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**THE BOOKKEEPING RECORDS AND METHODS**  
**OF**  
**E. I. DU PONT DE NEMOURS AND COMPANY, 1801-1834**

**by**  
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**Submitted in partial fulfillment**  
**of the requirements for the degree of**  
**Master of Arts**

**Faculty of Graduate Studies**  
**The University of Western Ontario**  
**London, Canada.**

**April, 1966**

UMI Number: EC45516

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## ABSTRACT

The Du Pont chart system has become a model for the analysis and reporting of the financial results of diversified, large-scale industrial enterprises. This system was designed to forecast the future, as well as to record the past, and its complexity provides a startling contrast to the financial management of E. I. du Pont and Company from 1801 to 1834, when virtual control was exercised by its founder.

Whereas the Du Pont Company now makes a forecast of working capital requirements and cash resources, the establishment of the Du Pont gunpowder factory cost twice what E. I. du Pont estimated, and he was constantly embarrassed by lack of working capital. Although Du Pont de Nemours prophesied certain profits from the sale of the superior product which he believed his son could manufacture, this was simply a hope, rather than a systematic forecast. A capital expenditures budget and working capital standards were neither applied nor even dreamed of at that time.

The Du Pont Company now issues detailed yearly financial statements arrived at by systematic accounting

procedures, but from 1801 to 1834 the books of the company were closed and profits calculated only at irregular intervals. The profit figures, moreover, were of questionable validity, and the procedures were far from systematic. The bookkeeping procedures were determined by the practices of the time, and some of them can be justified even in terms of modern standards.

The closing of the books for the calculation of profit was determined partly by the terms of the Act of Association and partly by the control exercised by E. I. du Pont. The first closing came at the end of the first period of association, some followed changes in the proprietorship, and others were forced by special circumstances.

The control exercised by E. I. du Pont was a vital factor, not only in determining bookkeeping procedures and the calculation of the profit, but also in the expansion of the company. Before 1815 he had only one share of the total of eighteen, but the terms of the Act of Association allowed him to decide upon the use of the profits. He applied them to a program of expansion, ignoring the objections of the American partner, Peter Bauduy, who had supplied much-needed capital. This period was characterized by a struggle for control between the two men.

In 1815 Bauduy withdrew from the company, selling his shares to E. I. du Pont, who then became the holder of the largest number of shares. Bauduy's duties in the

company were assumed by Antoine Bidermann, the son of the chief European shareholder, who worked in complete harmony with E. I. du Pont.



## PREFACE

The Du Pont Company believes that a system of financial control should include a periodic forecast of sales and profits, a forecast of working capital requirements and cash resources, a capital expenditure budget and working capital standards, together with statements that show actual operating performance and balance sheet conditions promptly after the close of the accounting periods.<sup>1</sup>

The purpose of this thesis is to contrast the handling of the financial affairs of E. I. du Pont and Company from its inception in 1801 to the death of its founder in 1834 with the above summary of the system of financial control now imposed upon the company. This will involve: a description of the circumstances which led to the establishment of the company; an outline of the capitalization and of the changes in proprietorship; a description of the bookkeeping records and methods used by various bookkeepers; an outline of the procedures used and the circumstances surrounding the measurement of profit; and, finally, an evaluation of the bookkeeping procedures in terms of both contemporary and modern standards.

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<sup>1</sup>American Management Association, Bulletin No. 6, "Executive Committee Control Charts," prepared by the Treasurer's Department, E. I. du Pont de Nemours and Company (Wilmington, Delaware, 1960), p. 5.

The most important source for this thesis was the collection of bookkeeping records of E. I. du Pont de Nemours and Company. The eleven-volume work of Mrs. B. G. du Pont based on the correspondence of E. I. du Pont provided an invaluable short-cut and, together with manuscript material from the various collections of the Eleutherian Mills Historical Library, helped to clarify specific matters of importance to this study and to give insights into the characters of the people concerned. The contributions of A. C. Littleton have been essential in gaining a perspective of both the history and theory of American bookkeeping and accounting.

The writer of this thesis wishes to thank the Eleutherian Mills-Hagley Foundation of Wilmington, Delaware, for grants-in-aid of research which permitted the study of the primary source material at the Eleutherian Mills Historical Library in the summers of 1963 and 1964. She wishes, also, to acknowledge the unfailing courtesy and co-operation of the staff of the library in facilitating her work. The generous loan of a set of Mrs. B. G. du Pont's Life of Eleuthère Irénée du Pont was particularly helpful. Special thanks are due to the Director of the Library, Dr. Richmond D. Williams, and to Mrs. Marie E. Windell.

At the University of Western Ontario, Dr. Richard C. Overton gave valuable help by the meticulous care he took in reviewing the thesis and making suggestions for its improvement; Professor W. J. McDougall of the Business

School discussed and clarified some problems relating to bookkeeping and accounting; and Dr. D. G. G. Kerr provided training in historical method which has been invaluable in forcing a more critical analysis of the material. The deficiencies which remain are the responsibility of the writer of the thesis.

N. L. E.

London, Ontario,  
April, 1966.

## DOCUMENTATION

The terms shown below were used in this thesis in referring to manuscript collections of the Eleutherian Mills Historical Library. An explanation of the numbers and letters accompanying these terms in foot-note references is also shown below.

EBduP Collection: Eleuthera Bradford du Pont Collection. The box, file, and items numbers of each manuscript cited are shown after the abbreviation.

Longwood ms.: Longwood Manuscript Collection. The group, series, and box numbers of each item cited are shown after the abbreviation.

PSduP Collection: Pierre S. du Pont Collection. The box and file numbers of each manuscript cited are shown after the abbreviation.

Schedule: Records of E. I. du Pont de Nemours & Co. The number shown before the abbreviation is the number assigned to the volume as listed in the schedule prepared by the Manuscripts Department of the Eleutherian Mills Historical Library.

Winterthur Collection: Henry Francis du Pont

Winterthur Collection. The group, series, and box numbers of each item cited are shown after the abbreviation.

Because of the length of the titles of some of the early bookkeeping texts, shortened forms have been used in referring to them in the foot-notes and in listing them in the bibliography.

Although there is some variation in the spelling of the family name of E. I. du Pont in early documents, the spelling in this thesis has been standardized, except in direct quotations. His father signed himself and was referred to as Du Pont (de Nemours) after his election to the Estates General in 1789 as the representative from the district of Nemours.<sup>1</sup> Throughout this thesis, Du Pont de Nemours is used to refer to the senior Du Pont.

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<sup>1</sup>The representative from Bigorre, whose name was Dupont, was called Dupont de Bigorre.

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## CHAPTER I

### THE EIGHTH PLAN

My second Son will explain to you the eighth plan that we have in view, and what we believe we can accomplish here by the manufacture of gunpowder--for which his skill in this art, the ignorance of it in America, the needs of Government, those of the Country and even of the Spanish Indies, give us not hope but a positive certainty of great profits.<sup>1</sup>

E. I. du Pont de Nemours and Company, a gigantic enterprise, whose name is synonymous with the manufacture of explosives and synthetic products, is the fruition of the "eighth plan." The other seven were too impracticable or planned on too grandiose a scale to have succeeded, or they were based on expectations which changing conditions made impossible of achievement.<sup>2</sup> The eighth plan seems almost an afterthought,<sup>3</sup> but it was the only successful one initiated.

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<sup>1</sup>P. S. du Pont de Nemours to Jacques Bidermann, December 1, 1800, Life, V, 191.

<sup>2</sup>These plans were mentioned briefly in the letter cited above; ibid., V, 163-96. Included were plans for acting as agents in the purchasing of supplies in the United States for the French Government and the French Navy, setting up a fleet of mail ships, loaning money to the United States, and two unexplained "Spanish schemes."

<sup>3</sup>The details of the eighth plan take slightly more than one of the thirty-one printed pages of the letter cited

All of them centered around the efforts of Du Pont de Nemours to make a fortune in the United States after he and his family left France in 1799.

The decision to leave France must be considered against the background of conditions there and the public career of Du Pont de Nemours.<sup>1</sup> It was a career marked by sufficient ability to allow him to associate and correspond on equal and cordial terms with men such as Quesnay and Turgot, Franklin and Lavoisier, Lafayette and Talleyrand, and Thomas Jefferson. It was a career rewarded by elevation to the French nobility for his services in helping to prepare the rough draft of the Treaty of Paris (1783), and distinguished by being asked by Jefferson to act as an intermediary in the negotiations for the Louisiana Purchase.<sup>2</sup> It was a career honored by election to the Constituent Assembly in 1789 and to the Council of Ancients, of which he became president, in 1795.

It was the activities of Du Pont de Nemours in those bodies during the Revolutionary period, however, which led

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above; see ibid. These details come nearly at the end of the letter. Du Pont de Nemours expected a modest eighty thousand francs annually from the gunpowder factory, in comparison with five to ten million francs from "my own plan with Spain."

<sup>1</sup>See Pierre Larousse, Grand Dictionnaire Universel du XIX<sup>e</sup> Siècle (Paris, 1870), VI, 1415-16, for a summary of the career of Du Pont de Nemours.

<sup>2</sup>This took him back to France in 1802, Life, VI, 66. In 1815 he returned to the United States, where he died two years later, Life, X, 87 and 242.



to the nadir of his public fortunes and his consequent departure from France. In the first place, his membership in the "Club of '89", one of the many political groups which flourished in Revolutionary France and which included Sièyes and Condorcet, marked him as a moderate. To the extremists, his action in forming and leading a group which tried to protect Louis XVI during the famous attack of August 10, 1791, on the Tuileries stamped him as a reactionary and led to his proscription and imprisonment in La Force Prison in 1794. Only the fall of Robespierre saved Du Pont de Nemours from following his friend, Lavoisier, to the guillotine.

To Du Pont de Nemours, the rule of the Directory was little improvement over that of the Terrorists, and his constant and candid public attacks on the virtual dictatorship exercised by the former again led to his arrest. He was released after only one night spent in La Force Prison, but the continuing surveillance of the secret police led him to the realization echoed by his son in the words:

Oh! how happy we would be, my Sophie, away from the volcano on which we live and established in the promised land.<sup>1</sup>

This heartfelt comment was made in a letter describing a conversation between E. I. du Pont and Colonel Robert Fulton about conditions in various areas of the United States.<sup>2</sup> In preparation for the proposed migration, the

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<sup>1</sup>E. I. du Pont to his wife, September 27, 1797, ibid., IV, 71.

<sup>2</sup>Ibid., IV, 68-72.

second son of Du Pont de Nemours was even then studying English, and his father was negotiating the sale of his property and soliciting financial support for trading and land speculation schemes in frontier areas such as Virginia and Kentucky.<sup>1</sup>

At this time Victor du Pont, the older son, was a key figure in his father's plans. Four years of service at New York and Philadelphia with the French minister and a further three years as French Consul at Charleston had made him well known and well respected in the United States.<sup>2</sup> When he returned to France in 1798 he found that his name was shown in the prospectus being circulated throughout Europe as the director of the enterprise who would be most useful because of his experience in the United States and his fluency in English.<sup>3</sup>

According to his wife, Victor relinquished brilliant prospects for advancement. Mme. Bonaparte had promised to use her influence on his behalf, and General Clarke, recently appointed French Ambassador to Naples, had offered to obtain Victor's appointment as Consul General there.<sup>4</sup> By this time, however, plans were well advanced for the

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<sup>1</sup>Life, IV, 76 and 116.

<sup>2</sup>Ibid., IV, 115,116.

<sup>3</sup>Ibid., IV, 121.

<sup>4</sup>From Transplantation, quoted in Life, IV, 121. In this account it is stated that Victor met General Clarke at the home of Mme. de Staël, who "christened him Victor the superb." Although his name is spelled "Clark" in this account, he has been identified as Henry Clarke (1765-1818); see Grand Larousse encyclopédique (Paris, 1960), III, 173.

move to America, and Victor allowed himself to be persuaded to set aside his own desires.<sup>1</sup> Any arguments or advice that Victor could have presented against the move were useless. His wife pointed out:

Every one of them was so wearied by all they had endured that they were seeing wonderful visions in the future--visions that were less bright to us who had just come from the scene of the proposed migration.<sup>2</sup>

There were thirteen in the Du Pont group that arrived at Newport, Rhode Island, on the first day of the nineteenth century.<sup>3</sup> Their arrival was noted by the Newport Journal, which pointed out that Victor du Pont's "devotion to American interests in France deserves the gratitude of all Americans."<sup>4</sup> No less distinguished a person than George Washington had written in anticipation of the arrival of Du Pont de Nemours:

The expected arrival from France of Mr. du Pont de Nemours cannot but excite the liveliest emotions in the minds of such of our people as are sensible to his own land and more especially to this country in arranging the late Peace.<sup>5</sup>

The Du Pont party settled down at Bergen Point, about nine miles from New York City, in a home which they called "Goodstay." By July 19, 1800, an office had been

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<sup>1</sup>From Transplantation, quoted in Life, IV, 119.

<sup>2</sup>Ibid.

<sup>3</sup>William S. Dutton, Du Pont: One Hundred and Forty Years (New York, 1942), p. 23.

<sup>4</sup>Quoted by Max Dorian, The du Ponts: From Gunpowder to Nylon (Boston, 1961), p. 13.

<sup>5</sup>November 9, 1799; ibid., p. 1.

set up in New York City in the name of Du Pont de Nemours Père Fils et Cie., but there must have been few transactions to record in the bookkeeping records which were purchased at that time.<sup>1</sup> Sometime during the fall, however, E. I. du Pont conceived the idea of a gunpowder factory.

There are two differing stories concerning the germination of the eighth plan, but in both of them there occurs the name of Colonel Louis de Toussard, a French officer who had served with the American forces in the Revolution and decided to remain in the United States.<sup>2</sup> One story is that Toussard and E. I. du Pont ran out of powder while shooting game, and that the latter was shocked to find American-made gunpowder expensive in price but poor in quality.<sup>3</sup>

According to Mme. Victor du Pont, however, Toussard simply spoke in the course of a general conversation about a small cannon powder factory in Pennsylvania.<sup>4</sup> E. I. du Pont's curiosity led him to visit the factory, where he found that powder was still being made by methods that dated back to the time of Louis XIV.<sup>5</sup> Despite this, the owners

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<sup>1</sup>See Life, V, 117-21, for an undated circular, circa March, 1800, advertising the services of this company.

See Longwood Ms., Group 2, Box 3, for a bill submitted by Peter A. Mesier under date of July 19, 1800, for a Waste Book, Journal, and Ledger. As far as can be ascertained, these records are not extant.

<sup>2</sup>Life, V, 192.

<sup>3</sup>Dutton, p. 27.

<sup>4</sup>From Transplantation, quoted in Life, V, 196.

<sup>5</sup>Ibid.

were making a very good profit.<sup>1</sup>

No matter which of these stories is the more reliable, E. I. du Pont was a good judge of gunpowder and had a thorough knowledge of the latest methods of its manufacture, since he had been employed for approximately four years at the French Service des Poudres et Salpêtres at Essonne, under the direction of Antoine Lavoisier.<sup>2</sup> It is to the training that E. I. du Pont received during this time that "the acknowledged superiority of the early Du Pont powder" has been attributed.<sup>3</sup>

In the fall of 1800 E. I. du Pont drew up an outline of a plan for establishing a gunpowder factory, detailing the advantages and competition, and estimating costs and profits.<sup>4</sup> In a separate memorandum he described the location and buildings which he felt would be desirable for the success of the enterprise.<sup>5</sup> After the plan had been discussed with Du Pont de Nemours and Victor du Pont, it was decided that the two Du Pont sons would go to Europe.

Victor had a difficult task, calling for all his talents and diplomacy. He was to explain to his father's friends and associates who had invested in the land

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<sup>1</sup>Ibid.

<sup>2</sup>This was from 1787 to 1791. See Life, I, 99 and 200.

<sup>3</sup>Arthur Pine Van Gelder and Hugo Schlatter, History of the Explosives Industry in America (New York, 1927), p. 26.

<sup>4</sup>Life, V, 198-205.

<sup>5</sup>Ibid., V, 206-212.

speculation project why it had been shelved and a commercial business set up in New York City.<sup>1</sup> He also had to persuade them to continue their support, and his final task was to go to Spain to make arrangements for a project which "would have produced millions"--if he had been successful.<sup>2</sup>

E. I. du Pont had a more modest task, but it was more practical and more productive. He was to get financial support for the setting up of the gunpowder factory, and this he was able to obtain.<sup>3</sup> He also spent several weeks at Essonne and consulted with his former associates at the French gunpowder works.<sup>4</sup> He was able to refresh his memory about the manufacturing processes and learn about improvements that had been made there since he had left.<sup>5</sup>

On his return to the United States, E. I. du Pont's next problem was to select a site for the factory. President Jefferson, whom Du Pont de Nemours had consulted and who offered encouragement, suggested that it be built near the new capital of the United States.<sup>6</sup> E. I. du Pont looked at sites in that area and also in New York State and New

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<sup>1</sup>From Transplantation, quoted in Life, V, 196.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid.

<sup>6</sup>Dutton, p. 30. The burning of Washington by the British in the War of 1812 probably made E. I. du Pont glad that he had not chosen a site in that area. As a matter of fact, shortly after Washington had been burned, Wilmington was threatened, the Du Pont powder mill doubtless being an important objective; see Life, IX, 269.

Jersey.<sup>1</sup> An offer to buy a gunpowder factory already in operation in Pennsylvania was refused by its owners, William Lane and Stephen Decatur.<sup>2</sup>

The location finally chosen, on the Brandywine Creek near Wilmington, Delaware, had much to recommend it. Good water power and transportation facilities had attracted other manufacturing enterprises to the area.<sup>3</sup> E. I. du Pont chose his site primarily with an eye to safety, and he also noted that the wood on the property would permit a saving of about one-quarter of the cost of the buildings.<sup>4</sup>

One of the intangible attractions of the Wilmington area was the presence there of a group of French who had been forced out of the West Indies by the slave uprising in 1791.<sup>5</sup> One of the members of this group was Peter Bauduy, who helped E. I. du Pont explore the potential advantages of the area and who offered to invest in the gunpowder

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<sup>1</sup>At first, E. I. du Pont favored either New York or New Jersey, because in those states foreigners had no difficulty in purchasing land, whereas the Delaware laws prohibited such purchases; see Life, V, 313.

<sup>2</sup>Ibid., V, 326 and 336.

<sup>3</sup>Van Gelder and Schlatter, p. 66.

<sup>4</sup>Life, V, 294. The roof of each powder mill building and the side facing the Brandywine were built of light wood, while the other three sides were built of thick stone blocks. The purpose of this design was to direct the main force of any explosions upward and toward the Brandywine; see Dutton, p. 36.

<sup>5</sup>Ibid., p. 28.

factory.<sup>1</sup> Although Bauduy's practical help at that time was valuable and his later financial contributions were essential in getting the enterprise started and firmly established, the relationship between him and E. I. du Pont was a stormy one, ending in Bauduy's withdrawal in 1815. Some aspects of this relationship will be discussed in the course of this thesis.

E. I. du Pont's appraisal of his established competitors was summed up in a statement entitled "On the Manufacture of War and Sporting Powder in the United States."<sup>2</sup> In his opinion, although the two or three gunpowder plants then in operation were doing a thriving business, they made poor powder for which they charged excessive prices.

As an example, he described the factory which had the "best reputation and is now working for the Government."<sup>3</sup> The manager was a Batavian workman who used processes dating back fifty years. Although the Indian saltpetre used there was superior to the French material, inferior refining methods gave a product with only half the potential power. Furthermore, inefficient methods for graining powder resulted in a great deal of waste in production and increased the cost of labor. E. I. du Pont estimated that if

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<sup>1</sup>Peter Bauduy to E. I. du Pont, October 5, 1801, Life, V, 289-291.

<sup>2</sup>Life, V, 198-205.

<sup>3</sup>Ibid., V, 199.



proper methods were used at this factory the working time could be cut in half, and yet production could be increased by one-quarter. At the same time, he believed, the staff could be reduced from sixteen men to twelve, and only two mills would be needed instead of four.

E. I. du Pont came to the following conclusion:

Such competitors should not be formidable to one who, having studied this manufacture for several years in the powder works of the French government when they were directed by M. de Lavoisier, can add to the extensive knowledge of that administration the important modifications which have been made in use since the Revolution and which have been caused in the making of powder by the needs of an unprecedented war."<sup>1</sup>

There is no doubt that E. I. du Pont did not overestimate his ability to outstrip his competitors. Little

<sup>1</sup> Ibid., V, 199. He referred to the French Revolution and the Napoleonic War.

E. I. du Pont's recognition of his debt to Antoine Lavoisier can be seen in his desire to call the gunpowder factory the "Lavoisier Mill" as an expression of his "gratitude to the one whose goodness to me was the first cause of my enterprise." He also noted that the mill was "founded on the principles and discoveries" of Lavoisier and "would never have been started but for his kindness to me." E. I. du Pont to Du Pont de Nemours, June 12, 1803, Life, VI, 237. A letter from Victor du Pont addressed to his brother at "Lavoisier's Mills, near Wilmington, Delaware," indicates that the gunpowder factory did bear Lavoisier's name for a time. See Life, VI, 250.

Du Pont de Nemours had suggested that it be called "Eleutherian Mills", and he used this name in an agreement made around February, 1803, with Charles Parent, who was hired as head workman for the gunpowder factory. In his letter of June 12, 1803, cited above, E. I. du Pont wrote that it was "ridiculous" to call the factory after himself and stated that "to anyone who might look up the Greek derivation it would have a political suggestion that would not suit me at all, and that some day might ruin me." Despite his reluctance, "Eleutherian Mills" was the name given to the gunpowder factory.

more than a year after his factory commenced operations, tests made by the United States Government showed his gunpowder so superior to both domestic and English-made powder that Secretary of War Henry Dearborn was forced to give him orders for re-manufacturing gunpowder and refining saltpetre.<sup>1</sup> Despite a public statement made by Dearborn on July 4, 1805, that in future the Du Pont mill would get all the Government business,<sup>2</sup> between 1805 and 1809 Government purchases from E. I. du Pont amounted to less than \$30,000 of the total of approximately \$244,000.<sup>3</sup>

The demand for hunting and blasting powder, however, allowed E. I. du Pont to write early in 1808 that, even without the war which then threatened, the reputation of his gunpowder was so well established that he would be unable to fill all the orders for it.<sup>4</sup> In the same letter, the following figures were given for powder manufactured and sold from the beginning of operations in April, 1804, to the end of 1807:

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<sup>1</sup>E. I. du Pont to Du Pont de Nemours, August 6, 1805, Life, VII, 155.

<sup>2</sup>Ibid. Dearborn's announcement was made to the "officers--who were delighted with our powder."

<sup>3</sup>Dutton, p. 46.

<sup>4</sup>E. I. du Pont to Du Pont de Nemours, February 8, 1808, Life, VIII, 19-29.

	<u>New Powder Manufactured</u>	<u>New Powder<sup>1</sup> Sold</u>
1804	44,907	38,525
1805	79,299	77,210
1806	120,968	107,219
1807	<u>143,035</u>	<u>129,076</u>
	388,209	352,030

	<u>Powder Re-manufactured</u>	<u>Re-manufactured Powder Sold</u>
1805	97,648	75,000
1806	43,873	67,200
1807	<u>36,285</u>	<u>32,950</u>
	177,806	175,150

The census of 1810 showed Delaware as the third largest producer of gunpowder in the United States, following Maryland and Pennsylvania.<sup>2</sup> The two leading states, however, had nine and twenty mills respectively, whereas E. I. du Pont's factory was the only one in Delaware and was "first in so far as the size of the mill and the quality of powder was concerned" of all the mills in the United States.<sup>3</sup> In 1810 the total Maryland production was 323,447 pounds, the total Pennsylvania production was 286,566 pounds, and the Du Pont mill turned out nearly 200,000 pounds of gunpowder.<sup>4</sup>

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<sup>1</sup>These figures represent pounds of gunpowder.

<sup>2</sup>Van Gelder and Schlatter, p. 85.

<sup>3</sup>Ibid., pp. 77, 78 and 85.

<sup>4</sup>For the figures for Maryland and Pennsylvania, see Ibid., 77 and 78. For the Du Pont production figure, see

As can be seen from the record kept by E. I. du Pont, the War of 1812 saw the first big surge in his sales.<sup>1</sup> After the momentary check of the post-war slump, sales reacted even more strongly to the impetus of the expanding economy of the United States. Gunpowder was needed in mining, canal building, and the opening of the West. This demand was accentuated by the shortage of labor.<sup>2</sup> In 1833, the year before E. I. du Pont's death, sales of his gunpowder broke through the million-pound barrier and amounted to over \$200,000 in value.<sup>3</sup>

The matter of profits will be dealt with later, but it is clear that the combination of factors outlined on December 1, 1800, by Du Pont de Nemours brought about the success of his son's gunpowder factory.

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Appendix A, chart of "Work done at Dupont's Powder Mills since the beginning of their establishment," Longwood ms., Group 2, Series C, Box 49. A comparison made by the writer of this thesis between this chart and the Production Day Book, 1685 (Schedule), revealed that the figures in the chart are for sales, not production, of gunpowder.

<sup>1</sup>See Appendix A.

<sup>2</sup>See Van Gelder and Schlatter, p. 69. E. I. du Pont's memorandum entitled "On the Manufacture of War and Sporting Powder in the United States", Life, V, 198, opens with the following statements:

"The high price of labor, and that of raw materials which is the natural consequence, have caused till now small success in the manufactures of the United States.

"But a manufacture in which nearly all the work is done by machinery, which would use foreign raw material, and which for those reasons could not feel the effects of the high price of national industries, would be sure of complete success."

<sup>3</sup>See Appendix A.

## CHAPTER II

### CAPITALIZATION AND PROPRIETORSHIP

#### Part 1

Les fonds de l'entreprise seront de trente six mille Dollars, formant dix huit actions de Deuxmille Dollars chacun.<sup>1</sup>

According to Article Two of the Act of Association of the gunpowder factory, the original capitalization was as follows:<sup>2</sup>

Biderman pour une action	une action
Catoire Duquesnoy & Comp.	une action
Necker Germany	une action
Archd. McCall	une action
	une action
Peter Bauduy	une action
	une action
Du Pont de Nemours Père et fils et Cie, de New York	Douze actions

A memorandum dated May 4, 1808, following Article Eight, noted that Peter Bauduy had acquired Archibald McCall's two shares.<sup>3</sup>

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<sup>1</sup>Article One, Act of Association, EBduP Collection, 3/21.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

In contrast to this, the opening entry under date of April 21, 1801, in the first Journal of the gunpowder factory showed the original division of shares as follows:

Jacques Bidermann <sup>1</sup>	1 share
Catoire, Duquesnoy & Company <sup>2</sup>	1 share
Necker Germany <sup>3</sup>	1 share
Dupont de Nemours Père Fils & Cie <sup>4</sup>	15 shares

Even apart from the fact that the number of shares shown in the Act of Association totals nineteen, instead of the eighteen specified, the original capitalization therein is not correct. A chart of changes in holdings, based upon entries in the Journals of the gunpowder factory, has been compiled by the writer of this thesis, and correspondence confirming the accuracy of the Journal entries will be referred to in dealing with the subject.<sup>5</sup>

<sup>1</sup>"One of the leading businessmen of the French Revolutionary period, and . . . particularly active as a merchant and as a speculator in international trade," W. David Lewis, "The Capitalization of E. I. du Pont de Nemours, Part I, 1801-1804," p. 33 (unpublished manuscript, Eleutherian Mills Historical Library).

<sup>2</sup>"Adrien Cyprien Duquesnoy had been in La Force with Du Pont de Nemours," Life, V, 247 n. His name is spelled in various ways, but the spelling given here will be used hereafter.

<sup>3</sup>"A brother of Jacques Necker, the famous Minister of Finance under Louis XVI," Life, V, 175 n. "Germany" was the name of his home, and he was referred to as "Necker Germany" to distinguish him from his brother.

<sup>4</sup>877 (Schedule).

<sup>5</sup>This chart appears in the thesis as Appendix B.

The capitalization and proprietorship of the gun-powder factory revolve around three main topics. The first of these to be considered is the acquisition of shares by Peter Bauduy and his relations with E. I. du Pont. The influence of European shareholders and their contribution of funds, either directly or through Du Pont de Nemours Père Fils & Cie, will also be dealt with. Finally, the control exercised by E. I. du Pont over the company is important in understanding the course of events.

It should be stressed that the word "company" is and will be used in the contemporary sense, that is, a partnership with unlimited liability.<sup>1</sup> It was not until 1899, as a matter of fact, that the company was incorporated.<sup>2</sup>

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<sup>1</sup>Dilworth's Book-keeper's Assistant Improved (New York, 1803), p. 107, mentions the "accompts of Merchants . . . IN COMPANY: Wherein two or more merchants are joined together in trade; and have each a share of the gain, or bear a share of the loss, in proportion to his share in the stock, as is taught in the rules of Fellowship."

The word "company" is used in the same sense in Lyman Preston, Preston's Treatise on Book-keeping (New York, 1838), p. 160, and in John H. Shea, Book-keeping by Single and Double Entry (Baltimore, 1841), pp. 152-156.

<sup>2</sup>B. G. du Pont, E. I. du Pont de Nemours & Co., A History, 1802-1902 (Houghton Mifflin, 1920), Appendix G.

## Part 2

The small capital that I had and the necessity of starting promptly so as not to lose the present opportunity and not to spend all I had in interest and expenses, have forced me to use the credit that Mr. Bauduy offered us.<sup>1</sup>

William Hamon, one of the members of the Wilmington group of French refugees from the West Indies, and Archibald McCall, a Philadelphia merchant, were the first American shareholders. They bought one share each from the parent company under date of June 2, 1802.<sup>2</sup> Hamon was a naturalized American citizen and he was asked by E. I. du Pont to act for him in buying property for the gunpowder factory from Jacob Broom.<sup>3</sup> The timing of E. I. du Pont's request is interesting. Six days before he made it, he was informed by his brother of a long conversation that Victor had had with Hamon, who had asked if it were possible for him to buy shares in the gunpowder factory, and Victor wrote: "I permitted myself to be begged for them."<sup>4</sup> Victor also expressed the hope that his brother had not made a definite commitment with Broom, since Hamon had promised to invest \$3000 at once if another site were bought, but apparently

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<sup>1</sup>E. I. du Pont to Du Pont de Nemours, August 6, 1805, Life, VII, 154.

<sup>2</sup>877 (Schedule).

<sup>3</sup>E. I. du Pont to William Hamon, April 26, 1802, Life, VI, 29. At that time aliens were not permitted to own property in the State of Delaware.

<sup>4</sup>Victor du Pont to E. I. du Pont, April 20, 1802, Life, VI, 21.



had doubts about subscribing for shares if the Broom property were chosen.<sup>1</sup>

E. I. du Pont presumably managed partly to allay Hamon's fears, because the latter subscribed for one share in the gunpowder company, paying \$1500 toward the purchase.<sup>2</sup> On September 8, 1803, however, he wrote to E. I. du Pont:

The certain loss of all my property in San Domingo changes all my plans in this country; and I can no longer consider having an interest in your manufacture on the Brandywine. It would not be proper for me to try to sell the share that you promised me, and I feel less hesitation in asking you to keep it because I know that you offered it to me only from friendship and in order to gratify me.<sup>3</sup>

In a postscript, Hamon wrote reassuringly:

Take your time, my friend, about returning the 1500 Dollars.<sup>4</sup>

A few days before, E. I. du Pont had taken steps to recover the share partly paid for by Archibald McCall. It would appear that, when Peter Bauduy had some doubts about the extent of his participation, McCall wanted to acquire three shares in the gunpowder factory.<sup>5</sup> An interchange of correspondence between E. I. du Pont and his brother reveals

<sup>1</sup>Ibid.

<sup>2</sup>877 (Schedule), November 26, 1802.

<sup>3</sup>William Hamon to E. I. du Pont, September 8, 1803, Life, VI, 275. This was just two months before the surrender of French troops on Haiti, where independence was proclaimed January 1, 1804.

<sup>4</sup>Ibid.

<sup>5</sup>Victor du Pont to E. I. du Pont, September 22, 1802, Life, VI, 116.

that the former considered excluding McCall, but Victor du Pont advised selling him the same number of shares as Bauduy.<sup>1</sup> Victor wrote that he had found McCall "prudent and something of a Jew, but thoroughly honest and honorable", adding that McCall had been very helpful.<sup>2</sup>

A few months later E. I. du Pont informed his father that McCall had paid only a thousand dollars on account for two shares, delaying payment of the balance in order to "exact conditions to which I could not agree."<sup>3</sup> It can be concluded from the above outline of McCall's relations with the company that the Act of Association reflects the state of affairs at a time when McCall and Bauduy were expected to buy two shares each and before Hamon had committed himself. By September 9, 1803, Bauduy was the only one of the three who held shares.<sup>4</sup>

When he wrote to his father in June, 1803, E. I. du Pont stated that McCall's demands would probably make it necessary for him to return the latter's money.<sup>5</sup> By August 17, 1803, E. I. du Pont had decided to break with McCall,

<sup>1</sup>Victor du Pont to E. I. du Pont, March 28, 1803, Life, VI, 198-199.

<sup>2</sup>Ibid.

<sup>3</sup>E. I. du Pont to Du Pont de Nemours, June 12, 1803, Life, VI, 234-237.

<sup>4</sup>See Appendix B.

<sup>5</sup>E. I. du Pont to Du Pont de Nemours, June 12, 1803, Life, VI, 234-237.

and his brother outlined a suggested course of action for doing so.<sup>1</sup> The step was taken two weeks later and E. I. du Pont justified it to McCall in the statement:

I regret that as the agreement on which our Company is based was long ago formulated by the original shareholders, it is not in my power to arrange that any new shareholder should enter the Company on a different footing.<sup>2</sup>

This statement should be considered in the light of the special arrangements which E. I. du Pont made with Peter Bauduy and, more specifically, in contrast to a letter in which he welcomed Bauduy's offer to invest in the company.<sup>3</sup> Most significant of all is his statement:

I do not know, however, to what extent I am free to accept without reducing too much the share that our Company wishes to hold in the enterprise, but in any case there is at my disposal a portion of the profits that makes it possible for us to arrange a place for you among us.<sup>4</sup>

The place found for Bauduy gave him a commission of two and a half per cent on gunpowder sales and three shares of profit in addition to profits on his proposed purchase of two shares in the company.<sup>5</sup> In return, he was to give his

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<sup>1</sup>Victor du Pont to E. I. du Pont, August 23, 1803, Life, VI, 267-273.

<sup>2</sup>E. I. du Pont to A. McCall, September 5, 1803, Life, VI, 274.

<sup>3</sup>E. I. du Pont to P. Bauduy, October 13, 1801, Life, V, 296-298.

<sup>4</sup>Ibid, The "Company" referred to was Du Pont de Nemours Père Fils et Cie.

<sup>5</sup>Articles of Agreement between the firm of Du Pont de Nemours Père Fils et Cie., E. I. du Pont, and Peter Bauduy, August 25, 1802, Life, VI, 108-109.

services from May 1 to December 1 of each year in purchasing raw material, selling gunpowder, establishing agencies, and adjusting accounts with dealers.<sup>1</sup>

On September 9, 1803, Peter Bauduy bought the shares given up by Hamon and McCall, and, at the same time, he secured two additional shares from Du Pont de Nemours Père Fils et Cie.<sup>2</sup> The Journal entry shows that Bauduy paid Hamon and McCall directly for their equity in the shares, and this action and later events make the transaction more complex than it appears on the surface.

In 1817, McCall's version of the circumstances which led him to sell his share to Bauduy completely contradicted what Bauduy affirmed. By that time, unfortunately, Hamon was dead, and the testimony which he undoubtedly would have been called upon to give will never be known. This means a decision has to be made between the veracity of Peter Bauduy and that of Archibald McCall concerning the share transfer of 1803.

Bauduy's story of the events leading up to his acquisition of the two shares from McCall and Hamon was outlined in the Bill of Chancery filed August 9, 1817, in a suit which he brought against the gunpowder company shareholders. This story must be set in the context of his efforts to prove charges of mismanagement and misconduct on

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<sup>1</sup>Ibid.

<sup>2</sup>877 (Schedule).

the part of E. I. du Pont in regard to the affairs of the company.

It had been specified in the Act of Association that the factory buildings should be completed by January, 1802, and that the factory should be in operation by the summer of the same year. According to Bauduy, this was not accomplished because E. I. du Pont had

lavished more than a fourth of the original funds in unnecessary expenses [sic], in travelling, in salaries from the date of the agreement executed in Paris, and in extravagant Buildings for his own comfort on the Brandywine.<sup>1</sup>

As a result, Bauduy testified, additional funds were needed to put the gunpowder factory into operation, and McCall and Hamon withdrew because they were unwilling to take the risk of losing what they had invested, and they were even less willing to invest more.<sup>2</sup>

Bauduy stated that he had already supplied funds for the enterprise and that he was faced with the choice of losing this money, as well as labor and time, or of making up the capital withdrawn by McCall and Hamon.<sup>3</sup> According to his testimony, he "chose to embrace the latter alternative, and . . . became the owner of the two shares relinquished by them".<sup>4</sup> He does not explain, however, why he bought two more shares from the parent company, and his

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<sup>1</sup>Bill of Chancery, 5, EBduP Collection, 5/51.

<sup>2</sup>Ibid., 8.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

willingness to implicate himself further seems quite illogical when it is set against the vehemence of his condemnation of E. I. du Pont's "lavishness" and the hard bargain which Bauduy drove for his services in the company.

In his testimony, McCall told a story that cast a very unfavourable light on Bauduy. He stated that, after subscribing for two shares in 1802, he was told by Bauduy that E. I. du Pont was unwilling to give either of them a "conveyance or declaration of [their] interest in the real estate of the concern, as would be admitted to record."<sup>1</sup> He said that Bauduy showed him a small piece of paper which E. I. du Pont had given him (Bauduy) to acknowledge his partnership standing in the gunpowder factory, but this document was "without witness, without seal and without acknowledgment."<sup>2</sup>

The most damning part of McCall's testimony followed Bauduy's explanation for this unsatisfactory situation. Bauduy, McCall testified, told him that

E. I. du Pont was a very prejudiced man jealous and fearful of being deceived that he was a stranger to our laws and customs did not understand business, and was afraid to give deponent a title to any part of the estate lest deponent should turn him out of the concern and take it all to himself; that the said E. I. Dupont

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<sup>1</sup>Defendant's Interrogatories re Suit in Chancery Court of New Castle County, Complainant [sic] vs. E. I. du Pont, Mme. de Pusy, Peter S. du Pont, and Jacques Bidermann, PSduP Collection, 18/9. Du Pont de Nemours was the "Peter S. du Pont" referred to.

<sup>2</sup>Ibid.

was much disgusted with America and would no doubt return to France in which [event] the whole establishment would fall to him Peter Bauduy, when if deponent chose he would divide it equally with him. He told deponent that he would have much difficulty with E. I. Dupont and advised deponent to give up his interest in the establishment.<sup>1</sup>

There is one piece of evidence which tends to confirm McCall's testimony, and which also provides a possible explanation of the situation. When E. I. du Pont wrote to McCall that he was unable to make special arrangements for any shareholders in the gunpowder company, he began the letter with the words:

Mr. Bauduy has told me of the answer that you sent here on Saturday last concerning the two shares that we had kept for you in our manufacture.<sup>2</sup>

From this, it would appear that Bauduy acted as an intermediary for E. I. du Pont, perhaps because the latter then lacked the command of the English language that would have enabled him to deal directly with McCall, or, more likely, because he was fully occupied with the construction of the gunpowder factory. It seems natural to expect E. I. du Pont to trust a fellow French exile, but he must later have regretted that he ignored Victor du Pont's judgment of McCall.<sup>3</sup>

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<sup>1</sup>Ibid.

<sup>2</sup>E. I. du Pont to A. McCall, September 5, 1803, Life, VI, 274.

<sup>3</sup>McCall became one of the chief sales agents for the gunpowder company, and was also later associated with E. I. du Pont in a cotton factory established a few miles down the Brandywine.

Bauduy's desire to cast in his lot with E. I. du Pont is revealed as early as 1801. In the testimony which he gave in 1817, he stated that E. I. du Pont proposed the partnership between them, but there are some pieces of evidence that seem to contradict his statement.<sup>1</sup>

In the first place, in a letter following up the investigation that he and E. I. du Pont made of possible sites around Wilmington for the gunpowder factory, Bauduy wrote that he was "still very anxious" that E. I. du Pont should settle in his neighbourhood.<sup>2</sup> His use of the words "even if the propositions that I have made should not meet your approval" suggests that it was he who opened the negotiations.<sup>3</sup>

That E. I. du Pont, for his part, welcomed an association with Bauduy is clear in his reply. In it he expressed his desire to buy Jacob Broom's property, not only because of its suitability for the gunpowder factory, but also because he would be near Bauduy and Bauduy's family.<sup>4</sup> This letter strengthens the belief that Bauduy opened the negotiations, for in it E. I. du Pont stated:

Your offer to invest in the business would of course be most helpful to me, both because of your knowledge

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<sup>1</sup>Bill of Chancery, 5, EBduP Collection, 5/51.

<sup>2</sup>p. Bauduy to E. I. du Pont, October 5, 1801, Life, V, 289.

<sup>3</sup>Ibid.

<sup>4</sup>E. I. du Pont to Peter Bauduy, October 13, 1801, Life, V, 296-298.



of this country and the opportunity of friendship that it offers.<sup>1</sup>

The mutual expressions of friendship exchanged at this time accentuate the dissension which marked the later relationship of the two men. There were constant quarrels and reconciliations until the partnership was dissolved in 1815, and the aftermath was a bitter lawsuit, first decided in Bauduy's favour, then appealed successfully by E. I. du Pont. A portent of the future can be seen in the protest which E. I. du Pont made during the negotiation of the terms of partnership:

You have increased everything that I thought I might offer you because you thought it necessary in order to make yourself a proper position.<sup>2</sup>

Only a few months after the gunpowder plant went into operation, E. I. du Pont and Peter Bauduy had a dispute which required all of Victor du Pont's talents as a peacemaker to settle. The controversy revolved around the exercise of authority, and it came to light after Victor wrote a letter congratulating his brother on the success of the gunpowder factory.<sup>3</sup> In his reply, E. I. du Pont lamented:

At the moment when you were so warmly congratulating me, my dear friend, on the success of my efforts--

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<sup>1</sup>Ibid.

<sup>2</sup>E. I. du Pont to Peter Bauduy, n.d., circa July, 1802, Life, VI, 77.

<sup>3</sup>Victor du Pont to E. I. du Pont, December 1, 1804, Life, VII, 29-31.

when you believed me to be quite happy as to my future, especially after twelve years of such hard experiences and uncertainties--you could not have imagined that a tempest has risen in the harbor of which it is as impossible for me<sup>1</sup> to foresee the result as it was to expect the storm.

In explaining the situation, E. I. du Pont told his brother that there had been a "coolness" between himself and Bauduy for several months, and asked Victor not to "blame too severely the coldness or sensitiveness of my nature."<sup>2</sup> He did not feel that he was responsible for the trouble that had arisen, but it will be seen that the characteristics which he admitted to Victor aggravated the situation, even though they did not cause it.<sup>3</sup>

The affair stemmed from an advertisement which Bauduy authorized Archibald McCall, then the Philadelphia agent of the company, to place in the newspapers. Bauduy and E. I. du Pont had discussed advertising, but the latter thought it unnecessary, since the gunpowder factory had more orders than it could fill.<sup>4</sup> As he explained to his brother, he thought the matter had been settled, and when the advertisement appeared he wrote an angry letter to McCall, whom he thought responsible.<sup>5</sup> Part of his anger was due to his opinion that the advertisement contained an

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<sup>1</sup>E. I. du Pont to Victor du Pont, circa December 13, 1804, Life, VII, 50.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., VII, 51.

<sup>5</sup>Ibid.

"absurd" description of the operations of the gunpowder factory.<sup>1</sup> The real basis for E. I. du Pont's anger, however, can be seen in the statement:

[Bauduy's] lack of consideration coincided with his new method of conducting the correspondence in his name only, and with the care he has taken to add a letter signed by himself to all the bills I have sent to him.<sup>2</sup>

As a result of this procedure, letters were being received addressed to Bauduy as "owner of the powder mills, or at his powder mills on the Brandywine."<sup>3</sup> Although E. I. du Pont wrote to Victor that he was not "seriously annoyed" at this, it is obvious that his pride was hurt, and the steps he took brought the situation to a head. He did not speak to Bauduy about it, and informed Victor that his actions were not influenced by it, but he admitted that his "manner may have become stiffer and colder."<sup>4</sup>

As a positive remedy, E. I. du Pont decided to write and sign one of the business letters of the gunpowder factory, explaining that he thought it time to do so, as he had lately become an American citizen.<sup>5</sup> The implication is that this allowed him to reveal himself as the proprietor of the gunpowder factory. The first letter he wrote concerned a partially filled order for gunpowder and in it E. I. du Pont asked the customer to send further instructions

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid., VII, 52. E. I. du Pont was probably referring to accounts payable sent to Bauduy for payment.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

to him or to his "friend Peter Bauduy."<sup>1</sup>

Bauduy's reaction was immediate and vigorous. He substituted a letter of his own to the customer, sending a copy to E. I. du Pont, and in a covering letter he struck at E. I. du Pont's reference to him in the Boyd letter, accusing him of trying to put him (Bauduy) in the position of a clerk.<sup>2</sup> E. I. du Pont countered with the charge that Bauduy was trying to put him in the position of the head powderman of the gunpowder factory.<sup>3</sup>

The letters which flowed between E. I. du Pont and Peter Bauduy in the next few days became progressively more recriminatory.<sup>4</sup> Both wrote lengthy, explanatory appeals for support to Victor du Pont, and it was he who saw that the fundamental cause of the dispute was the differing concept held by the two men in regard to their partnership relation.<sup>5</sup> Victor felt that his brother's attitude had been based upon a notion of Bauduy as a sleeping partner, who was entitled to an accounting, but not to equal authority in the business.<sup>6</sup> This was the kind of partnership

<sup>1</sup>E. I. du Pont to Boyd, December 11, 1804, Life, VII, 53.

<sup>2</sup>Peter Bauduy to E. I. du Pont, December 11, 1804, Life, VII, 54 and 55.

<sup>3</sup>E. I. du Pont to Peter Bauduy, December 12, 1804, Life, VII, 57.

<sup>4</sup>See Life, VII, 54-68 and 78-89.

<sup>5</sup>See Life, VII, 50-53, 68-77, 97-99 and 103-105 for the letters to Victor du Pont.

<sup>6</sup>Victor du Pont to E. I. du Pont, December 17, 1804, Life, VII, 90.

relationship which existed in France and to which E. I. du Pont had been accustomed, but in America, wrote Victor, men were either partners and equals or clerks and masters.<sup>1</sup> Victor also told his brother in a couple of letters that Bauduy had been urged on by other people and wanted only to be acknowledged publicly as a full partner in the American sense.<sup>2</sup>

The uneasy truce that resulted from Victor's efforts at conciliation was formalized on July 1, 1805, by a new partnership agreement between E. I. du Pont and Bauduy. Under this Bauduy was to be granted a thousand dollars before the division of profits, a commission of five per cent on sales of remanufactured gunpowder, and a guarantee that his "interests and advantages" in the company would be secured whether the original association were liquidated or renewed at the expiration of the Act of Association.<sup>3</sup>

These concessions were necessary because of Bauduy's financial contributions, without which the gunpowder factory would probably have taken much longer to get into operation or would probably have had to be abandoned. The \$8,000 which he paid for his four shares was badly needed, but even more important was the use of Bauduy's credit at

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<sup>1</sup>Ibid.

<sup>2</sup>See Life, VII, 91, 101, and 111, In these letters, Victor mentions McCall, the "women" and Quakers as inciting Bauduy's actions.

<sup>3</sup>Life, VII, 146-148.

the Bank of Wilmington. Article Three of the partnership agreement specified that he would grant this for the sums of money needed to complete the factory.<sup>1</sup> This credit E. I. du Pont was forced to use, as the amount needed for building the factory and operating it in the first year was nearly double what he had estimated.<sup>2</sup> Several times he expressed to his father the fear that Bauduy would withdraw his credit in order to gain full control of the gunpowder factory.<sup>3</sup>

This suspicion on the part of E. I. du Pont must be balanced, however, against Bauduy's personal responsibility for the debts of the company, a factor which is specifically acknowledged in the last clause of Article Three of the partnership agreement.<sup>4</sup> During the dispute between the two men in the fall of 1804, Bauduy pointed out to Victor that he had supplied \$22,000, which he would lose if anything went wrong.<sup>5</sup> Certainly in the early years of the company, Bauduy's assets were far more considerable than those of E. I. du Pont, while the European shareholders were

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<sup>1</sup>Bill of Chancery, EBduP Collection, 5/51.

<sup>2</sup>Du Pont de Nemours to Jacques Bidermann, n.d., written some time after August, 1814, Life, X, 11-24.

<sup>3</sup>E. I. du Pont to Du Pont de Nemours, August 6, 1805, Life, VII, 154; November 18, 1805, Life, VII, 219; February 8, 1808, Life, VIII, 23; April 12, 1808, Life, VIII, 38.

<sup>4</sup>Bill of Chancery, EBduP Collection, 5/51.

<sup>5</sup>Peter Bauduy to Victor du Pont, December 13, 1804, Life, VII, 70.

protected by distance.

In 1806 Bauduy wanted the money borrowed from the Bank of Wilmington by the use of his credit to be counted as an additional investment on his part.<sup>1</sup> To this demand, E. I. du Pont flatly refused to agree, pointing out that "peculiar concessions" had been made to compensate Bauduy for his endorsements.<sup>2</sup> E. I. du Pont took the occasion to sum up the unsatisfactory state of affairs between himself and his partner, writing:

For three years Mr. B. has persecuted me with accusations, complaints and suspicions with as little foundation for one as for the others, but with increasing persistence.<sup>3</sup>

He also stated that Bauduy had accused him of trying to force him out of the business, but he reminded Bauduy that the agreement of July 1, 1805, gave the latter the right to remain in the business forever.

The extremes of the relationship between Bauduy and E. I. du Pont are revealed vividly in the year before the final break between them. When Bauduy's son died less than three months after his marriage to E. I. du Pont's daughter, Bauduy wrote to E. I. du Pont:

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<sup>1</sup>Memo in the writing of E. I. du Pont, circa September, 1806, Life, VII, 265.

<sup>2</sup>Ibid. This memo is probably the rough draft of E. I. du Pont's letter to Bauduy.

<sup>3</sup>Ibid.

May this sorrow unite us; be my friend, I have lost the best one I had.<sup>1</sup>

Six months later Bauduy wrote that E. I. du Pont was "blinded by a vanity that is almost insanity."<sup>2</sup> He also wrote of the "follies" and "very poor administration" of E. I. du Pont in the affairs of the company, and was anxious to have a representative of the European shareholders appointed to work with him in demanding a division of the profits and more economical administration.<sup>3</sup>

This letter was written after Bauduy learned from Mme. de Pusy, the step-daughter of Du Pont de Nemours, that E. I. du Pont and his father owned only two shares in the gunpowder factory.<sup>4</sup> It was sent by the recipient to Jacques Bidermann, the principal European shareholder, who then passed it on to Du Pont de Nemours.<sup>5</sup> He, in turn, wrote a lengthy memorandum justifying his son's actions and summing up the financial difficulties of the gunpowder company which had allowed Peter Bauduy to gain a commanding position in the early years.<sup>6</sup>

As a result of Bauduy's letter, Jacques Bidermann

<sup>1</sup>Peter Bauduy to E. I. du Pont, January 23, 1814, Life, IX, 169.

<sup>2</sup>Peter Bauduy to a Mr. Beauchet, June 21, 1814, Life, IX, 196-200. Mr. Beauchet sent it to Jacques Bidermann.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>See Life, IX, 196.

<sup>6</sup>See Life, IX, 200-219.



sent his son to America in 1814 to investigate the situation. Antoine Bidermann declared for E. I. du Pont, and he took over Bauduy's responsibilities when the latter withdrew from the company.<sup>1</sup> This took place formally on February 28, 1815, and Peter Bauduy was paid \$60,000 for his shares and rights in the company.<sup>2</sup> The four shares were transferred to E. I. du Pont for the sum of \$37,714.28, and this price included his right to the profits on the shares since January 1, 1810.<sup>3</sup> The balance of \$22,285.72 represented Bauduy's extra three shares of profit and commissions since January 1, 1810.<sup>4</sup>

The last information available about Peter Bauduy is that he went to Havana, but the circumstances of his departure contribute to the judgment that may be made of him.<sup>5</sup> In 1806 his brother, General Alexandre Bauduy, bought the Eden Park estate in Wilmington, the purchase being made in Peter Bauduy's name. An arrangement was made between the two brothers, whereby Peter became half owner of the property in return for the money he spent on repairs, but he

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<sup>1</sup>See Notes written for the information of Du Pont de Nemours, in the handwriting of Antoine Bidermann, n.d., circa November, 1814, Life, X, 38. Hereafter cited as Bidermann Notes to Du Pont de Nemours. See, also, Articles of Agreement, February 16, 1815, Life, X, 65-68.

<sup>2</sup>Longwood ms., 5/c/49.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>For the details which follow, see W. T. Poussin to E. I. du Pont, November 29, 1824, Life, XI, 127-129.

was to pay rent to Alexandre. In 1819 General Bauduy's representative demanded security for the rent due to his client, whereupon Peter Bauduy

admitted . . . the serious condition of his business affairs and left for Havana, leaving his son-in-law, Mr. Garesché, to settle with his creditors.<sup>1</sup>

It was then discovered that Peter Bauduy had placed on the property two mortgages totalling approximately \$11,500, and these the General assumed, although his advisor did not think it necessary. In 1824 General Alexandre Bauduy was still hoping that his brother would "remember the General's sacrifice if his own fortunes are ever re-established."<sup>2</sup>

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

## Part 3

Though the Powder factory is today our only resource and my one hope of perhaps saving the capital of my associates--by adding the sacrifice of my own interest in it to that of the rest of the property, I feel sure that my associates will agree that it was prudent at that time not to furnish all its capital from our funds.<sup>1</sup>

In order to determine the contributions of European investors to the gunpowder factory, the shareholdings in the parent company, Du Pont de Nemours Père Fils et Cie., have to be taken into account.<sup>2</sup> For reasons which he does not state, in 1808 Du Pont de Nemours reduced the number of shares in circulation by using the funds of the parent company to buy back three shares each from Catoire and Abbema and one share from the heirs of Necker Germany.<sup>3</sup> In his statement to the shareholders in 1808, he noted that the purchase of three shares in the parent company and one share in the gunpowder company was made possible by "a fortunate accident."<sup>4</sup>

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<sup>1</sup>Statement made by Du Pont (de Nemours) Père to the Shareholders in his Company, April 18, 1808, Life, VIII, 46. Hereafter cited as Statement, April 18, 1808.

<sup>2</sup>Appendix C, compiled by the writer of this thesis from correspondence, shows the distribution of shares at various pertinent times. As the bookkeeping records of the parent company, as far as can be determined, are not extant, the correspondence is the only source of information about this matter.

<sup>3</sup>Sequel and Summary of the statement given April 18, 1808, to the Shareholders of the Company formed under the name of Du Pont (de Nemours) Père, Fils et Compagnie and spoken of as Société d'Amérique, June 1, 1811, Life, VIII, 304. Hereafter cited as Sequel, June 1, 1811.

<sup>4</sup>Statement, April 18, 1808, Life, VIII, 38. It can

The parent company had presumably agreed to take twelve shares in the gunpowder company, and the purchase of the Catoire share was ostensibly made to fulfill this commitment.<sup>1</sup> The period of association of the parent company terminated in 1811, and this explains the adjustment of shareholdings which took place in that year.<sup>2</sup> In 1811 the only assets of the parent company were its twelve shares in the gunpowder company, and Du Pont de Nemours surrendered three of his shares in the parent company in order to reduce its shares to a total of thirty-six, thus making the liquidation of his company very simple.<sup>3</sup>

The buying out of the small shareholders which afterwards took place was planned as early as 1809.<sup>4</sup> This was a step dictated by the dissension between Bauduy and E. I. du Pont, as well as by the latter's fears of his partner. E. I. du Pont wanted to terminate his partnership with Bauduy at the end of 1809, but his father advised against it. Two of the reasons he gave were that "a friend is better than an enemy [and] a former partner in a powder

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only be deduced that the shareholders were familiar with the reasons for this action of Du Pont de Nemours and with the "fortunate accident".

<sup>1</sup>Statement, April 18, 1808, Life, VIII, 59.

<sup>2</sup>Du Pont de Nemours to E. I. du Pont, n.d., circa January, 1809, Life, VIII, 119.

<sup>3</sup>Sequel, June 1, 1811, Life, VIII, 304.

<sup>4</sup>Du Pont de Nemours to E. I. du Pont, n.d., circa January, 1809, Life, VIII, 117.

manufacture is always dangerous."<sup>1</sup> The most valid reason, however, was that the partnership agreement of July 1, 1805, had given Bauduy the right to his extra three shares of profit and his commission whether the Act of Association of April 21, 1801, were terminated or renewed.<sup>2</sup>

The Act of Association, of course, involved only the original shareholders of the gunpowder company, and they had to declare their intentions by January 1, 1809.<sup>3</sup> If any decided to withdraw, E. I. du Pont claimed the right to buy their shares, and this is how he acquired a share from Necker Germany on May 1, 1808, at the time Du Pont de Nemours bought Catoire's share for the parent company.<sup>4</sup>

As Du Pont de Nemours pointed out, instead of buying Bauduy's shares and being forced to continue the other payments to him, it would be preferable to use the money to buy shares in the parent company.<sup>5</sup> The wisdom of this advice became plain when Bauduy made his appeal to the

<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Article 14, Act of Association, EBduP Collection, 3/21.

<sup>4</sup>Although it was not specifically stated, Articles 15 and 16 of the Act of Association were interpreted by E. I. du Pont as giving him the right to buy shares from retiring shareholders at the inventory price, in order, he said, that "shares should not pass into the hands of strangers and that I should always have the right to succeed such shareholders as wished to retire from the business that I created." E. I. du Pont to Du Pont de Nemours, July 4, 1811, Life, VIII, 315.

<sup>5</sup>Du Pont de Nemours to E. I. du Pont, n.d., circa January, 1809, Life, VIII, 117.

European shareholders in June, 1814. By that time E. I. du Pont had acquired some of the available shares, and his father began negotiations to secure the remainder of them for him.<sup>1</sup>

The key figure in the situation at that time was Jacques Bidermann, who had the largest number of shares, and Bauduy's letter seems to have been directed primarily to him.<sup>2</sup> It was to Bidermann that Du Pont de Nemours tried to explain and justify E. I. du Pont's management of the gunpowder company.<sup>3</sup> Bidermann then took action to resolve the situation by sending his son to the United States to investigate the affairs of the company.

E. I. du Pont was afraid that Antoine Bidermann's "reserved manner" during his first week in Wilmington indicated a prejudice inspired by Mme. de Pusy, and he believed that young Bidermann's first letters would not be favorable to him.<sup>4</sup> Antoine Bidermann, on the contrary, submitted reports which more than cleared E. I. du Pont. Traces of his indignation that the latter had been misjudged are

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<sup>1</sup>Du Pont de Nemours to E. I. du Pont, August 14, 1814, Life, IX, 243.

<sup>2</sup>It was addressed to a Mr. Beauchet, who apparently sent it to Bidermann.

<sup>3</sup>Du Pont de Nemours to Jacques Bidermann, n.d., Life, X, 11-24.

<sup>4</sup>E. I. du Pont to Du Pont de Nemours, August 18, 1814, Life, IX, 261 and 264.

discernible in the following passage:

It is evident that the administration has not been bad. It is also evident that the associates of the Company Du Pont Pere instead of having grounds for complaint, have been very generously treated by being credited with an investment of \$22,000, whereas they paid only \$16,470; so that they actually have \$21,294 that would belong to E. I. d P. if he had credited himself with the \$5,529,10 that he advanced for them, or to anyone else who might have bought the share; or if the investment had never been completed, that sum might have been divided among the other shareholders-- and yet they are not satisfied.<sup>1</sup>

Bidermann was even more indignant about Mme. de Pusy's attitude toward E. I. du Pont. Her husband had died in 1805, and his five shares in the parent company were converted to one and two-thirds of gunpowder company shares in the 1811 adjustment. Her mother, the second wife of Du Pont de Nemours, transferred to Mme. de Pusy another one-third share in the gunpowder company.<sup>2</sup>

Between 1813 and 1818 Mme. de Pusy and E. I. du Pont carried on a voluminous correspondence, marked by intermittent dissension, concerning the value of her two shares and the payment of profits.<sup>3</sup> E. I. du Pont offered her \$12,000 for the shares, and Antoine Bidermann wrote that her only reasons for refusing this offer must have been that she

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<sup>1</sup>Notes written for the information of Du Pont de Nemours, in the handwriting of Antoine Bidermann, n.d., circa November, 1814, Life, X, 38. Hereafter cited as Bidermann Notes to Du Pont de Nemours.

<sup>2</sup>Memorandum in the handwriting of Du Pont de Nemours, n.d., circa January, 1816, Life, X, 134.

<sup>3</sup>See Life, IX and X, passim.

either hoped to get more than the shares were worth or that "her dislike of E. I. du P. was greater than any other consideration."<sup>1</sup> Bidermann's regard for E. I. du Pont can be seen in his statement:

That dislike is very unfair and a very sad return--not only of E. I. d P.'s affection for Madame de Pusy, for but the sincerity with which he has given his life to save his father's associates.<sup>2</sup>

He pointed out that Mme. de Pusy's portion of the parent company's investment in the gunpowder company was \$2,745.15, and that, as she had already received \$6,400, her acceptance of E. I. du Pont's offer would make a total of \$18,400 return on the investment.<sup>3</sup>

In August, 1818, Mme. de Pusy withdrew from the gunpowder company.<sup>4</sup> It took another five years of negotiations before her shares were formally acquired by E. I. du Pont.<sup>5</sup> At the time of the final settlement, after E. I. du Pont's death, Mme. de Pusy actually owed E. I. du Pont \$3,570.59 because of overpayments that came about through the terms of the purchase of her shares, and Bidermann pointed out that E. I. du Pont had offered her more than

<sup>1</sup>Bidermann Notes to Du Pont de Nemours, n.d., circa November, 1814, Life, X, 36.

<sup>2</sup>Ibid., p. 37

<sup>3</sup>Ibid.

<sup>4</sup>See Life, X, 298 and 299 for the published notice of her withdrawal and Life, X, 303 and 304 for the notice of acceptance served to her attorney by E. I. du Pont and Antoine Bidermann.

<sup>5</sup>884 (Schedule), December 31, 1823.



her shares were worth.<sup>1</sup> He did this, according to Bidermann, to compensate her for acting on "treacherous advice" which she had received from Peter Bauduy.<sup>2</sup> This advice, Bidermann wrote, had led her to withdraw at a time when the company had suffered severe losses, and the publication of her withdrawal had seriously affected the already strained credit of the company.<sup>3</sup>

Bidermann obviously took a great deal of pleasure in telling Mme. de Pusy that the company had prospered since that time, and that he was not making a claim for the overpayment made to her.<sup>4</sup> He suggested steps by which she could assure herself of the accuracy of the account, and his bitterness toward her is revealed in his desire for "the quickest and easiest method for ending a deplorable situation that filled with bitterness and perhaps shortened our father's life."<sup>5</sup>

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<sup>1</sup>Antoine Bidermann to Mme. de Pusy, July 28, 1835, Life, XI, 207.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid., p. 208. The reference to "our father" applies to E. I. du Pont, whose daughter, Evelina, Bidermann married. Elsewhere in the letter he refers to E. I. du Pont as "our good father." In writing to E. I. du Pont on September 18, 1828, Bidermann called him "my very dear father" and signed the letter "your affectionate son." See Life, XI, 218-221.

## Part 4

The Director of the manufacture and the representative of the Company Du Pont de Nemours Père et Fils et Cie. shall decide each year after making the Inventory, what proportion of the profits shall be divided among the shareholders.<sup>1</sup>

E. I. du Pont's acquisition of formal control of the gunpowder company through the purchase of shares can be traced on the appended charts of shareholdings.<sup>2</sup> From these, it can be seen that he did not gain a majority interest until December 31, 1823. Even before that time, however, he was able to exercise control over company policies through Article Nine of the Act of Association, and this was a vital factor in the development of the gunpowder factory.

In theory, Victor du Pont, as the representative of the parent company, had equal power under Article Nine, but this power he apparently did not use. In order to understand why this was so, it is necessary to give some details of Victor du Pont's career.

As noted elsewhere in this thesis, Victor had allowed himself to be persuaded to give up good prospects in the French diplomatic service in order to fill an important place in his father's American venture.<sup>3</sup> After Du Pont de Nemours returned to France, Victor headed up the commercial

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<sup>1</sup>Article Nine, Act of Association, April 21, 1801.

<sup>2</sup>Appendices B and C.

<sup>3</sup>See above, p. 5.

business established in New York City, but the default of French agents in the United States to meet notes amounting to more than \$140,000 brought about the failure of this business.<sup>1</sup>

Against the pleas of his brother, Victor bought five hundred acres of land in the Genesee Valley in New York State, set up a store, and again came to grief.<sup>2</sup> Victor then came to the Brandywine sometime in the fall of 1809, and a few years later E. I. du Pont invested in a woollen factory in order to provide him with a position.<sup>3</sup> This gives some indication why Bauduy could say that Victor de Pont did not assert his authority because of his heavy

<sup>1</sup>These notes were for supplies, transportation, and cash advances, mainly in connection with the French campaign in Haiti. See Life, VII, 232, for the notice published by Victor du Pont in Paulson's American Daily Advertiser, Philadelphia, March 1, 1806.

<sup>2</sup>E. I. du Pont was eager for Victor either to share the management of the gunpowder factory or to set up another gunpowder factory near Pittsburgh. See Victor du Pont to E. I. du Pont, January 8, 1806, Life, VII, 226-229; extract from Transplantation, Life, VII, 246-247; E. I. du Pont to Du Pont de Nemours, May 2, 1807, Life, VII, 296-300; extract from Transplantation, Life, VIII, 91-92, 106-107; and Raphael Duplanty to E. I. du Pont, July 1, 1809, Life, VIII, 189-192.

<sup>3</sup>This was another source of worry for E. I. du Pont, and it actually jeopardized his own financial resources and those of the gunpowder factory. He wrote of "the danger of being crushed under the weight of Victor's factory in which I put all I could get and for which I contracted an enormous debt." E. I. du Pont to Du Pont de Nemours, August 18, 1814, Life, IX, 264.

obligation to his brother.<sup>1</sup> In addition, Victor, according to Bauduy, was "very indolent", and there was no inducement for him to exert himself in the affairs of the gunpowder factory.<sup>2</sup>

Another factor that contributed to Victor's apparent willingness to be dominated by his brother was the difference between the two men, a difference which Victor himself pointed out. When he was planning his Genesee venture, Victor asked E. I. du Pont not to take advantage of this factor to persuade him to abandon the plan.<sup>3</sup> In Victor's words, "You are as obstinate as a dog, and I am always willing to yield for the sake of peace."<sup>4</sup>

It is difficult to escape the conclusion that the successive disasters that Victor suffered in business were made even more galling when contrasted to the success that his brother had made of the gunpowder factory. Certainly, Victor would not have been human if he had not been inwardly humiliated by the necessity of depending upon his brother, and it is likely that he simply ceased to wish to exert himself and became completely passive in his relationship with his brother.

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<sup>1</sup>Peter Bauduy to Mr. Beauchet, June 21, 1814, Life, IX, 196.

<sup>2</sup>Ibid.

<sup>3</sup>Victor du Pont to E. I. du Pont, January 8, 1806, Life, VII, 229.

<sup>4</sup>Ibid.

This situation left E. I. du Pont in control of the profits of the company, but in the first five or six years any payment of profits was out of the question because of the shortage of working capital. This was a problem which plagued him almost from the beginning of the enterprise, and it was one of the factors, incidentally, which made him vulnerable in his relationship with Peter Bauduy. This shortage stemmed mainly from three causes.

The first of these was that some of the shareholders did not pay fully for their shares. In writing to Jacques Bidermann about it, Du Pont de Nemours noted that this had been a "grave misfortune."<sup>1</sup> According to his calculations, instead of \$24,000 for the twelve shares placed in the name of the parent company, only \$16,470 was paid, and E. I. du Pont raised \$5,530 to make up the deficit in the parent company's subscription.<sup>2</sup> In December, 1807, apparently as a result of consultation with Jacques Bidermann, Du Pont de Nemours borrowed a hundred thousand francs through J. V. A. Menstrier, the agent of Prince Talleyrand.<sup>3</sup> Some of this money was used to buy out most of the minor shareholders in the parent company, and \$12,000 of it was sent to E. I. du

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<sup>1</sup>Du Pont de Nemours to J. Bidermann, circa May, 1807, Life, VII, 301.

<sup>2</sup>Ibid. See also Bidermann Notes to Du Pont de Nemours, cited above, and Du Pont de Nemours to J. Bidermann, circa November, 1814, Life, X, 12.

<sup>3</sup>Du Pont de Nemours to J. Bidermann, n.d., circa November, 1814, Life, X, 13.

Pont in an attempt to ease the financial position of the gunpowder factory.<sup>1</sup>

This was \$1,000 more than E. I. du Pont reported as owing to the bank in February, 1808.<sup>2</sup> His summary of the situation at that time gave further reasons for shortage of working capital. In the first place, he had under-estimated the cost of the gunpowder factory, and, in addition, he had not taken into account the six months' credit that had to be allowed on sales.<sup>3</sup> In 1808 he estimated that customers owed the gunpowder factory between \$25,000 and \$30,000 and he noted that this would increase as sales increased.<sup>4</sup> It is obvious, too, that increased production would mean increased purchases of raw materials, as well as increased payments for wages and other expenses.

The time lag between production expense and sales revenue was particularly crucial in the first year of operations at the gunpowder factory. It had been foreseen by Victor du Pont, but this is another instance when his advice seems to have been disregarded. As early as October 26, 1802, he wrote to E. I. du Pont:

I think you are mistaken in your calculations. Even if your buildings were much cheaper and were all finished, you will need eight or ten thousand dollars to buy,

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<sup>1</sup>Ibid., p. 14.

<sup>2</sup>E. I. du Pont to Du Pont de Nemours, February 8, 1808, Life, VIII, 22.

<sup>3</sup>Ibid., p. 23.

<sup>4</sup>Ibid.

at sixty days, the raw materials which, in the form of powder, cannot be sold in less than three or four months, at three, four and six months' credit; and during that time your men must be paid; surely you have not considered all that.<sup>1</sup>

Far from being cheaper, the buildings were more costly than anticipated. In his original estimate, E. I. du Pont allowed \$2,000 for a one-third down payment on land, \$6,000 for machinery to be brought from France, \$1,000 for advances to workmen coming from France, and \$15,000 for buildings.<sup>2</sup> The figure for buildings included \$1,000 for workmen's houses and \$2,500 for a home for E. I. du Pont and his family. Of a total of \$36,000 in the estimate, this left \$12,000 for the purchase of raw materials, the construction of a second stamp mill, and the balance due for the land.

Although Du Pont de Nemours tried to excuse him by writing that it was not possible for E. I. du Pont to estimate correctly in advance the amount of money needed for the gunpowder factory, the extent of his miscalculation is shown by the fact that the land, buildings, and dams alone cost almost \$59,000.<sup>3</sup> The further \$11,000 to \$13,000 needed for raw material purchases and wage payments during the first year of production made the cost of establishing and

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<sup>1</sup>Victor du Pont to E. I. du Pont, October 26, 1802, Life, VI, 129.

<sup>2</sup>See Life, V, 234 ff.

<sup>3</sup>Du Pont de Nemours to J. Bidermann, n.d., circa November, 1814, Life, X, 14.

putting the gunpowder factory into operation approximately double the estimated figure of \$36,000.<sup>1</sup>

By the end of December, 1809, the accumulated profits of the company were estimated as \$1,474.97 a share, but, as E. I. du Pont pointed out to Mme. de Pusy, they consisted of real estate and raw materials, not money.<sup>2</sup> Even if they had been in the form of money, it is unlikely that he would have distributed the profits, because, in his opinion, taking such a course would have made it impossible to do for the company what he had done.<sup>3</sup>

The course he did take was to embark upon a program of expansion, and for this he thought it necessary to keep the profits in the business.<sup>4</sup> As a result of enlarging the factory, he was able to secure more orders from the government, thus making larger profits in 1811 and 1812.<sup>5</sup> The further demands of the government in 1813 made it necessary to double the production capacity of the factory, partly because of the potential profits and partly to forestall allowing a competitor to become firmly established through getting orders that he would be forced to refuse if he did not expand.<sup>6</sup>

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<sup>1</sup>Ibid., p. 15.

<sup>2</sup>E. I. du Pont to Mme. de Pusy, June 5, 1814, Life, IX, 190.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid.

<sup>6</sup>Ibid.



On March 9, 1813, E. I. du Pont paid \$5,500 as a down payment for the adjoining Hagley Estate, for which the total purchase price was set at \$47,000.<sup>1</sup> As far as can be determined, the Hagley Mills went into production during the first six months of 1814.<sup>2</sup> The short-term justification for E. I. du Pont's program of expansion can be seen in an increase of over 55% in the quantity of powder sold in 1814 as compared with sales for the previous year.<sup>3</sup>

From the long-term standpoint, too, expansion was a wise course, but the resultant strain on the financial resources of the company, aggravated by the particular circumstances of the time, made the payment of profits an even more remote prospect. In 1814 E. I. du Pont pointed out to Mme. de Pusy that the company, despite the increase in sales, was in an extremely difficult position, partly because of the expense of the new buildings and partly because the government was not paying its accounts to the company as promptly as before.<sup>4</sup> This situation was made even more difficult because bank credits, on which E. I. du Pont had counted, were being refused.<sup>5</sup>

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<sup>1</sup>Receipt from Thomas Lea to E. I. du Pont, Life, IX, 91.

<sup>2</sup>1685 (Schedule).

<sup>3</sup>See Appendix A.

<sup>4</sup>E. I. du Pont to Mme. de Pusy, June 5, 1814, Life, IX, 191.

<sup>5</sup>Ibid.

The fluctuations of the post-war period brought a low point for the company's sales in 1818, but the steady growth after that year provides the decisive vindication of E. I. du Pont's actions.<sup>1</sup> It should be noted, moreover, that even the 1818 production low exceeded the figure for 1813, the year preceding the opening of the Hagley Mills.<sup>2</sup>

The withdrawal of Mme. de Pusy in 1818, during the critical post-war period was almost a death-blow to the company,<sup>3</sup> and the writing-off of over \$65,000 in accumulated bad debts in 1823 reflected a serious loss.<sup>4</sup> A more insidious drain on the resources of the gunpowder company after 1810, however, resulted from the participation of E. I. du Pont in other manufacturing enterprises on the Brandywine.

In an effort to provide for his brother, E. I. du Pont helped to organize a woollen mill in 1810 and a cotton mill in 1813.<sup>5</sup> He was also involved indirectly in a tannery

<sup>1</sup>See Appendix A.

<sup>2</sup>Ibid.

<sup>3</sup>This took place officially on August 31, 1818. See Life, X, 298, for the official notice of the dissolution of the partnership.

<sup>4</sup>884 (Schedule), December 31, 1823.

<sup>5</sup>The woollen mill was called Du Pont, Bauduy & Co., and the original shareholders were E. I. du Pont, Victor du Pont, Peter Bauduy, and Raphael Duplanty. See E. I. du Pont to Peter Bauduy, n.d., circa January, 1813, Life, IX, 70-77, for details of this enterprise. The cotton mill was called Duplanty, McCall & Co., and the shareholders were

started in 1815.<sup>1</sup> The losses of these companies were charged to the personal accounts of E. I. du Pont and Antoine Bidermann in the settlement of October 31, 1834.<sup>2</sup> The amount of the losses was \$245,062.78, increased to \$354,675.00 by interest charges, and the latter figure accounted for roughly 85% of the total of \$416,052.84 for Accounts Receivable shown on the books of the company at that time.<sup>3</sup> It should be stressed that there was no malpractice involved, but the strain on the resources of the gunpowder company was serious.

In his appeal to the European shareholders, Bauduy mentioned the cotton mill, stating that most of the capital was being provided from the funds of the gunpowder factory and that the accounts of the latter were "thoroughly

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E. I. du Pont, Victor du Pont, Raphael Duplanty, Archibald McCall and Robert McCall. The Journal for this company was among a number of volumes found during a search for such records made at the Du Pont Hall of Records in July and August, 1963, and at this time it was designated HR 1085. It was from this volume that the names of the shareholders were determined.

<sup>1</sup>The shareholders in this company were Alexandre Cardon de Sandrans, Charles Dalmas (E. I. du Pont's brother-in-law), Auguste Dautremont, and Antoine Bidermann. See Life, X, 126-127.

<sup>2</sup>Bidermann assumed the losses of the tannery, while E. I. du Pont was charged for the debts of the cotton mill and the woollen mill, as well as for the debts of Victor du Pont. See 891 (Schedule).

<sup>3</sup>Ibid.

confused" with those of the new establishment.<sup>1</sup> As already noted, the transactions of the cotton factory were recorded in a separate Journal.<sup>2</sup> Transactions of the woollen factory, however, in which Bauduy had invested, were recorded in the Cash Book of the gunpowder factory.<sup>3</sup> Significantly enough, the woollen factory was not referred to by Bauduy, whose attack was directed mainly against the expansion of the gunpowder factory. He condemned the building of the Hagley Mills as "a piece of madness that I was unable to prevent", and he stated that E. I. du Pont "has always forced my hand and compelled me to allow all sorts of follies."<sup>4</sup>

One can imagine Bauduy's rage when he learned from Mme. de Pusy the true state of affairs in regard to the shareholdings of the gunpowder factory. Some of the phrases from his letter to Mr. Beauchet which have been quoted in this thesis give an indication of his feelings at that time, and yet a couple of months later he could address E. I. du

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<sup>1</sup>Peter Bauduy to Mr. Beauchet, June 21, 1814, Life, IX, 199. Bauduy's actual words in regard to the capital were: "One Duplanty, a very audacious and selfish man, has established himself in Mr. du Pont's good graces and is now building a cotton factory near us, for which we furnish most of the capital." If the word "we" referred to E. I. du Pont and Peter Bauduy personally, the latter could have had no basis for objection, therefore it must apply to the gunpowder factory.

<sup>2</sup>HR 1085.

<sup>3</sup>1035 (Schedule).

<sup>4</sup>Peter Bauduy to Mr. Beauchet, June 21, 1814, Life, IX, 199.

Pont in a letter as "my friend".<sup>1</sup> Very shortly thereafter, however, Bauduy apparently demanded a legal title to part of the Hagley Mills.<sup>2</sup> He based this demand on the claim that it had been built from the profits of the original gunpowder company, and he wanted a guarantee of his proportion of the profits that had been used for it.<sup>3</sup>

By December, 1814, the negotiations that led to Bauduy's withdrawal from the gunpowder factory were well under way.<sup>4</sup> Formally, this withdrawal took place on February 15, 1815.<sup>5</sup> The following day Articles of Agreement initiated a new partnership association among E. I. du Pont, P. S. du Pont, Mue. de Pusy, and Jacques Bidermann.<sup>6</sup> Under this agreement, Antoine Bidermann took over the duties of Peter Bauduy, receiving three parts of the profits or a minimum of \$600 per year.<sup>7</sup> Some indications of the happy relationship between E. I. du Pont and Antoine

<sup>1</sup>Peter Bauduy to E. I. du Pont, September 2, 1814, Life, IX, 267.

<sup>2</sup>See Louis McLane to E. I. du Pont, September 24, 1814, Life, IX, 281-282.

<sup>3</sup>Ibid.

<sup>4</sup>See E. I. du Pont to Peter Bauduy, December 22, 1814, Life, X, 53-55; December 29, 1814, Life, X, 55-56; and January 6, 1815, Life, X, 56-63.

<sup>5</sup>See Articles of Agreement, February 16, 1815, Life, X, 65-68, which refer to this.

<sup>6</sup>Ibid.

<sup>7</sup>Ibid.

Bidermann have already been given in this thesis.<sup>1</sup> The association of Antoine Bidermann with the gunpowder company must, therefore, have resulted in a considerable lessening of the strain upon E. I. du Pont.

The acquisition of Peter Bauduy's shares by E. I. du Pont in February, 1815, gave the latter the largest single holding in the gunpowder company. The transfer of three shares from the parent company to E. I. du Pont had to be corrected at the end of 1815 because two shareholders, Hom and Reynard, were unwilling to sell their small holdings.<sup>2</sup> It was not until E. I. du Pont acquired his father's share on the death of the latter that he had a clear majority of shares in the company.

During the time under review the proprietorship of the gunpowder company theoretically falls into four periods. The first extends from April 21, 1801, to December 31, 1809, and the termination date was set by Article 13 of the Act of Association. The declaration of the renewal of the association, dated May 26, 1808, gave E. I. du Pont the right to decide whether it should last six years or nine years.<sup>3</sup> The closing of the books of the company on December 31, 1815, indicates that he chose the earlier date, and this marks the

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<sup>1</sup>See 46-49 above. See also Antoine Bidermann to Cardon de Sandran, December 7, 1825, Life, XI, 145-151.

<sup>2</sup>See Memo by Du Pont de Nemours, n.d., circa December, 1815, Life, X, 137-138.

<sup>3</sup>Articles of Association, EBduP Collection, 4/48.

end of the second period. The withdrawal of Mme. de Pusy on August 31, 1818, closed the third period, and the death of E. I. du Pont on October 31, 1834, marked the end of the fourth period.

At the end of each of these periods it was necessary to close the books and determine the profit, and each time a new set of books was opened. Because of special circumstances, the books were balanced and the profits determined on June 30, 1814, December 31, 1814, and December 31, 1817. Each of these closings will be discussed in detail later, but the lapse of time between the closing of August 31, 1818, and that of October 31, 1834, is particularly significant. It is, of course, a reflection of the power which E. I. du Pont possessed in this period. As indicated above, he exercised a great deal of control before the final period, but it was not until the opening of that period that he had a clear majority of shares.

The death of E. I. du Pont necessitated a general settlement, but the affairs of the company were not finalized until March 31, 1837. At that time, the following redistribution of shares was made:

Alfred Victor du Pont	8 shares
Henry du Pont	5 shares
Alexis Irénée du Pont	5 shares
Victorine du Pont Bauduy	2 shares
Antoine Bidermann	2 shares
Eleuthera du Pont Smith	2 shares <sup>1</sup>
Sophie du Pont	2 shares <sup>1</sup>

This new partnership, led by E. I. du Pont's three sons, began a new era in the history of the gunpowder company.

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<sup>1</sup>892 (Schedule).

## CHAPTER III

### BOOKS AND BOOKKEEPERS

#### Part 1

Tho' all Merchant-accounts may be kept by the Waste-book, Journal and Ledger alone, yet Men of great Business find it convenient either for abridging these, or for other Ends, to use some others, generally called Subsidiary or subservient Books.<sup>1</sup>

Within the above quotation can be seen both the foundation and the superstructure of bookkeeping records. The use of the Waste Book has long been discontinued as unnecessary, and the Journal and Ledger now usually bear little, if any, resemblance to those of the past.<sup>2</sup> The

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<sup>1</sup>John Mair, Book-keeping Methodiz'd: or, A Methodical Treatise of Merchant-Accounts, According to the Italian Form (Edinburgh, 1741), p. 175.

<sup>2</sup>The usual procedure, well into the 19th century, was to make a simple, detailed factual explanation of every business transaction in the Waste Book, which was later called the Day Book. This was sometimes quite rough or crude in form, as it was usually written hurriedly and was not intended to be the finished record. The Waste Book entries were entered in formal bookkeeping style in the Journal, and from the Journal they were posted to the pertinent Ledger accounts. In some instances, an entry made in the Blotter, an even rougher record than the Waste Book, preceded the routine outlined above. In 1789, Benjamin Booth, who seems to have been remarkably in advance of his time, protested this duplication of effort.



basis of bookkeeping, however, still consists of the chronological recording of transactions in some form of Journal and the classifying of the same transactions in some form of Ledger. These two records are the foundation of bookkeeping, and upon that foundation can be built a modest or an elaborate bookkeeping system to suit the needs of the business it serves.

Other early bookkeeping writers agreed with Mair that the Waste Book, Journal, and Ledger were the absolute minimum, and all listed auxiliary books which could be used if it seemed advisable.<sup>1</sup> Because of the French background of E. I. du Pont & Company, the work done by Jacques Savary the elder is relevant in this study.

Savary is acknowledged as the chief designer of the Ordinance Pour Le Commerce which Louis XIV made law in 1673 and which formed the framework for Napoleon Bonaparte's

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See Benjamin Booth, A Complete System of Book-keeping (London, 1789), p. 4. As late as 1846, however, George N. Comer gave an exasperated account of his efforts to persuade "an accomplished accountant who commands a high salary" to abandon the practice. The "accomplished accountant" argued that, if he did so, "half his time would be unoccupied, and perhaps his services might not be considered of so much importance." See George N. Comer, A Simple Method of Keeping Books (Boston, 1846), p. 8.

<sup>1</sup>See Booth, p. 7; William Mitchell, A New and Complete System of Book-keeping by an Improved Method of Double Entry (Philadelphia, 1796), p. 2; William Gordon, The Universal Accountant, and Complete Merchant, New Modelled (Dublin, 1796). p. 28; Thomas Dilworth, Dilworth's Bookkeeper's Assistant Improved (New York, 1803), preface, n.p.; Thomas Turner, An Epitome of Book-keeping by Double Entry (Portland, 1804), p. 17.

Code de Commerce of 1807.<sup>1</sup> This Ordinance outlined the provisions by which books were to be kept by "Tradesmen, Merchants, and Bankers" in France, and the Journal was named as the one compulsory and indispensable record.

In 1675 Savary clarified and expanded upon the book-keeping regulations laid down by the Ordinance.<sup>2</sup> He recommended the use of the following specialized and subsidiary bookkeeping records:

1. A purchases book
2. An accounts payable subsidiary ledger
3. A sales journal for sales made on credit terms
4. A subsidiary accounts receivable ledger
5. A journal to record cash sales
6. A journal for cash payments
7. A cash book which appears to have been a ledger account for cash based upon the two preceding journals
8. A detailed running inventory of merchandise kept in ledger account form

As Savary was using for illustrative purposes a merchant who also carried on dyeing operations, he suggested the

<sup>1</sup>Information concerning Savary's accomplishments comes from Stanley E. Howard, "Public Rules for Private Accounting in France, 1673 and 1807", The Accounting Review, VII (June, 1932), pp. 91-102.

<sup>2</sup>Jacques Savary, Le Parfait Négociant (Paris, 1675). In 1713 Savary's son, also named Jacques, brought out a seventh edition of this work, and the eighth edition was prepared by another son, Philemon Louis. As Savary's work was translated into English, Italian, Dutch, and German, it is not unlikely that later writers got ideas from it.

use of a separate record for manufacturing operations.<sup>1</sup>

As will be seen, the bookkeeping records of E. I. du Pont & Company fit into the general contemporary framework, and special records gave it the flexibility desirable to serve the needs of the enterprise. Until the gunpowder factory made its first sales in May, 1804, the only transactions of which a record had to be kept were mainly for expenses related to its establishment. These were journalized by Peter Bauduy in a Day Book, which covered the period from November 20, 1800, to July 9, 1804.<sup>2</sup> Except for approximately half a dozen items, the entries appear as "Manufactury Dr to Cash" and were for travelling expenses and the purchase of building materials and plant equipment. These expenditures were totalled and entered in summary in a regular Journal.<sup>3</sup>

When operations began, however, additional records

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<sup>1</sup>This seems exceptionally early for manufacturing operations to be provided for in bookkeeping. The appearance of the word "mercantile" or "merchant" in the titles of most American bookkeeping textbooks until past the middle of the 19th century shows where the emphasis lay. In addition, the examples in these texts illustrate trading transactions and mercantile operations. See Harry C. Bentley and Ruth S. Leonard, Bibliography of Works on Accounting by American Authors (Boston, 1934), I, for titles of American bookkeeping textbooks. See Booth, Mitchell, Gordon, Dilworth, and Turner for the use of mercantile operations for illustrative purposes.

<sup>2</sup>849 (Schedule). The handwriting indicates what person or persons made entries in the various bookkeeping records.

<sup>3</sup>877 (Schedule).

were necessary in order to handle the greater variety of transactions which took place, and the initial set of books included the following:

A Day Book for sales of powder and customers' payments:

This consisted of the back portion of the original Day Book, and the entries extended from May 16, 1804, to January 14, 1805.<sup>1</sup> At a later date these entries were transferred to the regular Journal, and an attempt was made to eliminate duplications by combining certain Day Book entries to make one entry in the Journal.<sup>2</sup> Both Peter Bauduy and E. I. du Pont had made the Day Book entries, and it is likely that Raphael Duplanty reviewed and marked them for the guidance of Peter Bauduy, who then made the proper entries in the Journal.<sup>3</sup>

<sup>1</sup>849 (Schedule).

<sup>2</sup>877 (Schedule). For example, the following entries in the Day Book:

Powder to Joseph Donathe  
for money rec'd of him

Cash Dr to Powder  
money rec'd of Joseph Donathe

Irénée Du Pont dr to Joseph Donathe  
for money rec'd of Joseph Donathe

were included in the following Journal entry:

Irénée Dupont to Sundries  
To Jeremiah Woolston \$50 for  
Cash rec'd of him  
Joseph Donathe \$15 for  
Cash rec'd of him

<sup>3</sup>Raphael Duplanty reviewed the Journal entries as of February 11, 1806, and December 15, 1808, and made several correcting and adjusting entries. On the former date

A Petit Ledger for employees' earnings and wage payments:

This consisted of the middle section of the original Day Book, and included an index of the accounts.<sup>1</sup> The entries were made by Raphael Duplanty, who doubtless compiled the earlier ones from rough records.

A Factory Day Book: This was headed "Statement of the Different Sums Paid by Irénée Dupont towards the Manufactory", and it was kept by Peter Bauduy.<sup>2</sup> It was started as of May 19, 1804, and the various amounts recorded were totalled at the end of each page. Summary entries for accumulated totals were made in the Journal on February 11, 1806, December 31, 1808, and December 31, 1809.<sup>3</sup>

A Production Day Book: This was a record of raw materials used and gunpowder produced.<sup>4</sup> It was started as of April, 1804, and was kept by E. I. du Pont. Although a summary of the materials used and the production of gunpowder was made at the end of each year, the first entry to record the consumption of raw material was not made in the Journal until

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he was forced to make an entry crediting "Profit & Loss for a mistake somewhere not yet discovered in Summing up the A/Cs." The amount involved was only 83¢. See 877 (Schedule).

<sup>1</sup>849 (Schedule).

<sup>2</sup>850 (Schedule).

<sup>3</sup>877 (Schedule). The first of these entries was for the total to the end of 1805, the second for the combined yearly totals for 1806, 1807, and 1808, and the third for the total for 1809.

<sup>4</sup>1685 (Schedule).

December 31, 1809.<sup>1</sup>

A Sales Book: This was started in May, 1804, and shows details of direct sales to customers by the month.<sup>2</sup> The entries in this book were written mainly by E. I. du Pont, with a few by Raphael Duplanty.

A Journal: The entries date from April 21, 1801, but the fact that the early entries were written by Peter Bauduy indicates that they were compiled at a later date from memoranda and Day Books.<sup>3</sup> This is confirmed by testimony given in the suit which Bauduy brought against the company in 1817.<sup>4</sup> All the entries after December 15, 1808, were made by Raphael Duplanty.<sup>5</sup>

A Ledger: This covers the period from April 21, 1801, to some time in 1810, and overlaps slightly with the succeeding volume.<sup>6</sup> The entries in this ledger were written by

<sup>1</sup>878 (Schedule).

<sup>2</sup>1640 (Schedule).

<sup>3</sup>877 (Schedule). Bauduy's official association with the gunpowder factory dates from August 25, 1802, the date of the Articles of Agreement. The date on which he is shown to have acquired shares in the company is September 3, 1803. See 877 (Schedule).

<sup>4</sup>See Delaware Cases, 1792-1830, Daniel J. Boorstin, ed., (St. Paul, 1943, III, pp. 245, 273, and 274).

<sup>5</sup>This seems to be the official date of Duplanty's full-time association with the company. As noted above, before this time he had reviewed the books, and had made entries to correct and adjust them on two occasions. See Delaware Cases, pp. 245, 249, 270.

<sup>6</sup>934 (Schedule). The overlapping entries were apparently made before it was decided that a new set of books

Raphael Duplanty, and the Ledger folio reference numbers in the pertinent Journals appear also to have been written by him.<sup>1</sup>

As of December 31, 1808, Duplanty began to keep the books of the gunpowder company regularly, and the set he used included the following:

A Blotter: This covered the period from January 2, 1809, to December 31, 1810, and served as a rough, preliminary record of routine transactions.<sup>2</sup> The entries from this volume were transferred to the Journal, where they appeared in conventional bookkeeping form.<sup>3</sup>

A Journal: This covered the same period as the Blotter, and it was more carefully written up than the previous Journal kept by Bauduy.<sup>4</sup> There is a marked improvement in handwriting, neatness, and general appearance in the Journal kept by Duplanty.<sup>5</sup>

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should be opened as of January 1, 1810, the beginning of a new period of association of the company. There are some differences in the entries in the overlapping Journals and Ledgers, and the entries in the new set of books are probably more authoritative.

<sup>1</sup>877 and 878 (Schedule).

<sup>2</sup>852 (Schedule).

<sup>3</sup>878 (Schedule).

<sup>4</sup>878 (Schedule).

<sup>5</sup>This is true of all the records kept by Duplanty, and it is accounted for by his skill as a bookkeeper. See pp. 73 and 74 below.

A Factorage Ledger: This was opened to record transactions with sales agents, and the account for each agent showed the company's shipments of gunpowder to the agent and his sales to customers.<sup>1</sup> Entries for sales were made when the agent sent in his account for the year, and, at the same time, an entry was made in the current Blotter, transferred to the Journal, and posted in the Ledger.

On Page 224 of the first General Ledger there is a Trial Balance dated December 31, 1809, and this is followed by a note that a new set of books had been opened because of the termination of the original period of association of the gunpowder company.<sup>2</sup> The new set of books included:

A Waste Book: This was the first of its kind, elaborately written up by Raphael Duplanty as a factual record of day-to-day transactions, without any attempt to establish the debits and credits, as had been done in some of the earlier Day Books and the Blotter.<sup>3</sup>

A columnar Cash Book: This was the first of a series used to classify the most common cash transactions, and payments

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<sup>1</sup>1641 (Schedule). It should be pointed out that the modern use of the word "factory" tends to obscure its former significance as relating to sales. See, for example, P. Kelly, The Elements of Book-keeping (London, 1815), p. 81, which gives an outline of the use of the "Sales Book or Factory Book" and refers to a sales agent as a "Factor".

<sup>2</sup>934 (Schedule).

<sup>3</sup>881 (Schedule).



of cash which did not fit into it were entered in the current Journal.<sup>1</sup> The headings in the columnar Cash Book were:

For the account of

E. I. Dupont

Peter Bauduy

woollen fact'y<sup>2</sup>

G. P. Factory

Wages

Several bills

The advantage of this type of Cash Book was that, instead of having to make individual entries for cash payments, expenditures could be entered in summary in the Waste Book. Such a system also decreased the number of entries that had to be made in the Journals and Ledgers.

A Journal: This volume was bound and lettered to match the Waste Book, and it was also written up by Duplanty.<sup>3</sup> It covers the period from January 1, 1810, to May 31, 1816, and it includes some entries which do not appear in the Waste Book.<sup>4</sup>

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<sup>1</sup>1035 (Schedule).

<sup>2</sup>This was the woollen mill referred to on pp. 52 and 53 above, that is, Du Pont, Bauduy & Co.

<sup>3</sup>881 (Schedule).

<sup>4</sup>The additional entries are mainly month-end entries to transfer the cash balance forward and minor adjusting entries.

After August 31, 1818, when Mme. de Pusy terminated her association with the company, the main bookkeeping records were closed out, and new ones were opened up.<sup>1</sup> In addition, there were some marked changes in bookkeeping routine which reflect a change in bookkeepers.<sup>2</sup>

Instead of a leather-bound Waste Book, a series of paper-covered books were used. The first of these covered the six-month period from September 1, 1818, to February 28, 1819, while the remainder covered one month. With the exception of the period from September 1, 1818, to December 31, 1819, these books were bound in leather for yearly periods.<sup>3</sup> Another indication of more systematic methods is that some of the Blotters and Journals used after 1820 covered only one year's transactions.

On January 1, 1824, shortly after Augustus Belin became bookkeeper, the columnar Cash Book and the Blotter were discontinued, and all the entries for day-to-day transactions originated in the Waste Book.<sup>4</sup> The only other significant change came with the death of E. I. du Pont,

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<sup>1</sup>The books involved were the Waste Book, Journal, General Ledger, and Petit Ledger. The old and new volumes are, respectively: 863 and 864, 880 and 881, 936 and 937, and 962 and 963 (Schedule).

<sup>2</sup>For further information concerning the bookkeepers employed by the company see pp. 71-87 below.

<sup>3</sup>864 and 865 (Schedule).

<sup>4</sup>The first of Belin's Waste Books was 866 (Schedule). Belin was employed on October 22, 1823. See his account in 937 (Schedule).

which took place October 31, 1834. As in 1810 and 1818, the main bookkeeping records of the company were closed out, and a new set was started.<sup>1</sup>

There is an interesting variety of journalizing techniques in the bookkeeping records. In the first several Journals, the entries were quite simple, usually covering only one transaction or combining transactions of the same type which took place on one day. The word "Sundries" was used to represent multiple debits and/or credits which were then listed in the body of the entry.

In the Journal dating from September 1, 1818, however, entries were made in the following ways:

- (a) From September, 1818, to December, 1818, all the accounts to be debited were listed with the relevant amounts, and the total was carried forward from page to page. In the same manner, the credits were listed, and the amounts were carried forward and totalled at the end. Each section was headed "Sundries to Sundries."
- (b) From January, 1819, to June, 1820, the same technique was used, except that the debits and credits appeared on opposing pages.
- (c) From July, 1820, to September, 1820, the orthodox method of journalizing individual transactions was used.<sup>2</sup>

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<sup>1</sup>The old and new volumes are 873 and 874, 891 and 892, 940 and 941, and 968 and 969 (Schedule).

<sup>2</sup>881 (Schedule).

After 1824 the methods outlined in (a) and (b) were used alternately, with the addition of an entry "Sundries Dr to Gun-powder," at the end of each month. This type of entry was made to record small sales of gunpowder direct to customers. The special entries made under date of October 31, 1834, after the death of E. I. du Pont, in order to transfer the profits to the proprietors' accounts, were made in the orthodox way.<sup>1</sup>

It is obvious that the journalizing techniques outlined in (a) and (b) make it impossible to identify individual transactions. A Journal kept in this manner no longer serves its primary purpose as a chronological record of such transactions, but is used for the summarizing of transactions recorded chronologically in the Waste Book, Day Book, and other records.

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<sup>1</sup>891 (Schedule).

## Part 2

Book-keeping is an art, teaching how to record the dealings and transactions which a man of business hath occasion to commit to writing, and to arrange, dispose, and adjust them, that it may be known at any period, and by any person versant in accounts . . . every thing that is proper for the merchant to know relative to his own affairs, or the affairs of others, with which he may be any how connected.<sup>1</sup>

Just as the talents of artists vary, so do the skills of bookkeepers, and this factor was important in the bookkeeping practices of E. I. du Pont & Company. Another factor, of course, that influences bookkeeping practices is the amount and type of business carried on, but an unskilled bookkeeper like Bauduy would be unlikely to use efficient short-cuts and specialized books to decrease the work.

In the Articles of Agreement, it was specified that one of Bauduy's responsibilities was "adjusting accounts with dealers," but he later either assumed or was assigned the regular bookkeeping duties, and he went so far as to acknowledge his responsibility for the cost of bookkeeping services.<sup>2</sup> In 1806 Bauduy admitted his limitations

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<sup>1</sup>William Gordon, The Universal Accountant and Complete Merchant, New Modelled (Dublin, 1796), I, 18.

<sup>2</sup>In referring to the bookkeeping, Bauduy wrote to E. I. du Pont, circa January, 1806: "I am responsible for this part of the business," Life, VII, 117. He had taken the books to an American merchant for help in working out entries, and he wrote in the same letter: "Of course I am responsible for the cost of Hayes' work," Life, VII, 118.

as a bookkeeper.<sup>1</sup> It seems strange, therefore, that he did not refer to a small notebook of instructions which had been compiled for the gunpowder company as a guide to its bookkeeping.<sup>2</sup>

This notebook contains directions, illustrated by specific examples, for journalizing the routine transactions of the gunpowder factory. Although certain references in it indicate that it could have been written by an American merchant or his clerk, close study leads to the conclusion that it was written by someone with a knowledge of the French Commercial Code of 1673.<sup>3</sup>

One of the instructions in the notebook is that entries be made in the Journal daily, and it is obvious that Peter Bauduy's proposed six-month visits to San Domingo would have made it out of the question for him to do so.<sup>4</sup> Certainly, Bauduy very soon found himself out of his depth,

<sup>1</sup>In the letter cited above, he wrote: "I am somewhat out of practice." Life, VII, 117.

<sup>2</sup>Winterthur Collection, 3/C/10. It appears to have been written early in 1802.

<sup>3</sup>The determining factor is the statement: "Our Laws [require] the merchant or manufactor to . . . keep his Books regularly and daily posted." As far as can be ascertained, at that time there were no American laws regulating bookkeeping. For the bases of the belief that French law is referred to in this quotation, see Howard, The Accounting Review, VII, 92 and 95.

<sup>4</sup>The loss of Haiti by the French nullified Peter Bauduy's stipulation that he be allowed this time to look after his business interests there.

and his entries in the Journal and the kinds of records he kept indicate that he possessed only an elementary and mechanical knowledge of bookkeeping.<sup>1</sup>

It was to Raphael Duplanty that E. I. du Pont turned, first for guidance, then for skilled help in bookkeeping. Duplanty had come to the United States from Haiti in 1803, and was recommended to Victor du Pont by the French Consul in New York City.<sup>2</sup> As already stated, in 1805 and 1808 Duplanty reviewed the Journal entries in the books of the gunpowder company and made the necessary corrections and adjustments. Shortly after the close of 1808, in response to the urging of E. I. du Pont, he came to the Brandywine and took over the bookkeeping duties.

Duplanty's skill as a bookkeeper is shown, not only in the improved physical form of the entries in the

<sup>1</sup>In justifying his action in consulting a Philadelphia merchant about the bookkeeping, Bauduy wrote: "I would rather do that than allow the matter to continue to perplex me and to cause a confusion that it will be more and more difficult to clear up." Peter Bauduy to E. I. du Pont, n.d., circa January, 1806, Life, VII, 118.

<sup>2</sup>See excerpt from Transplantation, Life, VIII, 107-108 for a summary of Duplanty's background and association with the Du Pont family. During the French Revolution his father and two of his brothers were guillotined, and he fled to England. Although Mme. Victor du Pont had "some causes for complaint against him", she considered Duplanty "an excellent member of our colony in many ways; he was above all a loyal friend, he was an excellent accountant, spoke and wrote English well, and throughout his life with us showed an ability, an activity, an interest in his work that both in New York and on the Brandywine made him very valuable." His association with the Du Pont family's business interests lasted approximately twenty years.

bookkeeping records, but also in the specialized books which he introduced into the system. The contemporary method of irregular wage payments and accumulation of employees' earnings made a special Ledger advisable, and Duplanty started a Petit Ledger for the recording of employees' accounts.<sup>1</sup> The Factorage Ledger, which he also started, was important in giving an accurate and easily comprehensible view of the company's dealings with its sales agents, while the use of a columnar Cash Book saved time and space in recording and posting cash payments.<sup>2</sup>

As the Ledger entries for Duplanty's salary end as of December 31, 1817, and as he wrote up the Journal only until that date, it would appear that this was the official termination of his employment as bookkeeper of the gunpowder company. On February 9, 1818, however, E. I. du Pont wrote:

For nearly three months . . . I have had the services of an additional bookkeeper from Philadelphia, both for the yearly settlement of the accounts of the business and those that are needed for the suit that we now have before the Chancellor.<sup>3</sup>

This indicates that Duplanty was still performing

<sup>1</sup>The first Petit Ledger consisted of the middle section of the original Day Book, 849 (Schedule). This was followed by a complete series of volumes extending from 1812 to 1902 and numbered 961-1024 (Schedule) inclusive.

<sup>2</sup>The use of these two records has already been outlined. The Factorage Ledger is 1641 (Schedule), and the columnar Cash Books are 1035, 1037, 1038 and 1039 (Schedule).

<sup>3</sup>E. I. du Pont to G. Denizot, February 9, 1818, Life, X, 269.



bookkeeping duties for the company in 1818, and it can only be concluded that he was paid for his services, not for the actual period during which he worked on the books.

Information about Duplanty's successor is scanty. It may have been the "additional bookkeeper" mentioned above. The only clue to his identity so far discovered is from E. I. du Pont's request to his wife, "If you have not answered Rogers, have Courtauld write him that I am away."<sup>1</sup> From 1821 to 1823 inclusive the Waste Books were used as the books of original entry, and Courtauld apparently discontinued the use of the Journal.<sup>2</sup>

The next bookkeeper was Augustus Belin, who began work on October 22, 1823, and was succeeded in 1845 by his son, Henry.<sup>3</sup> Augustus Belin re-introduced the summary journalizing techniques that appear in the Journals from September, 1818, to September, 1820.<sup>4</sup> As noted earlier, Belin discontinued the use of the Blotter and the columnar Cash Book after December 31, 1823, and all the entries for day-to-day transactions originated in the Waste Books after that time.

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<sup>1</sup>E. I. du Pont to his wife, February 28, 1821, Life, XI, 28.

<sup>2</sup>This conclusion was drawn because the folio references in the Ledgers for the pertinent period are "WBG" and "WBH", that is, Waste Book G and Waste Book H, and also because no Journals for those years have been found.

<sup>3</sup>937 and 943 (Schedule).

<sup>4</sup>There was no change in journalizing until September, 1870, when Edward Collison succeeded Henry Belin. See 908 (Schedule).

## Part 3

For nine years I gave to [the business] all my strength--physical and moral. I was both director and head workman, and even workman--day and night. I was unable to make the accounts and keep the books myself; I was obliged to wait for Duplanty to do it, because the working of the mills depended entirely upon me; because the danger of teaching the men so much that they could take our knowledge to other mills forced me to do the refining myself, as well, as many other tasks that filled my days with work.<sup>1</sup>

This statement was written by E. I. du Pont in reply to a letter from his father, which the latter called "severe" and his son called "very cruel."<sup>2</sup> It sums up the herculean efforts made by E. I. du Pont in the early years of the company, but it also indicates the need for a consideration of some significant factors relating to the bookkeeping affairs of the gunpowder factory.

Although no definite evidence can be presented that E. I. du Pont had any bookkeeping training or experience, it can be inferred from his statement that he could have done the bookkeeping for the enterprise. As it was physically impossible for him to do so, Bauduy undertook the task, but his deficiencies soon became apparent. It may be, too, that Bauduy's lack of skill gave E. I. du

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<sup>1</sup>E. I. du Pont to Du Pont de Nemours, May 26, 1811, Life, VIII, 297.

<sup>2</sup>The letter from Du Pont de Nemours was not printed in Life, but see Du Pont de Nemours to Victor and E. I. du Pont, October 14, 1813, Life, IX, 116-126, which is probably similar in tone.

Pont a welcome excuse for employing Duplanty. The dissension between Bauduy and E. I. du Pont, as well as the latter's obvious mistrust and suspicion of his partner, makes this seem a logical conclusion.

Certainly, E. I. du Pont had an extremely high opinion of Duplanty and went to great lengths to persuade him to settle permanently in the Brandywine area.<sup>1</sup> It would appear, too, that while Duplanty and Belin were equally skilled in bookkeeping, Duplanty fulfilled the functions of a steward for both Victor and E. I. du Pont, rather than those of a mere bookkeeper. For example, when Victor was facing a financial crisis in 1805, he discussed the situation with Duplanty, and they decided upon a course of action.<sup>2</sup> E. I. du Pont's opinion of Duplanty can be gauged from the fact that his only objection to the latter as a prospective husband for his daughter, Victorine, was that Duplanty was too old.<sup>3</sup> He may later have regretted that

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<sup>1</sup>E. I. du Pont helped to arrange a marriage for Duplanty "because it would make it easier to keep him here where he was very useful." See E. I. du Pont to Peter Bauduy, n.d., circa January, 1813, *Life*, IX, 74. In the same letter, E. I. du Pont wrote of Duplanty: "I think that his energy, his determination, his patience in writing and as an accountant, are very valuable to those who are in business with him, especially to men like you and me." At this time Duplanty was associated with E. I. du Pont and Bauduy in the woollen mill.

<sup>2</sup>Victor du Pont to E. I. du Pont, July 25, 1805, *Life*, VII, 152.

<sup>3</sup>E. I. du Pont to Du Pont de Nemours, November 22, 1809, *Life*, VIII, 228. In this letter, he stated: "Duplanty is a very worthy man, full of energy and ability; his character is good and I am really fond of him."

he discouraged Duplanty and allowed Victorine to marry Ferdinand Bauduy, whom he thought too young for her.<sup>1</sup>

The conflict between E. I. du Pont and Bauduy undoubtedly made Duplanty important to the former. In the final stages of the partnership, Bauduy attacked both Duplanty and his bookkeeping ability. In the letter directed to the European shareholders, he spoke of Duplanty as "a very audacious and selfish man" who had "established himself in Mr. du Pont's good graces."<sup>2</sup> He accused Duplanty of having the accounts of the gunpowder factory "thoroughly confused" with those of the cotton mill.<sup>3</sup> This, Bauduy stated, was allowed because

Mr. Irénée, who considers him the prime mover, treats him accordingly and lets him do anything he pleases.<sup>4</sup>

Just a week before this, Bauduy had written Duplanty a coldly impersonal letter complaining about the bookkeeping, and on the reverse Duplanty wrote explanatory notes, justifying his entries and procedures.<sup>5</sup> One of

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<sup>1</sup>Ibid. E. I. du Pont also wrote of Ferdinand: "It is the factory he wants to marry." E. I. du Pont to Du Pont de Nemours, n.d., circa June, 1810, Life, VIII, 270.

<sup>2</sup>Peter Bauduy to Mr. Beauchet, June 21, 1814, Life, IX, 198.

<sup>3</sup>Ibid., 199.

<sup>4</sup>Ibid.

<sup>5</sup>Peter Bauduy to Raphael Duplanty, June 13, 1814, Longwood ms., 5/A/1. This letter was written in the third person.

Bauduy's complaints was Duplanty's use of the term "several bills paid" in the Journal entries, and he stated that details of each payment should be shown in the Journal or that some reference should be made in the Journal to the source of such entries.<sup>1</sup> Duplanty's comment was that details of payments were shown in the Check Books and Cash Books and that the Journal contained folio reference numbers.<sup>2</sup>

Bauduy also complained about the treatment of a couple of suppliers' accounts, and he "begged" Duplanty to make no entries in the books of the gunpowder factory except those which concerned it.<sup>3</sup> In expanding on this in the last paragraph, he stated that the faults which he saw in Duplanty's work caused errors which were impossible to detect.<sup>4</sup>

In view of Duplanty's superior skill in bookkeeping, it is laughable to have Bauduy write:

The object of book keeping is to make one's business clear and inteligible [sic] and our books as they stand are to me and to every body else pure hieroglyphick.<sup>5</sup>

Duplanty appears to have replied directly to this in a memo which reads in part:

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid. Duplanty had a valid rebuttal for this complaint.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid.

In addition to what I have already answered, for fear of having not been explicit enough, I wish it to be more understood that Mr. Bauduy was in 1806 perfectly sensible of the many fold mistakes and irregularities of the books kept by him, as also of the propriety of the numerous rectifications which I wrote for him and which he copied afterwards in Book No. 1.<sup>1</sup>

At the beginning of 1815, when E. I. du Pont and Bauduy were negotiating the terms for the dissolution of their partnership, the latter again attacked Duplanty.<sup>2</sup> Because of this, Duplanty requested that the books be examined by Antoine Bidermann and Augustin Bousquet or by someone named by them.<sup>3</sup> At the same time, he suggested that Antoine Bidermann could keep a Waste Book or Blotter in French, and that he (Duplanty) could later make the

<sup>1</sup>Memo by Raphael Duplanty, n.d., circa June, 1814, Longwood ms., 5/C/45. This is included in a series of memos written by Duplanty for the Bauduy suit. He made summaries of several of Bauduy's letters to E. I. du Pont, and most of them were written in a somewhat sardonic vein. One, for example, reads: "Bulletin of P. Bauduy's health; he intended to come up to the powder mills and to close the account which he had begun, but was stopped by the ague." The next began with the words: "2nd Bulletin of P. Bauduy's health", and it is obvious that Duplanty thought Bauduy was simply making excuses for not being at the gunpowder factory. See Longwood ms., 5/C/45.

<sup>2</sup>In this letter Bauduy did not mention Duplanty by name, but referred to him only as E. I. du Pont's bookkeeper. See E. I. du Pont to Peter Bauduy, January 6, 1815, Life, X, 56-63, written in reply to a letter from Bauduy dated January 3, 1815. In his letter, E. I. du Pont copied Bauduy's letter, paragraph by paragraph, replying to each paragraph in turn.

<sup>3</sup>Duplanty began his letter "M. Bauduy a tellement clabaudé contre la tenue de vos livres." Raphael Duplanty to E. I. du Pont, January 15, 1815, EBduP Collection, 2/15/15. Bousquet was representing Mme. de Pusy, who had returned to France.

entries in the Journal from Bidermann's record.<sup>1</sup>

Unfortunately for Duplanty, Antoine Bidermann's father apparently had more responsible duties in mind for his son. He recommended that Antoine be trained to replace Bauduy, because he felt that it was necessary for E. I. du Pont to have someone on whom he could "entirely rely, who acts as merchant, and keeps the accounts in order."<sup>2</sup> Jacques Bidermann later suggested that Duplanty's supervision of the cotton factory interfered with the bookkeeping of the gunpowder company.<sup>3</sup>

In October, 1815, Duplanty reminded E. I. du Pont of the latter's "solicitations répétées" that he come to the Brandywine and of the "humiliations sur humiliations" that he had suffered since then.<sup>4</sup> He concluded by asking that he be allowed to withdraw from the cotton mill, so

<sup>1</sup> Ibid.

<sup>2</sup> Jacques Bidermann to E. I. du Pont, January 22, 1815, EBduP Collection, 3/25/8.

<sup>3</sup> See Raphael Duplanty to E. I. du Pont, September 1, 1815, EBduP Collection, 2/15/17, which was written by Duplanty after he had seen Bidermann's letter.

<sup>4</sup> Raphael Duplanty to E. I. du Pont, October 22, 1815, EBduP Collection, 2/15/20. Duplanty's handwriting in this letter is much more legible than usual, an indication of the pains he took in composing it. He was referring to his treatment in connection with the woollen mill. See Duplanty's memos No. 6 and 7, prepared in connection with the Bauduy suit, Longwood ms., 5/C/46, which are summaries of Bauduy's demand that Duplanty be "ousted" from the woollen mill. See also E. I. du Pont to Peter Bauduy, n.d., circa January, 1813, Life, IX, 70-77. E. I. du Pont defended Duplanty, but he consented to Duplanty's withdrawal "for the sake of the business in spite of my dislike of all injustice."

that he might seek a place where he hoped he would be appreciated.<sup>1</sup> E. I. du Pont's conciliatory reply did not satisfy Duplanty for long.<sup>2</sup> Six months later he wrote to request the settlement of his account, stating that he needed money to support his wife and children and to pay their passage to France.<sup>3</sup>

In the suit which Bauduy brought against the company on August 9, 1817, both Duplanty and the bookkeeping figured prominently.<sup>4</sup> Of the four charges of mismanagement alleged by Bauduy, two concerned the bookkeeping.<sup>5</sup> One of these was that E. I. du Pont's private accounts were "mingled and kept with those of the company", and the other was that the books "were kept irregularly, and were 'unintelligible to one not skilled in the secret mode of keeper'."<sup>6</sup>

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<sup>1</sup>Raphael Duplanty to E. I. du Pont, October 22, 1815, EBduP Collection, 2/15/20.

<sup>2</sup>E. I. du Pont to Raphael Duplanty, October 23, 1815, EBduP Collection, 2/15/21.

<sup>3</sup>Raphael Duplanty to E. I. du Pont, April 1, 1816, EBduP Collection, 2/15/22.

<sup>4</sup>The suit was brought against E. I. du Pont, Mme. de Pusy, Du Pont de Nemours, and Jacques Bidermann. See PSduP Collection, 18/9.

<sup>5</sup>Delaware Cases, 1792-1830, p. 222. The other two charges were that unnecessary buildings were erected and that workmen were improperly employed. The latter item refers to workmen being used to do E. I. du Pont's private work.

<sup>6</sup>Ibid.



As far as the first charge is concerned, there were drawing accounts for both E. I. du Pont and Peter Bauduy in the Ledgers of the Company.<sup>1</sup> This was and is the normal practice in proprietorship and partnership enterprises, although E. I. du Pont used his for his personal affairs more than Bauduy did.<sup>2</sup> As pointed out by the Chancellor in his ruling, the fact that E. I. du Pont had a private account in the company's books made it plain that he had no desire to conceal anything from Peter Bauduy, who could have detected any errors and/or irregularities.<sup>3</sup> It had been established that Bauduy himself kept the books before the summer of 1808 and that he afterwards "continued to make entries, to inspect, superintend, and correct them" until he withdrew from the company.<sup>4</sup> Duplanty denied that there were any errors in the books, basing this contention on the fact that his accounts always agreed with the statements of the Banks or of any

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<sup>1</sup>934 and 935 (Schedule).

<sup>2</sup>See Gordon, The Universal Accountant, pp. 30-31, which lists a "Book of Expenses" for the recording of a merchant's family expenses, thence carried in total to the Waste Book or Cash Book. See also Frederick Beck, The Young Accountant's Guide (Boston, 1831), p. 30, which shows an illustrative Journal entry "Personal expenses Dr to Cash" for the proprietor's monthly expenses.

For the modern procedure, see H. A. Finney and Herbert E. Miller, Principles of Accounting (New York, 1953), pp. 102 and 108.

<sup>3</sup>Delaware Cases, p. 245.

<sup>4</sup>Ibid.

individuals who had business dealings with the company.<sup>1</sup>

Early in 1818 there occurred an episode which may explain why Duplanty's association with the gunpowder company ended. At this time it was reported to E. I. du Pont that Mme. de Pusy's nephew had

met the gentleman who has charge of your books and was shocked by certain of his expressions that seemed to him to be insulting to Madame de Pusy--his aunt.<sup>2</sup>

Slight though this evidence may seem, it is not unlikely that Duplanty was dismissed for his remarks about Mme. de Pusy. Even though E. I. du Pont undoubtedly entertained privately the sentiments which Duplanty expressed publicly, it would be unthinkable to him that his bookkeeper would speak in insulting terms of his step-sister.<sup>3</sup> Valuable though Duplanty's services had been, E. I. du Pont's family loyalty and sense of propriety would predominate. By this time, too, as will be explained, Duplanty's services were not as vital as they had been and could more easily be dispensed with.

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<sup>1</sup>Memo by Raphael Duplanty, n.d., circa 1814, Longwood ms., 5/C/45.

<sup>2</sup>W. C. Sourcesol to E. I. du Pont, March 15, 1818, Life, X, 276.

<sup>3</sup>During the War of 1812 E. I. du Pont was driven to write to his step-sister one extremely plain-spoken letter which concluded: "Your letter forbids any advice or any proposition from me. Give your proxy to Mr. Bousquet, I shall be glad; direct a lawyer to prosecute me, I am quite willing. Do, my sister, exactly what you please." E. I. du Pont to Mme. de Pusy, September 3, 1814, Life, IX, 272. On August 24, the city of Washington had been taken by

By the middle of 1819 relations between E. I. du Pont and Duplanty had deteriorated to the extent that the latter wrote:

I do not know what pleasure Mr. Dupont can find in harassing me on a subject as well known to him as to myself.<sup>1</sup>

This matter concerned the cotton mill in which both men were still associated, and it caused a great deal of bitterness between them. In response to E. I. du Pont's request through a third party that the affairs of the mill be wound up and the books examined, Duplanty replied that he was just as anxious as E. I. du Pont that this be done, in order to correct the errors which had crept into them because of the multiplicity of his duties.<sup>2</sup> Duplanty's next letters were more conciliatory, but to his requests for money due him from the cotton mill, E. I. du Pont replied:

Can Mr. Duplanty believe that I will support alone all the losses, pay every thing and every body in the cotton concern and him in the bargain?<sup>3</sup>

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British troops, and E. I. du Pont was too busy making preparations for the expected attack on Wilmington to exercise the usual patience he had employed in answering innumerable previous letters from Mme. de Pusy in regard to balancing the books so that a value could be set for her two shares in the gunpowder company.

<sup>1</sup>Raphael Duplanty to E. I. du Pont, July 18, 1819, EBduP Collection, 2/15/49.

<sup>2</sup>Raphael Duplanty to E. I. du Pont, December 2, 1819, EBduP Collection, 2/15/57.

<sup>3</sup>E. I. du Pont to Raphael Duplanty, January 17,

By October, 1820, E. I. du Pont had come to the conclusion that his interests in the cotton mill had been "neglected and sacrificed" and that he had been "led on" to pay money for it after it had been closed down.<sup>1</sup> He laid down an ultimatum, therefore, that he would not pay one more cent in connection with the cotton mill unless he were sued by the creditors.<sup>2</sup> In 1824 Duplanty wrote from France to ask Victor du Pont to try to persuade E. I. du Pont to settle up the accounts of the cotton mill, if Victor could do so "sans vous compromettre."<sup>3</sup> As this apparently had no effect, Duplanty wrote directly to E. I. du Pont almost two years later to ask that this be done, but no evidence has been found that the latter complied with this request.<sup>4</sup> As already noted, E. I. du Pont's personal account was charged for the losses of the cotton mill in the settlement which followed his death. As the sum

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1820, EBduP Collection, 2/15/65. See also Raphael Duplanty to E. I. du Pont, December 20, 1819, and January 12, 1820, EBduP Collection, 2/15/64.

<sup>1</sup>E. I. du Pont to Raphael Duplanty, October 24, 1820, Longwood ms., 2/6.

<sup>2</sup>Ibid. In the published version of this letter, Life, XI, 23-24, the word "auditors" mistakenly appears instead of "creditors".

<sup>3</sup>Raphael Duplanty to Victor du Pont, February 15, 1824, Longwood ms., 2/1.

<sup>4</sup>Raphael Duplanty to E. I. du Pont, December 2, 1825, EBduP Collection, 2/15/92.

amounted to over \$27,500.00, it is easily seen why he probably refused to pay anything to Duplanty.

To revert to the affairs of the gunpowder factory, it can be concluded that Antoine Bidermann's assumption of authority set off the gradual decline in Duplanty's importance to the company. It may have led to the decision which he had made, by 1816, to return to France, where he was said to have had influential friends.<sup>1</sup> Even if there had not been the break which appears to have taken place early in 1818, the entry of E. I. du Pont's son, Alfred, into the gunpowder enterprise the following year would have made Duplanty even less important.<sup>2</sup> Certainly, all the circumstances seemed to contribute to his loss of favour with E. I. du Pont, and 1815 can be taken as a watershed in the relationship between the two men.

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<sup>1</sup>From *Transplantation, Life*, VIII, 108.

<sup>2</sup>By this time Alfred was 21 years old, and when E. I. du Pont was away, he sent instructions to Alfred through Mrs. E. I. du Pont. Before this time, Duplanty had been sent such instructions, either directly or through E. I. du Pont's wife. By 1823 E. I. du Pont was writing directly to Alfred in such circumstances, and it was Alfred who got the largest number of shares in the gunpowder factory after his father's death and who assumed the leadership of the company. See Longwood ms., 3/1 for pertinent letters from E. I. du Pont to his wife, to Duplanty, and to Alfred du Pont.

## CHAPTER IV

### PROFIT AND LOSS

The extensive need for dependable determinations of periodic net income makes the income statement the most important product of enterprise accounting.<sup>1</sup>

Article Six of the Act of Association of the gunpowder company specified that the profit should be determined yearly by calculating the market value of the "product and the property" and deducting from it the original capital.<sup>2</sup> This is the balance sheet or net worth approach to profit, and the only likeness to the modern income approach is that they both involve the periodic measurement of profit. Although there has recently been some controversy about the length of the period that should be taken into account, a year is still the accepted unit of time.<sup>3</sup>

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<sup>1</sup>A. C. Littleton, Structure of Accounting Theory, American Accounting Association, Monograph No. 5, 1953, p. 22.

<sup>2</sup>Article Six, Act of Association, April 21, 1801.

<sup>3</sup>See A. C. Littleton, Accounting Evolution to 1900 (New York, 1933), p. 11, in which he writes of "arbitrary and meaningless lengths called years", and states that

Apart from this, a comparison of Article Six with the opening statement of this chapter illustrates what has been called "the most significant change" that has taken place in accounting, that is,

the shift of emphasis from the balance sheet to the income account, and particularly to the income account as a guide to earning capacity rather than as an indication of accretions to disposable income.<sup>1</sup>

There is, of course, a correlation between the balance sheet and the modern profit and loss statement, but the latter did not evolve until late in the 19th century.<sup>2</sup> The calculation of profits by the method laid down in Article Six was not only the accepted method, but the only procedure then used for the calculation of profits. Some further consideration will be given to the validity of this method, but, before doing so, it should be determined when and how the profits of E. I. du Pont & Company were calculated between 1801 and 1834 and whether the methods used did yield "dependable determinations of periodic net income."

During the first period of association of the company, that is, from April 21, 1801, to December 31, 1809, the bookkeeping accounts and methods used were very similar

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"nine tenths of the problems of the accountant are due to this demand to express results in terms of years."

<sup>1</sup>George May, Financial Accounting: A Distillation of Experience (New York, 1959), p. 5.

<sup>2</sup>Littleton, Accounting Evolution, p. 149.

in principle to "venture" accounting, which was common for calculating the profits of trading ventures. In contrast to the usual multiplicity of accounts now used for manufacturing enterprises, there were only three Ledger accounts which related to the manufacturing and selling operations of the gunpowder factory.

Purchases of saltpetre and brimstone, that is, sulphur, the two main raw materials for the manufacture of gunpowder, were debited to separate accounts bearing the names of those materials. Income from sales, purchases of supplies, payments to or on behalf of workmen, delivery costs, returns and allowances, and all other items of income and expense were shown in a "Factory" account. The only other income and expense account was one entitled "Profit and Loss", which was used mainly for recording transactions for interest and discount on bills of exchange and promissory notes.

With this system, an analysis of the various items of revenue and cost would be difficult, if not impossible, to achieve. A further reason for such difficulty would be that wages were not paid regularly. From time to time the workmen drew small sums in cash, for example, 12½¢ or 25¢, and the company paid their rent and grocery bills or their board. These payments were debited to the employees' account in the Petit Ledger, and wages earned were credited



to these accounts.<sup>1</sup> The earnings were entered irregularly, however, and information concerning the specific periods covered was frequently omitted.

Sometimes there was a time lag between the receipt of supplies or raw materials and their invoicing.<sup>2</sup> In certain instances, also, there seems to have been a time lag between the receipt of an invoice and the Journal entry to record it.<sup>3</sup> The bulk of expenses for the building and operating of the factory were recorded in preliminary records.<sup>4</sup> None of the entries in these preliminary records appeared in the Journal until February 11, 1806, when the accumulated totals were debited to accounts entitled Factory Buildings and Factory.<sup>5</sup> The manufacturing expenses for 1806, 1807, and 1808 were journalized in a summary entry on December 31, 1808, and those for 1809 were journalized

<sup>1</sup>849 (Schedule).

<sup>2</sup>For example, a shipment of saltpetre received in June, 1807, was apparently invoiced and journalized in October, 1807. See 472 (Schedule).

<sup>3</sup>A shipment of sulphur invoiced under date of May 27, 1806, was journalized April 21, 1807. See 472 (Schedule).

<sup>4</sup>The expenses for organizing the enterprise and building the factory were entered in journal form in a Blotter, 849 (Schedule), and were later transferred to a Waste Book, 848 (Schedule). When the factory went into operation in May, 1804, another Blotter, 850 (Schedule), was started for factory operating expenses.

<sup>5</sup>See 877 (Schedule).

in total on December 31, 1809.<sup>1</sup>

Although Article Six specified that the profits should be calculated yearly, the first time this was done was under date of December 31, 1809, at the termination of the first period of association of the company. The first step in the procedure was to determine the total value of saltpetre and brimstone used.<sup>2</sup> This was done by subtracting the amounts on hand from the amounts recorded as purchased. Saltpetre was "valued at the moderate rate of 23/100 average price of our purchases."<sup>3</sup> As the price paid for Saltpetre that was journalized in 1809 varied from 20.65¢ to 41¢ per pound, with an average of 30.61¢ per pound, the use of the lower of cost or market price conforms to present-day accounting practices.<sup>4</sup> The unit price of 6.5¢ shown for brimstone cannot be explained, however, as the average cost works out to 4.757¢. The cost of the saltpetre and brimstone was transferred to the Factory account, leaving the value of the raw materials on hand as

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<sup>1</sup>See 877 (Schedule).

<sup>2</sup>See 877 and 878 (Schedule).

<sup>3</sup>Adjusting and closing entries dated December 31, 1809, in the Journal, 878 (Schedule), were examined to establish the procedure followed. This was done for the other closings.

<sup>4</sup>878 (Schedule).

<sup>5</sup>The Journal and Ledger entries for saltpetre and brimstone were checked through for this whole period and the succeeding one in order to determine the unit price.

the balances in the respective accounts.

The next step in the closing process was to make several entries for comparatively large sums of money in order to adjust suppliers' and agents' accounts. A summary entry for purchases of factory supplies was made, as well as an entry to record \$2,279.42 for wages owing to the workmen. All these expenses were debited to the Factory account.<sup>1</sup>

The final credit balance of \$50,010.85 in the Factory account was closed to the Profit and Loss account by a Journal entry.<sup>2</sup> Special entries were then made in the Profit and Loss Account to adjust the interest for shareholders, to record \$6,305.84 for depreciation on buildings and machinery, and to write off \$284.25 for Bad Debts.<sup>3</sup>

The final balance in the Profit and Loss Account was closed to the Stock account, and the value of gunpowder on hand was credited to the Stock account.<sup>4</sup> The final credit balance of \$44,249.31 in this account was taken to be the profit for the period from April 21, 1801, to December 31, 1809.<sup>5</sup>

This procedure for determining the profit corresponds very closely with present-day practices. There are some factors, however, that have to be taken into account

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<sup>1</sup>878 (Schedule).

<sup>2</sup>Ibid.

<sup>4</sup>Ibid.

<sup>3</sup>Ibid.

<sup>5</sup>934 (Schedule).

in deciding whether the figure arrived at was the correct profit for the period.

The most important of these factors is the calculation of raw material costs. The recording of purchases and the calculation of the cost of saltpetre and brimstone seem to have been logical procedures, but the time lag between the receipt of a shipment, the receipt of the invoice and the journalizing of the invoice could have caused a discrepancy between the amount of raw material presumed used and the amount that was actually used.

It would appear that there were discrepancies in the figures for the raw materials used as recorded in the Journal.<sup>1</sup> Figures for the daily consumption of saltpetre and brimstone were recorded in a Production Day Book, and the totals for the period do not agree with those used to arrive at the profit.<sup>2</sup> The Production Day Book shows 43,322 pounds more saltpetre used, and this amounts to a difference of almost \$10,000 at the estimated unit price.<sup>3</sup> For brimstone, on the other hand, the amount shown in the Production Day Book is 23,926 pounds less than the figure given in the Journal, resulting in a difference of approximately \$1,100.<sup>4</sup> The use of the figures in the Production

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<sup>1</sup>878 (Schedule).

<sup>2</sup>1685 (Schedule).

<sup>3</sup>Ibid.

<sup>4</sup>1685 and 878 (Schedule).

Day Book would reduce the profit almost \$9,000, a significant sum in the five and a half year figure of \$44,249.31 arrived at.

Another factor that has to be considered in deciding on the accuracy of the profit figure arrived at as of December 31, 1809, is that there are three sources of information concerning sales.<sup>1</sup> One of these is a Sales Book, so-called, kept mainly by E. I. du Pont, showing the shipments of gunpowder made.<sup>2</sup> From this, he compiled a chart of yearly sales.<sup>3</sup> The third source of information is the Factory account in the Ledger where sales were entered as credits.<sup>4</sup>

The values shown in the Sales Book might not appear to be dependable, since they were said to be "rough estimates to presume the yearly value of powder sent to market."<sup>5</sup> The pattern of sales in this record, however, is more consistent than the figures which resulted from an attempt by the author of this thesis to segregate the sales shown in the Factory account in the Ledger.<sup>6</sup>

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<sup>1</sup>Appendix D is a summary of the yearly figures from these three sources.

<sup>2</sup>1640 (Schedule).

<sup>3</sup>Appendix A.

<sup>4</sup>934 (Schedule).

<sup>5</sup>Delaware Cases, III, 264.

<sup>6</sup>934 (Schedule).

For the first period of association of the company, the total value of sales shown in the chart compiled by E. I. du Pont is approximately \$1,200.00 less than the total derived from the Sales Book.<sup>1</sup> The total in the latter, however, is approximately \$13,813.00 less than the total estimated from the Factory account in the Ledger.<sup>2</sup> This would appear to reflect a further over-estimation of profits for the period.

One of the factors in arriving at a conclusion about this matter, however, is that the figures from the Sales Book were the ones used in the Bauduy suit, which revolved partly around the payment of Bauduy's commission on sales. As this was calculated on net sales, the figures in the Sales Book and on the chart were for net sales, whereas the figures in the Ledger would include such items as shipping charges and adjustments, which would have to be included in estimating the profit.

A time lag between shipping, invoicing, and journalizing gunpowder could result in an under-estimation of sales income for the period. Adjustments of agents' accounts and treatment of sales of remanufactured powder also have to be considered in trying to arrive at an accurate figure for sales for the whole period of the first association. It would be even more difficult to determine such a figure

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<sup>1</sup>Appendix A and 1640 (Schedule).

<sup>2</sup>934 (Schedule).

for the various years within the period.

In the final analysis, the figures for sales in the Ledger account have to be accepted, even though they may not meet rigid standards of accuracy. More consistent figures for the yearly gross sales could be arrived at by pro-rating the Ledger account figures with those from the sales chart.

As noted, an entry was made as of December 31, 1809, charging the Factory account with outstanding wages, and it can be taken for granted that all wage expense had been taken into account in determining the profit. The total figure for this expense would be difficult to determine, however, because of the unsystematic method used in recording wage payments and earnings.<sup>1</sup>

After Raphael Duplanty took over the bookkeeping, there were a few changes, but little real improvement in the classifying of income and expense. The new Cash Book provided columns for "Wages" and "Several Bills", but the totals reflected only payments, not total expenses for such items.<sup>2</sup> The old method of irregular payment of wages and irregular recording of earnings was continued, thus preventing accurate estimates of wage expense. As "Several Bills" included all types of items, there was no improvement in classifying other expenses.

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<sup>1</sup>See Page

<sup>2</sup>1035 (Schedule).

Starting in 1810, the saltpetre and brimstone accounts in the Ledger were closed out each year by transferring materials used to the Factory account and bringing forward the balance on hand. Although this change tended toward a more systematic handling of these important items, the cost figures for saltpetre were very much distorted in 1812 and 1813, because the account was debited for "amounts paid or accepted toward contracts" for material received at a much later date.<sup>1</sup> When such payments were made, the Journal entry showed only the amount paid. When the material was received, another Journal entry was made recording the weight of the shipment and the amount paid for shipping and agent's charges.<sup>2</sup> This procedure resulted in a variation of the unit costs for saltpetre from approximately 89¢ in 1812 to approximately 12¢ in 1813.<sup>3</sup> Another factor which would contribute to confusion in trying to arrive at yearly figures for saltpetre purchases is that material used in the manufacture of gunpowder for the United States War Department over a period of years was accounted for in total on June 30, 1813.<sup>4</sup>

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<sup>1</sup>See entries dated July 21, 1812; December 21, 1812; July 1, 1813; and August 7, 1813, 878 (Schedule).

<sup>2</sup>Ibid.

<sup>3</sup>These costs were arrived at by compiling information from the relevant Journal entries and Ledger accounts.

<sup>4</sup>879 (Schedule).



At the beginning of June, 1814, separate accounts were started in the Ledger for "Gunpowder Sales" and "Gunpowder Sales to the U. S. Government", and these accounts were closed to the Factory account whenever a profit figure was taken thereafter. This change, of course, is helpful in estimating the sales figures, and it also indicates a slightly more advanced use of Ledger accounts.

The books were closed out and the profit estimated again as of June 30, 1814, this time at the insistence of Mme. de Pusy. She wished to dispose of her two shares in the gunpowder factory and return to France, and it was necessary to determine the profit in order to place a value on her shares. The procedure for this closing was much the same as for the preceding one. A note in the Journal in regard to bad debts stated that the closing was

not considered of [sic] a final settlement, but merely as a preparatory work to the settlement which is to take place at the End of this Year, when persons will be appointed for the express purpose of examining the materials and utensils then effectively in our possession and of ascertaining the value of our Building & real estate, in a regular manner.<sup>1</sup>

This statement reflects the arrival in August, 1814, of Antoine Bidermann, who helped to complete the June 30th closing, finished some time in September.<sup>2</sup> When the projected year-end closing took place, approximately \$8,000

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<sup>1</sup>Ibid.

<sup>2</sup>See E. I. du Pont to Mme. de Pusy, September 11, 1814, Life, IX, 276.

in bad debts was written off. For both closings in 1814, accrued wages were taken into account, and in June \$2,750 was shown for depreciation.

For the period from 1810 to 1814 inclusive, there was a difference of only about \$555 between the total sales shown in the Sales Book and on the chart and the total estimated from the Ledger account.<sup>1</sup> This indicates a more reliable figure for sales than in the preceding period, and it also probably indicates more systematic and accurate bookkeeping methods. With the exception of one year, from 1810 on the figures shown in the Sales Book and on the sales chart coincided. In 1823 there was a difference, but it amounted to only \$240. Starting in 1815, the cumulative figures in the Sales Book exceeded those in the Ledger, with the result that for the period from 1804 to 1833, inclusive, the total in the Sales Book amounted to almost \$171,000 more than that compiled from the Ledger. If figures from the Sales Book had been made up for 1834, this difference might have been reduced, because adjusting entries made at closings brought the totals in the Ledger above those in the Sales Book for the pertinent years. This is particularly striking in 1814, 1818, and 1823.

To revert to the closings made in 1814, there was apparently still some lag in recording receipts of raw materials. From 1804 to 1814, inclusive, the purchases

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<sup>1</sup>See Page 95 above.

recorded in the Ledger for saltpetre amounted to about 21,000 pounds less than the amount recorded in the Production Day Book.<sup>1</sup> The latter record, however, also showed approximately 182,000 pounds of saltpetre on hand as of December 31, 1814, and this accentuates the discrepancy between the two records. Unlike the previous period, the records show the same pattern for brimstone as for saltpetre, that is, the consumption shown in the Production Day Book exceeded the purchases shown in the Ledger.<sup>2</sup>

The second period of association of the shareholders of the gunpowder company terminated at the end of 1815, and the books were again closed out in order to arrive at a final profit.<sup>3</sup> At that time, an item of approximately \$22,000 was charged to Profit and Loss for the payment of

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<sup>1</sup>1685 (Schedule). The Production Day Book ended in 1815, and no further volumes of its type have been found. It is impossible, therefore, to determine whether there were any further discrepancies in the estimates of raw materials used.

<sup>2</sup>1685 (Schedule).

<sup>3</sup>As far as can be ascertained, the association was not formally renewed, although there was a formal agreement entered into by E. I. du Pont, Du Pont de Nemours, Mme. de Pusy, Jacques Bidermann, and Antoine Bidermann on February 16, 1815, concerning the acquisition of Peter Bauduy's interests. This also assigned Bauduy's former duties to Antoine Bidermann. See Life, X, 65-68. The account proper of Du Pont de Nemours Père Fils et Cie. was closed out on December 31, 1815, and a settlement was made in accordance with terms worked out by Du Pont de Nemours and Bidermann. It took, incidentally, a series of five alternating adjusting and reversing entries to do this to the satisfaction of all concerned. 879 (Schedule).

Bauduy's commissions for 1815 and for the acquisition of his three shares of profit "bought for the generality of the concern", and this resulted in a loss of approximately \$6,000 for the year.<sup>1</sup>

On December 31, 1817, the books were again closed out to determine the profits. As far as can be ascertained, after the death of Du Pont de Nemours, pressure was brought to bear upon E. I. du Pont by Mme. de Pusy, who wished to withdraw from the company, and also by the agent of Prince Talleyrand, who had lent money to Du Pont de Nemours some years before.<sup>2</sup> A debit of \$463.22 to write off bad debts at the end of 1817 is of interest largely because action taken in 1823 shows that the amount was completely unrealistic.<sup>3</sup>

When Mme. de Pusy did terminate her association with the company in August, 1818, it was necessary again to close out the books.<sup>4</sup> The most significant special item was a debit of nearly \$31,000 to the Profit and Loss

<sup>1</sup>879 (Schedule).

<sup>2</sup>Agreement between J.V.A. Menestrier and Du Pont de Nemours, December 31, 1807, Life, VIII, 12.

<sup>3</sup>The "Losses of the establishment in 1817 and 1818" were estimated at \$190,180.79. See Winterthur ms., 4/C/10.

<sup>4</sup>The actual date is uncertain, although a letter dated August 24, 1818, Life, X, 301, indicates that it was before this date. For an undated public notice announcing Mme. de Pusy's withdrawal from the company, see Life, X, 298.

account to adjust the value of real estate for the loss suffered from an explosion in March, 1818. The sales for the year were considerably lower than those of previous years, and this combination of factors contributed to a loss of nearly \$64,000.<sup>1</sup>

It will be seen, then, that the closing out of the operating accounts and the determination of profits followed no consistent periodic pattern, but took place under the particular circumstances outlined. The following summary, giving the date of each closing and the period for which profits were determined, may be useful for an over-all view of this matter.

<u>Date of Closing</u>	<u>Period</u>
December 31, 1809	8 years, 8 months
June 30, 1814	4 years, 6 months
December 31, 1814	6 months
December 31, 1915	1 year
December 31, 1817	2 years
August 31, 1818	8 months

It would be facetious to suggest that the work involved in the frequent closing of the books between 1814 and 1818 caused E. I. du Pont to refuse to have this done again, but it is noticeable that it was not done until his death, on October 31, 1834, made it necessary. It should

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<sup>1</sup>880 (Schedule).

be kept in mind, however, that by August 31, 1818, he held 8-1/2 shares of the total sixteen of the gunpowder company.<sup>1</sup> The only other major shareholder was Jacques Bidermann, whose son worked harmoniously with E. I. du Pont in the management of the gunpowder factory. It can be concluded, therefore, that E. I. du Pont and Antoine Bidermann considered periodic full-scale closings of the books unnecessary.

From time to time, however, there were significant entries that should be considered. On December 31, 1823, there were a number of special Journal entries following E. I. du Pont's acquisition of two shares from Mme. de Pusy.<sup>2</sup> The most important of these charged the Profit and Loss account for nearly \$35,000 lost on the Bush Hill Estate and for approximately \$23,000 lost through the failure of one of the company's important sales agents, William Cornell.<sup>3</sup> Included in the total of \$9,200 written off to bad debts was \$5,650 overdrawn by Peter Bauduy on his personal account.<sup>4</sup>

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<sup>1</sup>See Appendix B.

<sup>2</sup>Ibid.

<sup>3</sup>884, (Schedule). The Bush Hill Estate was a property in Philadelphia in which Archibald McCall had had a one-sixth interest. On December 31, 1817, he transferred this to the company along with lands in Virginia and Pennsylvania "in consequence of his embarrassments", that is, as part settlement of his debt to the company. See 880 (Schedule).

<sup>4</sup>884 (Schedule).

Interest to shareholders and on the Talleyrand loan amounted to over \$25,000, and an entry of \$12,000 was made in the Factory account for the salaries of Alfred du Pont and Antoine Bidermann for the period following the closing-out of August 31, 1818.<sup>1</sup> Like E. I. du Pont, they drew upon the funds of the company for their needs, rather than receiving regular salaries, and this entry was to adjust their personal accounts, as well as to take the expense of their salaries into account.

The operating accounts, however, were not closed out at the end of 1823, and the division of profits then made was apparently based on a rough estimate of the increase in the net worth of the company. An estimate of this type, headed "Inventory of June 4, 1828", showing the main assets and liabilities of the company, was made up when E. I. du Pont acquired one and two-thirds shares from Joseph Jean Johannot.<sup>2</sup>

Included among the assets on the inventory of 1828 were the value of the raw materials and the finished gunpowder, as well as the amounts owing to the gunpowder company, or, rather, to E. I. du Pont and Antoine Bidermann,

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<sup>1</sup>Ibid.

<sup>2</sup>EBduP Collection, 3/23/10. The formal Journal entry for the transfer appears in 891 (Schedule), under date of October 31, 1834. The last entry in Johannot's Account Current in the Ledger, however, is under date of December 31, 1828, and this can be taken, therefore, as the date of the actual purchase of the share.

by the ill-fated woollen and cotton factories and the tannery. The property of the gunpowder company was valued at an even \$80,000, and \$10,000 was shown for lands in the Genesee area and in Pennsylvania at two-thirds of their original value. For some reason, nothing was listed for Accounts Receivable, although an item of roughly \$37,000 for "Balance in Agents hands" may comprise the major part of this element. In the liability section the main items listed were Notes Payable, Accounts Payable, a mortgage, and the shareholders' balances.<sup>1</sup>

The closing-out procedure after the death of E. I. du Pont was similar to that of the previous closings. There were numerous adjusting entries for comparatively large amounts to settle suppliers' accounts, and there was also an adjusting entry for nearly \$33,000 for accrued wages.<sup>2</sup> Another very significant point of interest is that the Real Estate was written up from \$75,340 to \$161,050.<sup>3</sup>

The Profit and Loss account was credited with nearly \$110,000 for interest on the outstanding debts of Victor du Pont, the woollen and cotton mills, and the

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<sup>1</sup>EBduP Collection, 3/23/10. The recapitulation on this document uses the French terms "Actifs" and "Passifs" to denote assets and liabilities.

<sup>2</sup>891 (Schedule). Among the adjusting entries for suppliers was an item of nearly \$18,000 for work done by William Boyd between August 31, 1818, to October 31, 1834.

<sup>3</sup>Ibid.



tannery.<sup>1</sup> E. I. du Pont and Antoine Bidermann had assumed responsibility for these debts, which, after the interest has been added, made up \$354,675.50 of the Accounts Receivable, leaving only \$61,377.34 in Accounts Receivable and \$16,986.08 in Bills Receivable which could presumably be collected. When the books were re-opened as of November 1, 1834, the Accounts Receivable was reduced to a realistic figure by transferring the uncollectible debts mentioned above to the personal accounts of E. I. du Pont and Antoine Bidermann.<sup>2</sup> The former account was closed out as of March 31, 1837, and the balance was distributed among accounts opened up for E. I. du Pont's children.<sup>3</sup>

It was on March 31, 1837, that the final settlement brought about by the death of E. I. du Pont was made. For this reason, the practices followed in the intervening period are relevant and significant. On December 31, 1835, and December 31, 1836, entries were made for accumulated wages, salaries, and interest.<sup>4</sup> The Gunpowder account was closed out to the Factory account to transfer sales of gunpowder, the Factory account was closed out to Profit and Loss, and the Profit and Loss account was closed out to the

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<sup>1</sup>Ibid.

<sup>2</sup>892 (Schedule).

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

Stock account.<sup>1</sup>

All the accounts were balanced off as of March 31, 1837, and the balances were carried forward.<sup>2</sup> Among the significant items shown were gunpowder and raw materials worth over \$134,000 and Real Estate valued at nearly \$200,000. Bills and Accounts Receivable totalled over \$94,000. On the liabilities side was an item of approximately \$18,000 for Bonds Payable and Mortgage, and the Bills Payable amounted to just over \$63,000. The total for Accounts Payable amounted to nearly \$355,000, but, except for \$36,529.47 for wages owing, this consisted of credits in shareholders' accounts.

Antoine Bidermann's balance was the largest, \$105,857.07, and the smallest was \$7,826.03 for Hom, who had clung tenaciously to his half-share in the parent company. Reynard, the other European shareholder, had approximately twice as much in his account as Hom. Of the Du Pont children, Alfred had the largest balance, nearly \$58,000, while each of the others had around \$14,000. The final item was \$13,297.13 in the Stock account.

The total of Assets and Liabilities carried forward

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<sup>1</sup>Ibid. In subsequent years, these accounts were closed out usually, but not always, at the end of each year. For example, they were closed out at the end of the years 1837 to 1840, inclusive, but were not closed out at the end of the following four years. See 893, 894, and 895 (Schedule).

<sup>2</sup>892 (Schedule).

to start the next stage of development was \$449,304.34. The faith of Du Pont de Nemours in the eighth plan had been vindicated, but it was the determination and foresight of E. I. du Pont that had brought about the initial success and the continued expansion of the gunpowder factory.

## CHAPTER V

### THE TRIAL BALANCE

A synthesis of theory and practice must be effected in accordance with the environment of the time.<sup>1</sup>

The previous chapter of this thesis has given some indication of what modern accountants would consider weaknesses in the bookkeeping methods of E. I. du Pont and Company during the early years. Some of these weaknesses cannot be explained, but others can be defended and justified, not only in the light of contemporary practices, but also in terms of modern standards. The basic factor underlying the evaluation of the bookkeeping of the gunpowder company is the necessity for differentiating between bookkeeping and modern accounting, and this calls for a definition of terms in order to set a boundary line between them.

The fundamental principles and methods of double entry bookkeeping outlined by Pacioli in 1494 are still

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<sup>1</sup>Rufus Wixon (ed.), Accountants' Handbook (4th ed.; New York, 1957), p. 1.12.

valid, and have merely been elaborated upon and expanded in scope.<sup>1</sup> He recommended the use of the Waste Book, Journal, and Ledger for the "help and convenience" of the Venetian business man of his time, but stated that the Waste Book could be dispensed with if the business were a small one.<sup>2</sup> As already stated, the system built upon the foundations laid by Pacioli depends upon the needs and type of business carried on.<sup>3</sup>

Essentially, double entry bookkeeping is now defined as a "method usually followed for recording transactions", and, in practice, this simply involves recording day-to-day transactions as they occur.<sup>4</sup> The purpose of this procedure

<sup>1</sup>See Pietro Crivelli, Original Translation of the Treatise on Double Entry Bookkeeping by Lucas Pacioli (London, 1924), or R. Gene Brown and Kenneth S. Johnston, Paciolo on Accounting (New York, 1963). The titles of these books demonstrate the lack of precision in distinguishing bookkeeping from accounting. They also demonstrate the uncertainty about the name of the man who wrote the first book on the subject. See Brown and Johnston, p. xiii, for the validity of the treatise in modern times.

<sup>2</sup>See Brown and Johnston, pp. 35 and 36. They use the terms "Memorandum", "Scrap Book", and "Household Expense Book" instead of "Waste Book."

<sup>3</sup>See Wixon, 1.21, who states: "It sometimes appears inconceivable that the complex collection of journals, ledgers, documents, and mechanical devices which are a part of the accounting system of a business enterprise deal basically with a framework so elementary in nature. Unfortunately the simplicity of the system is sometimes lost sight of in the maze of detailed records and forms required by large-scale enterprise."

<sup>4</sup>Eric L. Kohler, A Dictionary for Accountants (3rd ed.; Englewood Cliffs, N.J., 1963), p. 190.

is to keep track of the changes in the assets and liabilities of an enterprise, and it is considered that accounts for income and expense are used to record temporary phases of assets and equities.<sup>1</sup>

The essence of modern accounting, on the other hand, is the matching of cost and revenue within a set period of time, usually a year. Five other basic accounting concepts are generally accepted along with this, but the matching concept is the one with which the accounting profession has been the most concerned, and it can, therefore, be considered of most importance.<sup>2</sup> It is this matching concept which dictates the year-end adjusting and closing entries in the books of an enterprise in order to allocate revenue and cost as closely as possible to the financial period.

In general, an attempt was made to match costs and revenues whenever the books of the gunpowder factory were closed. Accrued wages and salaries, for example, were taken into account, and depreciation and bad debts were allowed for from time to time. Compared with modern practices, these attempts were rudimentary, but the main weaknesses in the closing routine of the gunpowder company from the modern standpoint were the failure to use systematic methods in allowing for such items as depreciation and

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<sup>1</sup>Wixon, pp. 1-20 and 1-21.

<sup>2</sup>Wixon, p. 1-17.

bad debts and the failure to close the books yearly.

In considering this first factor, it would be illogical to expect the gunpowder company to use modern methods for depreciating buildings and equipment, mainly because of the shift in thinking which has taken place in regard to the concept of depreciation. At the present time the accounting routine related to depreciation serves a double purpose, first, to reflect the portion of historic cost remaining in the asset account, and, second, to spread the expense of the asset over its estimated life.

As the second of these purposes had not been developed at the time under review, it can be ignored. The first of these purposes, however, does not correspond with the contemporary thinking as reflected in Article Six, which specified that the "property and product" be valued at the market price.<sup>1</sup> Accountants, however, are beginning to question the use of historic costs in valuing fixed assets.<sup>2</sup> This, of course, may be a reflection of the inflationary trend of the modern period, but it should be remembered

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<sup>1</sup>Act of Association, April 21, 1801.

<sup>2</sup>See Abraham J. Briloff, "Needed: A Revolution in the Determination and Application of Accounting Principles", The Accounting Review, XXXIX, 1 (January, 1964), p. 14, who recommends the use of market values of assets on the Balance Sheet.

See, also, Tom K. Cowan, "A Resources Theory of Accounting", The Accounting Review, XL, 1 (January, 1965), p. 9. Cowan speaks of "the inadequacy of the historical cost basis" in accounting.

that there are parallels between that period and the one under review.

Modern accountants are beginning, too, to question whether the attempts to match cost and revenue give accurate results. One has gone so far as to say:

Most accountants would agree in private that the measurement of income of a corporation is an inexact art.<sup>1</sup>

Another states that the conventions used by accountants to make up financial statements "represent the accountant's best efforts to meet recognized needs in the most useful manner," and the inference can be drawn that the writer does not believe the accountant is always successful.<sup>2</sup>

It has already been suggested that the use of a year as the unit of time for the measurement of profit results in difficulties for accountants.<sup>3</sup> Another aspect of attempting to match cost and revenue by making systematic year-end entries for items such as depreciation, bad debts,

<sup>1</sup>Harold Bierman, Jr., "Myths and Accountants", The Accounting Review, XL, 3 (July, 1965), p. 541.

<sup>2</sup>American Accounting Association, Committee on Concepts and Standards, "Accounting and Reporting Standards for Corporate Financial Statements--1957 Revision", The Accounting Review, XXXII, 4 (October, 1957), p. 537.

<sup>3</sup>See 100, n., above. See, also, Henry R. Hatfield, "An Historical Defense of Bookkeeping", Studies in Accounting Theory, W. T. Baxter and Sidney Davidson (eds.) (Homewood, Illinois, 1962), p. 11.



and accruals is that this procedure helps to level off periodic cost and income figures.<sup>1</sup> Basically, then, the length of time that elapsed between some closings of the books of E. I. du Pont & Company was not undesirable. Without the systematic matching techniques of the present day, yearly closings would have resulted in an erratic pattern of profits. This is demonstrated by the closings which took place at the end of 1815 and on August 31, 1818. On both of those occasions special items which had to be taken into account resulted in losses for the relevant financial period.<sup>2</sup> On the other hand, the writing-off in 1823 of approximately \$61,000 lost through the failure of agents and in bad debts did not make such a jolting impact upon the profits of the gunpowder company because it was absorbed into the seventeen-year period from 1818 to 1834.<sup>3</sup>

From the modern standpoint, one of the most serious defects in the routine bookkeeping of the gunpowder company was that all items of operating expense and income were lumped together in the Factory account in the Ledger. This did not permit analysis and comparison of these

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<sup>1</sup>The desirability of such a result is suggested by Samuel R. Hepworth, "Smoothing Periodic Income", in Stephen A. Zeff and Thomas F. Keller, eds., Financial Accounting Theory (New York, 1964), pp. 21-30.

<sup>2</sup>See pp. 101-103.

<sup>3</sup>See pp. 104-105.

various elements in order to determine the reasons for losses or to reveal trends that might, if unchecked, have brought about losses. The forecasting of the future made possible by systematic analysis and comparison is now considered to be an important service which accounting can render to management.<sup>1</sup>

The Factory account used by the gunpowder company was not suited to such a purpose, but reflected the "venture" concept of bookkeeping used in trading and merchandising operations.<sup>2</sup> Even by the end of the 19th century, however, the failure to classify and itemize operating expenses was a common defect in the bookkeeping procedures of American companies.<sup>3</sup> Expenses were still being "promiscuously dumped" into a "General Expenses" account, and it was pointed out that this practice was "a source of absolute danger", especially in large enterprises.<sup>4</sup> It

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<sup>1</sup>"The art of accounting, once concerned almost exclusively with recording the past, today addresses itself at least as much to the future as to the past and, in doing so, has become a more practical instrument for management." Canada, The Royal Commission on Government Organization, 1, Management of the Public Service, (The Queen's Printer, Ottawa, 1962), p. 107.

<sup>2</sup>A couple of true venture accounts have been found in the Ledgers of the gunpowder company. One was entitled "Adventure to Havana per Ellen" and had entries for the year 1824. See 938 (Schedule). Another had entries for the year 1852, and was entitled "Adventure to Havana." See 944 (Schedule).

<sup>3</sup>P. H. Grover, Corporation Bookkeeping in a Nutshell (Detroit, 1897), p. 11.

<sup>4</sup>Ibid., p. iii.

cannot be expected, therefore, that E. I. du Pont and Company would classify expenses in the early years of its operations.<sup>1</sup> Even the use of separate accounts for raw materials was probably an advance over the contemporary practices.

The venture concept of bookkeeping was also reflected in the method specified in the Act of Association for calculating profits. Article Six directed that "property" and "product" were to be taken into account in determining the increase in net worth from year to year, and this left much to be desired in the net worth approach. In early trading ventures, however, these were usually the only elements. In such operations, ships constituted the "property" implied in Article Six and goods the "product". The ships themselves might be sold at a profit when the venture was completed, and the total profits would be distributed. For operations of this type, the principle expressed in Article Six was not only an acceptable, but a completely valid means of determining profit.

The gunpowder factory was a manufacturing enterprise, however, and the modern concept of the "going concern" would have been more suitable in the determination and

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<sup>1</sup>The earliest indications of classifying expenses found were separate accounts for "Hauling" and "Freight", started in 1861. See 946 (Schedule).

division of profits.<sup>1</sup> In such enterprises profits derive, basically, from operations, and assets are a source of profit only when they are sold. An increase in the value of the property of the gunpowder factory was potential profit, but it could be transformed into actual profit only by discontinuing operations and selling the business.

During the long drawn-out controversy about the sale of Mme. de Pusy's two shares in the gunpowder factory, the question of the value of the property arose. She wrote to E. I. du Pont that two of her advisors had told her that the real estate was under-valued in the inventory of June 30, 1814, and it can be inferred that she believed the amount shown for real estate should be increased.<sup>2</sup> Under the provisions of Article Six, this would have meant an increase in the profit calculated, and Mme. de Pusy's shares would have been worth more. E. I. du Pont acknowledged that the real estate might seem to be under-valued in comparison with its value in the previous year or in the future, but he pointed out that at that time

it could not be sold for half the price at which it is carried in our books--which lessens the value of each share by more than 2000 Ds.<sup>3</sup>

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<sup>1</sup>See Wixon, pp. 1-13-1-16, for a summary of statements about this concept by accounting authorities. Wixon points out that it is the going concern concept which prompts individuals to invest in a business enterprise.

<sup>2</sup>Mme. de Pusy to E. I. du Pont, October 28, 1814, IX, 294.

<sup>3</sup>E. I. du Pont to Mme. de Pusy, October 29, 1814, IX, 298.

No matter who was right in regard to the value of the real estate of the gunpowder company, if the going-concern concept had been applied, the property would have been valued at its historic cost. The reason for this is that the use of this concept emphasizes earnings from operations rather than increases in net worth, and the assets of the gunpowder company would have been looked upon in terms of "unamortized costs rather than current values."<sup>1</sup> This is really, however, just a different way of saying that the purpose of the systematic depreciation of an asset is to spread its cost over its estimated life, and this idea about depreciation did not develop until the middle of the 19th century.<sup>2</sup>

The final problem of evaluating the bookkeeping practices of E. I. du Pont and Company is connected with the time element in estimating the profits. Even though the failure to do this every year was not necessarily a weakness under the particular circumstances, some way of gauging the soundness of the enterprise was necessary. At the present time various ratios and comparisons are used to do this, and E. I. du Pont may have developed a method

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<sup>1</sup>Wixon, pp. 1.15 and 1.16.

<sup>2</sup>Littleton, Accounting Evolution, pp. 228 and 240. Littleton attributes this development to the appearance of railroads.

of this type.<sup>1</sup>

At any time, of course, the balances in the Ledger accounts could have been listed in order to determine the net worth roughly, but the accounts would have had to be kept up to date to yield even a fairly accurate figure. The special Journal entries made under date of December 31, 1823, did bring some Ledger accounts up to date and adjusted others, and perhaps a Balance Sheet was made up at that time.<sup>2</sup> Such a Balance Sheet was made under date of June 4, 1828, but, as no special entries were made in the Journal around that time, its accuracy is questionable.<sup>3</sup>

Answers given by E. I. du Pont in 1832 in response to a request for information from the Secretary of the Treasury of the United States gave the impression that he could not supply definite information about the financial affairs of the company. To a question asking how much capital had been invested in land, buildings, water power, and machinery, he replied that this could not be calculated because the factory had been "gradually and progressively"

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<sup>1</sup>When total current assets are divided by total current liabilities, the result is called the "current ratio", the "working capital ratio", or the "banker's ratio." See Wilbert E. Karrenbrock and Harry Simons, Intermediate Accounting (Cincinnati, 1949), pp. 453-471, for the various ratios that may be applied.

<sup>2</sup>884 (Schedule). See pp. 103 and 104 above for details of the Journal entries.

<sup>3</sup>EBduP Collection, 3/23/10.

enlarged out of the profits.<sup>1</sup> In regard to the annual rate of profit on the capital invested in the factory, he replied that this could not be calculated because a large part of the profits had been used for expansion and in rebuilding after explosions.<sup>2</sup>

Since E. I. du Pont did give specific information about such matters as the amount of gunpowder manufactured, the price of raw materials, the number of workmen, and the hours of work in the gunpowder factory, it is likely that he was deliberately vague in replies to the questions about capital and profits.<sup>3</sup> This seems to be indicated by his answer to a question concerning the profits for the previous three years, dividends paid to shareholders, and profits retained.<sup>4</sup> He gave the blunt reply:

<sup>1</sup>Life, XI, 259. He estimated the total at \$80,000, then proceeded to lobby for the continuance of protective tariffs by writing that this estimate was based on the supposition of continued prosperity, but stated that if American manufacturers had to compete with Europeans the value of real estate and manufactured products would decline.

<sup>2</sup>Life, XI, 260. In his reply to a question asking for his opinion of the cause of changes in profit, he put in a word for the free enterprise system by declaring that the "only causes of increase or decrease of profit or of losses, consist in the degree of skill in the manufacturer and the proper management of the business." Life, XI, 261.

<sup>3</sup>Life, XI, 262 and 263.

<sup>4</sup>Life, XI, 268.

Public interest does not seem to us to have any concern in this.<sup>1</sup>

Another question asked for a calculation of the various percentages of the raw material, labour, and profit in the total cost.<sup>2</sup> In his reply, E. I. du Pont stated that the cost of materials and labour were not the only elements of expense that should be considered, and he pointed out that "contingent expenses, the repairs of machinery, [and] the chance of losses" also had to be taken into consideration.<sup>3</sup>

This reply indicates that E. I. du Pont had an intelligent understanding of the elements that contributed to the continuing financial soundness of his enterprise. The only definite clue, however, to his criterion for judging the periodic success of the company is the chart of yearly sales which he compiled.<sup>4</sup> This did give him comparative figures for the quantity and value of gunpowder sold, and he must have used some rough system for adjusting prices to any changes in the major elements of cost. E. I. du Pont was aware, furthermore, of the advantages of large-scale production, and in 1815 he was making attempts to

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<sup>1</sup>Life, XI, 269.

<sup>2</sup>Ibid. This question was simply designed to reveal the percentage of profit.

<sup>3</sup>Ibid.

<sup>4</sup>See Appendix A.



increase his sales by lowering his price, hoping eventually to control the market.<sup>1</sup>

Certainly, in comparison with modern methods of calculating costs and profits, those used by E. I. du Pont seem very crude. Methods in advance of the time, however, cannot be expected, and the concept of venture accounting which then predominated set the theoretical limits for the bookkeeping of the company. The practical limits were set partly by the needs of the company, but the control exercised by its founder was the decisive factor.

The importance of the bookkeeping in the early history of the enterprise can be judged from the fact that some major disputes were related to it. The bookkeeping routine was important in the dissension between E. I. du Pont and Peter Bauduy in 1806, in Mme. de Pusy's desire to sell her shares during the war of 1812, and in the suit that Bauduy brought against the company in 1817. Of much more importance is the fact that business activities are directed primarily toward making profits.<sup>2</sup> The bookkeeping records of a business enterprise are designed to record the transactions that produce the hoped-for profit,

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<sup>1</sup>See A. Bidermann to E. I. du Pont, April 1, 1815, Life, X, 77. Bidermann was reporting on his negotiations with John Hancock of Boston to act as the gunpowder company's sales agent.

<sup>2</sup>See Harold Lazarus, American Business Dictionary (New York, 1957), p. 54, who states that the profit motive distinguishes business activities from economic activities.

and the bookkeeping methods affect the measurement of the profit. These factors make the evaluation of the bookkeeping records and methods vital in any study of a business enterprise. The importance of such an evaluation in a study of E. I. du Pont and Company can be judged from the company's current credo:

Du Pont believes that a manufacturing enterprise can best measure and judge the effectiveness of its efforts in terms of return on investment.<sup>1</sup>

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<sup>1</sup>American Management Association, Bulletin No. 6, "Executive Committee Control Charts", Treasurer's Department, E. I. du Pont de Nemours and Company (Wilmington, Delaware, 1960), p. 5.

## APPENDICES

## APPENDIX A

Work done at Dupont's Powder Mills  
since the beginning of their establishment<sup>1</sup>

	<u>New Powder Made</u>	<u>Old Powder</u>		<u>Amount per</u>
	<u>Eagle</u>	<u>Common</u>	<u>Re-Manu-</u>	<u>Sales &amp; In-</u>
	<u>Powder</u>	<u>Powder</u>	<u>factured</u>	<u>voice Books</u>
			<u>Total</u>	
1804		38,525		15,116.75
1805		77,210	75,000	46,857.75
1806		107,219	67,200	45,100.24
1807		129,076	32,950	47,694.45
1808		104,400	93,900	53,863.42
1809		163,006	40,300	71,183.99
1810		184,975	400	86,614.27
1811		204,056		122,006.25
1812		299,788		148,007.95
1813		335,677		216,392.39
1814		519,551	825	292,851.85
1815		461,700		205,008.89
1816		551,250		184,571.54
1817		703,831	33,600	189,131.06
1818		350,896		84,114.41
1819		491,964		110,213.16
1820		477,179		97,939.73
1821		614,086	38,625	135,836.04
1822		514,540	15,187	114,622.44
1823	5,037	628,029	23,048	138,627.06
1824	10,521	668,128	25,435	149,423.10
1825	10,584	650,611	58,741	150,452.30
1826	9,391	569,051	28,072	127,403.68
1827	11,742	676,620	20,561	143,817.69
1828	16,189	700,197	22,058	148,138.34
1829	16,025	677,578	18,908	142,244.60
1830	14,705	828,142	10,246	169,984.63
1831	17,076	767,814	4,866	159,244.31
1832	17,529	887,137	6,265	179,697.02
1833	22,481½	1,023,544	14,001½	208,852.12

<sup>1</sup>Longwood ms., 5/C/49

## APPENDIX B

	April 21 <sup>1</sup> 1801	June 2 <sup>2</sup> 1802	Sept. 9 <sup>3</sup> 1803	May 1 <sup>4</sup> 1808	Feb. 28 <sup>5</sup> 1815
J. Bidermann	1	1	1	1	5-1/3
Dusquenoy	1	1	1		
Necker Germany	1	1	1		
Du Pont de Nemours Père Fils et Cie.	15	13	11	12	
A. McCall		1			
W. Hamon		1			
P. Bauduy			4	4	
E. I. du Pont				1	8
Mme. de Pusy					2
Johannot					1-2/3
P. S. du Pont					1
	<u>18</u>	<u>18</u>	<u>18</u>	<u>18</u>	<u>18</u>

<sup>1</sup>877 (Schedule).

<sup>2</sup>One share each transferred from Du Pont de Nemours Père Fils et Cie. to A. McCall and W. Hamon. Ibid.

<sup>3</sup>P. Bauduy acquired four shares, two from Du Pont de Nemours Père Fils et Cie. and one each from McCall and Hamon. Ibid.

<sup>4</sup>One share transferred from Catoire, Dusquenoy & Company to Du Pont de Nemours Père Fils et Cie, and one share transferred from Necker Germany to E. I. du Pont. Ibid.

<sup>5</sup>Four shares transferred from P. Bauduy to E. I. du Pont, and three shares transferred to E. I. du Pont through purchase of shareholdings in Du Pont de Nemours Père Fils et Cie. Distribution of shares of parent company to individual shareholders. 879 (Schedule).

## APPENDIX B (Cont.)

	Dec. 31 <sup>1</sup> 1815	Aug. 31 <sup>2</sup> 1818	Dec. 31 <sup>3</sup> 1823	Oct. 31 <sup>4</sup> 1834
J. Bidermann	5-1/3	5-1/3	5-1/3	
E. I. du Pont	7-1/2	8-1/2	10-1/2	12-1/6
Mme. de Pusy	2	2		
Johannot	1-2/3	1-2/3	1-2/3	
P. S. du Pont	1			
Hom	1/6	1/6	1/6	1/6
Reynard	1/3	1/3	1/3	1/3
A. Bidermann	—	—	—	5-1/3
	18	18	18	18

<sup>1</sup>Hom and Reynard had been expected to sell their shares in the parent company, but when they refused to do so, a correcting entry had to be made from E. I. du Pont's account to their accounts. 879 (Schedule).

<sup>2</sup>Du Pont de Nemours had willed his share to E. I. du Pont, and an entry was made on this date to transfer this share. Ibid.

<sup>3</sup>E. I. du Pont acquired Mme. de Pusy's shares. 884 (Schedule).

<sup>4</sup>E. I. du Pont acquired Johannot's share holdings, probably at the end of 1828, as there were no further entries in the latter's account current after that time. Antoine Bidermann acquired his father's shares in November, 1826. The formal transfers were made under date of October 31, 1834. Ibid.

## APPENDIX C

	April 18 <sup>1</sup> 1808	June 1 <sup>2</sup> 1811	June 1 <sup>3</sup> 1811	Dec. 31 <sup>4</sup> 1815
J. Bidermann	13	13	4-1/3	4-1/3
Du Pont de N.	6	3	1	1
Mme. du P. de N.	1	1	1/3	
Johannot	5	5	1-2/3	1-2/3
Mme. de Pusy	5	5	1-2/3	2
Mme. de Staël	2	2	5/6	
Lescallier	1	1	1/3	
Reinhard	1	1	1/3	1/3
Necker Germany	1			
Ochs	1	1	1/3	
Wischer	1	1	1/3	
Forcard Weis	1	1	1/3	
De Crillon	1-1/2	1-1/2	1/3	
Hon	1/2	1/2	1/6	1/6
E. I. du Pont	—	—	—	2-1/2
	40	36	12	12

<sup>1</sup>Statement, April 18, 1808, VIII, 59.

<sup>2</sup>Sequel, June 1, 1811, VIII, 305.

<sup>3</sup>Reduction of parent company shares to one-third to equal number of shares held in the gunpowder company.

<sup>4</sup>879 (Schedule).

APPENDIX D<sup>1</sup>

<u>Year</u>	<u>Sales Books</u> <sup>2</sup>	<u>Cumulative Totals</u>	<u>Ledgers</u> <sup>3</sup>	<u>Cumulative Totals</u>
1804 <sup>4</sup>	15,000		15,000	
1805	47,000		48,000	
1806	45,000		48,000	
1807	48,000		26,000	
1808	54,000		86,000	
1809	71,000	281,000	72,000	295,000
1810	87,000		82,000	
1811	122,000		124,000	
1812	148,000		141,000	
1813	216,000		156,000	
1814	293,000	866,000	377,000	866,000
1815	205,000		193,000	
1816	185,000		146,000	
1817	189,000		175,000	
1818	84,000	663,000	97,000	610,000
1819	110,000		90,000	
1820	98,000		109,000	
1821	136,000		119,000	
1822	115,000		80,000	
1823	139,000	597,000	163,000	561,000
1824	149,000		128,000	
1825	150,000		156,000	
1826	127,000		119,000	
1827	144,000		125,000	
1828	148,000		131,000	
1829	142,000		130,000	
1830	170,000		156,000	
1831	159,000		162,000	
1832	180,000		171,000	
1833	209,000	1,579,000	207,000	1,483,000

<sup>1</sup>For ease of comparison, the figures shown here have been rounded off to the nearest thousand in dollars. The actual cumulative totals have also been rounded off, and this has produced slight variations between these figures and those which result from adding the yearly rounded-off figures.

<sup>2</sup>As may be seen in Appendix A, the figures in the sales chart, Longwood ms., 5/C/49, have been derived from the Sales and Invoice Books, 1640 and 1643 (Schedule). Before 1810 and in 1821 there are some variations between the figures on the sales chart and those in the other two records, but the maximum variation is less than \$400.

<sup>3</sup>These figures have been compiled from the Factory accounts in the Ledgers, 934-940 (Schedule), by the writer of this thesis.

<sup>4</sup>Production started in April.



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