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UNITED STATES TARIFF COMMISSION

PAPER MACHINERY AND PARTS: WORKERS AND FORMER  
WORKERS OF THE WATERTOWN, N. Y., PLANT  
OF THE BLACK CLAWSON CO.

Report to the President  
on Investigation No. TEA-W-236  
Under Section 301(c)(2) of the Trade Expansion Act of 1962



TC Publication 683  
Washington, D. C.  
August 1974

**UNITED STATES TARIFF COMMISSION**

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REPORT TO THE PRESIDENT

U.S. Tariff Commission,  
August 9, 1974.

To the President:

In accordance with sections 301(f)(1) and 301 (f)(3) of the Trade Expansion Act of 1962 (19 U.S.C. 1901), the U.S. Tariff Commission herein reports the results of investigation No. TEA-W-236 made under section 301(c)(2) of the act to determine whether, as a result in major part of concessions granted under trade agreements, articles like or directly competitive with paper machinery and parts (of the types provided for in items 668.00 and 668.06 of the Tariff Schedules of the United States (TSUS)) produced by the Black Clawson Co. at its Watertown, N. Y., plant are being imported into the United States in such increased quantities as to cause, or threaten to cause, the unemployment or underemployment of a significant number or proportion of the workers of such firm or appropriate subdivision thereof.

The investigation was instituted on June 19, 1974, on the basis of a petition for adjustment assistance filed June 11, 1974, under section 301(a)(2) of the act on behalf of the workers and former workers of the firm.

Public notice of the investigation was given by posting copies of the notice at the office of the Commission in Washington, D. C., at the New York City office, and by publication in the Federal Register of June 26, 1974 (39 F. R. 23098). No public hearing was requested in connection with the investigation and none was held.

In the course of this investigation, the Commission obtained information from the Black Clawson Co., other domestic producers of paper machines, importers of paper machines, the New York State Division of Manpower Services, the Pulp and Paper Machine Manufacturers Association, the International Association of Machinists and Aerospace Workers, and the Commission's files.

#### Finding of the Commission

On the basis of the investigation, the Commission unanimously finds that articles like or directly competitive with the paper machinery and parts (of the types provided for in items 668.00 and 668.06 of the Tariff Schedules of the United States) produced by the Black Clawson Co. at its Watertown, N. Y., plant, are not, as a result in major part of concessions granted under trade agreements, being imported into the United States in such increased quantities as to cause, or threaten to cause, the unemployment or underemployment of a significant number or proportion of the workers of such firm or an appropriate subdivision thereof.

### Considerations Supporting the Commission's Finding

Our determination in this investigation relating to workers and former workers of the Black Clawson Co. is in the negative because the criteria established by section 301(c)(2) of the Trade Expansion Act of 1962 (TEA) have not been met. Before an affirmative determination can be made, the Commission must find that each of the following conditions has been satisfied:

1. Articles like or directly competitive with those produced by the workers' firm are being imported in increased quantities;
2. The increased imports are the result in major part of concessions granted under trade agreements;
3. A significant number or proportion of the firm's workers are unemployed or underemployed; and
4. The increased imports resulting from trade-agreement concessions are the major factor in causing or threatening to cause the unemployment or underemployment of the workers.

Some of the Commissioners question whether one or all of the first three conditions have been satisfied, but are unanimous in the decision that the fourth criterion has not been met.

The Black Clawson Co. was incorporated in Ohio in 1883. Currently, Black Clawson manufactures a full line of paper machinery in the United States and abroad. In the United States, the Black Clawson Co. manufactures paper machines and parts thereof only at its Watertown, N. Y., plant, where the petitioning workers were employed. Other domestic facilities include a plant for the production of wood-preparation equipment at Everett, Wash.; plants for producing pulp- and paper-mill-stock-preparation equipment at Middletown, Ohio; a

plant for making converting paper and plastics machinery at Fulton, N. Y.; and a plastics and industrial machinery plant at Hamilton, Ohio.

As indicated above, the fourth criterion requires a finding that concession-generated imports must have been the major factor in causing the unemployment or underemployment of the workers involved. In this investigation, we have found that other factors have been more significant in causing such layoffs, namely a contracting U. S. market during 1971 and a preference by an increasing number of U. S. paper mills for the paper machinery and parts manufactured by another domestic supplier.

Demand for new paper machines in the United States fell off sharply in 1971, in part because of the economic recession and a persistent and increasing overcapacity in the U. S. paper industry. In addition, certain paper companies were faced with large expenditures for required pollution controls; such expenditures might otherwise have been made for new paper machinery and parts. As a result, prime contracts awarded for entire paper machines for delivery to U. S. mill sites totaled only \$8.0 million in 1971, compared with \$33.5 million in 1970 and \$39.7 million in 1972. This low point for new paper-machine contracts resulted in a sharp decline in employment at Black Clawson's Watertown plant with the number of production and related workers dropping from \* \* \* in 1970 to \* \* \* in 1971.

During 1968-73, Black Clawson's share of prime contracts for new U. S. -produced paper machines delivered to U. S. mill sites



declined sharply, falling from \* \* \* percent, in terms of value, in 1968-70 to \* \* \* percent in 1971-73. By the same token, shipments of paper machinery parts by Black Clawson declined \* \* \* percent from 1968 to 1973. A domestic firm engaged in the production of paper machinery and parts was the principal beneficiary of Black Clawson's declining sales--its share of this market rose from \* \* \* percent, in terms of value, in 1968-70 to \* \* \* percent in 1971-73. In addition, this firm succeeded in winning this larger share of business in a market that grew significantly in 1972 and 1973. Prime U.S. contracts awarded to U.S. producers rose from \$49 million in 1968-70 to \$88 million in 1971-73. The import share of total U.S. prime contracts declined from 33 percent in 1968-70 to 23 percent in 1971-73.

In view of the foregoing, we have concluded that increased imports, if any, are not the major factor causing or threatening to cause the unemployment or underemployment of the petitioning workers.

### Further Views of Commissioner Leonard

I concur with the considerations supporting the Commission's finding that any increased imports are not the major factor causing or threatening to cause the unemployment or underemployment of the petitioning workers. However, a discussion of the first, second, and third criteria as cited in the Commission's finding for this case is desirable, since certain unanswered questions exist.

The first criterion states: "Articles like or directly competitive with those produced by the workers' firm are being imported in increased quantities." Import data are not separately classified for paper machinery and parts, but such imports, including parts for pulp machinery, varied irregularly in recent years. These imports remained relatively constant during 1969-71 at \$14 to \$15 million, rose to \$20 million in 1972, then dropped to nearly \$12 million in 1973, averaging about \$15 million annually during 1969-73. Therefore, it is probable that paper machines and parts are not being imported in increased quantities, although the lack of separate statistical data clouds the issue.

The second criterion states: "The increased imports are the result in major part of concessions granted under trade agreements." The principal tariff concession applicable to paper machines became effective on January 1, 1948, when the rate was reduced from 27.5 percent ad valorem to 15.0 percent ad valorem. Imports of paper machinery and parts were relatively insignificant from the late 1940's through the early 1960's. The pre-Kennedy Round rate of 7.0 percent

ad valorem was gradually reduced beginning on January 1, 1968, in five annual stages to 3.5 percent ad valorem on January 1, 1972. These duty reductions, particularly the Kennedy Round tariff reductions which began on January 1, 1968, were probably not sufficient to significantly affect the competitive situation. This is especially true when one considers the importance of design characteristics to the purchasers of paper machines.

The third criterion states: "A significant number of the firm's workers are unemployed or underemployed." The number of production and related workers at Black Clawson's Watertown plant declined annually from \*\*\* in 1968 to \*\*\* in 1972. However, such employment increased to \*\*\* in 1973 and rose to \*\*\* in January-April 1974. There was a sharp decline in employment in the Black Clawson plant during 1971-72; the subsequent upturn was due to increased paper machinery and parts business as well as to \*\*\*. The number of production and related workers at the Watertown plant of Black Clawson in January-April 1974 was \*\*\* percent below the annual average for 1968.

The previous discussion relating to the first, second, and third criteria, although partially inconclusive, reinforces my negative determination which was based on the fourth criterion.



## INFORMATION OBTAINED IN THE INVESTIGATION

## Description and Uses

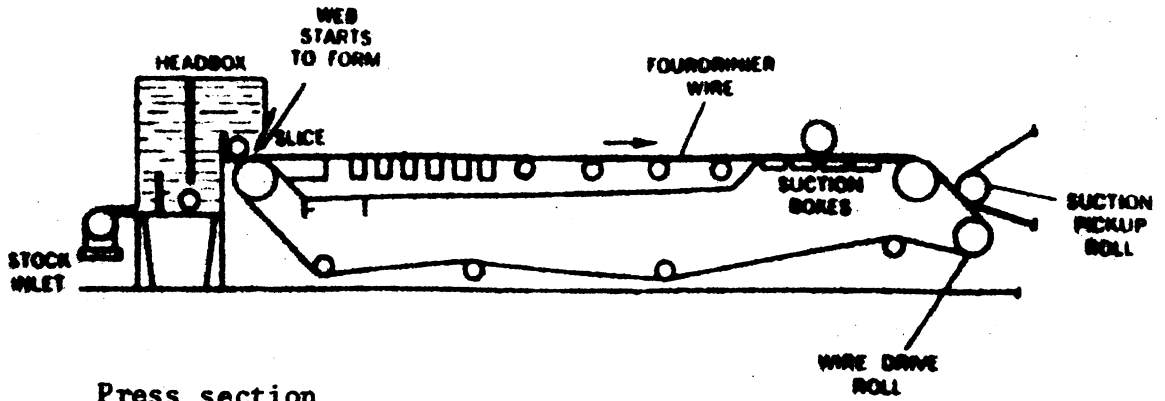
The process of making paper is complex and requires a large variety of machinery, ranging from stock preparation equipment to the highly sophisticated papermaking machine. The only equipment encompassed by this investigation is the papermaking machine itself and parts thereof, the function of which is to form paper from a water suspension of wood fibers or fibers of other materials.

Modern papermaking machines are large and complex, weigh several hundred tons, and may be as long as 600 feet. The machines are assembled at the mill site from numerous components delivered during a 12- to 18-month construction period. Such a machine is regarded as a major capital investment by both buyers and sellers since the price of such a machine can run to roughly \$10 million.

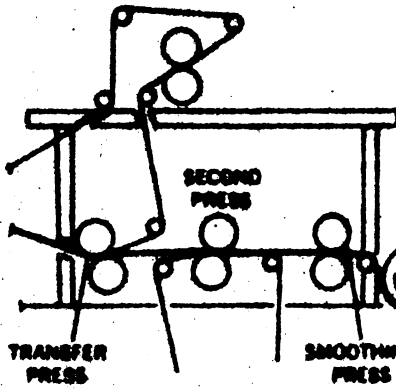
The two types of papermaking machines normally used in making paper and paperboard are the Fourdrinier machine and the cylinder machine. The Fourdrinier machine usually consists of four sections: the wet end, the press, the dryer, and the calender and reels (see chart 1). In the wet end a suspension of pulp (usually of wood fibers) in water flows through and out of the headbox, regulated by the slice, onto the Fourdrinier wire, forming a continuous web of fibers. The Fourdrinier wire, an endless belt of metal or plastic cloth carrying the web of fibers, then passes over a series of suction devices which draw off water. At the end of the Fourdrinier

Chart 1. --FOURDRINIER MACHINE

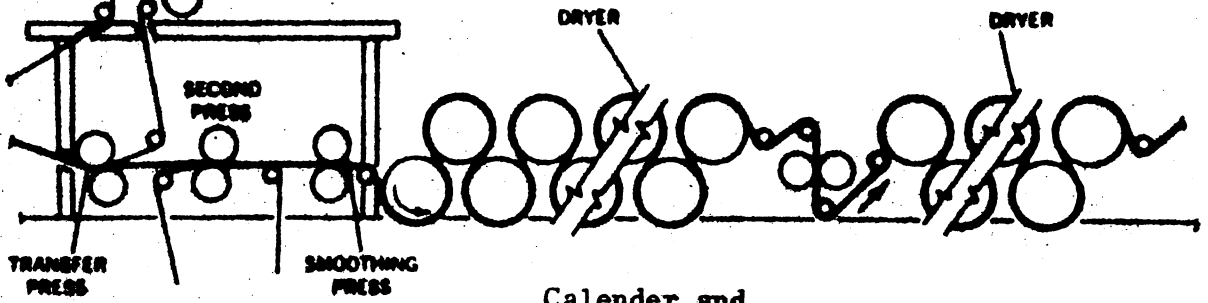
Wet end section



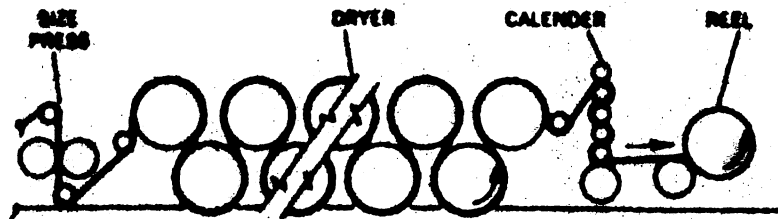
Press section



Dryer section



Calender and reel section

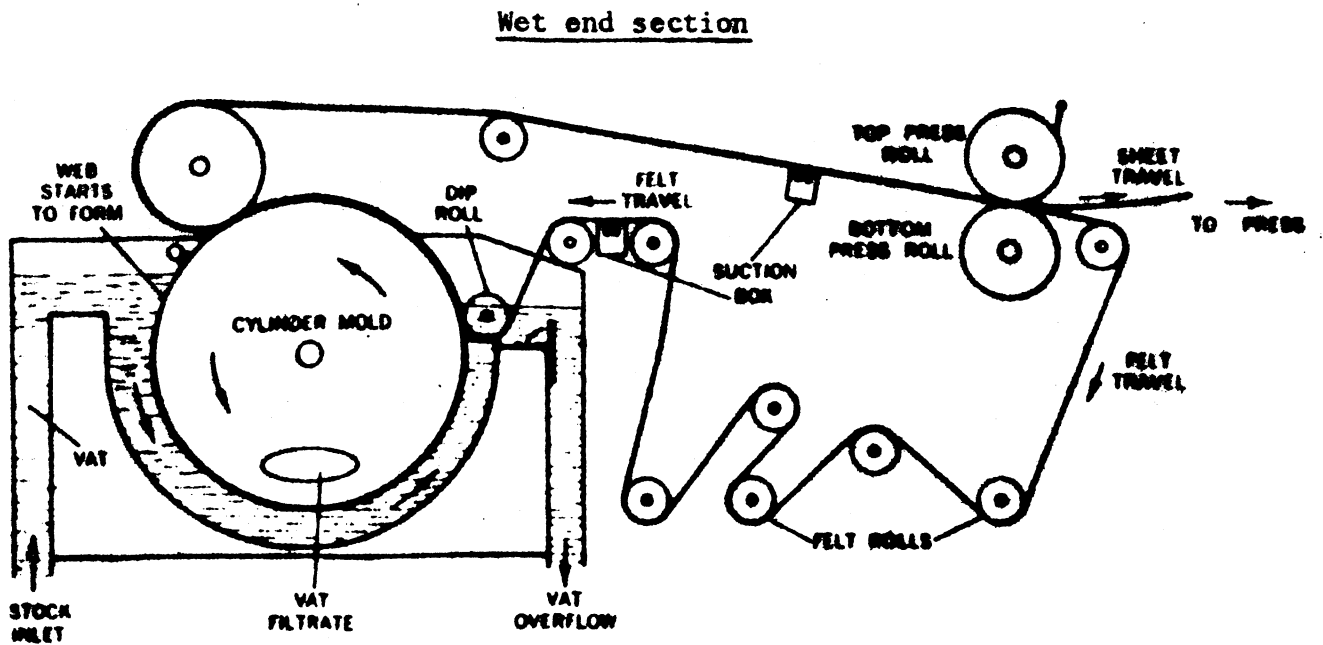


section, the web of fibers is removed from the wire and fed into the press section, which mechanically removes additional water from the sheet by pressing it between cloth felts and rolls of steel. The third section, the dryer section, consisting of several dozen steam-heated cylinders, removes the remaining water. The paper is held against these cylinders by cloth felts which travel with the sheet through the section. The sheet then leaves the dryer section and moves into the calender stack. The calender, consisting of one to three stacks of large cast-iron rolls, finishes the paper by giving it a smooth surface and the desired gloss. From the calender stack the sheet goes to the reel, which winds the paper into a roll. The roll of paper is then ready for further finishing or processing.

The overall speed of a papermaking machine depends on the grade and weight of paper being manufactured, as well as the general design specifications. Many Fourdrinier machines can produce a sheet of paper 30 feet wide at the rate of 3,000 feet per minute. Such machines can produce more than 1,000 tons of paper per day.

The other major type of papermaking machine, the cylinder type, is characterized by the use of wire-covered cylinders or molds on which the web of fibers is formed (see chart 2). The cylinders are partially immersed and rotated in vats containing the wood fibers in suspension. The fibers are formed into a sheet on the cylinder as the water drains out. The wet sheet is taken off the cylinder by a felt which is held against the cylinder by a roll. The press section, and the dryer section, as well as the calender and reels, are

Chart 2. --CYLINDER MACHINE





essentially the same as those of a Fourdrinier machine. The cylinder machine, which normally produces thicker, heavier grades of paper, runs at a slower speed than the Fourdrinier.

There are other types of papermaking machines with unique features, but they are essentially variations of the Fourdrinier or the cylinder machine.

#### U.S. Tariff Treatment

Papermaking machines (except for dryers and parts thereof, which are classified under item 661.70 1/) are currently classified in the Tariff Schedules of the United States under item 668.00, which provides for all machines for making cellulosic pulp, paper, or paperboard. Parts of such machines are classified separately under item 668.06. 2/ The current rate of duty applicable to both tariff items 668.00 and 668.06 is 3.5 percent ad valorem; the rate of duty applicable to item 661.70 is 6.0 percent ad valorem. These rates, which became effective January 1, 1972, reflect the fifth and final stage of concessions granted by the United States in the sixth (Kennedy) round of trade negotiations under the General Agreement on Tariffs and Trade (GATT); prior to the Kennedy Round, the rates of duty that had been in effect since the adoption of the TSUS on August 31, 1963, were 7 percent ad valorem for items 668.00 and 668.06 and 12.5 percent ad valorem for item 661.70.

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1/ In the course of the investigation it was discovered that some imports may enter under TSUS 661.70.

2/ Certain customs entries under TSUS item 668.04, at 7 percent ad valorem, may be integral parts of paper machines. However, analysis of customs documents indicates these entries to be small or negligible.

Under the Tariff Act of 1930, as originally enacted, papermaking machinery without an electrical element or device as an essential feature, as well as parts, was provided for under paragraph 372 of that act at 27.5 percent ad valorem. The machinery and parts thereof having an electrical element or device as an essential feature were classified under the provision for articles having an electrical element or device, not specially provided for, under paragraph 353 at 35 percent ad valorem. The rates of duty in effect in 1930 and after are shown in the following chronology.

Papermaking machinery and parts: U.S. rates of duty  
in 1930 and changes through 1972

Effective date	: Rate of duty applicable :		Authority
	: to papermaking machinery :	: and parts-- :	
	: With elec-: Without elec-:		
	: trical fea-: trical fea-:		
	: tures (TSUS: tures (TSUS :		
	: item : items 668.00 :		
	: 661.70) : and 668.06) :		
	: <u>Percent</u> : <u>Percent</u> :		
	: <u>ad valorem</u> : <u>ad valorem</u> :		
June 18, 1930---	35.00	27.5	Tariff Act of 1930.
Aug. 5, 1935---	1/	20.0	Trade Agreement with Sweden.
Jan. 1, 1939---	27.50	1/	Trade Agreement with the United Kingdom.
Jan. 1, 1948---	15.00	1/	GATT concession.
Apr. 30, 1950---	1/	15.0	Do.
June 6, 1951---	13.75	10.0	Do.
June 30, 1956---	1/	9.5	Do.
June 30, 1957---	1/	9.0	Do.
June 30, 1958---	1/	8.5	Do.
July 1, 1962---	12.50	7.5	Do.
July 1, 1963---	11.50	6.5	Do.
Aug. 31, 1963---	12.5	7.0	Tariff Classification Act of 1962.
Jan. 1, 1968---	11.0	6.0	GATT concession.
Jan. 1, 1969---	10.0	5.5	Do.
Jan. 1, 1970---	8.5	4.5	Do.
Jan. 1, 1971---	7.0	4.0	Do.
Jan. 1, 1972---	6.0	3.5	Do.

1/ No change.

## U. S. Producers

There are seven domestic producers, or prime contractors, capable of supplying papermaking machines: Beloit Corp., Beloit, Wis.; Black Clawson Co., Watertown, N. Y.; Allis-Chalmers Papermaking Division, Appleton, Wis.; Manchester Machine Co., Middletown, Ohio; Sandy Hill Corp., Hudson Falls, N. Y.; J. H. Horne Co., Lawrence, Mass.; and Rice Barton Corp., Worcester, Mass. Rice Barton Corp. has not successfully bid on a prime contract since 1967. Of the approximately 54 contracts 1/ let by domestic papermills for papermaking machines in the United States during the past 6 years, these firms were the contractors on about 81 percent; the remainder went to foreign firms. Beloit had about \* \* \* percent of all contracts; Black Clawson, \* \* \* percent; and the other domestic suppliers, \* \* \* percent. No single manufacturer builds an entire papermaking machine.

The following table indicates the number of contracts awarded to the individual domestic builders of papermaking machines.

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1/ For the purposes of this report the term "contract" means an agreement to supply an entire papermaking machine.

Papermaking machine contracts awarded to domestic  
producers by domestic paper mills, 1969-73

\* \* \* \* \*

Not only are Beloit and Black Clawson the most important firms in the domestic industry, they are the only domestic firms which have facilities to produce an extremely large linerboard machine--380 inches trim width and larger. The production of such a machine requires a casting foundry, 1/ lathes, and facilities which are capable of producing and handling perfectly balanced rollers 30 feet or more in length which can run at or in excess of 3,000 feet of paper per minute. The other firms produce machines that are smaller than the large highspeed machines that Black Clawson and Beloit are capable of building. 2/

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1/ The paper making-machine rolls are cast gray iron. These large castings are cast vertically in metal flask molds with sand core centers; the flasks are poured off in pits.

2/ For example, the Sandy Hill Corp. can build papermaking machines only up to 200 inches trim width.

Beloit and Black Clawson, in particular, concentrate on contracts for the supply of new machines, and they also produce a wide range of equipment for use in the pulp and paper industry the world over. In 1969-73, however, much of the output of the producers went into products such as replacement parts for old machines, major components for rebuilding machines, and portions of new machines contracted for by other manufacturers rather than new machines for which they held the contract. These machine producers also manufacture machinery for pulping and other stock preparation.

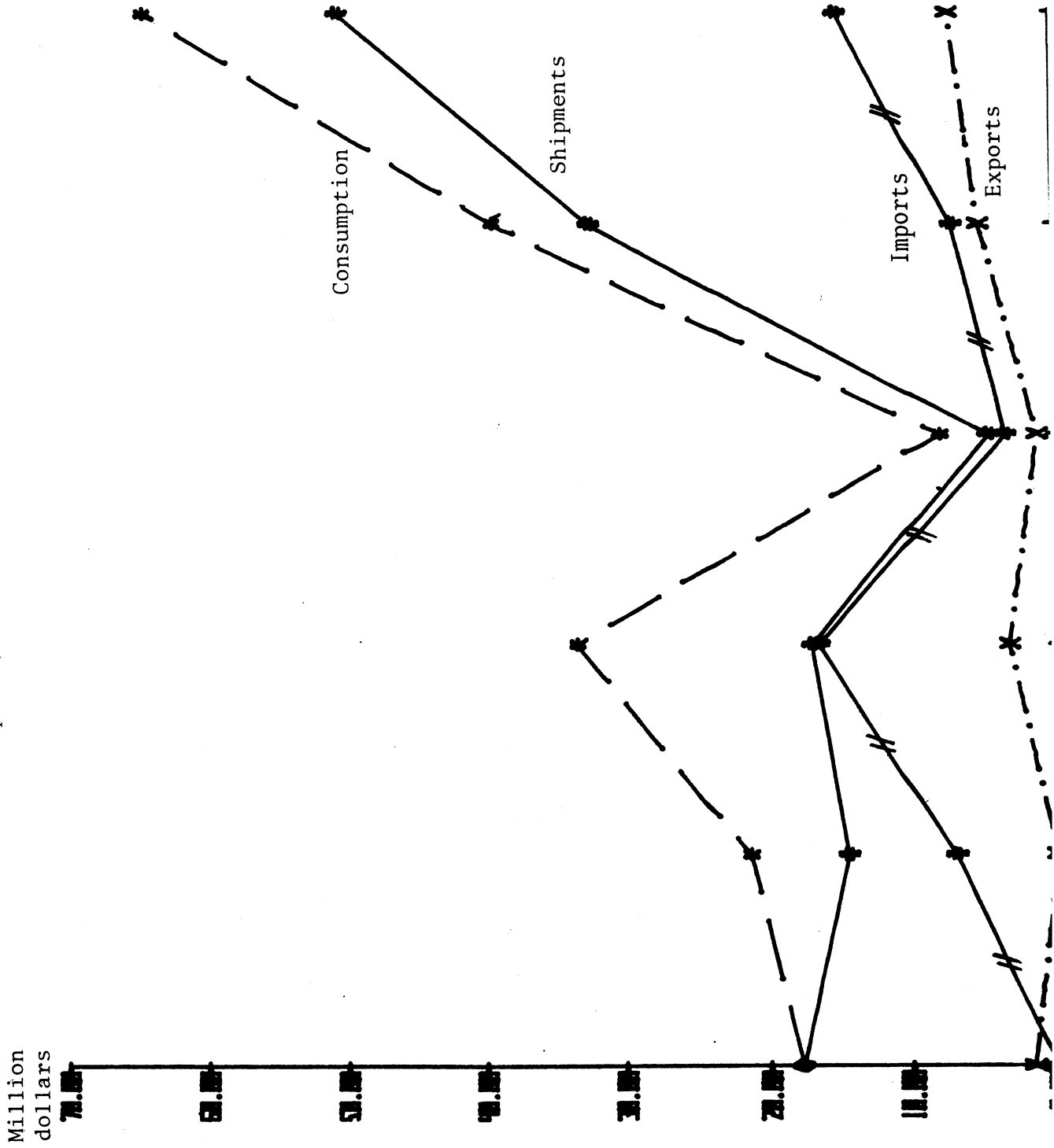
#### U.S. Consumption

Domestic consumption of paper machines, based on the year in which contracts were let, declined annually from 11 complete machines in 1969 to 4 machines in 1971, representing a falloff of 64 percent in the span of 3 years (table 1). The value of new orders for paper machines increased by 89 percent from 1968 to 1970 and then fell to a period low of \$8.0 million in 1971, as shown in the graph on page 11 (and in table 2). <sup>1/</sup> While contracts let for new machines reached a period low in 1971, recovery was registered in 1972 and 1973--7 machines were ordered in 1972 and 16 in 1973--as the paper industry attempted to increase capacity in an effort to meet rising demand for its products; the value of contracts let in 1972 amounted

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<sup>1/</sup> The value of individual machines varies widely, from \$600,000 to more than \$11 million, depending on size, complexity, and controls. Of the four machines ordered in 1971, three averaged \* \* \* and the fourth amounted to \* \* \*.

Chart 3.--Papermaking machinery: U.S. consumption, shipments, imports  
for consumption, and exports, 1968-73



to \$39.7 million, and in 1973, to \$64.9 million. The value of these new orders were 18 and 92 percent above the 1970 value. Coincident with the economic upsurge of late 1972, seven of the nine domestically placed orders were awarded in the months of October-December. 1/ Bids are currently being prepared by the prime contractors on six paper machines with firm contracts to be awarded by autumn 1974.

The machines mentioned in the previous paragraphs were designed to run various products and grades of paper ranging from asbestos to insulation to tissue paper to linerboard (table 3). However, since 1968 linerboard machines (7), tissue machines (7), and fine paper machines (6) have predominated in the 18 identified uses of such machines; the remaining 15 types averaged roughly 2 machines each during the period.

#### U.S. Shipments and Exports

Contracts for paper machinery state that payments are to be made at specified stages of completion and/or on shipment of segments of a machine. Consequently, the value of shipments for any period cannot be correlated with completion of individual papermaking-machines. However, data on the value of shipments, as shown in table 4, exclusive of exports, do indicate a decline in the number

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1/ Papermaking-machine producers report that since 1972 many paper mills have rebuilt or modernized some of their old papermaking machines to achieve increased capacity without making large capital investments. Such engineering alternatives provide a far quicker route to increased capacity than engineering and buying a new paper-making machine.



of papermaking machines ordered during the period 1968-71. These shipments declined in value from \$63.5 million in 1968 to \$12.7 million in 1972.

During the same period the domestic prime contractors' shipments of parts for paper machines declined similarly, from \$72.9 million in 1968 to \$47.8 million in 1972 (table 4). This reduction in the value of shipments was, in part, a reflection of the reduction in machine sales which sometimes include spare parts and lost sales to foreign competitors. Table 4 illustrates that "parts" shipments became increasingly more important than prime contracts in 1968-73. During this period Black Clawson's prime contract shipments declined \* \* \* percent, and their parts shipments, \* \* \* percent.

In the export market nine prime contracts for papermaking machines were awarded to domestic producers by foreign paper mills in the past 6 years, \* \* \* to Beloit \* \* \* and \* \* \* to Black Clawson \* \* \*. \* \* \* were awarded in each of the years 1968, 1970, 1972, and 1973, and \* \* \* in 1971, with shipment 12 to 18 months thereafter. The total value of these contracts amounted to \* \* \* million, and, depending on the year in which the contract was awarded, they amounted to as much as 25 percent of the total number of machines under contract to domestic producers in that year.

Tables 5, 6, and 7 contain export data from prime contractors and official statistics. Owing to the inclusion of many types of equipment other than papermaking machines and parts, official U.S.

statistics are overstated and cannot be compared with data from the individual prime contractors. The Beloit Corp. is the main exporter of papermaking machine parts, accounting for more than \* \* \* percent of the total exports by prime contractors.

#### U.S. Imports

Imports of papermaking machines for installation in U.S. papermills averaged less than two machines and \$8.2 million per year in 1968-73 (tables 1 and 2). No domestic firm has imported a paper machine from a foreign subsidiary or affiliate. Firms in Sweden (KMW), Finland (Valmet Oy and Tampella), and Canada (Dominion Engineering) have been the only foreign competitors in the domestic market; each has been awarded contracts for two or more complete machines since 1968, with the exception of Valmet Oy, which received only one prime contract (in 1970).

The number of machines imported taken as a percent of consumption ranged from zero in 1968 to 27 percent in 1969 (table 1) and averaged 19 percent over the 6 years. The value of imports ranged from zero (in 1968) to 49 percent (in 1970) of consumption (table 2) and averaged 26 percent for the period. Disregarding the base year of 1968, the year in which no foreign firms were awarded prime contracts, 1971 and 1972 were the poorest years for new orders for papermaking machines; in those years foreign producers were limited to one paper machine order. Representatives of

Dominion Engineering, Valmet Oy, and Tampella reported that they have not bid successfully in 1974, primarily as a result of the devaluation of the dollar.

Official statistics on papermaking machinery and parts are shown in table 8. Import data compiled from responses of prime contractors to Tariff Commission questionnaires are presented in table 9. Information supplied by domestic papermaking-machine producers in response to Commission questionnaires shows that they import some parts from time to time, both under prime contracts and otherwise (table 9). These imports amounted to less than 1 percent of the total shipments by these firms, except in 1968, when one firm imported more than \* \* \* worth of papermaking machinery items.

#### Black Clawson Co.

##### The company

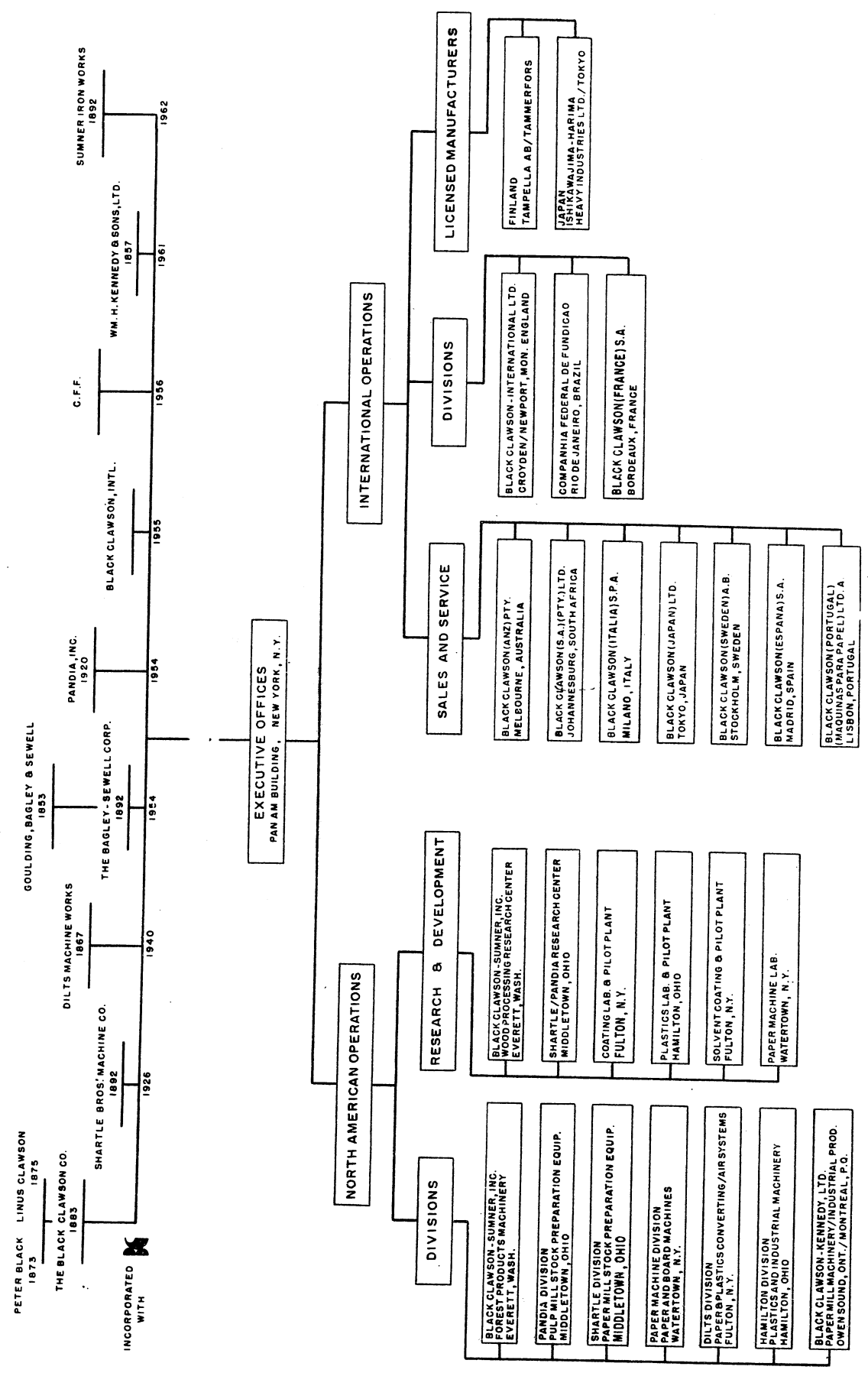
The Black Clawson Co. was incorporated in the State of Ohio at Hamilton in 1883 as a papermaking-machine producer. The incorporation followed a successful expansion of Frank Black's roll-grinding company, founded in 1873, to a partnership with Linus Clawson in 1875 wherein the Black Clawson Co. was formed and the firm began producing papermill machinery. The Black Clawson Co. built its first Fourdrinier papermaking machine in 1881. A corporate chart and graphical history are shown on the following page.

The Black Clawson Co.'s successive acquisitions and mergers started in 1926--ended in 1962--and resulted in a vertically integrated

papermaking machinery company (see chart on page A-17). The corporate acquisitions covered eight companies, including one in Canada, plus the founding of four papermaking-machine manufacturing subdivisions abroad in Argentina, Brazil, France, and Great Britain. The first acquisition was the 1926 purchase of the Shartle Bros. Machine Co., Middletown, Ohio, which provided the firm with stock pumps, beaters, and refiners. In 1931 the Hayton Pump and Blower Co. was added as a source of centrifugal pumps. In 1940 the Dilts Machine Works, Fulton, N. Y., was merged with Black Clawson as a source of pulp slurry machines. In 1954 the well-established firm of Bagley-Sewell Corp. (originally organized in 1853), Watertown, N. Y., was acquired. At that time the Bagley-Sewell operation was the world's first producer capable of making a paper machine with a trim width of over 300 inches and operating rates of more than 1,000 feet per minute. Thereafter Pandia, Inc. (1954), Middletown, Ohio; the Downington Manufacturing Co. (1955), Downington, Pa.; and Wm. H. Kennedy & Sons, Ltd. (1961), Owen Sound, Ontario, Canada, were added to the corporate structure.

The final acquisition to broaden the product line occurred in 1962, when Black Clawson purchased the Sumner Iron Works, Everett, Wash.; a producer of sawmill and pulpmill woodroom equipment. The Black Clawson Co. asserts that with these companies added to the corporate roster it became the largest and most fully integrated producer of papermaking machinery in the United States. The firm's

Chart 1.--Black Clawson Co.: Graphical history and corporate structure of the Black Clawson Co. in 1973



sales range from \* \* \* million to \* \* \* million annually. The executive offices are in the Pan Am Building, New York, N.Y. 1/

Paper Machine Division, Watertown, N. Y., plant

As stated above, the Black Clawson Co. acquired the Watertown, N.Y., firm of Bagley-Sewell with its papermaking-machine plant in 1954. The plant consists of a foundry for floor and pit molding, a triangular core of office buildings (unused since 1972), and two large machine shops. These shops are set up and tooled for machining and assembling the large pieces and segments of the papermaking machines. The plant was originally built in 1889, following the decision by the Bagley-Sewell Co. to produce papermaking machines for the Black River paper industry which lined the river north and south of Watertown. Prior to 1950, there were 30 paper mills on the Black River just within 10 miles of Watertown. With the acquisition of the Bagley-Sewell Co., the Black Clawson Co. obtained facilities and technology which enabled them to build papermaking machines over 300 inches in trim width. Included in the Bagley-Sewell sale was a small research and development (R. & D.) operation which provided Black Clawson with means by which to continue advancing their papermaking-machine technology and maintaining the recognition of their product by the paper industry.

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1/ The Black Clawson Co. is a subsidiary of Parsons & Whittemore, Inc., owned by the Landegger family. Parsons & Whittemore, Inc., is a corporation that purchases components and from them constructs and sells turn-key papermills the world over.

Several problems have existed in the paper industry since 1970 which have adversely affected the Watertown plant. The first was the economic downturn of 1970-71, which reportedly hit the paper industry very hard; 1/ second, the sales of foreign machines to domestic buyers at crucial times during the slack period; and finally, the necessity for various paper companies to spend large sums on pollution controls rather than on new paper machines. 2/ The recent increased demand for paper and paper products, however, has provided the impetus for buyers to purchase new papermaking machines.

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1/ The American Paper Institute reported that capacity utilization in the paper industry declined from 95.3 percent in 1969 to 92.2 percent in 1970 and 1971.

2/ An example of such equipment is the pollution-control system installed at the St. Regis papermill near Watertown, N. Y., for the processing of waste water, for \* \* \*. This system became operational in September 1973 at a cost of \* \* \*.

\* \* \* \* \*





\* \* \*

Employment

\* \* \* \* \*

\* \* \* \* \*

Neither the Black Clawson Co. management, the union representative, nor the local officers of the New York State Employment Service were cognizant of the status of the former workers of the

Watertown plant. They felt that the machinists, because of their skilled trade background, would not have had difficulty in finding new employment; some of the union's people were known to have taken jobs at the expanding New York Air Brake Co. plant in Watertown. The unskilled workers may have had difficulty in finding jobs since Watertown is situated in an area (Jefferson County) primarily oriented to farming and recreation. Employment in the area is subject to seasonal fluctuations, and unemployment there tends to run consistently higher, than in the industrial areas 70 to 90 miles to the south (Syracuse District), as shown in the table below. It was also noted by these organizations that the people in Watertown have a strong propensity for remaining in the area, as witnessed by rejections by some employees of offers from the Black Clawson Co. to transfer to the Fulton plant some 70 miles away.

Annual average unemployment in the Syracuse District and  
Jefferson County, N.Y., 1969-73

(In percentages)

Year	: Syracuse : District	: Jefferson : County
1969-----	:	:
1970-----	3.2 :	5.6
1971-----	4.9 :	6.5
1972-----	5.5 :	8.5
1973-----	5.3 :	7.9
	4.4 :	7.2
	:	:

Source: New York State Department of Labor.

## Market Practices

Papermaking machines are sold under a variety of circumstances. At one extreme are the "turn-key operations," in which a paper producer purchases an entire mill, usually through an engineering or construction firm and at a guaranteed price. At the other extreme, the purchaser may design the machine and then buy components rather than contract for the complete machine. The method described below, however, is typical.

Once a paper manufacturer decides to expand its papermaking capability, it normally engages an engineering firm to assist in designing the entire mill, to prepare specifications for the equipment to be installed, and to evaluate the bids submitted. The engineering firm handles many of the technical decisions and acts as an intermediary between the purchaser and the potential suppliers. Specifications are sent to selected machinery manufacturers that are invited to participate in the bidding process. After the returned bids are compared and analyzed, the originally submitted proposal may be modified by specifying type and secondary equipment supplier and by developing the specifications into a more nearly final form. Those firms with which negotiations continue are notified, and the return of the second set of bids leads to the final stages of negotiation. Finally, on the basis of both design and price considerations, a contract is let to a particular machine builder to "sell and supply" a machine. The negotiation period may last many months.

A papermaking machine is composed of thousands of parts and subassemblies. Usually the supplier will furnish about 60 percent of the machine, by value, out of his own production and purchase the remainder from domestic and foreign sources. A portion is furnished by secondary suppliers and, as noted in dumping investigation AA1921-128, about half of the Valliant I and a quarter of the Valliant II papermaking machines were purchased by the Swedish firm KMW from European and U.S. producers. The purchaser may request that the contracting firm supply large sections from another machine producer that has patents covering a given process or equipment, or the contractor may choose, for reasons of cost or convenience, to subcontract portions of the machine. Thus the share that the contractor supplies from his own manufacturing facilities may vary from contract to contract.

Once there is an agreement to supply the machine, the contractor begins production; for a large machine, production continues over a period of 18 months or longer. Shipments to the mill site are made throughout this period, and payments are made upon completion of certain agreed-upon phases of production as set out in the sales contract. Final payment is not made until the machine is proved out in operation.

In the United States the erection of the machine is usually accomplished by a firm other than the firm that contracted to supply it. \* \* \*

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\* \* \*

In some contracts it may be done by the supplier or, for a small machine, by the purchaser of the machine. The period of time from the decision to purchase a machine until the machine is on stream is generally about 2 years.

Sales agents for machine builders participate in sales: their job is to publicize equipment, encourage purchasers, and take part in the negotiating phase. They receive their fee directly from the machinery producer.

#### Bids, bidding, and contracts

In connection with the Tariff Commission's antidumping investigation No. AA1921-128, on papermaking machinery and parts from Sweden, data were collected on papermaking machine contract bidding and awards. Such data were collected on 42 machines installed in the United States during 1965-73.

Because of the diversity of the machines and, to some extent, the bidding practices, no meaningful price trend can be determined. The machines vary greatly in end products produced--from tissue to thick paperboard; they also range widely in capacity--from a wire width of 107 to 390 inches, from 1 to 119 dryer drums, and from speeds of 200 to 5,000 feet per minute; and they vary in initial purchase price from \$500,000 to over \$11 million.

Factors that lead a purchaser to select one machine over another may be classified loosely as "price predominating" and "design predominating." Based on information received by the Commission in

its dumping investigation mentioned earlier, these factors appear to be roughly equal as a determinant of which machine is selected. The firms that purchased primarily on a design basis indicated that the reasons that may have influenced this decision include the facts that (1) the purchaser preferred one bidder's design over the others, or the purchaser lacked confidence in the engineering capability of some of the potential sellers; (2) the purchaser had prior experience with a particular builder's machine and was satisfied; (3) the purchaser desired a compatibility of spare parts with an existing machine; and (4) the purchaser wanted a domestic source of spare parts.

Black Clawson's bidding experience, 1969-73

\* \* \* \* \*

\* \* \* \* \*

Terms of payment

Terms of payment vary by type of machine and by specifications, as well as by different suppliers and purchasers. Generally, the payment period extends anywhere from 15 months to about 2 years. The terms consist of a down payment made at the time the contract is signed or soon afterward and a series of agreed payments (representing a percentage of total price) made at various stages of engineering, manufacturing, or delivery of the machine. The exact amount or percentage of the total due at scheduled intervals also varies with negotiating parties.

In some purchases, apparently, initial contract payment terms are a negligible influence in determining which bidder is awarded a contract. Several purchasers report discussion of payment terms with a supplier only after the contract had been awarded. On the other hand, in a few purchases, payment terms appear to have been



a more significant factor. Thus, just as the machines themselves are highly diverse and specified, so are the payment terms.

APPENDIX A  
STATISTICAL TABLES

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Table 3.--Papermaking machinery: U.S.-produced and U.S.-purchased papermaking machines, by types, 1968-73

(Number of machines)

Type of machine <sup>1/</sup>	1968	1969	1970	1971	1972	1973
Asbestos-----	-	-	-	1	-	-
Carbon tissue-----	1	-	-	-	-	-
Cigarette-----	1	-	-	-	-	-
Coating-----	-	-	-	-	-	2
Communication-----	-	2	-	-	-	-
Corrugated-----	1	-	1	-	-	2
Currency-----	-	-	-	-	-	1
Fine paper-----	2	-	-	1	1	2
Insulation-----	-	1	1	-	-	-
Kraft-----	-	-	-	-	2	1
Linerboard-----	2	1	1	-	1	2
Newsprint-----	-	-	1	-	1	1
Pulp-----	-	-	1	1	-	-
Roof felt-----	-	-	-	-	1	1
Tissue-----	1	4	1	-	-	1
Total-----	8	8	6	3	6	13

<sup>1/</sup> There were no machines for making crepe, gypsum, or publication paper produced in 1968-73.

Source: Compiled from data submitted in response to U.S. Tariff Commission questionnaires.

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Table 6.--Papermaking machinery: U.S. exports of domestic merchandise, by principal markets, 1969-73

(In thousands of dollars)

Market	1969	1970	1971	1972	1973
Canada-----	2,480	2,996	1,438	3,554	1,980
Brazil-----	261	157	178	77	1,478
Peru-----	-	24	-	-	1,276
Mexico-----	377	1,158	743	170	1,083
Panama-----	353	23	-	-	532
Other countries-----	2,616	4,684	4,572	1,574	4,652
Total-----	6,087	9,042	6,931	5,375	11,001

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 7.--Parts and attachments for pulpmill and papermill machines: U.S. exports of domestic merchandise, by principal markets, 1969-73

(In thousands of dollars)

Market	1969	1970	1971	1972	1973
Canada-----	6,460	8,959	6,879	8,265	10,088
Mexico-----	3,073	1,790	2,848	2,145	6,010
Venezuela-----	592	1,537	7,838	1,686	4,559
Argentina-----	171	120	165	1,063	2,537
Republic of South Africa--	446	1,093	1,289	854	2,387
Other countries-----	13,749	20,056	17,276	15,333	14,770
Total-----	24,491	33,555	36,295	29,346	40,351

Source: Compiled from official statistics of the U.S. Department of Commerce.





Table 8.--Papermaking machinery and parts: U.S. imports for consumption, by source and TSUS number, 1969-73, January-April 1973, and January-April 1974

(In thousands of dollars)							
Source and TSUS item number	1969	1970	1971	1972	1973	Jan.- Apr. 1973	Jan.- Apr. 1974
<b>Canada:</b>							
661.70-----	3,828	6,163	7,075	6,207	7,648	2,033	3,910
668.004-----	301	232	61	276	252	74	145
668.04-----	883	883	739	947	1,243	358	780
668.06-----	4,270	5,816	2,271	3,026	3,719	679	6,006
Subtotal (668.004 and 668.06)-----	4,572	6,048	2,331	3,301	3,971	753	6,151
Total-----	9,282	13,094	10,146	10,456	12,862	3,144	10,841
<b>West Germany:</b>							
661.70-----	8,272	11,164	12,941	7,904	8,117	2,388	2,834
668.004-----	294	853	1,211	510	623	87	661
668.04-----	153	169	118	226	202	26	106
668.06-----	279	760	129	613	372	79	89
Subtotal (668.004 and 668.06)-----	573	1,614	1,340	1,123	995	166	750
Total-----	8,998	12,946	14,399	9,253	9,314	2,580	3,690
<b>Sweden:</b>							
661.70-----	1,459	1,081	1,447	2,956	2,087	373	583
668.004-----	124	315	1,348	916	1,950	84	5
668.04-----	317	152	238	546	382	144	138
668.06-----	317	582	6,292	2,537	2,196	348	509
Subtotal (668.004 and 668.06)-----	441	898	7,640	3,453	4,147	432	514
Total-----	2,217	2,130	9,325	6,955	6,615	949	1,235
<b>United Kingdom:</b>							
661.70-----	3,858	3,975	4,500	5,400	5,527	1,404	1,384
668.004-----	352	476	23	7	59	40	158
668.04-----	2	3	3	22	12	6	13
668.06-----	55	185	357	351	408	85	10
Subtotal (668.004 and 668.06)-----	407	661	380	358	467	125	168
Total-----	4,267	4,639	4,883	5,780	6,006	1,535	1,565
<b>Japan:</b>							
661.70-----	1,344	2,827	6,650	2,601	5,131	958	4,535
668.004-----	-	2,380	809	-	-	-	-
668.04-----	6	5	15	26	86	22	43
668.06-----	74	85	32	107	84	14	19
Subtotal (668.004 and 668.06)-----	74	2,465	841	107	84	14	19
Total-----	1,424	5,297	7,506	2,734	5,301	994	4,597
<b>Switzerland:</b>							
661.70-----	1,481	1,181	1,435	1,733	3,062	1,540	904
668.004-----	3	-	-	-	-	-	-
668.04-----	-	7	2	5	-	-	19
668.06-----	7	4	-	-	11	10	1
Subtotal (668.004 and 668.06)-----	10	4	-	-	11	10	1
Total-----	1,491	1,192	1,437	1,738	3,073	1,550	924
<b>France:</b>							
661.70-----	2,885	1,838	1,775	2,347	2,239	842	468
668.004-----	-	-	30	148	-	-	51
668.04-----	18	8	43	13	-	-	11
668.06-----	20	98	147	47	21	6	20
Subtotal (668.004 and 668.06)-----	20	98	177	195	21	6	71
Total-----	2,923	1,944	1,995	2,555	2,260	848	550
<b>Finland:</b>							
661.70-----	27	2	12	8	279	2	15
668.004-----	1,229	1,038	21	21	-	-	-
668.04-----	36	98	103	307	476	101	112
668.06-----	7,260	1,157	829	11,310	1,323	741	2,388
Subtotal (668.004 and 668.06)-----	8,489	2,195	851	11,331	1,323	741	2,388
Total-----	8,552	2,295	965	11,646	2,078	844	2,515
<b>All other countries:</b>							
661.70-----	6,404	9,441	8,320	6,100	6,048	2,109	4,193
668.004-----	366	39	115	89	4	-	79
668.04-----	2	11	15	20	68	5	13
668.06-----	323	327	391	277	652	125	270
Subtotal (668.004 and 668.06)-----	690	366	506	366	656	125	348
Total-----	7,095	9,818	8,841	6,486	6,772	2,239	4,555
<b>Total:</b>							
661.70-----	29,557	37,671	44,155	35,257	40,138	11,649	18,826
668.004-----	2,669	5,334	3,619	1,966	2,889	286	1,100
668.04-----	1,416	1,336	1,275	2,113	2,470	661	1,236
668.06-----	12,605	9,016	10,448	18,269	8,785	2,088	9,311
Subtotal (668.004 and 668.06)-----	15,274	14,350	14,067	20,235	11,674	2,373	10,410
Total-----	46,247	53,357	59,497	57,602	54,282	14,684	30,473

Source: Compiled from official statistics of the U.S. Department of Commerce.

A-38 through A-40

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APPENDIX B

LETTER TO MEMBERS OF LODGE 355, INTERNATIONAL  
ASSOCIATION OF MACHINISTS AND AEROSPACE WORKERS

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