Since the organization of the New York Cotton Exchange, cotton exchanges have been established in many southern cities, until now they are to be found in Norfolk, Va., Charleston, S. C., Savannah and Augusta, Ga., Mobile, Ala., New Orleans, La., Galveston and Houston, Tex., Memphis, Tenn., and St. Louis, Mo. In other cities the cotton business is carried on in connection with the produce exchanges. On only two of the American exchanges, those at New York and New Orleans, has there been an extensive business done in the sale and purchase of "futures." Some of the other exchanges have experimented with the system, but have found the amount of business done too small to warrant a continuance of it.[1] At two foreign ports, Liverpool and Havre, the business of buying and selling "futures" has been carried on for some years.

The growth of the business since its organization under the rules of the New York and New Orleans cotton exchanges, is shown in the following table:

ANNUAL SALES OF "FUTURES" ON THE NEW YORK AND NEW ORLEANS COTTON EXCHANGES [2]

Year Ending Aug. 31.	New York. Bales.	New Orleans. Bales.
1871	2,512,200	
1872	4,963,500	
1873	5,299,700	
1874	6,187,500	
1875	8,357,600	
1876	7,233,600	
1877	10,908,600	
1878	13,009,900	
1879	25,416,500	
1880	33,976,600	2,033,000

[1] Plans have been formulated for introducing the future delivery system on the Charleston Cotton Exchange, but these plans have not yet been realized.

[2] Figures for New Orleans furnished by New Orleans Cotton Exchange; for New York, from Report of Senate Committee, I: 460, and by New York Cotton Exchange.

1881	28,124,700	10,115,000
1882	32,200,300	16,171,000
1883	26,542,600	13,054,000
1884	24,334,800	9,588,000
1885	20,058,100	8,037,000
1886	22,683,200	7,475,900
1887	26,186,200	11,237,000
1888	24,759,700	9,649,500
1889	19,155,700	6,570,600
1890	21,107,600	6,782,000
1891	24,433,700	8,555,300
1892	34,359,800	12,131,400
1893	53,273,500	16,516,700
1894	37,858,300	12,649,600
1895	32,110,100	14,648,700
1896	54,689,600	15,497,000

In its essence, "the future delivery sale" is a very simple thing. A & Co., a firm of brokers, members of the Cotton Exchange, agree to deliver to B & Co., another firm represented on the same exchange and who may be buying for themselves or for other parties, a certain number of bales of cotton at a stated future time, the price per pound being agreed upon at the time the contract is entered into. The form of contract employed at the New York Cotton Exchange, which is almost the same in wording as the one used at New Orleans, is as follows :

NEW YORK COTTON EXCHANGE.

CONTRACT.

New York, ... 18 . .

In consideration of one dollar in hand paid, receipt of which is hereby acknowledged, ... have this day sold to (or bought from) . . . . . . , 50,000 pounds in about 100 square bales of cotton, growth of the United States, deliverable from licensed warehouse, in the port of New York, between the first and last days of . . next, inclusive. The cotton to be of any grade from Good Ordinary to Fair, inclusive, and if stained not below Low Middling (New York Cotton Exchange, inspection and classification), at the price of cents per pound for middling, with additions or deductions for other grades, according to the rates of the New York Cotton Exchange existing on the day previous to the date of the transferable notice of delivery. Either party to have the right to call for a margin, as the variations of the market for like deliveries may warrant, and which margin shall be kept good. This contract is made in view of, and in all respects subject to, the rules and conditions established by the New York Cotton Exchange, and in full accordance with Article II, Title IV, Chapter second of the by-laws.

(Signed) . . . .

Verbal contracts (which shall always be presumed to have been made in the foregoing form), shall have the same standing, force and effect as written ones, if notice in writing of such contracts shall have been given by one of the parties thereto to the other party during the day on which such contract was made, or on the next business day thereafter.[1]

"Futures" are bought and sold entirely by members of the Exchange, within Exchange hours, and across the trading ring.[2] There is, of course, nothing to prevent any person entering into an agreement with a merchant or spinner to furnish him with cotton at a specified time and price, but if he wishes to have his contract enforced by the Exchange, or to buy from one of its members, he must be a member of that body or employ a member to transact his business for him. All members of the Exchange are obliged to report to the collector the contracts for future delivery which they have entered into, within ten minutes after the sale has been agreed upon,[3] and the Exchange holds its members to the strictest account for the fulfilment of all contracts entered into, with the penalty of heavy fines, suspension and even expulsion for non-fulfilment of contract.

When the time for settlement of the contract has arrived, there are three ways by which this may be done:

1. If A & Co. have sold to B & Co. 50,000 pounds of cotton for December delivery (seller's option), at least

[1] Charter, By-laws and Rules of the New York Cotton Exchange, 1894, 61–2.

[2] *Ibid.*, 51, 61, 104.

[3] *Ibid.*, 81–2.

five days before they intend delivering the cotton, they send B & Co. a notice of their intention.[1] B & Co. now send notice to A & Co., at least the day before the one set for delivery, [2] of their willingness to receive the cotton, [3] and upon the day set for delivery return to A & Co. their notice and receive, upon payment of the price stipulated, a warehouse receipt for their cotton. In place of there being two parties to the transaction, however, there may have been a larger number, perhaps twenty. Thus B & Co., who have bought from A & Co., 50,000 pounds of cotton for December delivery, at ten cents per pound, may have at an opportune moment, sold to C & Co. 50,000 pounds, December delivery, for 10.10 cents per pound. C & Co., after a few days have seen the market decline and have sold out for 9.95 cents to D. & Co. Thus the sale may proceed, D & Co. selling to E & Co.; E & Co. to F & Co., and so on. When December arrives, A & Co., as in the other case, send to B & Co. notice of their intention to deliver, which notice reads as follows:

TRANSFERABLE NOTICE.[4]

. . . o'clock. New York, . . . 18

To (B & Co.)

Take notice that on . . . . . we shall deliver to you 50,000 pounds in about one hundred square bales cotton in accordance with the terms of our contract sale to you dated . . . . . , at (ten) cents per pound. We pledge ourselves to deliver at or before 2 p. m. on the day specified for the delivery, to the last holder hereof a warehouse certificate or certificates of grade upon written notice by the last holder of this notice of the holdlng of the same to us, one half

[1] Rules of New York Cotton Exchange, 110.

[2] *Ibid.*, 112.

[3] Of course B & Co. must receive the cotton, unless they claim that, for some reason the transaction was a fraudulent one, in which case they file a protest with the Exchange which body determines the matter.

[4] Rules of the New York Cotton Exchange, 111.

hour or more before the closing of the Exchange on the day previous to the one herein specified for delivery of the cotton. This notice to be delivered to us simultaneously with our delivery of the warehouse receipt or receipts and inspectors certificate or certificates of grade, to the holder thereof.

(Signed A & Co.)

Appended to this transferable notice are the following

CONDITIONS.[1]

In consideration of one dollar paid to each of the acceptors, the receipt of which is hereby acknowledged, it is agreed that the last acceptor hereof will, one half hour or more before the close of the Exchange on . . . . day of . . . . , give written notice to (A & Co.) and on the following day receive from (A & Co.) a warehouse receipt or receipts, and inspectors certificate or certificates of grade for about 100 square bales, and pay them the full amount of (10) cents per pound therefor, settling with them on the basis of middling, with allowances for variations in grade in accordance with the quotations of the New York Cotton Exchange, existing on the day previous to the date of this notice. It is further agreed that each acceptor hereof shall continue his (or their) liability to each other for the fulfillment of this contract until this notice shall have been returned to (A & Co.), and a warehouse receipt or receipts for the cotton to be delivered, is received by the last acceptor hereof from (A & Co.), at which time all responsibilities of intermediate parties shall cease.

(Signed, B & Co.)

Having received from A & Co. the above notice and signed the conditions, B & Co. sign also the following form of transfer which, together with the transferable notice and conditions, they, within twenty minutes,[2] pass on to C & Co.

FORM OF TRANSFER.[3]

. . . o'clock. NEW YORK, ... , 18 . .

To (C. & Co.)

We accept the above with all its conditions and obligations, and you will please take notice that in accordance therewith we shall deliver you 50,000 pounds in about 100 square bales, cotton, on account of our contract sale to you dated . . . . . The cotton to be paid for at the price of transferable notice.

(Signed.) B & Co.

[1] Rules of New York Cotton Exchange, 111–12.
[2] *Ibid.*, 110.
[3] *Ibid.*, 112.

At the time of receiving this transfer and notice, C & Co. pay to B & Co. the difference between their contract price and the price in the transferable notice [1] (in the above case 10–100 cents per pound) and A & Co. are now responsible for the delivery of the cotton to C & Co.

With a similar set of conditions and transfer signed, C & Co. *pass the notice to D & Co.*, receiving from, or as we have supposed in the above case, paying to, D & Co. the difference between their contract price and that in the notice. The notices continue thus to pass along, each buyer settling his difference with the preceding, until the last man in line presents it to A & Co., and on paying the price stated in the transferable notice, receives from them the warehouse receipt for his cotton.

2. The second form of settlement is known as "cancelling the contract," and is the method employed when only two parties are concerned, each of whom has bought from the other a like quantity of cotton to be delivered in the same month. In this case the contracts are simply canceled, and the difference between them is paid.[2]

3. The third form of settlement is called "ringing out," and is the method by which the majority of the contracts for future delivery entered into on the cotton exchanges are settled. It is in reality only the extension of the second method, that of "cancelling the contract", to cases where more than two parties are concerned. Suppose in the case of the parties referred to in describing the first method, A & Co., who have sold December cotton to B & Co. for ten cents per pound, later, because of a decline in the market, decide to

[1] If the difference is in favor of C & Co., of course B & Co. pay it.
[2] Rules of New York Cotton Exchange, 105.

"cover their contract" and buy of F & Co. 50,000 pounds of December cotton for 9.50 cents. But, as we have supposed in the above case, F & Co. bought 50,000 pounds of December delivery from E & Co., who bought it from D & Co., who bought it from C & Co., who bought it from B & Co., who bought from A & Co. Each party having thus bought and sold 50,000 pounds of cotton deliverable in the same month, it would be useless to go through the process of delivering. With the consent of all the parties, a "ring" is therefore formed and the "differences" are settled. The reason why "ring clearances" are the usual mode of settlement for future delivery contracts, is because, according to the rules of both the New York and the New Orleans exchanges, all contracts for future delivery are for "50,000 pounds of cotton in about 100 square bales." As nearly all the members of the Exchange are both buying and selling continually and the sales are posted, it is not difficult for any member to find parties with contracts similar to his own who are willing to form a "ring" for the purpose of settlement.[1]

We have thus far described only the method of dealing in "futures" on the cotton market.[2] Let us now see what use the commercial world makes of this system.

A New England manufacturer receives early in autumn an order for a quantity of cotton goods, sufficient to keep his mills running all winter. The order

[1] From calculations made by him, Mr. Alfred B. Shepperson has arrived at the conclusion that "the proportion of the deliveries of cotton to the sales of 'futures'" on the New York Exchange, for the six years ending Aug. 31, 1893, was about 1 to 10. Report of Senate Committee, I: 459.

[2] The method of dealing in futures on the wheat market has been more fully described than I have been able to do for the cotton market, by Mr. A. C. Stevens in the *Quarterly Journal of Economics*, II: 37–63. See also Emery, "Speculation on the Stock and Produce Exchanges of the United States," (1896), Chapter III.

is conditioned on the delivery of the goods in the spring and at a certain stated price. Whether or not the manufacturer can accept the order will depend upon his ability to purchase the raw cotton at or below a certain price. Existing prices of cotton will enable him to contract to fill the order, but he may not be able to purchase at once the entire quantity of cotton of the desired grade, or does not desire to pay insurance and storage charges and lose the interest of his investment. In all probability, therefore, he seeks his broker and makes known his wants. The broker has no hesitation in naming a price for which he will bind himself to deliver the cotton as it is needed. The broker having received the contract, is now responsible for the delivery of the cotton, himself assuming all the risks which the transaction involves. But this broker, unless he be a speculator, will be unwilling to accept the risk of finding months from now the market so low that he can purchase cotton at a price lower than that which the requirements of the manufacturer and the competition of his fellow brokers have caused him to name. His only reason for agreeing to do business on such a small margin lies in the fact that the system of future delivery contracts enables him to distribute this risk among his associates on the Exchange. The broker therefore goes upon the floor of the Exchange and purchases for delivery in the month or months when his contract with the manufacturer binds him to deliver cotton, a like quantity of this staple. Now, while it is true that owing to the choice of delivering any one of a number of different grades of cotton which the rules of the Exchange gives the seller of "futures," the broker can probably not make use of the cotton which he has thus purchased in filling his order from the manufacturer, his purchase has nevertheless served to protect him from any loss which he might otherwise suffer from an advance in the price of cotton previous to his purchase of it for direct use in the mills. For if a rise in the price of the staple takes place, compelling him to pay more for his "spinning cotton" than he had anticipated, his "contract cotton" has also risen in value, and by disposing of this at the same time that he lays in his stock for the mills, he meets the loss from one transaction by a gain on the other.[1] What he gains by the entire transaction is only legitimate profits, the difference between the price which he named to the manufacturer and the price which his knowledge of the market led him to think would be the prevailing one when he came to make his purchases. The risk, the speculative element in the transaction, was turned over to the body of traders on the floor of the Exchange, and was probably shared in by a score of persons.[2]

The service which the system of "futures" renders to manufacturers or brokers in enabling them to "hedge" on imports, it also renders to the factors, the country merchants or the planters who consign cotton to market and wish to guard against a loss through a decline of prices while the cotton is in transit. It may also be

[1] The gain in some cases may not be a corresponding one. The seller of "futures according to present rules does not have the option of delivering the higher grades. If, therefore, the "spinning cotton" which he is to purchase be of higher grades, an advance in prices will not be entirely recompensed by the advance in the grades which he can deliver. This has led to a demand by some of the manufacturers and brokers that the rules of the Exchange be so modified as to allow the delivery of the higher grades. See Report of Senate Committee, I: 445.

[2] That this is not merely a theoretical advantage can be seen by reading the letters of manufacturers of cotton goods to the Senate Committee on Agriculture and Forestry, Report of Senate Committee, I: 439-452.

made use of by the planter who desires to hold his cotton without paying storage and insurance, or he may even take advantage of the system to sell his cotton crop before it is raised, if he expects prices to decline after harvest.

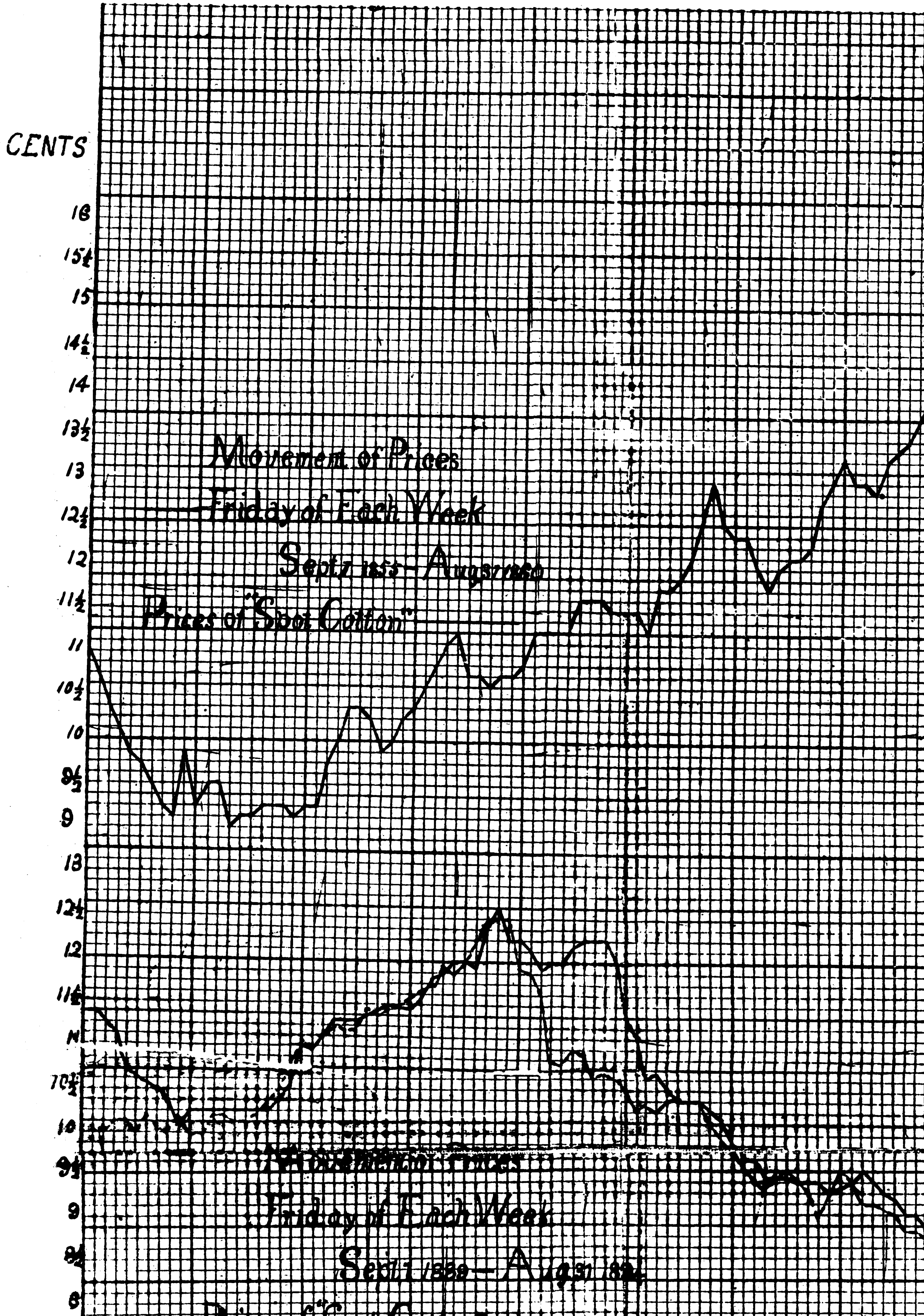
The transactions in "futures" thus furnish planters and merchants a continuously open market for their cotton, with the prices as nearly adjusted to the future demand and supply of that article as the judgment of the best informed class of traders is able to fix it. It is not a sufficient criticism of this system to say that these estimates are often erroneous. In estimating anything of so variable a nature as the probable demand for cotton goods, or the probable supply of cotton, anything like accuracy is impossible. The system should be judged by comparison with that which it has replaced, and not alone by the imperfections which are inseperably connected with it. The system of "futures," it will be seen, goes hand in hand with the new methods of marketing. Without this means of protecting shipments, the manufacturer would not take the risk of importing cotton from the interior, nor could the planter or the merchant of small means afford to consign cotton to market on his own responsibility.

But not the least of the services which the system of future delivery contracts has rendered to the cotton trade, is the greater steadiness in prices which it has introduced. For long periods the fluctuations are perhaps as marked as they were before the sale of "futures" began, for these variations depend upon actual changes in the demand or supply of cotton. But the changes appear less suddenly, and with a less degree of intensity. Thanks to the telegraph and cable, the effect of such circumstances as an attack upon the cotton plant by the boll worm or cotton worm, or a strike among the spinners at Manchester or Fall River, is foreseen on the cotton market weeks and months before it is felt by the consumer or producer, and a change in the prices of cotton for future months comes about gradually. Spinners and planters, seeing the course that prices are taking, gradually make a change in their own plans, and this tends to restore an equilibrium. When speculation was entirely in "spot cotton," the plans of the spinner or merchant might be entirely upset by the arrival of a ship bringing news from Liverpool or New Orleans, and the "bottom might drop entirely out of the market," or prices might go up like a rocket. To show this greater steadiness of the cotton market since the introduction of the future delivery system, based on modern methods of communication, I have prepared the accompanying chart. The irregular line in the upper part of the chart represents the weekly fluctuations in prices for middling uplands during the five years beginning Sept. 1, 1855, and ending August 31, 1860.[1] By a reference to Appendix I (chart), it will be seen that these years presented less fluctuations than any five years between 1816 and the Civil War. The reports of the *New Orleans Price Current*[2] for these years also tell us that they were particularly free from speculative influences. The unbroken line in the lower half of the chart represents the course of prices for "spot cotton" (middling uplands), during the commercial years of 1890–94,[3] while the broken line shows the course of "futures" for the same years.[1] These are the years during which the

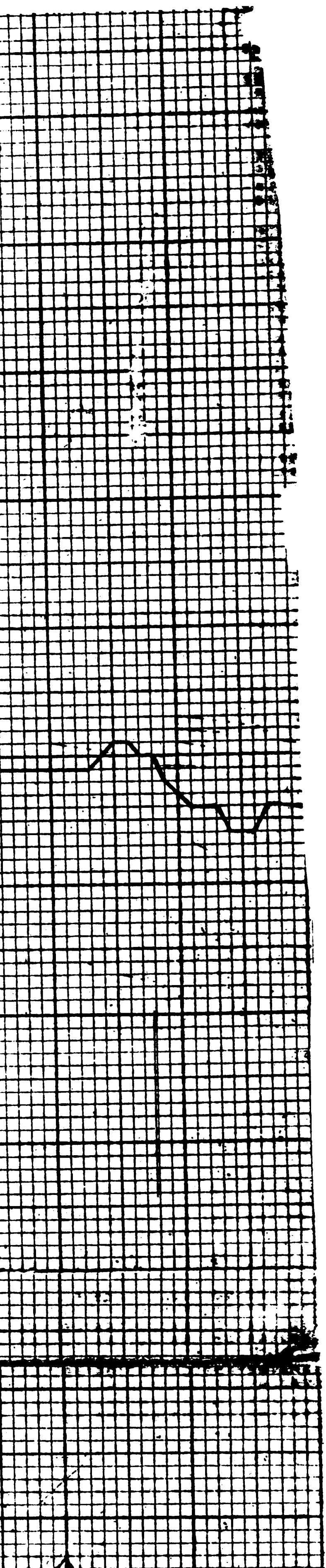
[1] Prices given in Donnell's "History of Cotton."

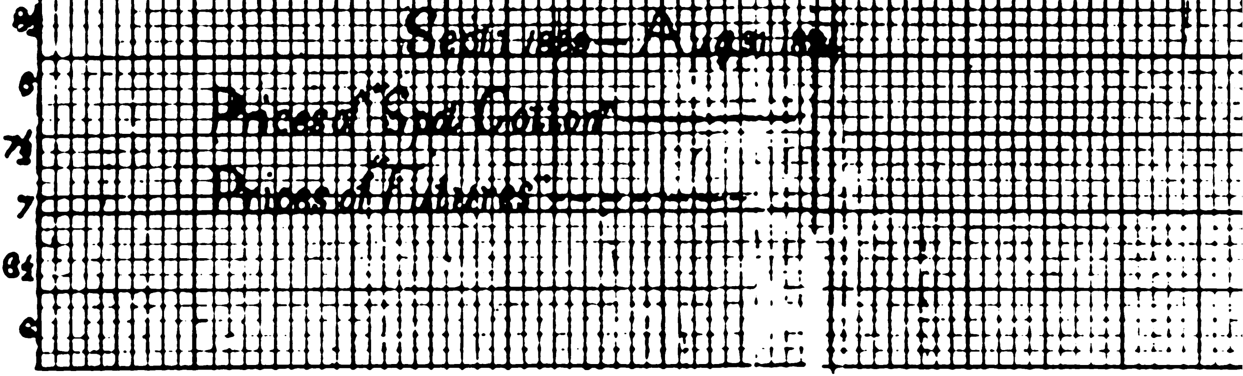
[2] Donnell's "History of Cotton," 446, 458, 470, 482, 495.

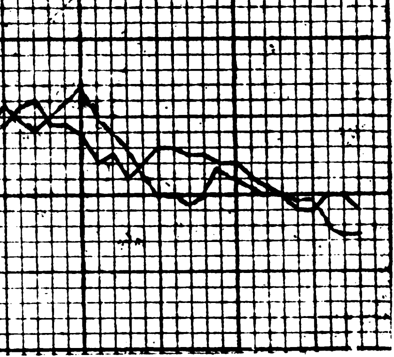
[3] Owing to a change in classification, middling uplands do not represent the same grade that they did for 1856–60. This, however, does not in any way affect the value of the chart, the purpose of which is to offer a comparison, not of prices, but of fluctuations.


CENTS
16
15½
15
14½
14
13½
13
12½
12
11½
11
10½
10
9½
9
Movement of Prices
Friday of Each Week
Sept 1 1855 – Aug 31 1860
Prices of "Spot Cotton"
13
12½
12
11½
11
10½
10
9½
9
8½
8
Movement of Prices
Friday of Each Week


Cha Showing the Fluctuations
in Prices
185–1860 and 1889–1894




Prices of Spot Cotton
Prices of Futures
6
7
6



largest transactions in "futures" have been made, also years of attempted anti-option legislation which its advocates claim has become necessary because of the disturbance caused to prices by the speculation in "futures" during recent years.

The services of the market for "futures" to the cotton trade may be summed up as follows:[2]

1. It has introduced greater stability of prices, spreading the fluctuations due to sudden changes in the actual or probable demand and supply over a longer period than under the old method of buying and selling, when prices were constantly subject to sudden disturbances.

2. It furnishes the mechanism for moving the crop with but little risk from a fall or rise of prices.

3. It maintains an open market for both spinner and planter, enabling the former to enter into large contracts for goods and yet avoid the necessity of carrying large stocks of cotton with the attending costs of storage, insurance and loss of interest, and enabling the latter to select his own time for selling, with comparatively little risk of loss involved.

The advantages of the new method of buying and selling have not been appreciated by the great majority of the people, while the evils which are, without doubt, connected with it from the fact that it has greatly increased the number of speculative transactions by those who are in no position to assume the risk which such dealings involve,[3] have often been overlooked.

[1] The prices of both "spots" and "futures" were obtained from the weekly reports of the New York Cotton Exchange.

[2] Compare Mr. A. C. Stevens' article on "The Utility of Speculation," *Political Science Quarterly*, VII: 419.

[3] See an article by H. C. Emery on "Legislation against Futures," in *Political Science Quarterly*, X: 85. Also the same author's recent work, "Speculation on the Stock and Produce Exchanges of the United States," 171–191. Hadley, "Economics," Chapter IV.

The leading charge made against the system is that it depresses the price of farm products "by the offering upon the exchanges of illimitable quantities of fiat or fictitious products by those who do not own and have not acquired the right to the future possession of the articles which they pretend to offer and sell."[1] The ordinary laws of demand and supply as a regulator of prices, say the authors of this charge, have been destroyed by the practice of "short selling," and in place thereof the "market wreckers" have introduced the law of supply alone as the governing factor in determining prices. For if the price is not low enough to suit the "bear operator," he has only to hammer them down until they reach the desired figure, and then buy in enough to cover his contracts.

But if we ask the authors of this charge what it is that prevents the price reaching zero, as our elementary lessons in the theory of prices have taught us to expect in cases where there is an "illimitable supply" of an article, and as it is certainly in the interests of the "bear operators" to depress prices as much as possible; or if we

[1] House Reports, First Session, 52d Congress, No. 269, p. 1. Report of Senate Committee on Agriculture and Forestry, Third Session, 53d Congress, No. 986, Part I: viii–xx, *et passim*, Mr. John T. Roddey in the *Columbia State*, Oct. 23 and 25, 1894. Charles W. Smith, "Original Theories Upon and Remedies for Depressions in Trade, Land, Agriculture and Silver," London, 1893, pp. 36-40. *Ibid*, "Commercial Gambling," London, 1893.

Not all who oppose the future delivery system do so on the above grounds. So good an authority as the *Banker's Magazine*, (Vol. XVII. Third Series, page 70), claims that "the system [of 'future' sales] is nothing more nor less than an adroit method practiced by comparatively a very few persons of taxing the whole community, as *there cannot be a doubt that these paper contracts sustained during the whole year have the effect of maintaining* [*cotton*] *prices far above their natural level*." (Italics mine). This opinion is shared by some manufacturers. See Report of Senate Committee, I: 448,450. The system of "futures" has also been opposed by many factors, whose business has been injured by interior buying, itself largely dependent on the future delivery business.

venture to suggest that the demand side of the market has not ceased to be operative; that the "bull operators" have met this "illimitable supply" with an illimitable demand and have prevented prices falling below what is expected to be their normal level, we are met by the assertion that while the demand may still be effectual enough to prevent prices from reaching the zero mark, yet the 'long' is a far less potent factor in advancing prices than is the 'short' in depressing them,"[1] because "one man may and does put the prices down, while it requires the concurrent action of at least two persons to advance the price."[2]

"It is not necessary," say the anti-optionists, "that there be either a sale or a purchase to determine the price, prices being as often determined by an offer where there is no sale, as by those where there are."[3] But, may we not ask, what prevents the offer from being accepted as soon as it is made at a price below that which the Exchange reports indicate is likely to prevail in the month for which the offer to sell is made? And the only rational answer to this question is that this offer will be accepted under the circumstances named. For there are as many persons on the floor of the Exchange anxious to profit by a rise of prices, as there are those who desire to see a decline of the market. Let the market fall but a few "points" below the level which the reports of the weather bureau, the crop correspondents and the cotton statisticians indicate as normal, and the late "bears" will become frantic "bulls" in their haste to "cover."[4]

[1] Speech of Senator Washburn, *Congressional Record*, XXIII: Part 6, page 5985.

[2] *Ibid.*

[3] *Ibid.*

[4] For a statement of the influence of the short-seller in preventing wide fluctuations in prices, see Emery, "Speculation on the Stock and Produce Exchanges of the United States," 121.

There is no doubt but that a broker who has gained a reputation as a shrewd buyer and seller may, and sometimes does, by bold offers to sell scare the timid "bulls" into refraining from purchasing, but his power lies in the very fact that his previous estimates of the "future" market have proven more correct than Exchange reports, or than the estimates of the buyers opposed to him. Still the power of such a man who seeks to manipulate prices is limited to a very narrow range. As soon as cotton goes down a few "points," buyers will rush in and send it up again.

But the favorite argument of the anti-optionists is that these sales of "futures" "do not constitute actual commerce, since they are dealings in which no actual transfer of property is made."[1] The seller sells not only what he has not got, but what he "does not now or ever expect to possess, and which the buyer does not expect nor intend to receive and pay for."[2] These "fictitious transactions" are so interwoven with legitimate commerce, the trade in real cotton, that the prices of "spot cotton" are completely determined by the prices made by speculators in "futures," the sale of which is often eight or ten times as great as the entire crop raised. Now, as the speculators on the cotton exchanges are only "hungry cormorants," whose very *raison d' etre* is to prey upon "the plunder of the farmer,"[3] "bulls" and "bears" give over their ancient feud to make a joint attack upon their common enemy, the farmer. Prices for the future months, it is agreed, shall be put down far below that which they are likely to attain if left to natural law. The reports of these prices fixed by the

[1] Report of Senate Committee, I: xii.

[2] Senator Washburn in *Congressional Record*, XXIII: Part 6, 5986.

[3] Report of Senate Committee, I: xx.

exchanges, say these writers, are circulated among the farmers, who, terrified by the prospect afforded, hurry their crops to market, but as prices for "spot cotton" follow closely the prices of "futures," the farmers must accept the prices which the manipulator at New Orleans or New York has "manufactured" for them.

In attempting to ascertain whether this pessimistic theory of modern commerce be true or not, let us first examine the statement that the buyer does not intend to receive nor the seller to deliver the commodity sold, and see how far it applies to transactions on the cotton exchanges. Rule 4 of the By-laws and Rules of the New York Cotton Exchange[1] says: "All contracts for the future delivery of cotton shall be binding upon members, and of full force and effect until the quantity and qualities of cotton specified in such contract shall have been delivered, and the price specified in said contract shall have been paid. Nor shall any contract be entered into with any stipulation or understanding between the parties, at the time of making such contracts, that the terms of such contract, as specified in paragraph 73 of the by-laws are not to be fulfilled, and the cotton delivered and received in accordance with such section." That these rules are enforced, no one who is familiar with the methods of the Exchange can doubt. The severest penalties are imposed for a violation of the rules by any member of the Exchange.

It is the "ring clearance" which seems to have been in the mind of the anti-optionists[2] when they made the assertion that it was not the intention of the parties entering into a contract to deliver or receive the cotton therein designated. But, as we have shown, the "ring

[1] Page 105.
[2] Report of Senate Committee, I: IX.

clearance" is only a simple method of settling contracts when the parties thereto are all buyers and sellers, and the delivery of the cotton which would ultimately come back to the original seller would be a useless expenditure of time and energy. The forming of a "ring" is only possible when the price is "within 25-100 cents of the market price for like deliveries at the time,"[1] and when all the parties interested agree to this method of settlement. If either party were to lose by this method of settlement, the "ring" would never be formed, but each party would demand his cotton in the form of actual delivery. No one can know at the time he sells cotton for future delivery whether his contract is to be "rung" out or settled by actual delivery, although the settlement of the majority of the contracts by the "ringing out" method makes the presumption in its favor. The chief explanation for this mode of settlement being the favorite one, seems to be that a large number, perhaps a majority of the "futures" sold, are for the purpose of "hedging" actual transactions, the *modus operandi* of which we have already described. Owing to the impracticability of using the cotton sold on the future market as "spinning cotton," the manufacturer or his broker who uses "futures" to protect himself, must buy back the "futures" which he has sold, or sell again the "futures" which he has bought.

The rule of the cotton exchanges which gives the seller the option of delivering any one of about thirty grades or half grades of cotton on future delivery contracts which are based on "middling," has also been the object of attack by the anti-optionists, who claim that it is a rule formulated in the interest of speculators and designed to prevent those persons who desire

[1] Rules of New York Cotton Exchange, 105.

to purchase cotton for actual use from using the future market for this purpose.[1] That manufacturers and factors do use the "future" market in spite of this rule is shown by the testimony transmitted by the committee urging this objection. The rule giving an option to the seller as to certain grades of cotton to be delivered by him is a necessary one, not only to the seller who otherwise might have some difficulty in securing the exact grade of cotton called for in the contract, but also because of the facility given to settlement which the rule affords. With the contracts specifying exactly the grade to be delivered, and fifty different contracts specifying fifty different grades, there would be little chance of employing the simple mode of settlement, "cancelling the contract," or "the ring clearance." Nor is there anything to be gained by such a change in the mode of settlement which is not already secured under the present system. If, on the other hand, the contracts should call for the delivery of "middling" only, there might not be enough of what is technically known as "middling" to supply the wants of those who demand delivery. And the existence of such a rule could not but injure the sale of the other grades. The lack of the present system seems to be not in the fact that it includes so many grades, but that it does not permit of the delivery of the higher grades, and thus it tends to exclude the manufacturers who use only the higher grades from the use of the "future" market.[2]

Another point relied upon by those who oppose the system of dealing in "futures" on the cotton market,

[1] Report of Senate Committee, I : VIII–IX.

[2] It has been claimed by some well acquainted with the cotton trade that the discriminations made by the future delivery contracts in favor of the lower grades, enable these grades often to find a market where they would otherwise be sold with difficulty.

is that the prices of "spot cotton" follow closely those of "futures," and suffer from the same fluctuations which result from speculation in the latter.[1] We may, I think, accept this statement of the case without endangering for the moment the position which we have assumed. We may acknowledge that prices of "spot cotton" are largely governed by the prices which prevail on the "future market" for some month yet to come, and may even, in the words of the anti-optionists themselves, acknowledge that "the price for that month has been fixed as far as a future event can be fixed by human agency, by actual transactions taking place among men, the best posted of all men in the conditions that regulate prices."[2] In any case, the price of commodities is regulated not alone by the existing demand and supply, but by the anticipated demand and supply as well, and the system of "futures" has arisen from the very fact that the anticipated demand and supply can be quite accurately foreseen. Is it better to act upon that knowledge at once and have "the best posted of all men in the conditions that regulate prices" state at once the prices which are likely to prevail, and offer to buy and sell on that basis, thus enabling producer and consumer to adjust their business in accordance with the probable conditions? Or, is it better to leave the knowledge gained by modern methods of communication unused, and wait until the expected change makes itself felt upon the market? One answer to these questions can be found in the chart already presented (page 312). The answer is the more apt from the fact that the years treated in the upper portion of the chart are constantly referred to by the anti-optionists as the "golden era" of high prices, steady markets and absence of "bulls" and "bears."

[1] Report of Senate Committee, I: xiv–xv.
[2] *Ibid.*, xv.

The opponents of the future delivery system themselves acknowledge that the introduction of dealings in futures has had the effect of taking speculation out of the "spot" market.

There is another serious charge against the sale of "futures" that has been brought forward by those persons who favor legislation against "futures." The insurance which the system affords to the exporter or importer of cotton, we are told "is mere gambling as to the future price of the commodity."[1] And it has also been claimed that these dealings "are in law, pure gambling on the future price of cotton."[2] It can scarcely have been by accident or ignorance on the part of the members of the Senate Committee on Agriculture and Forestry, of the fifty-third Congress, that led them, in seeking evidence on the legality of these transactions, to overlook the decisions of the United States Supreme Court on the question of the legality of these contracts. That tribunal has held (Irwin vs. Williar, 110 U. S., 499, 507, 508; 4 Sup. Ct. Rep. 160) that, "A person may make a contract for the sale of personal property for future delivery which he has not got. Merchants and traders frequently do this. A contract for the sale of personal property which the vender does not own or possess, but expects to obtain by purchase or otherwise, is binding if an actual transaction of property is contemplated." The same tribunal has also held (Bibb vs. Allen *et al.*, 149 U. S., 481; 13 Sup. Ct. Rep. 269) that "sales made subject to the rules and regulations of the New York Cotton Exchange" are not "wagering transactions," and are therefore not void.[3]

[1] Report of Senate Committe, I: xviii.

[2] *Ibid.*, ix.

[3] There is not space in this article to consider all the arguments that

It is not to be denied that the system of buying and selling "futures" does offer great facilities for those who wish merely to speculate on the price of a commodity, and the system offers opportunities, which have often been embraced, for persons of limited means to indulge in "market gambling." Especially is this true in the case of cotton. Persons who would not have the money to buy "spot cotton" to hold for a rise, are able to put up the one or two hundred dollars required for "margins." Like a lottery, therefore, it serves to draw in all the earnings of a certain class who do not possess the knowledge of the market conditions necessary to the operators on the Exchange, and too often leads them to invest not only their own capital, but the property of others confided to their care. How much has been thus spent by the cotton growers of the South, no one knows. Opinions differ as to the extent of the practice among planters, but it is known that every few years a speculative mania seizes hold of the people of this section, leading them to turn "bulls," and to send the price of cotton up far beyond what the actual and probable future condition of the market warrants.

have been brought forward by those opposed to the modern trade in "futures," especially in the Report of the Senate Committee so often referred to in the preceding pages. The report of this committee, not only on the subject of "futures," but on the whole treatment of the causes which have led to the recent depression of cotton prices, shows a wonderful manipulation of the testimony taken by them, to advance the pre-conceived or pet theories of the members of the committee. On the subject of "futures," there is scarcely an argument presented in the report of the committee which is not fully and adequately answered in the published testimony transmitted with the report. A full treatment of the subject of contracts for future delivery and their relation to commerce from the standpoint of the defenders of the system, is to be found in the articles of Mr. A. C. Stevens and Prof. H. C. Emery, already referred to. For the opposite view, see in addition to the authorities referred to on page 314, W. E. Bear, "Market Gambling," in *Contemporary Review*, June, 1894.

All well meaning persons will willingly support an effort to prevent by legislative means, or otherwise, the gambling speculations which are without doubt a feature of the modern produce and stock exchanges.[1] But to attempt to do this by forbidding " contracts for the sale and future delivery [of commodities] by a party who is not the owner thereof, and has not acquired the right from the owner to the future possession of the article contracted to be sold and delivered,"[2] would be striking a blow at the modern mechanism of commerce that would recoil with particular severity on the producers of the South, dependent, as many of them are, on the sale of their crops months before the harvesting of them.[3]

[1] For the plan devised in Prussia to check these speculations, see H. C. Emery, "Legislation Against Futures," *Political Science Quarterly*, X: 85. *Idem*, "Speculation on the Stock and Produce Exchanges of the United States," Chapter VI.

[2] House Reports, First Session, 52d Congress, Vol. 4, No. 969, page 3.

[3] The framers of the Hatch bill sought to avoid this by providing that the act should not apply to "contracts made by any farmer or planter for the future delivery of the products of his land, either grown or growing." But as the merchants or brokers would be estopped from contracting with the spinner to furnish him cotton which they had not already secured, the market would be narrowly limited with a heightening of the risk which the broker would run, and the consequent lower price which he could afford to pay to make up for this risk.

CHAPTER XI.

THE COTTON TRADE OF THE UNITED STATES FROM 1866 TO 1897.

Released from the shackles which had been put upon it by the Civil War, and freed from its dependence on slave production, the American cotton trade began rapidly to recover the ground lost by it during the four years' struggle, and soon attained in the commerce of this country and that of the world an importance even greater than that possessed by it in 1860. The early estimates of the amount of cotton remaining in the South at the close of the war were entirely too large. At the end of August, 1865, the *Commercial and Financial Chronicle*, an authority in high favor among cotton men, supposed that 3,100,000 bales was perhaps not too large an estimate of the cotton which merchants and traders were inclined to believe had been hidden away by the planters, safe from capture and confiscation by the northern troops.[1] Less than three months later it had reduced this estimate to 1,500,000 bales.[2] In view of the disorganized condition of the South and the unwillingness of the negroes to work, the *Chronicle* estimated the crop of 1865 at only 300,000 bales. About the first of June of the succeeding year, the *Chronicle* raised its estimates. "Those who estimated the supply of cotton in the South at about two and a half million bales," it said, "seem likely to witness the fulfillment of their predictions."[3] Up to that time, 2,300,000 bales had already been received at the ports. This total must

[1] *The Chronicle*, I: 259.
[2] *Ibid.*, 611.
[3] *Ibid.*, II: 675.

have included the greater part of the crop raised in 1865. By September 1, 1866, the receipts at the ports aggregated 2,666,222 bales.[1] According to the rule observed by cotton statisticians of estimating as the crop for the year all brought into sight since the close of the last commercial year, 2,269,316 bales of the above represent the commercial crop of 1865–66. But it is certain that a large part, probably the greater portion of this commercial crop, consisted of the cotton which remained undestroyed in the South during the war. Watkins[2] thinks that the actual crop of 1865 was not in excess of 500,000 bales, and although this estimate may be too small, it leaves only a little over two million bales as the cotton held in the South during the war. The belief in the existence of large quantities of pent-up cotton which were likely to be brought forward at any time, caused a more rapid decline of prices on the return of peace than the actual state of things warranted. In early March of 1865 the price of cotton was 90 cents in New York, but two weeks later, after the Federal successes around Richmond had shown that the conflict was nearly over, the price had fallen to 55 cents. Again, after the announcement that the President would remove the restrictions on the sale and transfer of the staple, the price further declined to 40 cents.[3] But the expected arrivals of pent-up cotton were much smaller than had been anticipated, although during the summer of 1865 the movement to the ports was quite a brisk one. The stocks at New Orleans increased from 17,250 bales in the middle of June, to 88,000 bales in the middle of August.[4]

[1] *The Chronicle*, III : 453.
[2] "Production and Price of Cotton for One Hundred Years," 14.
[3] *The Chronicle*, I : 358.
[4] *Ibid.*, 259.

There was, of course, much uncertainty as to what would be the future of cotton cultivation in this country. To those who believed that the culture of the staple was dependent upon the existence of slavery, the end of "King Cotton's" days seemed to be fast approaching. Even those who trusted in the ultimate triumph of free labor in the cotton fields, were forced to admit that the prospect for a few years looked anything but flattering. There was plenty of labor, but this labor had just attained its freedom and was inclined to enjoy it in idleness for a while. Besides, there was little capital in the South to hire labor, or to purchase seed and tools. And then there were India, Egypt and Brazil in possession of the British and Continental markets to be displaced, if possible, by the American staple. This latter task proved a not difficult one. European spinners were discouraged by the attempts to spin the dirty short stapled cotton from the East, and although they were obliged to continue its use in large quantities for a time, they were quick in giving the American staple the preference. The importation of Indian cotton by Great Britain, which reached its high water mark in 1866 with 1,866,000 bales, met with an almost steady decrease after that year until 1882, when, influenced by the reports of a short American crop, India was induced once more to send over a million bales to Liverpool. Egypt alone of the competitors to the United States which the Civil War had raised up or stimulated, seemed able to maintain the favor of the European spinners which had been shown them in the absence of the American cotton. For the five years immediately following the war, the demand for American cotton was sufficient to keep it from sinking much below 25 cents on the New York market and 10 pence in Liverpool.

The reorganization of the labor force and the expansion of cotton culture in the South was a more formidable undertaking than the securing of a market for the cotton when it was raised. The crop of the year 1865 was much larger than had been anticipated,[1] but the increase in the growth of cotton was very slow until 1870, and not until fifteen years after the war was over was there a crop produced equal to the remarkable one of 1860. The dull trade during 1867 and 1868 led Congress to repeal the internal revenue tax on raw cotton which the necessities of the war had led it to impose.[2] In 1869 prospects grew brighter, but in 1870 the Franco-Prussian war caused another disorganization of the foreign trade of the United States, especially that with the Continent.[3]

By 1871, the cotton trade of the world may be said to have again reached its normal state. The American crop was in excess of 4,300,000 bales, and the consumption of the European and American mills had attained up to that time its maximum. American had not yet gained the superiority over the cotton from other countries in the same degree as in the decade preceding 1860, but British importations from the United States were on the increase, while those from other countries had become stationary, or had almost ceased. Prices were still above *ante-bellum* figures, but American "middling" had reached 17 cents in New York on the down grade, and 8½ pence in Liverpool.

The cotton trade does not seem to have been greatly

[1] *The Chronicle*, I: 611.

[2] This tax was imposed in July, 1862, and was then one-half cent per pound. In June, 1864, it was raised to two cents; in March, 1865, to five cents; was reduced in July, 1866, to three cents, and entirely removed on February 3, 1868.

[3] Watkins, "Production and Price of Cotton," 15.

affected by the panic of 1873. The production of the staple was in excess of that of the preceding year, though not so large as during 1871. The consumption in Europe and at home appears to have been normal, and prices were in accordance with a natural state of affairs. Nor did the depression suffered by the English cotton industry during the years 1878 and 1879 seriously affect the cotton trade of this country. Prices were slightly less in 1879, but the production, exportation and consumption of the staple presented their usual increase.

A reference to the chart showing the average annual prices of American cotton in New York and Liverpool (Appendix I) will show that British prices have usually been at a higher level than have American. This is only what we should expect, from the fact that British prices must include the freight to Liverpool. During the Civil War, the more urgent demand of the northern spinners is doubtless sufficient to explain the higher prices which prevailed on this side the Atlantic, but this higher level was maintained after the close of the war by the expanded character of the American currency. But about the time resumption of specie payments was decided upon in 1875, British prices again overtopped the American, and have continued at a higher level ever since.

The decade beginning with 1880 was one very favorable to the cotton trade and industry of the United States. The crop harvested this year was the largest yet grown, and the consumption of the American mills, which, according to the Tenth Census numbered 756, with 10,678,516 spindles, was in excess of one and three-quarter millions of bales. The demand for cotton was strong enough to even cause a rise in prices.

In 1881 a Cotton Exposition was held at Atlanta.

The visitors to this were convinced that "an industrial revolution had actually been effected in the South,"[1] and that the raising of cotton was not only possible without slave labor, but was carried on with more profit and better results under the new regime. One gentleman present claimed to have produced with free labor cotton at three cents a pound.[2]

Some attention must be given to the year 1882 on account of the speculative character that the cotton trade then assumed. This year is a favorite illustration with those who claim that speculation in "futures" is responsible for the uncertainty of the market, and that "short selling" is the cause of the depression of prices.[3] The supporters of this theory hold that the short crop of this year should have met with an advance in prices; that this view was taken by the planters, "whose tendency is always to hope for and believe in higher prices," and who, expecting to profit by the advance in value, invested largely in "futures." The "bears" having thus enticed the "lambs" into their dens, suddenly began "selling short," until "the bottom fell out of the market," the former buyers became panic stricken and hastened to "unload" their purchases at prices even lower than those of the big crop year, 1881, while the "bears, having covered their shorts" at the lowered prices, desisted from their operations and the market under normal conditions again advanced.

In studying the conditions of this year, we must first look at the crops of the preceding years. After 1876, the production of the United States had increased at a rapid rate, and the crop marketed in 1880–81 was the

[1] *The Chronicle*, XXXIV : 3.
Ibid.
[3] Testimony before House Committee on Agriculture, House Reports, 52d Congress, First Session ; No. 969, p. 1245.

largest that had ever been attained, being 6,589,000 bales. Although the consumption of Europe was larger than during the preceding year, October 1, 1881, found stocks at the ports twice as large as for the previous year. Ellison's "Annual Report" stated that consumption was likely to increase at the same rate during the following year, that the crop of America would probably be "smaller than that of last season," and that arrivals from other countries would not be much greater than they had been.[1] In view of this conservative statement, the *Commercial and Financial Chronicle* felt warranted in saying that "there is going to be no dearth of cotton this year," and that "it is wise to let Europe have all she wants at present prices."[2] Throughout the South, however, the *Chronicle's* and Ellison's view of the situation was not accepted, but the estimate of the United States Agricultural Bureau, which made the crop only about 4,600,000 bales, was relied upon. Many planters, therefore, invested largely in "futures." By the middle of Febuary the sales of "futures" since September 1, on the New York Cotton Exchange were twenty per cent. in excess of those during the same period of the preceding year, and in New Orleans the sales of "futures" were already in excess of the sales for the entire commercial year 1880–81. Commenting on these conditions, the *Chronicle* said (Feb. 18, 1892): "Are not such figures wonderfully suggestive of severe losses and painful experience . . . . . . [Speculation] is a prominent reason why the South does not accumulate wealth faster. It always speculates on a cotton crop, and almost universally on what is called the bull side. Many of the southern people are so wedded to

[1] *The Chronicle*, XXXIII: 547.
[2] *Ibid.*, 456.

their idea that they dislike the giver of any information which does not help their theory."[1]

By February it had become apparent that the estimates of the United States Agricultural Bureau had not only been too low, but that the receipts of cotton by Europe from other countries than the United States would be far in excess of what had been expected, and there came the unavoidable collapse in prices. The United States crop, although a short one, was nearly a million bales in excess of the early estimates. Although Manchester increased her consumption, she took less American cotton than during the preceding year, and made up this deficiency by increased consumption of cotton from India, which had been led by the expectation of higher prices, to send to Liverpool over a million bales, nearly twice as much as during the preceding year. As a result of all this, prices for American fell so low during the latter half of the year that the average for the whole year was less than for the preceding year. The decline in prices was not due, however, to manipulation on the part of the "short seller," but was a natural result of the over-speculation by "long buyers."

In the winter of 1884–85, a Cotton Exposition to commemorate the centennial of the cotton trade of the United States, was held in New Orleans. The infant republic which in 1784 had sent its eight bales of cotton across the seas, was now at times sending nearly five million bales to European spinners, besides consuming two million bales in her own mills. The crops of 1884 and 1885 were short ones, but after these years, until the end of the decade, there was an almost steady increase in production. The consumption of cotton in both Europe and America maintained a corresponding

[1] *The Chronicle*, XXXIV: 188.

increase, and for seven years, beginning with 1883, average prices in New York were between 9¼ and 11 1-10 cents, and in Liverpool were between 5½ and 7½ pence for middling uplands.

In 1890–91, there came on the market a crop of 8,650,000 bales, followed the next year by a crop of over nine million bales. Then came two years of moderate production, but the commercial year 1894–95 threw another enormous crop of 9,900,000 bales, or over five billion pounds, on the market. Such a decline of prices resulted that cotton has been selling for less than nine cents ever since the spring of 1891, and during the early part of 1895, touched the extremely low figure of 5½ cents in New York, and 4⅞ cents in New Orleans. Owing to reduced acreage and to attacks of the boll worms the crop of 1895–96 was a small one, and a considerable advance in prices took place; middling uplands selling on the New York market at an average of 8.16 cents for the commercial year. During the past year prices have once more suffered a decline. The commercial crop of 1896–97 which amounted to 8,757,000 bales was sold at an average price of 7.72 cents per pound in New York and 7.32 cents in New Orleans. But the crop was raised at a very small cost, and despite the low prices "it is safe to estimate that it has netted the producer more than any previous one."[1]

Considerable effort has been made by various writers to explain the depression in prices of cotton which has taken place since 1890. The committee appointed by the Senate of the fifty-second Congress to investigate the conditions of American cotton growers and the

[1] Henry G. Hester, Annual Report of New Orleans Cotton Exchange, September 1, 1897.

causes for the depression in the prices of the American staple, in their report denied that over-production was the cause of the low prices, or that there had been any over-production in the sense in which that term is usually employed. The proof which the committee brought forward to support these really remarkable statements, was a comparison of the supply of cotton for the mills and the average prices of the year 1860–61, with the supply and prices for the years since 1890. It was found that while the supply for the mills at the close of the commercial year 1861 (August 31), was as great or greater than at the close of the commercial years 1891, 1893 and 1894, yet prices were in 1860–61 forty or fifty per cent. higher than for the later years. "This," says the committee, utterly overthrows the theory of over-production as the cause of the low price, the surplus in America being less than in 1860." [1]

The absurdity of this entire argument will be apparent to all who have followed the history of the cotton trade, and who remember the critical condition of the world's cotton industry in 1861. The commercial year ending August 31 of that year extended five months into the period covered by actual hostilities, carried on in the midst of a country producing seventy-five per cent. of the cotton used in the European mills. The prospect of a cutting off of supplies of cotton for years to come was certainly sufficient to prevent a decline in the price of that staple without any regard to the few months' supply which then lay in the mills or in the ports. As we saw in our discussion of this period, the one thing to cause wonder is that prices did not go much higher, as they undoubtedly would have done if the real gravity of the situation had been appreciated.

[1] Report of Senate Committe, I: v.

Having rejected, in spite of the almost unanimous testimony of the witnesses examined, the theory of over-production as the cause of the recent decline in prices of cotton, the committee considers at some length the causes which it finds to be chiefly responsible for the financial depression from which cotton growers have been suffering. These causes the committee asserts are, speculation in "futures," and the demonetization of silver. We have already discussed the reputed influence of the future delivery system on prices.[1] With reference to the influence of the so-called demonetization of silver on prices, we can only say that the investigation of this interesting subject belongs to the student of general prices, and does not fall within the domain of the present work. For whatever influence this circumstance may have exerted on the price of cotton, it has exerted with equal effect on the prices of other commodities, and it is plain that the recent depression in the prices of cotton has been much greater than the fall in the prices of commodities in general.[2]

The secretary of the Senate sub-committee, Mr. Alfred B. Shepperson, a cotton statistician of prominence, also inclines to the opinion that over-production has not been the cause of the recent low prices, although he does not state what he considers to have been the true cause. "An examination of the number of weeks' supply of cotton in the European markets at the end of each season," says Mr. Shepperson, "does not confirm the opinion

[1] Above, Chapter X.

[2] For a discussion of the reputed advantages which the silver standard countries, India and Egypt, have over the United States in the production and sale of cotton, see the author's article "The Southern Farmer and the Cotton Question," *Political Science Quarterly*, September, 1897, pp. 470–72.

held by many persons, that of recent years there has been an over-production of cotton. It is evident that the proper way to judge of the supply of any manufactured product is by the number of weeks' supply for the use of the mannfacturers in the market at the close of the season, and judged by this standard, the average yearly supply exceeded the demands of the manufacturers to a greater extent from 1843 to 1860 than from 1866 to the present time."[1] But aside from the fact that the existence of a large supply of cotton on hand at the end of a year is more often the result than the cause of low prices, we cannot judge fairly what prices ought to be by comparing the supply at the close of a recent year with the supply at the close of some year previous to the Civil War. The great development in means of communication and transportation, and the rise of the future delivery system, built upon the modern methods of transporting news and goods, have done away with the necessity of carrying the large stocks of cotton customary in the earlier days. One can scarcely conceive at the present time of manufacturers or merchants again carrying such enormous stocks as they did in 1843, when at the end of that year a supply of cotton equal to thirty-four weeks' consumption was gathered in Europe.

The true method of ascertaining whether there has been over-production in recent years, or whether there has been "an increasing demand equalling the increasing supply," as the Senate Committee asserts to have been the case,[2] is to compare the rate of increase in production and the rate of increase in consumption since

[1] Report of Senate Committee, I: 500.

[2] *Ibid.*, v.

1890, not only with each other but with corresponding rates for some previous years. To find years proper for comparison we need not go back to *ante-bellum* days. No decade in the history of the American cotton trade has been more favorable to the cotton industry, and more nearly exemplifies the normal condition of the trade, than the decade beginning with the commercial year 1880–81. Watkins says of it: "Throughout this decade prices were maintained with remarkable uniformity, although at times there were complaints of an accumulation of manufactured goods, the supply being in excess of the demand."[1] It is with the increase in production and consumption during this decade, therefore, that we shall compare the increase in production and consumption between 1890 and 1895. With the exception of trifling amounts the entire American crop is consumed in the mills of Europe and the United States. Adding to this the imports into Europe from other countries, we get the total crop so far as it concerns the European and American consumption. Comparing this with the consumption of both countries, and noting the rate of increase of each and the supply left over at the beginning of the new year, we obtain the following facts:[2]

[1] Watkins, "Production and Prices of Cotton," 17.

[2] The data for this table are furnished by the *Commercial and Financial Chronicle*, LXI: 403.

Year.	United States Crop.	Supply from Other Countries.	Total Supply for Europe and America.	Total Actual Consumption.	Visible and Invisible Supply at Beginning of Year.	Average Annual Price in Liverpool.
	Bales of 400 lbs.	Bales of 400 lbs.	Bales of 400 lbs.	Bales of 400 lbs.	Bales of 400 lbs.	Pence.
1880–81 . . .	7,519,000	1,837,000	9,356,000	8,646,000	1,548,000	6.48
1881–82 . . .	6,073,000	2,510,000	8,583,000	9,035,000	2,168,000	6.70
1882–83 . . .	8,058,000	2,350,000	10,480,000	9,499,000	1,616,000	5.90
1883–84 . . .	6,485,000	2,434,000	8,919,000	9,290,000	2,405,000	6.03
1884–85 . . .	6,420,000	2,007,000	8,427,000	8,597,000	1,939,000	5.76
1885–86 . . .	7,480,000	2,100,000	9,580,000	9,371,000	1,679,000	5.14
1886–87 . . .	7,450,000	2,478,000	9,928,000	9,757,000	1,800,000	5.42
1887–88 . . .	8,000,000	2,100,000	10,100,000	10,167,000	1,841,000	5.51
1888–89 . . .	8,079,000	2,350,000	10,429,000	10,524,000	1,614,000	5.73
1889–90 . . .	8,525,000	2,580,000	11,105,000	11,055,000	1,499,000	5.97
Average . .	7,408,000	2,274,000	9,690,700	9,594,000	1,810,900	5.86
1890–91 . . .	10,170,000	2,488,000	12,658,000	11,726,000	1,434,000	4.94
1891–92 . . .	10,800,000	2,390,000	13,190,000	11,721,000	2,266,000	4.18
1892–93 . . .	8,044,000	2,690,000	10,734,000	11,348,000	3,610,000	4.57
1893–94 . . .	8,920,000	2,719,000	11,639,000	11,692,000	2,885,000	4.23
1894–95 . . .	12,050,000	2,000,000	14,050,000	12,579,000	2,707,000	3.41
1895–96 . . .	. . . . . .	. . . . . .	. . . . . .	. . . . . .	3,953,000	. . . . .
Average . .	9,996,800	2,457,400	12,454,200	11,813,200	2,809,000	4.26

From the above table it will be seen that there is little foundation for the statement that there has been within the past few years an increase in the demand equal to the increase in the supply. Even for the decade ending with 1890, the increase in consumption did not quite keep pace with the increase in production. The average consumption for the decade was nearly one hundred thousand bales less than was the average supply for the American and European mills.

Between 1890 and 1895, however, the production far out-stripped consumption. The total supply for the European and American mills in 1894–95 exceeded that of 1890–91 by nearly eleven per cent., while the consumption of 1894–95 showed an excess over that of 1890–91 of only 7.28 per cent. The average consumption for the five years was 661,000 bales less than the average "total supply."

The American planter cannot shift the entire responsibility for this increase in production on to the shoulders of the cotton growers of other lands, for it will be seen that between 1890 and 1895 the average annual supply for Europe from other countries than the United States was less than 200,000 bales in excess of the average supply between 1880 and 1890. In the meantime stocks accumulated until the total visible and invisible supply at the beginning of the commercial year 1895–96 amounted to nearly four million bales of 400 pounds each.

To a slight extent a decline in the rate of consumption is a cause for this failure of production and consumption to keep pace with each other since 1890. The consumption for the year 1892–93 was 3.27 per cent. less than that of the preceding year, which was itself slightly less than that of 1890–91. The commercial and financial depression which has attacked industry since 1890 has doubtless had a great effect in checking the power of consumption of the people for cotton goods. Under normal conditions we should have expected the reduction of prices to have caused a more rapid increase in the rate of consumption, but the business depression was felt in New England so keenly during 1893 and 1894 that Ellison & Co., in their annual report for 1894, tell us that America was obliged to find a market in Liverpool for from 300,000 to 400,000 bales of cotton which would otherwise have been consumed at home.

As a more particular and definite cause of a decrease in the rate of consumption, we have the strike of the cotton mill operatives of Lancashire. The strike lasted from Nov. 7, 1892, to March 26, 1893, and so affected the cotton industry that the consumption of Great Britain was 300,000 bales less for 1892–93 than for 1891–92.[1]

[1] *Commercial and Financial Chronicle*, LVII: 403.

This was a sudden blow to the cotton trade, for all the indications had pointed to a greatly increased consumption. The loss from this cause alone almost suffices to explain the falling off in the consumption during the years 1891–93.

But after all due allowance is made for the failure in the expected rate of consumption, it is in a too rapid increase in the rate of production that the chief blame lies for the recent decline in the price of cotton[1] Under healthy business conditions it is doubtful if the world's markets are ready to take crops of over nine million bales from the United States, in addition to the average supply from other quarters, at prices which will afford the producer a profit. It is almost universally conceded that the only permanent relief from low prices is to be found in a reduction of the acreage. And the difficulties which lie in the way of this plan we have already considered.[2]

In reviewing the history of the cotton trade since the Civil War, perhaps the first thing which strikes our attention, after the increase in production of the staple in the United States, is the change in the routes for marketing the cotton. One of the characteristic features of the history of the cotton trade before the Civil War, was the repeated and always unsuccessful attempts on the part of the British manufacturers to relieve themselves from dependence on one source of supply for their cotton. The history of the cotton trade since the war has shown a more successful effort on the part of the cotton growers to emancipate themselves from the control of a single market for their product.

[1] Compare an article by S. I. Hubbard, Jr., in the *Bankers' Magazine* for January, 1895.

[2] See Book I, Chapters V, VI and VII.

In 1860 Great Britain took 55 per cent. of the American crop, and consumed in her mills 49.8 per cent. of the entire amount consumed by the mills of all Europe and America. In 1895, only 33 per cent. of the American crop found a market in Great Britain, and only about 34 per cent. of the entire amount consumed in the United States and Europe was spun in the British mills. This has not been due to an absolute decrease in the consumption of British mills. On the contrary, the consumption of Great Britain is vastly in excess of that of 1860, and America furnishes a larger percentage of this cotton than she did previous to the war. But while the consumption of cotton by British mills has increased at a flattering rate, the market for cotton has been strengthened by a still more rapid increase in the consumption of other countries. Thus the Continental countries which consumed 1,723,000 bales of 400 pounds each in 1860–61, or about 32 per cent. of the total European and American consumption, in 1895 consumed 5,096,000 bales, or over 40 per cent. of the total consumption of Europe and the United States. Previous to 1870, France was the Continental country first in importance as respects cotton manufactures, but an important seat of her industry was to be found in the Rhine provinces, Alsace and Lorraine. When these fell to Germany as a result of the Franco-Prussian War, it gave that country the leadership on the Continent as a cotton manufacturing land. Even France's claim to second place among Continental countries is now disputed by Russia, whose cotton industry has grown at a marvelous rate since 1850. The number of spindles in this country in 1892–93 was five millions, and the cotton consumed 1,035,000 bales, as compared with five and one-half million spindles and 750,000 bales of cotton consumed in

France.[1] Austria, Italy, Spain, Belgium, Switzerland, Sweden, Holland, Portugal and Greece follow in the order named, as regards the importance of their cotton manufactures. All of these countries import cotton from the United States, most of them having the bulk of their consumption composed of American cotton.

Although it is gratifying to be relieved of dependence on one market for the sale of our raw cotton, thus diminishing the probability of disaster to the cotton trade by such circumstances as a war between this country and Great Britain, or a strike among the cotton mill operatives of Lancashire, and while this tendency to seek more markets is in keeping with the commendable policy of Mr. Morton, the late Secretary of Agriculture, there are some dangers to the American cotton trade connected with the changed routes for marketing cotton. The English trade in cotton goods has grown at a rapid rate, but it is plain that without the development of manufactures elsewhere, the increase in English trade and manufacture might have been still more rapid. Especially is this true as regards India. The unsuccessful struggle which India waged with America on the British cotton markets previous to 1870, she has at last turned into success by consuming her own cotton. In 1869 there were in India only about 400,000 spindles, consuming annually about 80,000 bales of cotton.[2] By 1895 the number of spindles had increased to nearly or quite 4,000,000 (3,650,000 in 1894), and the consumption of cotton to about 1,375,000 bales.[3] While this manufacture of her own cotton has led India to relax

[1] Ellison, "Lancashire and Her Competitors," Latham, Alexander & Co.'s Report for 1894, p. 31.

[2] In addition to 670,000 bales spun by hand.

[3] Ellison, "The Cotton Trade of India," Latham, Alexander & Co.'s Annual Report for 1895, 35-6.

her efforts to compete with American cotton on the European markets, it has, by seriously disabling British trade in cotton goods not only in India but likewise in China and Japan, reduced to a certain extent the manufacture of American cotton into goods intended for those markets.

But likewise the shifting of our cotton trade from England to the Continent has brought us into greater competition with cotton from other countries than would likely have been the case if we had met these cottons only in Lancashire. As respects Indian cotton, it is true that this competition is less felt now than it was some years since. The consumption of Surat cotton has almost ceased in England, and has been greatly reduced on the Continent. Still, the use of this cotton is considerable, especially in such countries as Switzerland, Belgium and Austria. The slower speed of the spindles on the Continent enables the operatives to spin this short cotton when its use would be impracticable in England or America, and its cheapness makes its use preferable for the lower grades of yarns.

But the Continental countries consume also considerable quantities of cotton from other lands. Thus the Egyptian cotton is much used in France, Russia and in Alsace and Saxony, while almost one-third of the cotton consumed by the large and rapidly growing Russian manufacture comes from Asiatic countries, Persia, China, and especially from Turkestan and the Trans-Caucasian provinces belonging to Russia.

While, therefore, the expansion of the cotton industry on the Continent has been of the greatest advantage to the American cotton growers, it must be remembered that some of the markets thus furnished must be jealously guarded, or they may be lost to the producers in other quarters of the globe.

But another rival to Lancashire, of more importance to the American cotton grower than the cotton manufactures of any of the Continental countries, is the home manufacture. The increase in the amount of cotton consumed at home has been much more rapid than in Great Britain or on the Continent. In 1860 less than four hundred million pounds of cotton were consumed by the mills and domestic manufactures of the United States, the percentage of the American crop thus used being about 20 per cent., while America's percentage of the combined consumption of Europe and America was less than 18 per cent. In 1895 over 1,400,000,000 pounds of American cotton were consumed in the United States, or over 28 per cent. of the entire American crop, 25 per cent. of the joint European and American consumption.

The most noticeable feature of the American cotton industry since the Civil War has been the growth of the cotton manufacture near the seat of the supply of raw material. In 1860 there were in the southern states but 217,000 spindles, and only 10,000 bales of cotton were consumed in the mills, although the domestic manufactures consumed much in excess of that amount. Now about one-fifth of the spindles of the country are to be found in the South, and nearly one-third of the entire consumption of cotton takes place there.[1] Whatever may be the relative advantages of the South as a cotton manufacturing district, or the prospect of its outstripping the North, it can only be a matter of congratulation to the whole country that manufactures are springing up in this section, which shall furnish local markets

[1] See R. H. Edmonds, "The Cotton Manufacturing Interests of the South," Latham, Alexander & Co.'s Annual Report, 1895, 45-55.

not only for cotton, but for other products the raising of which has been so long neglected by the southern planter.

The following table is intended to furnish a statistical view of the past and present condition of the world's cotton markets, by giving the consumption of the leading cotton manufacturing countries by decennial years since the advent of American cotton as an article of export.

CONSUMPTION OF COTTON IN THOUSANDS OF BALES OF FOUR HUNDRED POUNDS EACH BY THE LEADING MANUFACTURING COUNTRIES OF THE WORLD FOR THE DECENNIAL YEARS.[1]

COUNTRY.	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1895
Great Britain	70	125	245	322	619	1147	1470	2709	2686	3431	4141	4264
Cont. Europe	75	100	125	190	344	652	1001	1767	1841	2854	4318	5096
Russia . . .	. .	. .	. .	. .	10	36	119	218	243	550	750	. .
Sweden . .	. .	. .	. .	. .	2	4	20	40	40	62	80	. .
Germany. .	. .	. .	. .	. .	40	66	115	350	367	715	1170	. .
Austria. . .	. .	. .	. .	. .	50	85	145	235	240	350	530	. .
Switzerland.	. .		. .	. .	22	45	60	76	98	122	150	. .
Holland . .	. .	. .	. .	. .	5	10	12	16	24	50	65	.
Belgium . .	. .	. .	. .	. .	20	40	55	72	88	125	145	. .
France. . .	. .	. .	. .	. .	170	291	350	565	550	500	650	. .
Spain . . .	. .	. .	. .	. .	15	35	85	130	125	220	300	. .
Italy. . . .		. .	. .	. .	10	20	40	65	66	160	390	. .
UnitedStates	5	40	50	80	184	340	768	968	1012	1981	2731	3219
North . .	. .	. .	. .	. .	. .	. .	. .		913	1779	2102	2215
South . .	. .	. .	. .	. .	. .	. .	.	.	99	202	629	1004
India[2] . . .	. .	. .	. .	.	. .	. .	. .	65	98	301	988	1260
China .		. .	. .	. .	. .	. .	. .	.	.	.	1485	. .

The closing pages of Chapter IX and the first pages of the present chapter have made us familiar with the fruitless attempts on the part of other cotton producing countries of the world to displace the cotton from

[1] From Ellison's "Centennial Sketch of the American Cotton Trade," Latham, Alexander & Co.'s Report for 1892, pp. 47 and 50, and from *Commercial and Financial Chronicle*, LXI., 403. Somewhat different statistics are given by von Halle, "Baumwollproduktion und Pflanzungswirtschaft in den Nordamerikanischen Südstaaten," Erster Teil, 181–2.

[2] Mill Consumption.

the southern states on the European markets by the staple from their own lands. The closing of the southern ports for four years had given the complete control of the European cotton trade into the hands of the cotton producers of Asia, Africa and South America; but the re-opening of the southern ports at the close of the war again flooded the markets with American cotton, and within a decade the position of America as a source of cotton supply for Europe seemed as impregnable as ever. But the other countries having once gained a foothold were loath to surrender their gain, and after a few years' decline they began once more to increase their exportations to Europe. The result has been that while the United States sends a great deal more cotton to Europe than it did in 1860, relatively speaking its exports are less. In 1860 America furnished 83.89 per per cent. of the entire amount of cotton imported by Europe, while in 1890–91 only 74.08 per cent. of the cotton imported by Europe came from the United States. It will therefore be necessary to examine, if but briefly, the present status of the cotton trade of America's competitors, and see if there is any reason to believe that the United States will lose the supremacy that it has so long held as a cotton grower for Europe.

Although cotton is grown in every grand division of the earth's surface, and in many portions of each continent, in most countries the amount grown is insignificant. According to an eminent cotton statistician, the production of the various cotton growing countries of the world was in 1889–90 as follows:[1]

[1] Ellison, "A Centennial Sketch," 51. Compare chart by Harry Hammond on Production and Consumption of Cotton, 1790–1895, in "The Cotton Plant," Bulletin No. 33, Office of Experiment Stations, Department of Agriculture, opposite page 42. Same chart in von Halle, *Op. Cit.*, opposite page 156.

	Bales of 400 Pounds.	Per Cent.
United States	8,520,000	55.92
East Indies	3,280,000	21.33
China	1,450,000	9.52
Egypt	750,000	4.92
South America, West Indies, etc.	400,000	2.63
Africa, (except Egypt)	375,000	2.45
Asiatic Russia	200,000	1.31
Turkey	120,000	0.79
Japan	115,000	0.76
Greece, Italy, etc.	25,000	0.17
Total	15,235,000	100.00

Chief among the competitors of the United States as a cotton producing and exporting country, is India. Her cotton, the despised "Surat" of war times, when exported is chiefly used by the Continental countries,[1] as has already been mentioned. But in spite of the shortness of its staple, the Surat is no longer so despised by European spinners as was formerly the case. At the time of the American Civil War, the Indian cotton was not only short in staple, but poorly cleaned and poorly baled. Indian exporters have since learned the importance of handling well and preserving the staple which they ship. The Indian cotton is carefully wrapped in bagging, compressed until the cotton bale feels as hard as wood, and thoroughly protected by fourteen or fifteen turns of strap iron.[2] The care with which it is handled has often led to its being preferred to the otherwise better American staple, and our consul at Vienna reports that "Indian cotton is more and more gaining ground"

[1] "In the record season of 1889-90 when 3,361,000 bales of Indian cotton came into sight, Great Britain took just ten per cent., the Continent 45.6, Japan and the Far East 2.1,—in all 57.7 per cent. was exported; the mills consumed 30 and local consumption disposed of 12.3 per cent." Ellison, "The Cotton Trade of India," Latham, Alexander & Co.'s Report for 1895, p. 43.

[2] Report of John B. Hawes, U. S. Consul at Reichenberg, Bohemia, Report of Senate Committee, II: 86.

in Austria.[1] There is practically no limit to the area which can be devoted to cotton growing in India, and the United States consul-general at Calcutta tells us[2] that it is no longer the competition of the American cotton which regulates the cultivation of this staple in India. "The Indian cotton is not only finding a new and rapidly increasing market in India itself, but it also has taken a firm hold of the European Continental markets. . . . Cotton has entered into the regular rotation of crops among a people who dislike a change more than anything else, and being at all times readily convertible into money, is relied on by the farmer to produce a large portion of the cash required to meet the government rent and other payments." "As far more land is adapted to the cultivation of cotton than has ever been used for that purpose, one can feel assured that if the price of wheat or linseed falls, and of cotton rises, the change will lead to the claiming of a wider territory by the article advancing in value, than it has heretofore occupied." Perhaps India may come to consume nearly all of her cotton in her own mills, and thus relieve the United States from competition on the Continent, as she has already done in Great Britain.

A less imposing but really more dangerous rival to the American cotton trade is that of Egypt. This country, although having grown cotton in small amounts for centuries, became an exporter of it as late as 1821. It was the only one of the competitors of the South that succeeded in maintaining the increase in exportation which the American Civil War stimulated. The production and exportation of the Egyptian cotton have grown at a rapid rate ever since the Civil War, until in

[1] Report of Senate Committee, II : 92.

[2] *Ibid.*, 264.

1893, 678,000 bales were exported. About one-half of this went to the European mainland, and the rest mainly to England,[1] but a part of the English imports were reshipped to other countries. A novel feature of this Egyptian cotton trade is the fact that a part of the exports are sent regularly to the United States, and are there consumed in the mills.[2] The imports of Egyptian cotton into the United States have been as follows:[3]

	Bales.		Bales.		Bales.
1884-85	4,553	1888-89	8,430	1892-93	42,475
1885-86	3,815	1889-90	10,470	1893-94	33,606
1886-87	4,700	1890-91	23,790	1894-95	59,418
1887-88	5,792	1891-92	27.739		

To a certain extent this cotton does not come into direct competition with American cotton. This is especially true of its use in the United States. "It is especially adapted for thread, fine yarns, fine underwear and hosiery (such as 'Balbriggan,' etc.), and for goods requiring smooth finish and high luster."[4] For such goods the American cotton is not so well suited. But even in this country it has hurt somewhat the producer of long stapled cotton, because of its greater cheapness, and there has been a demand for tariff legislation against it.[5] In Europe this cotton is highly prized, and its consumption has almost doubled in twenty years. About one-half the imports from Egypt are used in Great Britain. "The Egyptian cotton has become a serious

[1] Report of Senate Committee, II: 225.

[2] A considerable quantity of rough Peruvian cotton, amounting in 1895 to about 24,000 bales, also comes to this country, but as it is used exclusively in the woolen mills it does not enter into competition with American cotton. Shepperson, "Cotton Facts," (December, 1895,) p. 95.

[3] Shepperson, "Cotton Facts," (December, 1895,) p. 95.

[4] *Ibid.*

[5] *Bradstreet's*, XXI: 459. The demand became quite urgent during the last session of Congress.

competitor to the American cotton," writes our consul at Horgen, Switzerland. "Its consumption has greatly increased. Numerous mills have discontinued to spin American cotton, and have arranged their mills for the spinning of Mako [Egyptian]."[1] Without doubt a prominent reason for the preference given by many manufacturers to the Egyptian over the American cotton, is due to the better baling and ginning of the former. The saw gin which tears and otherwise injures the long silky staple of the better grades of cotton, is not used in Egypt. The Egyptian cotton, put into bales of about 750 pounds, gross weight, is carefully covered and protected, and the bales are compressed until they are even smaller in size than the American bales of only two-thirds the weight.

To the American cotton growers the most assuring feature in the competition of Egyptian cotton is that the area at present devoted to the cultivation of this cotton, (less than a million acres in the Nile delta) is too small, and the difficulties in the way of increasing it, owing to the expense of irrigation works, are too great to make the competition of Egypt a formidable one.[2] But the acting consul-general at Cairo, Mr. Louis B. Grant, tells us that "the means of irrigation are being improved year by year," and that "it is probable that in time there will be a considerable increase in the production of cotton, as it is one of the best paying crops."[3] The wisest plan would seem to be for those engaged in preparing the American cotton for market, to prepare to meet this competition of Egyptian cotton rather than

[1] Report of Senate Committee, II : 134.

[2] Alfred B. Shepperson in Report of Senate Committee, I : 502-3 ; Edward Atkinson in *Manufacturers' Record*, XXVIII (October 25, 1895,) Supplement, page 2.

[3] Report of Senate Committee, II : 223.

to rely on the supposition that Egypt is unable to overcome the obstacles to irrigation.

Next to India and Egypt, the country promising the most important rivalry to the southern states in the near future, is Asiatic Russia. Cotton from American upland seed has been grown in Turkestan only since 1884, but so rapid has been the increase in its production that in 1894, 120,000,000 pounds were produced in this country for the Russian mills. As is the case in Egypt, the amount of land which can be used for cotton growing is very small, and it seems to be the opinion of those learned in the matter that the extension of cotton culture under present methods will not be very rapid.[1] But Russia's anxiety to relieve herself from dependence upon other countries for a supply of cotton, may lead her to adopt such measures, or offer such encouragements, as will lead to a change from the present poor methods of cultivation east of the Caucasus, and enable this country to furnish a supply of cotton sufficient to meet her own demands.[2] There is, on the other hand, the prospect of cotton mills being erected in Central Asia itself, which will consume the cotton grown in that region.[3] In that contingency it behooves the United States to make every possible effort to secure the trade of the mills in European Russia for her own cotton.

Among the other countries of the world which either are now producing or can grow cotton for export, there are some, like Argentina, Brazil and the region of Central Africa, which offer great possibilities for the distant future, but little more can now be said than this: The state of civilization, the sparsity of population and the

[1] Report of Senate Committee, I: 504; II: 168, 187, 192, 203.

[2] *Ibid.*, II: 167, 192, 203.

[3] *Ibid.*, II: 168.

lack of facilities for transportation, prevent the present use of the great expanse of cotton lands in these countries, and will prevent it for years to come.

One of the principal causes which has led to a relative decline in the importation of American cotton by European spinners, as compared to that secured from other lands, is due to the better care with which these cottons of foreign growth are prepared for the market.[1] In the days of the invention of the saw gin, and the careful culture of the sea island cotton, it was largely due to the better condition of the American cotton that this staple displaced the cotton from India, the West Indies and Brazil, on the European markets. But the European traders in India and Egypt, who supervise the preparation for market of the cotton grown in those countries, have learned the lessons which the slow moving populations of the East were reluctant to learn. In America, on the other hand, confidence in the superiority of the home grown cotton, and America's monopoly of the foreign trade, seems to have led to carelessness in the handling of this staple on the part of producers and exporters. Improvements in the methods of ginning and baling that have readily been adopted in foreign countries have often been neglected here. "There is no important staple product of the world," says Mr. Edward Atkinson, "which is deteriorated so much after it has been successfully grown, as the cotton of this country. It is as a rule, when compared to any high or true standard of treatment, badly ginned, badly packed, worse baled and wastefully treated

[1] This subject has been exhaustively dealt with by Major Harry Hammond. See his article, "The Handling and Uses of Cotton," in "The Cotton Plant," Bulletin No 33, Office of Experiment Stations, Dept. of Agriculture, (1896).

from the time it leaves the hands of the picker until it reaches the warehouse of the mill in which it is to be spun."[1]

The attention of the American people has often been called to this injurious method of ginning and packing, not only by our own manufacturers who are directly interested in the matter, but by our consuls in Europe, who have an opportunity to compare the condition of the American bales arriving there with the bales from other lands. In 1887, Mr. John B. Hawes, the United States consul at Reichenberg, Bohemia, in his dispatches wrote as follows:[2] "It is estimated that 60 per cent. of the cotton imported is American. American cotton is recognized to be the best, but there is one serious objection to it, the remedying of which is in the hands of the American packer, that is, careless packing. I have recently been shown a warehouse filled with hundreds of bales of cotton. In one end was the Indian cotton, and in the other the American. The Indian cotton was in bales little more than half the size of American, and yet weighing within a few pounds as much.[3] Each bale was encircled with a continuous piece of strap iron, making fourteen or fifteen turns. The cotton was wrapped in coarse sacking, which the iron had thoroughly protected. An examination of the end of the bale showed the cotton so firmly pressed that it was as hard as wood.

"The American cotton was wrapped also in bagging, and each bale was encircled by not more than half a dozen iron straps. Nearly every bale had burst open,

[1] Quoted from *Manufacturers' Record* by *Bradstreet's*, XXI : 459.

[2] Reprinted in Report of Senate Committee, II : 89–90.

[3] This is an error. Average net weight of American bales in 1887–88, was 475 pounds ; Indian bales, 395 pounds.

and larger or smaller quantities of cotton were protruding, and of course more or less had been lost in shipment. If the American bales were compressed to nearly half their present size and more strongly packed, I am sure it would affect favorably the sales of the American cotton here and elsewhere, and American cotton growers cannot afford to neglect any means of this kind if they would compete with their Indian rivals."

"I had hopes at the time of making these reports," writes the consul in 1893, "that an improvement might take place, especially as the department seemed to interest itself in the matter, but I regret to say that American cotton arrives here to-day in just the same condition as in 1887."

The statements of Mr. Hawes are corroborated by the evidence of Hugo M. Starkloff, U. S. Consul at Bremen, Germany, who writes:[1]

"For a long time the imperfect packing of the American cotton has been the subject of much complaint, made by all parties concerned, without any successful measures having hitherto been adopted in order to lead to an improvement. . . . By the use of the present bagging with its wide meshes, the importers suffer many inconveniences, and even considerable losses. It frequently occurs that the bales arrive here in such a defective condition as to be beyond description. Of the original packing or covers, only some rags are to be discovered, and it may easily be explained that bales of cotton in such condition create a considerable danger of fire, so that the underwriters evince great scruples to insure cotton. . . . . . Competent authorities in America might contribute to bring this [a strengthen-

[1] Report of Senate Committee, II: 78–9.

ing of the direct intercourse between Germany and the United States] about by taking energetic steps in order to put an end to the abuses aforesaid, and by exerting themselves to introduce better packing or covers of the bales of cotton, meeting all requirements as to closeness and durability, and adapted sufficiently to protect the cotton from thieves, damage, and risk of fire—a packing similar to that of East Indian cotton, which has never yet given rise to complaints." [1]

Within a year or two a new system of baling and compressing cotton, by means of which the cotton is put up in cylindrical bales, has come into use, in some sections of the Southwest. It is claimed by the friends of the new system that the bales are better packed and protected than when the cotton is put up in square bales, and there is undoubtedly a saving in transportation and storage, as seventy to eighty of these cylindrical bales can be placed in a car that could carry only from twenty to forty of the square packages.[2] One hundred of these cylindrical bales, averaging 32.7 pounds per cubic foot, have recently been shipped in one car,[3] and some of the railroads have offered rebates for cotton baled in this way when shipped by their roads. It is also claimed that the fibre, which it is asserted is damaged by the high pressure of the Indian and Egyptian compresses, is left uninjured in the cylindrical bales. The leading objection to the new system, known as the Bessonette system, is that it does not permit of sampling the cotton when it is once put in the bales, although its advocates

[1] See cuts in "The Cotton Plant" pp. 361, 363, showing American, Egyptian, Indian and Turkish bales, and the Bessonette cylindrical bales, as they arrive on the European markets.

[2] Jerome Hill, "Preparing Cotton for Shipment," *Manufacturers' Record*, Nov. 1, 1895, Supplement, 2–3.

[3] *Manufacturers' Record*, XXVIII: 207.

claim that the method which is at present adopted of taking samples during the process of baling, "one when the bat has commenced to roll on mandrel, one when the bale is half made and one just before it is completed," together with the twelve months' guarantee to the manufacturer, that the cotton is equal to the samples, is superior to the old method of free samples. If these claims prove well founded, there can be little doubt that the favor which will be shown the cylindrical bales by manufacturers and by railway and steamship lines will soon lead to the adoption of the new system throughout the South.

Recent experiments and the experience of other countries seem to indicate that the saw gin which a century ago gave the world's cotton trade into the hands of the people of the South, will itself have to give way to new appliances for cleaning the fleecy staple, and that the roller gin, long since superseded, except in the case of the sea island cotton, may, greatly improved, again come into use for cleaning the better grades of the upland varieties as well.[1] The future of the cotton trade is in the hands of American producers, packers and shippers, for there is little doubt but that European manufacturers still prefer the American cotton when it is handled and shipped with the same care as the staple produced in other lands.

Important as is the foreign trade to the cotton growers of America, it is to be hoped that the greatest expansion of the cotton market will henceforth come from an increase in the home consumption. Not only is our

[1] See papers read at the Cotton Manufacturers' Association at the Atlanta Exposition, October, 1895, by Edward Atkinson on "Improvement of Cotton," and by Jerome Hill on "Preparing Cotton for Shipment," reported in *Manufacturers' Record,* Vol. XXVIII, (October 25, and Nov. 1, 1895).

own rapidly growing population offering a constant stimulus to cotton manufacturers, but the opening of new markets in China, Japan,[1] and especially in the Central and South American republics, present opportunities which our manufacturers and merchants should avail themselves of to supply the people of these lands with American made cotton goods. Our protective system, it is sometimes said, prevents us from competing with English and Indian cotton manufacturers in the outside markets of the world.[2] This is a subject which will command our attention in the subsequent portion of this work. It is sufficient here to point out that the future development of the American cotton trade depends largely on the ability of American manufacturers to find wider markets for their fabricated products.

[1] "Cotton is being transported in large quantities by rail from the South to San Francisco for ocean reshipment from that point to China and Japan. This is a new departure in commerce, and one which promises to be very advantageous to our cotton producers in the way of extending their market and giving them better prices." *St. Louis Globe-Democrat*, December 26, 1896.

[2] Ellison, "A Centennial Sketch," 26.

APPENDIX I.

STATISTICS OF THE COTTON PRODUCTION AND TRADE OF THE UNITED STATES.

NOTE TO TABLE.

For the early years of the American cotton trade the statistics are not to be relied upon for accuracy, as they are usually mere estimates made by merchants or government officials. Not until 1821 do we have accurate statistics of production. In order to illustrate the growth of the American cotton trade, I have, nevertheless, included the figures for the earlier years wherever they seemed to rest on good authority, or to be the result of a careful estimate. The sources of information for the following table are Woodbury's Report on Cotton Production and Consumption (Ex. Doc., 1st Sess., 14th Cong., No. 146); James L. Watkin's "Production and Price of Cotton for One Hundred Years" (published by the U. S. Dept. of Agriculture); "Cotton in Commerce" (published by the Bureau of Statistics, U. S. Treasury Dept.); Ellison's "The Cotton Trade of Great Britain;" the "Annual Reviews" of Ellison & Co., Liverpool; Donnell's "History of Cotton; *The Commercial and Financial Chronicle;* The Statistical Abstract of the United States (published by the Bureau of Statistics, U. S. Treasury Dept.), and the Annual Reports of Henry G. Hester, secretary of the New Orleans Cotton Exchange.

Mr. Hester has called my attention to the fact that the average annual prices at New Orleans, the largest "spot" market on this side of the Atlantic, would furnish a much better basis for a comparison of American and British prices than those at New York, where the annual sales are comparatively insignificant. Unfortunately the average annual prices at New Orleans do not seem ever to have been collated. *The New Orleans Price Current* would probably furnish the data, but the files of this journal were not at hand when I compiled my table.

In the following table some of the earlier years end September 30th, instead of August 31st. The early years also include in the exports some cotton of foreign growth reshipped from the United States. The classification of cotton has been changed several times by the New York Cotton Exchange. For this reason "middling uplands" do not always represent exactly the same grade. The change is believed, however, to be unimportant, and doubtless does not affect seriously the variation of prices.

The Cotton Production and Trade of the United States from 1784 to

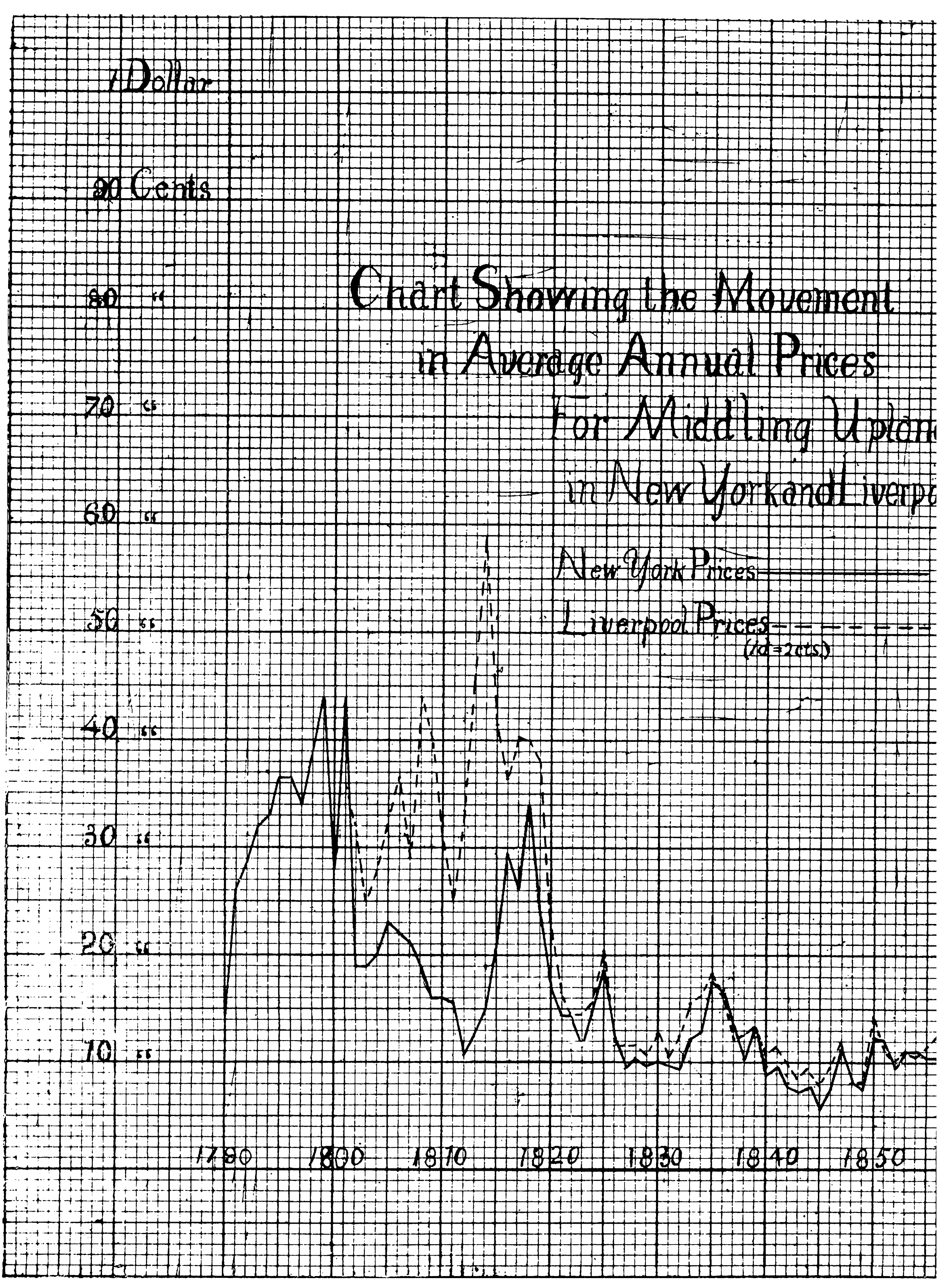
Year Ending Aug. 31.	Total Production of United States.		Total Exports of United States.		Total Exports of United States to Great Britain.		Total Consumption of United States.		Percentage of Crop Exported.
	In Thousands of Bales.	In Thousands of Pounds.	In Thousands of Bales.	In Thousands of Pounds.	In Thousands of Bales.	In Thousands of Pounds.	In Thousands of Bales.	In Thousands of Pounds.	
1784	No data	No data	.01	1	.01	1	No data	No data	No data
1785	" "	" "	.01	2	.01	2	" "	" "	" "
1786	" "	" "	.01	1	.01	1	" "	" "	" "
1787	" "	" "	.11	16	.11	16	" "	" "	" "
1788	" "	" "	.39	58	.39	58	" "	" "	" "
1789	" "	1000	.84	126	.84	126	" "	" "	12.60
1790	" "	1500	.08	12	.08	12	" "	5000	.80
1791	9	2000	.89	189	.89	189	" "	No data	9.45
1792	13	3000	.63	138	.63	138	" "	" "	4.60
1793	22	5000	2.	488	2.	487	" "	" "	9.60
1794	35	8000	7.	1602	7.	1602	" "	" "	20.02
1795	36	8000	28.	6276	28.	6276	" "	" "	78.45
1796	44	10000	27.	6107	27.	6106	" "	" "	61.07
1797	49	11000	17.	3788	17.	3788	" "	" "	34.44
1798	67	15000	42.	9360	42.	9360	" "	" "	62.40
1799	89	20000	42.	9532	42.	9532	" "	" "	47.66
1800	156	35000	79.	17790	71.	16180	36	8000	55.08
1801	211	48000	92.	20911	84.	18953	39	No data	43.57
1802	241	55000	121.	27501	103.	23474	No data	" "	50.00
1803	251	60000	158.	41106	115.	27757	" "	" "	68.51
1804	241	65000	130.	38118	95.	25771	" "	" "	58.64
1805	281	70000	154.	40383	131.	32571	44	" "	57.69
1806	348	80000	155.	37491	105.	24256	No data	" "	46.86
1807	286	80000	228.	66213	190.	53180	" "	" "	82.76
1808	272	75000	39.	12064	29.	7993	" "	" "	16.08
1809	366	82000	228.	53210	60.	13366	" "	" "	64.89
1810	340	85000	373.	93874	145.	36172	64	16000	111.02
1811	269	80000	209.	62186	128.	38073	57	No data	77.73
1812	305	75000	117.	28953	95.	23461	No data	" "	38.60
1813	305	75000	78.	19400	38.	9279	" "	" "	25.87
1814	285	70000	72.	17806	49.	12008	" "	" "	25.44
1815	364	100000	302.	82999	203.	55839	90	31500	82.99
1816	458	124000	302.	81747	166.	45007	No data	No data	65.92
1817	461	130000	304.	85649	200.	54327	" "	" "	65.85
1818	448	125000	331.	92471	208.	57915	" "	" "	73.97
1819	596	167000	314.	87997	205.	57445	" "	" "	52.69
1820	606	160000	484.	127860	302.	79832	" "	" "	79.25
1821	647	180000	449.	124893	300.	83419	" "	" "	69.33
1822	742	210000	511.	144675	330.	93363	" "	" "	68.86
1823	621	185000	583.	173723	453.	134436	" "	" "	83.89
1824	762	215000	505.	142370	282.	79629	" "	" "	66.22
1825	892	255000	617.	176440	424.	125452	" "	" "	69.15
1826	1121	350000	656.	204535	396.	123506	" "	" "	58.43
1827	957	316860	854.	294310	446.	213883	149	49489	92.22
1828	721	241400	600.	210590	425.	142278	121	40397	87.19
1829	870	296812	749.	264847	498.	169918	119	40328	89.24
1830	976	331150	839.	298459	596.	201947	127	42888	89.22
1831	1038	354547	773.	270980	619.	210875	182	62110	76.44
1832	987	355492	892.	322215	638.	229733	174	72568	90.63
1833	1070	374653	867.	303609	630.	220551	194	68044	81.03
1834	1205	437558	1028.	372946	756.	274537	196	71298	85.22
1835	1254	460358	1023.	375638	723.	265238	217	79598	81.59
1836	1361	507550	1117.	415493	771.	287630	237	73391	81.86
1837	1424	539669	1168.	442833	851.	322448	223	84343	82.05
1838	1801	682757	1576.	597063	1165.	441614	246	93258	67.83
1839	1361	522444	1075.	412681	798.	306951	276	105980	79.18
1840	2178	834111	1876.	718509	1247.	477521	295	113059	86.15
1841	1635	644172	1313.	517628	859.	338344	297	117331	80.35
1842	1684	668389	1465.	581703	936.	371446	268	106326	87.02
1843	2379	972960	2010.	822146	1470.	601312	325	132978	88.75
1844	2030	836529	1629.	671350	1202.	495429	347	142861	80.25
1845	2395	992719	2084.	864759	1439.	597212	389	161435	87.11
1846	2101	863321	1667.	685042	1102.	453074	423	173689	79.12
1847	1779	766599	1241.	534967	831.	358122	428	184468	69.78
1848	2440	1017391	1858.	774895	1324.	552227	616	256890	76.16
1849	2867	1249976	2228.	971340	1540.	670527	642	280124	53.70
1850	2334	1001165	1590.	681176	1107.	474705	613	263191	68.03
1851	2454	1021048	1989.	827303	1418.	789998	486	202015	81.03
1852	3126	1338061	2444.	1045880	1669.	714235	690	295150	78.16
1853	3416	1496302	2528.	1107439	1737.	760740	804	352032	74.01
1854	3075	1322241	2319.	997234	1604.	666378	737	317011	75.42
1855	2983	1294462	2244.	973987	1550.	672577	706	306585	75.24
1856	3656	1622908	2955.	1240935	1921.	806982	778	326650	76.53
1857	3094	1438520	2253.	1000180	1429.	634418	820	364054	69.53
1858	3257	1517518	3590.	1586981	1810.	799994	596	263238	104.51
1859	4019	1892665	3021.	1350567	2019.	902608	928	414660	71.30
1860	4861	2275372	3774.	1739893	2669.	1230607	978	470278	76.47
1861	3849	1934546	3128	1531850	3175.	1037582	844	402464	74.06
1862	No data	No data	No data	No data	No data	No data	370	176490	No data
1863	" "	" "	" "	" "	" "	" "	288	137376	" "
1864	" "	" "	" "	" "	" "	" "	220	104940	" "
1865	" "	" "	" "	" "	" "	" "	345	164565	" "
1866	2269	1041962	1555.	650573	1262.	512464	666	396318	62.43
1867	2097	969175	1557.	661473	1216.	524320	770	307168	68.32
1868	2520	1173431	1656.	784764	1229.	564515	907	388531	66.90
1869	2366	1129812	1466.	644328	990.	436544	926	486376	57.01
1870	3123	1451401	2206.	958559	1475.	649166	865	494314	63.98
1871	4352	2020694	3169.	1462928	2367.	1102322	1110	558186	72.39
1872	2974	1384084	1957.	933537	1455.	703915	1237	453153	67.42
1873	3931	1833189	2680.	1200064	1906.	858649	1201	637216	65.47
1874	4170	1940648	2841.	1358602	1868.	902572	1306	585294	70.03
1875	3833	1783644	2685.	1260419	1894.	911932	1193	524941	70.69
1876	4632	2157958	3234.	1491405	2081.	957330	1352	668780	70.75
1877	4474	2095901	3031.	1445369	2025.	1020364	1428	652911	68.97
1878	4774	2260286	3360.	1607534	2037.	1039948	1489	654849	71.23
1879	5074	2404410	3481.	1628373	2059.	983775	1528	778528	67.74
1880	5761	2771797	3885.	1822061	2556.	1116625	1790	953049	65.73
1881	6606	3199823	4589.	2191929	2843.	1364836	1939	1011103	68.47
1882	5456	2588249	3583.	1739976	2313.	1180806	1965	859769	67.23

84 to 1897.

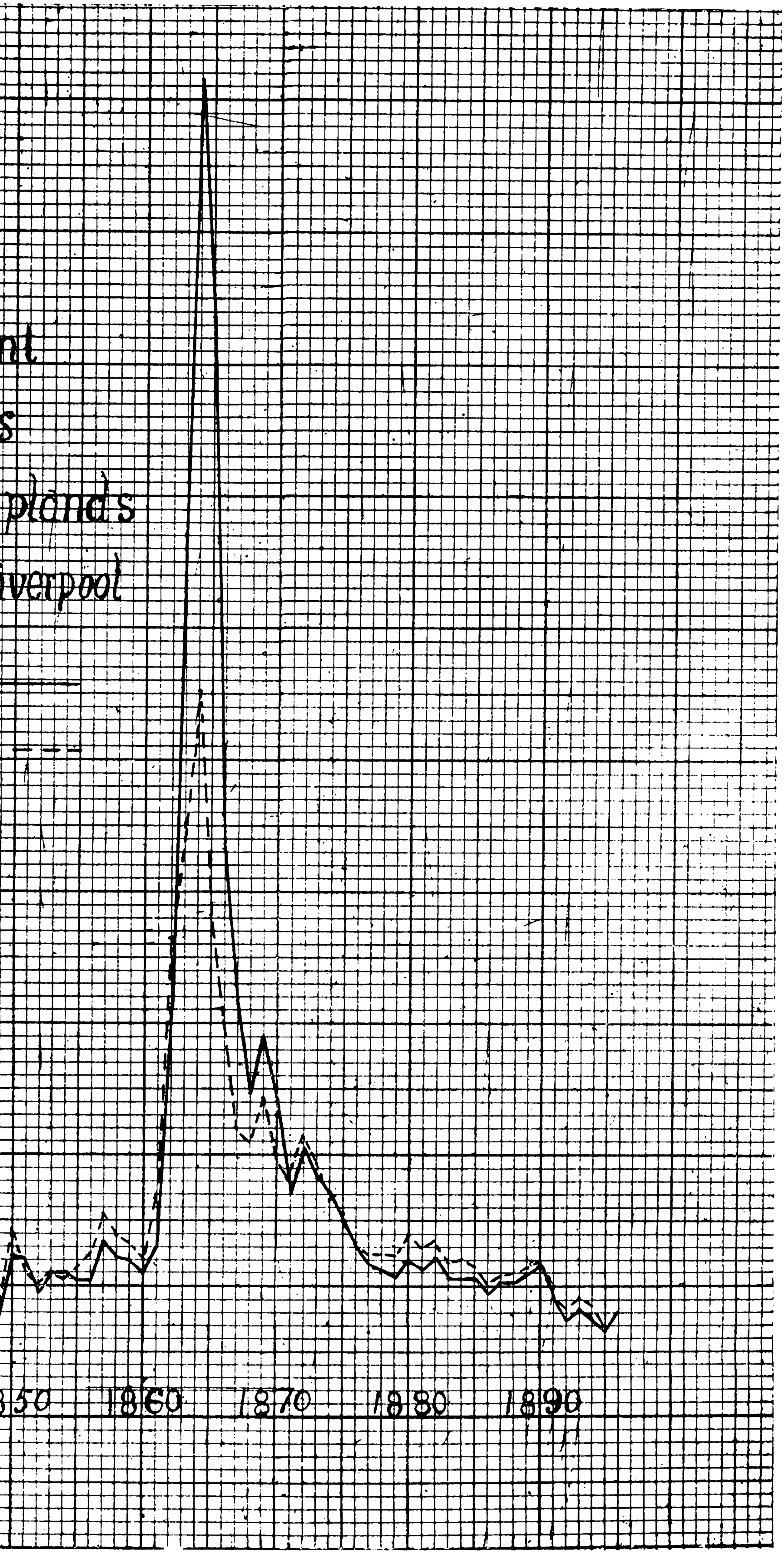
centage f Crop ported.	Average New York Prices for Middling Uplands. Cents.	Average Liverpool Prices for Middling Uplands. Pence.
o data	No data	No data
"	" "	" "
"	" "	" "
"	" "	" "
"	" "	" "
12.60	" "	" "
.80	14.5	.10
9.45	26.0	13-30
4.60	29.0	20-30
9.60	32 0	13-22
20.02	33.0	12-18
78.45	36.0	15-27
61.07	36.5	12-29
34.44	34.5	12-37
62.40	39.0	22-45
47.66	44.0	17-60
55,08	24.0	16-36
43-57	44.0	18.0
50.00	19.0	16.0
68.51	19.0	12.5
58.64	20.0	14.0
57.69	23.0	16.5
46.86	22 0	18.2
82.76	21.5	14.5
16.08	19.0	22.0
64.89	16.0	20.0
11.02	16.0	15 5
77.73	15.5	12.5
38.60	10.5	16.7
25.87	12.5	23.0
25.44	15.0	29.5
82.99	21.0	20.7
65.92	29.5	18.25
65.85	26.5	20.12
73.97	24.0	20 00
52.69	24.0	13.50
79.25	17.0	11.50
69.33	14.32	8.23
68.86	14.32	6.95
83.89	11.40	7.21
66.22	14.75	7.66
69.15	18.59	10.10
58.43	12.19	5.85
92.22	9.26	5.79
87.19	10.32	5.84
89.24	9.88	5.32
89.22	10.04	6.44
76.44	9.71	5.38
90.63	9.38	6.22
81.03	12.32	7.87
85.22	12.90	8.10
81.59	17.45	9.13
81.86	16.50	8.79
82.05	13.25	6.09
67.83	10.14	6.28
79.18	13.36	7.19
86.15	8.92	5 42
80.35	9.50	5.73
87.02	7.85	4.86
88.75	7.25	4.37
80.25	7.73	4.71
87.11	5.63	3.92
79.12	7.87	4.80
69.78	11.21	6.03
76.16	8.03	3.93
53.70	7.55	4.09
68.03	12.34	7.10
81.03	12.14	5.51
78.16	9.50	5.05
74.01	11.02	5.54
75.42	10.97	5.31
75.24	10.39	5.60
76.53	10.30	6.22
69.53	13.51	7.73
104.51	12.23	6.91
71.30	12.08	6.68
76.47	11.00	5.97
74.06	13.01	8.50
o data	31.29	18.37
"	67.21	22.46
"	101.50	27.17
"	83 38	19.11
62.43	43.20	15.30
68.32	31.59	10.98
66.90	24.85	10.52
57.01	29.01	12.12
65.98	23.98	9.89
72.39	16.95	8.55
67.42	20.48	10.78
65.47	18.15	9.65
70.03	17.00	8.36
70.69	15.00	7.67
70.75	13.00	6.61
68.97	11.73	6.29
71.23	11.28	6.31
67.74	10.38	6.16
65.73	12.02	6.94
68.47	11.34	6.48
67.23	12.16	6.70

1876	4632	2157958	3234.	1491405	2081.	957330	1352	668780	70.75
1877	4474	2095901	3031.	1445369	2025.	1020364	1428	652911	68.97
1878	4774	2260286	3360.	1607534	2037.	1039948	1489	654849	71.23
1879	5074	2404410	3481.	1628373	2059.	983775	1528	778528	67.74
1880	5761	2771797	3885.	1822061	2556.	1116625	1790	953049	65.73
1881	6606	3199823	4589.	2191929	2843.	1364836	1939	1011103	68.47
1882	5456	2588240	3583.	1739976	2312.	1180896	1965	859760	67.23
1883	6950	3405070	4767.	2288075	2888.	1388205	1073	1117838	67.20
1884	5713	2757544	3917.	1862573	2499.	1192127	1877	900637	67.56
1885	5706	2742966	3948.	1891659	2412.	1209917	1753	854813	68.96
1886	6576	3182306	4336.	2058037	2559.	1222241	2163	1128064	64.68
1887	6505	3157378	4445.	2169457	2698.	1356757	2112	991129	68.71
1888	7046	3439172	4628.	2264121	2808,	1419262	2257	1180345	65.83
1889	6938	3439935	4742.	2384817	2842.	1470400	2314	1062903	69.33
1890	7311	3627366	4950.	2471800	2845.	1452576	2391	1163924	68.15
1891	8653	4316044	5847.	2907359	3319.	1700606	2632	1429146	67.36
1892	9035	4506576	5933.	2935220	3331.	1690843	2877	1599887	65.13
1893	6700	3352658	4445.	2212115	2332.	1181588	2431	1183550	65.99
1894	7550	3769381	5288.	2683282	2761.	1485451	2320	1112775	71.20
1895	9901	5036965	6818.	3305046	3325.	1609499	2947	1426192	65.61
1896	7157	3592417	4707.	2362537	2299.	1153814	2505	1257310	65.76
1897	8757	4397178	6052.	3038588	3018.	1515509	2847	1429578	69.12

70.75	13.00	6.61
68.97	11.73	6.29
71.23	11.28	6.31
67.74	10.38	6.16
65.73	12.02	6.94
68.47	11.34	6.48
67.23	12.16	6.70
67.20	10.63	5.90
67.56	10.64	6.03
68.96	10.54	5.76
64.68	9.44	5.14
68.71	10.25	5.42
65.83	10.27	5.51
69.33	10.71	5.73
68.15	11.53	5.97
67.36	9.03	4.94
65.13	7.64	4.18
65.99	8.24	4.57
71.20	7.67	4.23
65.61	6.50	3.41
65.76	8.16	4.12
69.12	7.72	



1 Dollar
90 Cents
80 "
70 "
60 "
50 "
40 "
30 "
20 "
10 "
Chart Showing the Movement in Average Annual Prices For Middling Upland in New York and Liverpool
New York Prices
Liverpool Prices (1d=2cts)
1790
1800
1810
1820
1830
1840
1850



nt
s
plands
iverpool
350
1860
1870
1880
1890

APPENDIX II.

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[1] In this list works of a technical nature, such as reports of experiment stations, spinners and carders' guides, etc., have usually been omitted. For a large part of this bibliography I am indebted to Mr. Robert B. Handy, of the Office of Experiment Stations, Department of Agriculture, Washington, D. C.

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ERRATA ET CORRIGENDA.

On page 18, note 3, and subsequent references to this author, for "Uré," read "Ure."

On page 50, in line 3, for "cropping," read "single crop."

On page 61, in line 11, for "large or larger," read "large as or larger."

On page 122, in line 13, for "establishing," read "re-establishing."

On page 175, in the table, omit the averages in the columns headed "Annual Rate of Increase or Decrease, Per cent."

On page 206, in line 32, for "socities," read "societies," and in line 33 for "about two dollars," read "about four dollars."

On page 282, in line 1, for 1810, read 1830.

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