ways. Some thought it true, that to promise was to pay, and forgot it was only bidding. . . .

G. Ours are real transactions; we have given writing and signed it.

W. I should like to see it.

G. Very well, I will fetch them. See, there are several, from here, from Amsterdam, Alkmaar, and other places.

On November 12th, 1636, sold to N. N., a Ghemmerde de Goyer, planted, 375 acres, for 70 gld. growing, standing in the garden of N. N. "In the naught," signed by me.

And then one writes against this, as you may see here on this note: on December 9th, 1636, bought from N. N., a Ghecle en Root van Leyden, 578 acres, for 70 gld., standing in the garden of N. N. with the plates. Signed by me, N. N.

See this other one.

I, the undersigned, acknowledge to have bought from N. N., on conditions hereunder mentioned, one Gouda of 48 acres standing planted in N. N.'s garden, for the sum of 520 gld. in sterling. But in case 8 days after the notifying, the buyer were not to come to take the bulb, the seller may take it out of the ground, in the presence of two praiseworthy persons, and seal it in a box. And if a fortnight after this, the bulb has not been fetched by the buyer, the seller may sell it anew. If he gets more for it, the first buyer will not profit by it, and, when less, has to pay the difference. In case of any obscurity or misunderstanding or dispute arising out of this transaction, it will remain with two praiseworthy people, who know of these things and who live in the place or town, where this transaction has taken place. And by default of payment of the aforesaid sum, I hereby engage all my goods, movable and immovable, submitting same in the power of all rights and magistrates; all this without arch or cunning. Have signed this. Act in Haerlem on December 12th, 1636.

Another one.

We, the undersigned, namely I, N. N., acknowledge hereby to have bought from N. N., and I, N. N., to have sold to the same N. N., one Uytroep of

1,060 acres, planted by the seller, and I will pay to him for each thousand acre, which dried up properly, 275 gld., and what it weighs more or less to add or subtract pro rata.

In case I, the buyer aforesaid, having been notified 8 days before, do not appear on the day of delivery, I, the buyer aforementioned, declare that I shall remain content that the seller, in the presence of two praiseworthy witnesses, shall take it out of the earth and seal it in a box. I also consent that, if I, the buyer aforementioned, fail to take receipt 8 days after the taking up of the bulb, and after prompt payment, the seller aforementioned can, by his own authority, sell anew the aforementioned sealed merchandise, renouncing the profit, and agreeing to make restitution for the damages coming out of this, to the aforementioned seller.

And in order that our actions and promise may be all the more surely fulfilled, we promise to give now and in the future to this our contract such force and value, as if the solicitor and witnesses had passed it. And be so liable, as if it were a sentence of the magistrates on which condemnation had followed.

However, in case any question, dispute, misunderstanding, or obscurity might arise between us, we declare on faith and piety to remain content, that the same, whatever it is, shall be determined and decided, and whether to our loss or to our profit, by the customs and by the people who understand these things, residing in, and frequenting the place, where our transaction has taken place.

We, therefore, renounce like persons of honor all exceptions to the contrary. And also we engage our persons and our goods in case of default, as aforementioned, submitting to all rights and all magistrates. N. N. N. N.

Of this nature are most of these vouchers, all of the same content.

W. Yes, these letters have been made to pay, and they seemed to constitute a good transaction and therefore everybody ought to see for himself that he was not acting thoughtlessly or that he saw his way to pay. But what would be good advice for the present?

G. I do not know of any remedy, because of the trend of the times, and because so many have bought, who did not possess a penny. On the other hand through all these defaults the goods have been distributed in such a way that anyone who has kept any goods must go on with the blame. . . .

W. But tell me, what does it mean, "in the naught," as is said on some of these vouchers, as well as "with the plates?"

G. You know the meaning of the plates or the discs; I told you last time. If that is put under the letter, half the wine-money is changed, but if "in the naught," it is different.

W. Well, do these dealings take place in a different way than with the discs?

G. Yes, look, I will explain to you. If the discs or the plates have been round, one takes the slate and draws on it thus: in the upper half circle one writes the thousands of guilders; in the middle one, the hundreds. In the full circle, called "the naught," is written the amount which is given to the highest bidder. Under "the naught" the tens of guilders are written and beside that the guilders and the pennies.

One asks if anybody wants to put something "in the naught." If there is somebody, as happens always, he puts something "in the naught." Supposing it is a Gouda of 30 acres. One says: who bids, he who bids highest shall have a double penny, or three, four, five, six pennies; this depends on the place, and



how you think the company will write. Then one says 50, another 75, another 100, another 25 better, still another 150, another 200, till it finally stops and no one wants to bid higher. Then the one who sits next to the slates says: No one bids? No one, once, twice, no one bids? No one? Before I go on, I must tell you, he draws a circle round three dashes he has drawn previously.

Then he says: No one, once, twice, no one more, another time, no one a third time, no one? For the fourth time, the right is forfeited. He then draws a line through the circle and if the buyer wants to give the goods, the deal is accomplished. If not, he has the money for nothing, say the two, three, four, five, or six pennies as has been put "in the naught." If the deal is concluded, one gives as much wine-seal as "with the plates."

*W.* Well, see, is that the way, so even children could deal.

*G.* It is in this way, that the greatest number of three's are made. . . .

### (3) THIRD DIALOGUE (1637)

*G.* I have noted a few other curious sales, but they are not in this book.

*W.* My dear, show them to me as well. May one speak about these?

*G.* Why not, read them. Sold to N. N. a quarter of Witte Kroonen for the sum of 525 gld. when the delivery takes place; and four cows at once, which may be now taken from the stable, and led to the seller's house.

Taken from N. N. two pounds of Swislers he had bought for 1,200 gld. which I take to my charge, on top of which he will have one quarter of prunes, which I deliver at once, and also within fourteen days, 1,400 gld. counted down or transferred at the Bank.

Sold to N. N. one pound of Gheele Kroonen for 800 gld., and honoring him with cloth for a suit and a coat, worth in the estimate of connoisseurs at least eight guilders the ell.

Bought from N. N. a pound of Witte Kroonen for 3,200 gld., and honoring him with 200 gld. and a silver dish estimated at 60 gld. Handed over to N. N. a pound Gheele Kroonen, which had been bought for 375 gld. the pound, which sum he takes to this charge; he gives me at once his horse and coach, two silver bowls and 150 gld. N. N. and N. N. have agreed that the one shall accept sixteen acres of land, estimated by arbitrators at 16,000 gld., in exchange, the other shall deliver tulips of the same value, whilst promising that he shall buy the excrescences of the aforesaid tulips during five years for a price which is a fifth of the capital sum. On the same conditions a house has been sold, estimated at 4,400 gld.

Bought from N. N. one pound Centen for 1,800 gld., and giving her my best shot coat, one old rose-noble, and one coin with a silver chain to hang round a child's neck.

Someone had bought a Vice-Roy of 175 acres, planted, for 900 gld. which another took from him in exchange for a suit with a coat, as costly as he wanted, and on top of that, 1,000 gld. at the time of delivery. The material for the coat was at once cut off, and he had it edged with gold lace, the tails with green velvet and the coat entirely lined.

Sold to N. N. one Brabanson Spoor of 370 acres, for 700 gld., on condition of receiving 200 gld., a cabinet cupboard, made of ebony with a multiple glass in it, and a big picture, being a pot of flowers. Bought from N. N. one Gouda of 111 acres, for 700 gld. at the delivery; now at once, four rose-nobles, a sledge, a saddle, and reins belonging to a horse.

Sold to N. N. a garden with flowers and plants, as it stands in its hedges, for 80,000 gld. to be paid when the flowers are in their season. I will, however,

retain a few flowers for myself, which I will choose and which now name, if the buyer desires it, for a value of about 2,000 gld.

Taken from N. N. a Verbeterde Spinekop of 400 acres, planted, which he has bought for 700 gld., on condition of honoring him with a hundred ship-pounds of Edam cheese at once.

*W.* I thank you; I have heard enough; out of all this, those who have knowledge of flowers can easily make out the others.

*G.* That is true. But would you not take note of that sale of flowers in a garden for which the sum of 74,000 gld. was offered?

*W.* Has that sale been completed?

*G.* No, some say it was the buyer's, some say it was the seller's, fault.

*W.* Well, why should I note it then? But, tell me, would these flowers be as valuable now as they were last winter?

*G.* I do not think so, because now there is no demand for flowers; everyone keeps silent. Also some do not desire to sell, they say. On the other hand I have heard that on May 1st a garden has been sold with flowers, amongst which were a few Swislers, Audenaerdens, and Admiral de Man's, and a basin with second year seedlings, as well as Dobbela Coleuren and others. This was sold by Dutch auction and has not fetched more than 6 gld.; if they had been sold last year, it would have been over 600 gld. or perhaps 1,000 gld.

And I have been with one who offered to deliver one Ghel en Root van Leyden, one Cent, one Switser, one Witte Kroon, one Gheele Kroon, one Audenaerde, one Cooreneyer, and all that for a ducat apiece, which is only 22 gld. 1 penny. If they had been sold at the moment of highest price in the winter, they would have made over 400 gld.; at least that would have been promised for it. . . .

*W.* It is good that you remind me of it; because I have often wanted to ask you what kind of flower is the Semper Augustus of which I hear so much?

*G.* That is a beautiful flower; one can but see it at the homes of only two people, one in Amsterdam from which it comes, and also here at the home of one who will not sell for any money; so they are in close hands.

*W.* At how much is such a flower estimated?

*G.* Who shall say? But I will tell you what I have heard about it: about three years ago, it was sold for 2,000 gld., transferred at once at the Bank, with the restriction that the buyer could not sell or alienate it without the consent of him from whom he bought it.

*W.* So they might have been worth this winter, say, 3,000 gld.

*G.* Yes, even 6,000, and possibly more, even if it be a plant of only 200 acres.

*W.* The flowers greatly surpass gold and silver.

*G.* You may say gold and silver, yes, all the pearls and costly stones.

*W.* It is true, if you consider their beauty when in existence and take into account by whom the trade is run. But not when you look at their perishability, and consider by whom silver and gold, pearls and stones, and artistic works are esteemed; because the latter are esteemed by great people, the former by common folk.



## II

## SOLICITOR'S ACTS AND GOVERNMENTAL RESOLUTIONS\*

(1) DECLARATION OF SOLICITOR J. SCHOUTD AT HAARLEM, AUGUST 1ST, 1636<sup>1</sup>

At the instance and demand of Jan Oecsz, tickworker, and citizen of this town, appearing before me, Jacob Schoudt, public solicitor . . . residing in the city of Haerlem, and of the witness described below, David, de Milt, ribbonwaver by profession, about 32 years of age, living within Haerlem, on demand as above, certified to the truth of the fact that he, the witness, in company of the producer cent has gone, on December 1st of last year, 1634, to the house of Jan van Damme, living out of the Cleyn Houtpoort of this city on the East side of the Cleyn Houtwech and that he has heard and seen, being continually present, that aforesaid Jan van Damme finally sold to the aforesaid producer two tulip bulbs called the Gouda, weighing each 30 aces, for 30 pence per ace; also two Admirael van der Eyck's 18 or 20 aces, planted, for 132 gld. and another Admirael van der Eyck weighing 80 aces the dry bulb, to be delivered for the sum of 80 gld. which he, the witness, offers to maintain and to confirm at all times if necessary and on request. Consenting, etc.

(2) SUMMONS OF SOLICITOR J. WARNAERTS AT AMSTERDAM, MAY 9TH, 1636<sup>1</sup>

This day, May 9th, 1636, I have in the presence of, and at the request from the honorable Symon van Peulenburgh, betaken myself to the person of Jan Hendrick. Admirael, and have informed him as follows: that he, the plaintiff, has bought from you, the defendant, one-half share of three tulips, namely one, an Engelsche Admirael, weight 90 to 100 aces, the other, a General Vereyck of 100 aces, and the third an Admirael Liefkens of 110 aces, standing in the garden of Cornelis van Breugel according to the act of sale, made out on December 6th, 1635. And he, the plaintiff, has asked the aforesaid Cornelis van Breugel through solicitor Jacob van Swieten on April 24th ult. to deliver the same three tulips.

If the aforementioned van Breugel refuses to deliver, saying they belong to him in entirety, he, the plaintiff, through me, the solicitor, demands hereby immediate delivery of the half share of the three tulips and that you make haste to sell and to deliver the same as soon as possible. In case of default or refusal, the aforesaid plaintiff protests against all costs, damages, and interest which he has made, suffered, or lost, or may yet make, suffer, or lose, to prosecute and to recover as will be necessary. After which the aforesaid Jan Hendrickx. Admirael said: I hear and I see.

Act of which at Amsterdam, etc.

(3) SUMMONS OF SOLICITOR W. CROUSEN DEN JONGE AT HAARLEM, JULY 6TH, 1636<sup>2</sup>

Today, July 6th, 1636, I, the undersigned solicitor, and they, the witnesses, in the name of Martin Kretzer, living at Amsterdam, have betaken myself into the presence of Dirck Janssen and have read to him, protesting and summoning as follows.

Plaintiff to the defendant: as he has sold one motherbulb of an Admirael Liefkens and the excrescences thereof, to be received eight days after the taking

\* For the original Dutch, see *Economisch-Historisch Jaarboek*, vol. xiii (1927), pp. 3-85.

<sup>1</sup> Record-Office Haarlem, Solicitor's Acts no. 133, fol. 144.

<sup>2</sup> R. O. Amsterdam, Solicitor's Acts no. 673.

<sup>3</sup> R. O. Haarlem, Solicitor's Acts no. 158, fol. 158.

out of the ground of the same, as proved in the contract, signed by both of you, and as the time is now a few days overdue, and you refuse to receive them, so he offers to you, through me, solicitor, to make the delivery. In case of refusal or omission, he, the plaintiff, protests hereby against all costs, damages, and interests which he has already suffered or may still suffer (as well as against all accidents which may happen to the bulbs which are now whole and healthy) to be recovered on your person and your goods, when and where it suits him. I await your immediate answer to this.

I have read, summoned, and protested thus to the aforesaid defendant who answered: I hear and I see.

Done in the presence of Willem Schoneus and Jan Cornelisz. Quaeckel as witnesses of the plaintiff.

(4) DECLARATION OF SOLICITOR J. VAN BOSVELT, HAARLEM, AUGUST 1ST, 1636<sup>3</sup>

Appeared before me, solicitor, and the witness below-mentioned, Jeuriaen Jansz, baker, age about 50 years, living within this city, who has declared, at the request of Hendrick Bartelsz., shopkeeper outside the Cruyspoort, but living within the freedom of the aforesaid city, that he, the witness, bought, about two months ago (without knowledge of the exact day), from the plaintiff the outgrowth of the bulb of a tulip called Admirael Liefkens, standing then in full bloom, at Amsterdam, in the garden of Sr. Cresser, for 6 gld. 12 pennies each ace. The plaintiff had bought last winter this outgrowth of the tulip Admirael Liefkens from a certain Ysaacq Jansz. for 6 gld. 10 pennies per ace. However, he, the witness, bought the aforesaid outgrowth on such conditions that he had the choice for two days whether to conclude definitely or to cancel the deal. In the meantime he, the witness, coming to the house of Cornelis Arensz. Kettingman, innkeeper here, at the college and in the society of several tulipists overheard, from remarks freely made in other conversation, that they knew for certain that the aforesaid tulip Admirael Liefkens had been looked at, and taken out of the ground, and the earth scraped off. And by this the plaintiff himself has been very much deceived and has suffered great damage.

Because once the exact weight of the outgrowth of aforesaid tulip was known, no one would desire to buy for so high a price as he, the plaintiff, had paid previously. He, the witness, knowing this and hearing how the aforesaid tulip Admirael Liefkens had been treated, he and his . . .<sup>4</sup> on the following day have cancelled the aforesaid deal for which they had paid. He told the plaintiff what he had heard at the place of the aforesaid Kettingman. The plaintiff, who heard this for the first time, was very annoyed about it, on the one hand, for the deceit practised on this aforesaid tulip and its outgrowth, and on the other hand, on account of the profit which he should have made out of him, the witness. To which he, the witness, hereby certifies.

Of which act at Haerlem on August 1st, 1636, etc.

(5) DECLARATION OF SOLICITOR W. CROUSEN DEN JONGE AT HAARLEM, AUGUST 29TH, 1636<sup>5</sup>

Today, on the 29th day of the month of August, 1636, has come before me, Wouter Crouse de Jonge, public solicitor, and the undersigned witness, Juyt-

<sup>3</sup> R. O. Haarlem, Solicitor's Acts no. 165, fol. 271.

<sup>4</sup> Illegible.

<sup>5</sup> R. O. Haarlem, Solicitor's Acts no. 150, fol. 185.



een Jansz., baker, age about 50 years, freeman of this city, and known to me, solicitor, as having been present during the contagious disease, the plague.

He, on his honor as a man, and on the salvation of his soul, instead of an oath, has certified to the truthfulness and justice of the fact, that he, the witness, sold to his neighbor, Pieter Jansz. Aleman, during the last time of flowering, the second excrecence of a tulip Gouda for three guilders 15 pence each ace. When the time came to take the bulb out of the ground, he, the witness, asked the aforesaid Pieter Aleman to be so good as to be present; which has always happened in the presence of his, Pieter Jansz.'s daughter. But Pieter Jansz., himself, has not appeared, but amongst others his brother-in-law, Claas Jonas, was present from the beginning till the end; he has also inspected the bulb, as if it were his own concern.

He, the witness, further declares that the first excrecence had been bought by Jan Coopall, who was not present when the bulb was taken up, and that he, as well as a certain Dauvit de Milt, who has looked at the aforesaid bulb, wanted to make some difficulties and was unwilling to receive the aforesaid excrecence. But at the college of the florists \* to whom the matter was referred, it was understood that the aforesaid Coopall had to accept the excrecence. Such he has done and he paid for the aforesaid excrecence honestly and clearly. All of this has truly happened.

Offering to live or to die upon this, and to offer his soul to God Almighty, and if necessary to declare this on solemn oath. Done, etc.

(6) AGREEMENT BETWEEN THE FLORISTS OF ARKMAAR, DELFT, ENKHUIZEN, GOUDA, HAARLEM, HOORN, LEIDEN, MEDEMBLIK, ROTTERDAM, DE STREEK, UTRECHT, AND VIANEN, FEBRUARY 24TH, 1637<sup>7</sup>

Today, the 24th of February of the year, 1637, the undersigned delegates of the florists of Haarlem, Delft, Gouda, Utrecht, Alckmaer, Leyden, and Rotterdam, who have instruction to follow the majority, Vianen, Horeen, Enckhuysen, Medemblick, and de Streeck, who have arrived yesterday here in Amsterdam, to meet and to deliberate on the actions of Flora and to abolish the misunderstandings which have arisen recently between them owing to the high auctions of the tulips. To prevent the damage, yes, the extreme ruin which some, more especially the new amateurs, are to expect, they have concluded as follows, after several propositions, and also after mitigation of an unanimous resolution, which the florists of Amsterdam did not care to accept:

To wit, all deals which have been concluded before ultimo November, 1636, inclusive, *stilo novo*, are to be fulfilled; the sales which have taken place after that date may be cancelled by the buyer on payment of 10 per cent and he may decide in March whether he definitely wants to abandon the transaction.

So we have agreed at Amsterdam on the day and the year as above and in knowledge of which we each have signed.

- |                    |                         |                      |
|--------------------|-------------------------|----------------------|
| 1. Haarlem         | 2. Delft                | 4. Gouda             |
| Willem Schoneus    | Gertt Willem van Sassen | Cornelis Rotteval    |
| J. van Clarenbeeck | W. J. Flooding (?)      | (after affirmation)  |
| Pieter Gerretsen   | 3. Leyden               | 5. Vianna            |
| Cornelis de Bruyn  | Jagues Baelde           | Frans Gomez da Costa |
| Barent Kardoes     | Bruyn Dircsz.           | Isack Cornelissen    |

\* Cf. above, p. 444.

<sup>7</sup> R. O. Amsterdam, Solicitor's Acts no. 1269.

6. Alckmaer  
Corn. de Haes  
Gerritt Adriaensz.

7. Utrecht  
Francois Sweert  
Bastyen Hendricks. van Gheersberghen  
Anthony Verbeek

8. Those from Enckhuysen and Medemblick sign under condition of communion with their principals to decide ultimately whether to accept or to refuse.

Dirck Jansz. Uyl  
Hendrick Pietersz. Beelhouver

Gerrit Barentz. Spylleman

9. Those from Hoorn sign with the provision that they consult with their principals to decide whether to accept or to refuse.

Adryaen Jans. Spranger  
Mr. Jacob Chungijn

10. De Streeck

Thijs Wacmaersz.  
Claas Heertgensz.

(7) RESOLUTION OF THE BURGMASTER AND GOVERNORS OF HAARLEM,  
MARCH 7TH, 1637<sup>8</sup>

The Burgmaster and Governors of the City of Haarlem hereby declare for the benefit of the citizens and the inhabitants of the province of Holland, to incline and to be of opinion, that all deals in flowers made since the last planting time in this country should be cancelled in series; at the request of a few citizens act herof is made out, at the chambers of the Burgmaster, on March 7th, 1637. Under this was written, I being present, and was signed

J. VAN BOSVELT.

(8) RESOLUTION OF THE STATES OF HOLLAND AND OF WEST-FRIESLAND,  
APRIL 27TH, 1637<sup>9</sup>

At the request of many of those who were principally concerned with the growing, cultivating, and trading of flowers, residing in most of the cities of this province, such as Haarlem, Leyden, Amsterdam, Alckmaer, and Hoorn en Enckhuysen, and after having asked the advice of the President and the Councillors of the Provincial Court of the aforesaid country, the States of Holland and West-Friesland have decided, before answering the aforesaid request, that Their Honorable Great Powers and the aforesaid Court shall first receive further information concerning the origin and the time of the successive great increases in the sales of tulips, as well as concerning the great decline in prices, as well as concerning the number of contractants in the several cities. It is the opinion of Their Hon. Gr. Po. that this can be done most conveniently by the respective magistrates of the cities, who are advised to bring together and to unite contractants, if possible; if not, they are required to forward the information received to the aforesaid Court.

During which, the planters of the aforesaid tulips are authorized to sell the tulips which had been sold but have not been accepted, at the risk of the first buyers, after summons, and to recover the difference from the said buyers, in case of a decision that the aforesaid contracts were to have their full effect. Till then, all deals in tulips are in suspense and not prejudiced.

Done at The Hague on April 27th, 1637.

<sup>8</sup> R. O. Haarlem, Register of Resolutions, 1634-1639, fol. 154.

<sup>9</sup> Groot Plakkaat-Boek, ii, col. 2363.



(9) DECLARATION OF SOLICITOR E. VAN BOSVELT AT HAARLEM, JUNE 20TH, 1637<sup>1</sup>

At the request of Joost Plavier, for Cornelis Adriaensz. van Duyn, living at Middelburch, having married Flora Abrahams van Neste. Today, on the 20th of June, 1637, appeared before me Egbert van Bosvelt, secretary of the Orphan's Court of the City of Haarlem and public solicitor . . . in the presence of the witnesses mentioned below, Davidt Clement, 53 years old, Willem Gale, 37 years old, Daniel Olthoff, also 37 years, and Pieter Joosten de Sanger, 48 years old, all florists and citizens of this town, and at the request and instance as above, they have certified to the truth of the fact that they, the witnesses, have been present at many and various sales of flowers during the past winter. They have themselves traded extensively, selling and buying, importing for many thousands, but delivery and payment not being made by many and several, but a few honest people compromised by paying one, two, three, four, yes, even five, which was the utmost, out of hundred. They, the witnesses, understand, that such has happened in the same way at Amsterdam, der Goude, Hoorn, Enchuyssen, and Almacr. Yes, there are also a great number of persons unwilling to pay or come to a compromise. And not only no justice was administered, but all notaries, solicitors, and ushers were forbidden by the authorities: the notaries were not to summon, the solicitors not to make plaints, and the ushers not to bring them and not to occupy themselves with these matters. And, I, notary, declare this to be true as this defence has been brought to myself by the common usher, on behalf of the Burgomaster.

(1) DECLARATION OF SOLICITOR J. SCHOUT AT HAARLEM, OCTOBER 23D, 1637<sup>1</sup>

At the instance and the request of Pieter Louis, grocer and inhabitant of this city, appeared before me, Jacob Schoudt, public solicitor . . . residing within the City of Haarlem, in the presence of the witness below-mentioned, Cornelis Coelembier, thread-twiner, about 45 years old, known to me, the solicitor, who has . . . at the request as above . . . certified to the truth of the fact, that now about ten or eleven months ago, without knowing the exact day, or to make this a matter of importance, came to him, the witness, the aforesaid Pieter Louisz., the product in this matter, telling him that one Jan Jansz. Lely, peasant at Sardam, possessed in partnership with one Pieter Joncheer, a certain number of flowers, then planted in the garden of aforesaid Pieter Joncheer, and that he was willing to sell his part.

Further, that the aforesaid product, himself not having any knowledge of flowers, encouraged and advised him, the witness, to buy this aforesaid share on the especial condition, that if he succeeded in concluding this deal with the aforesaid Jan Jansz., that he, Pieter Louisz., and he, the witness, were each to have half of it, as was accepted and agreed between them.

Accordingly the product and himself, the witness, betook themselves to the aforesaid Jan Jansz., who was at the time in his boat lying in the Backenesser-grafte. The three of them sitting in the forecastle of the same boat and after some discussion, finally agreed on the sum of 275 carolus guilders to be paid within a month. On the 13th of January the aforesaid money was counted out to the aforesaid Jan Jansz. Lely, at the house of him, the witness, and in the presence of the aforesaid Pieter Louis; he, the witness, and the aforesaid product sharing equally, each contributing and paying 137 guilders and ten pence.

Finally he, the witness, declares that the aforesaid persons have never been able

<sup>1</sup> R. O. Haarlem, Solicitor's Acts no. 57, fol. 89.

<sup>2</sup> R. O. Haarlem, Solicitor's Acts no. 149, fol. 87 v.

to get the aforesaid flowers, in spite of many requests for delivery. The Lords officers of the Orphan's Court of the child of Pieter Joncheer especially forbade, and the guardians of the same child did not allow, either him, the witness, or the product, to have a hand in the matter and to take the bulbs out of the ground, with the consequence that the said flowers have remained in the ground till about mid-September, with the result that the same may be greatly spoiled or damaged, even entirely rotten and perished.

To which he, the witness, offers to certify, etc.

(11) DECLARATION OF SOLICITOR J. WARNAERTS AT AMSTERDAM, NOVEMBER 9TH, 1637<sup>2</sup>

Today, the 9th of November, 1637, at the written request of the honorable Willem Schoneus, citizen of Haarlem, I have betaken myself unto the person of the honorable Mathijs (S)chouten, merchant here, and have summoned as follows: the plaintiff has sold to you, the defendant, one pound of Golinx, as proved by the contract, for 775 guilders, therefore the plaintiff, through me, the solicitor, herewith offers to make delivery of the aforesaid bulbs, begging you to accept them during this week at the latest, and to pay the sale price at delivery. In case of default or refusal of the same, he protests emphatically that he, if he so desires, shall sell the said bulbs at your costs, charges, damage, and risk in conformity with, and by grant of, a resolution of the Lords States of Hollandt and West-Frieslandt.

(12) RESOLUTION OF THE BURGOMASTER AND GOVERNORS OF HAARLEM, JANUARY 30TH, 1638<sup>1</sup>

Has been formulated the instruction for the commissioners on questions which have come forth from the flower trade, in the following manner: the Lords of the Court of the City of Haarlem, at the request and persistent demand of several residents of this town, have nominated to be commissioners on the questions and disputes arisen out of the flower trade and to terminate these by accommodation if possible, hereby commit and nominate, E. Nicolaes Jansz. Verwer, formerly alderman, Hendrick Vestens, Nicolaes Lubbertsz. van der Weyden, Joëas Harrewijn, and Abraham Loreyn. All persons summoned relative to the flower trade have to appear before these commissioners under penalty for the first time, 30 pennies, the second time, 3 guilders, and for the third time, 12 guilders, to be paid to the benefit of the poor, unless the commissioners find reasons for dispensation or moderation.

The aforesaid commissioners, at least three in number, shall sit in the hall of the Prinsenhof, at this place on Wednesday and Saturday, in the morning from nine till eleven and in the afternoon from two till four.

The aforesaid commissioners shall be assisted by a secretary, or in case of his absence, by a clerk, who shall make notes and who shall enjoy three pence for each presentation, to be furnished by the plaintiff. The ushers shall enjoy the customary fee for summons, which the plaintiff must also pay. The summons must be made out twenty-four hours previously. For the summons the sworn ushers are authorized.

<sup>1</sup> R. O. Amsterdam, Solicitor's Acts no. 676, fol. 146.

<sup>2</sup> R. O. Haarlem, Register of Resolutions 1634-1639, fol. 203 v.



## (13) RESOLUTION OF THE BURGOMASTER AND GOVERNORS OF HAARLEM,

MAY 22ND, 1638<sup>a</sup>

The commissioners in the matters of flower trade announce that they have resolved, in the contracts of the aforesaid trade, which are of their concern, and where the decision remains with them, to agree on  $3\frac{1}{2}$  per cent consolation money. Has been decided that this shall be communicated to the Lords of Justice.

## (14) RESOLUTION OF THE BURGOMASTER AND GOVERNORS OF HAARLEM,

MAY 28TH, 1638<sup>a</sup>

Has been approved of the proposal of the commissioners of the flowers to decide the questions in this matter on  $3\frac{1}{2}$  per cent.

<sup>a</sup> R. O. Haarlem, Register of Resolutions 1634-1639, fol. 221 v.<sup>a</sup> *Ibid*, fol. 222.

# JOURNAL of ECONOMIC and BUSINESS HISTORY

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## HISTORY OF THE DENNISON MANUFACTURING COMPANY

E. P. HAYES

In its relatively short existence of about eighty-five years the Dennison Company has experienced many changes in policy and in fortune. Located at first in Brunswick (Maine), the plant moved to Roxbury, and, later to Framingham. Starting with the manufacture of jewelers' boxes, the firm extended its operations to tags, crepe paper, and many other stationers' supplies. While at first it had sold to wholesalers, it gradually found most profit and security in selling also to retailers and the consuming trade (pp. 480-482, 486). With a scarcity of skilled labor as its probable chief difficulty at first, it later had to face low prices, particularly in the keenly competitive market of the West (pp. 487, 497, 499). The firm started in the usual fashion as the enterprise of a single individual, then entered the partnership stage when more capital was required (pp. 471-472), finally becoming a joint-stock company (p. 478). The shares of the Company were gradually and purposely distributed among employees, particularly among those engaged in marketing (p. 486).

The pendulum of business policy swung first to the right and then to the left. In production the swing was toward several plants and then finally to one — at Framingham. In marketing, the early tendency was toward decentralization — in several cities (pp. 479-480), while later it was at least guided by a central committee. While trade was good and prices high, emphasis was put upon production; when business was poor, marketing received most attention. We leave the story with the victory of production in 1906 and the concentration of both production and marketing in the one central plant (pp. 501-502).

IN 1920 the Dennison Manufacturing Company undertook, for the information of its own executives, the study of its history from 1844, the date of founding, to the present.