

UNITED STATES TARIFF COMMISSION

ROLLED GLASS

**Report on
Escape-Clause Investigation No. 7-102
Under the Provisions of Section 7
of the
Trade Agreements Extension Act of 1951, As Amended**



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ROLLED GLASS

U.S. Tariff Commission
Washington, May 25, 1961

Introduction

This report, published pursuant to section 7(d) of the Trade Agreements Extension Act of 1951, as amended (19 U.S.C. 1364(d)), relates to investigation No. 7-102 under section 7 of the Trade Agreements Extension Act of 1951, as amended. The purpose of the investigation was to determine whether--

ROLLED GLASS (NOT SHEET GLASS) FLUTED, FIGURED, RIBBED,
OR ROUGH, OR THE SAME CONTAINING A WIRE NETTING WITHIN
ITSELF, PROVIDED FOR IN PARAGRAPH 221 OR IN PARAGRAPHS
221 and 224 OF THE TARIFF ACT OF 1930

(hereinafter referred to as "rolled glass") is, as a result in whole or in part of the customs treatment reflecting the concessions granted thereon under the General Agreement on Tariffs and Trade, being imported into the United States in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry producing like or directly competitive products.

This investigation was instituted on November 25, 1960, by operation of section 3(b)(1) of the Trade Agreements Extension Act of 1951, as amended. Public notice of the institution of the investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice at the office of the Tariff Commission in Washington, D.C., and at its New York City office, and by publishing the notice in the Federal Register (25 F.R. 12256), and in the December 1, 1960, issue of Treasury Decisions. The public hearing was duly held on March 28 and 29,

1961, and all interested parties were afforded reasonable opportunity to produce evidence and to be heard. In addition to the information obtained at the hearing, the Commission in this investigation obtained information from its files; from responses to questionnaires returned by domestic producers, importers, foreign manufacturers' sales agents, wholesalers, processors, fabricators, and other purchasers of domestic and imported rolled glass; and through fieldwork by members of the Commission's staff assigned to the investigation.

No Recommendation to the President for "Escape" Action

After considering all the facts obtained in this investigation, including the hearing, the Commission divided into three groups. Commissioners Talbot, Jones, and Dowling found that rolled glass is not being imported in such increased quantities as to cause or threaten serious injury to the domestic industry concerned.

Commissioners Schreiber and Sutton found that the rolled glass covered by the investigation is being imported into the United States in such increased quantities, both actual and relative, as to cause serious injury to the domestic industry producing like products; and that, in order to remedy serious injury to the domestic industry concerned, it is necessary to increase the duties on rolled glass under paragraphs 221 and 224 of the Tariff Act of 1930 to those originally established by statute (viz, 1-1/2 cents per pound and 5 percent ad valorem, respectively). ^{1/}

^{1/} The findings in this escape-clause investigation differ from the related peril-point findings of the Commission. Commissioners Schreiber and Sutton, in conformity with their views expressed in investigations Nos. 7-96 and 7-97 regarding tennis rackets and baseball gloves, respectively, deem it necessary to explain that, on the basis of further consideration of the facts, they believe the original peril-point finding as to remedy is in error.

Commissioner Overton found that rolled glass, provided for in paragraph 221 of the Tariff Act of 1930, whether or not subject to additional duty under paragraph 224 of that Act, is being imported into the United States in such increased quantities as to threaten serious injury to the domestic industry concerned; and, that in order to prevent such injury it is necessary that the duty on rolled glass imposed under paragraph 221 of the Tariff Act of 1930, be increased from 0.625 cent per pound to 2 cents per pound.

In view of the foregoing, there is no recommendation of any group of Commissioners for "escape" action that may be considered by the President as a recommendation of the Commission. Accordingly, no report to the President is submitted.

Facts equally pertinent to the findings of all the Commissioners are given in a general statement which follows, and this is succeeded by separate considerations bearing on (1) the finding of Commissioners Talbot, Jones, and Dowling, (2) the findings and recommendation of Commissioners Schreiber and Sutton, and (3) the findings and recommendation of Commissioner Overton.

General Statement of Facts

U.S. customs treatment

Rolled glass (not sheet glass) fluted, figured, ribbed, or rough, or the same containing a wire netting within it, is specially provided for in paragraph 221 of the Tariff Act of 1930. Rolled glass is also subject to the additional duty provided in paragraph 224 of the act when it is bent, beveled, colored (except rolled glass not less than 1/4 inch in thickness which has been obscured by coloring prior to solidification), decorated, embossed, enameled, engraved, etched, flashed, frosted, ornamented, painted, sanded, or stained. This investigation does not include rolled glass ground (whether or not polished) in whole or in part; such glass is dutiable under other tariff provisions and is not under consideration here.

The original rate of duty provided in paragraph 221 of the Tariff Act of 1930 was 1-1/2 cents per pound (table 1 in the appendix). Pursuant to a concession granted in the General Agreement on Tariffs and Trade (GATT), this rate was reduced to 3/4 cent per pound, effective January 1, 1948. Subsequently, pursuant to GATT, the rate was further reduced in three stages ^{1/} to 0.625 cent per pound, which is the current rate. The average ad valorem equivalent of the present rate, based on the value of imports in 1960, is 10.1 percent.

^{1/} The reductions were to 0.7 cent per pound, effective June 30, 1956; to 0.67 cent per pound, effective June 30, 1957; and to 0.625 cent per pound, effective June 30, 1958.

The additional rate of duty provided in paragraph 224 of the Tariff Act of 1930 for rolled glass that is colored or specially processed, as described in the first paragraph of this section, was 5 percent ad valorem. Pursuant to a concession granted under GATT, the rate was reduced to 2-1/2 percent ad valorem, effective June 6, 1951. In 1955 about 9.8 percent (by weight) of the imports of rolled glass dutiable under paragraph 221 at the reduced rate were also dutiable under paragraph 224; in 1960 about 4.6 percent of such imports were subject to the additional duty.

Description and uses

Rolled glass is flat glass that has surface irregularities impressed on it by the rollers used to form it. These irregularities may be in the form of patterns or may consist simply of a rough texture, and they may be impressed on both sides of the glass, or impressed on only one side, the other side having a smooth surface. The bulk of the rolled glass used in the United States is impressed on only one side.

The patterns impressed on rolled glass range from arabesque to geometric; the most common are those which have a mottled, ribbed, hammered, or fabric design. Others include Hylite, Pebblex, Bandlite, Louvrex, florentine, Skytex, Diffusex, and Pyramid--mostly trade names used by the manufacturers. The purpose of the different patterns is to

diffuse light and to reduce glare in various degrees.^{1/} Rolled glass is used for decorative as well as utilitarian purposes where transparency is unnecessary or objectionable but where light is needed, as in skylights, factory windows, office partitions, lavatories, and corridors. It is also used for lighting fixtures, jalousies, bath and shower enclosures, and sliding doors for closets and partitions.

Rolled glass is also produced with a wire netting embedded in it. The wire mesh adds strength to the glass and makes it more resistant to shock. When wire glass is broken, the mesh holds the pieces of glass together, thereby preventing injuries to persons and, in the case of fire, enabling the glass to act as a fire wall. This type of glass is therefore widely used where there is danger of fire or explosion, or similar hazards, as in terminals, powerplants, factories, subways, and so forth. Wire glass is available in most of the common patterns in which plain rolled glass is furnished. The wire may be in the form of a twisted chicken wire or in the form of a welded diamond-shaped or square crosshatching.

Rolled glass may also be corrugated, and in that form is used in skylights and interior and exterior partitions. The corrugated glass used for roofs and skylights is usually wired.

Rolled glass may also be colored; such glass is known in the trade as cathedral, opalescent, opal, and ornamental glass. It is produced in a great variety of colors and surface textures and is used principally

^{1/} One or both surfaces of rolled glass may also be surface treated by sand blasting or acid etching to increase glare reduction.

in decorative or church windows and in light fixtures. Heat-absorbing glass, which is slightly tinted, filters out a part of the sun's heat by reradiation; it provides cooler interiors and transmits that portion of the spectrum most restful to the eyes--blue and green.

Relatively small quantities of heat- and chemical-resistant glass are made in the United States. This glass, known as borosilicate glass, has specialized uses, such as for furnace sight glasses, rotisserie shields, heat-resistant cover plates, and for a number of technical purposes. Borosilicate glass is available with rolled patterns or in polished form.

Rough-rolled wire glass that has been ground and polished is classified for tariff purposes under paragraph 222(b), and the ground and polished borosilicate glass is classified under paragraph 222(a); neither is included in this investigation. Rolled glass may also be coated with a ceramic or glass coloring that is fired onto the surface of the glass. Such glass is used in exterior facings for buildings and is known as a spandrel material. Rolled glass also may be coated with a thin metallic paint which acts as an electrical heating element when used in wall heaters and warming plates. However, like polished wire glass, both kinds of coated glass are dutiable under tariff provisions not included in this investigation.

Rolled glass produced in the United States varies in thickness from slightly less than 1/8 inch (referred to as thin eighth) to 3/8

inch, and the regularly advertised thicknesses are $1/8$, $7/32$, $1/4$, and $3/8$ inch. Wire glass is usually $7/32$, $1/4$, or $3/8$ inch thick; corrugated glass is usually $3/8$ inch thick; and colored glass is usually available in thicknesses of $1/8$ to $1/4$ inch. The maximum sizes produced by U.S. manufacturers of rolled glass range from 4 to 5 feet in width and from 11 to 12 feet in length, depending on the thickness.

Western European producers regularly advertise a greater number of thicknesses than do domestic rolled-glass manufacturers. Thicknesses so described by the former are $1/8$, $3/16$, $7/32$, $1/4$, $9/32$, $11/32$, $7/16$, and $3/8$ inch. Imports from Japan include 18- and 24-ounce glass.^{1/} The thickness tolerances for the 18-ounce glass are from 2.3 mm. to 3.3 mm., depending on the pattern, and those for the 24-ounce glass, from 3.0 mm. to 4.0 mm. The thickness tolerances of the 18-ounce Japanese glass overlap somewhat the range of the domestic thin eighth glass, and the tolerances of the 24-ounce Japanese glass completely overlap those of the domestic glass.^{2/}

A rough-surfaced flat glass (rough plate glass blanks) is produced by plate-glass manufacturers as an intermediate stage in the production of plate glass (except in the twin-grind method). Rough plate glass

^{1/} Weight of glass per square foot.

^{2/} Thin $1/8$ -inch rolled glass produced by the Mississippi Glass Co. ranges in thickness from 2.79 mm. to 3.18 mm., and it has been produced by them since the 1920's. Thin eighth produced by the American-Saint Gobain Corp. ranges from 3.00 mm. to 3.38 mm. The Southwestern Sheet Glass Co. produces a thin eighth somewhat thinner than that produced by other U.S. producers.

blanks are sometimes sold without further processing for installation in exterior or interior partitions. These blanks also are produced by a rolling process,^{1/} but the rough plate glass blanks are produced in sheets much larger than the sheets produced by the rolled glass manufacturers.^{2/} The rollers used in the production of the blanks create impressions on the glass surface and these impressions serve to hold the abrasive used in the grinding operation to which the blanks are subjected in the production of plate glass. Increasing quantities of rough plate glass are being sold by the two major plate glass manufacturers for use as rolled glass, and both companies are actively promoting the sale of such glass.

Methods of production

Glass is made by fusing mixtures of silica sand and other materials at relatively high temperatures. The proportions of these materials used in the batches, or mixtures, vary according to the type of glass produced. A typical batch for plain (uncolored) rolled glass would consist of 40 percent of cullet (scrap glass), 33 percent of silica sand, 11 percent of soda ash (sodium carbonate), 7 percent of limestone, 5 percent of dolomite (calcium-magnesium carbonate), 3½ percent of aplite (a source of alumina), and a half percent of other materials.

^{1/} Although it is not known whether any of the glass entered under par. 221 has been in the form of rough plate glass blanks, it is believed that any imports of these blanks would be so classified.

^{2/} Rough plate glass, 19/64 inch thick, which is the usual thickness sold, is available in sizes up to and including 130 by 218 inches, whereas, the most similar domestically produced rolled glass, 3/8 inch thick, is available in sizes up to and including 72 by 144 inches. The rolled-glass manufacturers use a considerably narrower ribbon of glass in their production process than do the plate-glass manufacturers, and thus cannot produce glass in the widths and lengths offered by the plate-glass manufacturers.

In the most modern of the plants producing rolled glass in the United States these materials are individually stored in large vertical bins, so that measured amounts can be withdrawn from the base of the bins and conveyed to a mechanical mixer. The materials are weighed, conveyed to a mixer, mixed, and loaded into small hopper cars which are then conveyed to a continuous tank furnace. The mixed batch is emptied by various devices into the melting end of the tank. In the older and smaller plants, hand methods are largely used for measuring, mixing, and charging the materials into pots or day tank furnaces.

The tank furnaces are large refractory-lined tanks sometimes having a melting capacity of 140 tons. The continuous tanks are generally divided into three compartments: (1) The melting compartment, in which fusion of the raw materials occurs; (2) the refining compartment, in which, at higher temperatures impurities in the molten glass are removed; and (3) a working compartment, in which the molten glass is kept at the proper uniform temperature for rolling.

Two principal methods of forming rolled glass are now in general use--the intermittent and the continuous. In the intermittent process, molten glass is withdrawn from the tank or melting furnace by means of large iron ladles and poured onto flat cast-iron tables; where pot furnaces are used, the molten glass is poured onto tables directly from pots transported from the furnace by large cranes. Simultaneously with the pouring, a massive iron roller passes over the plastic glass, rolling it out into a sheet or slab of the desired thickness. The design is

impressed into the glass usually by configurations on the surface of the table.^{1/} The slab then passes through an annealing lehr^{2/} after which the glass is inspected and cut into stock sheets or cut sizes.

In the continuous process, the glass flows from the refining end or compartment of the continuous-melting tank furnace in the form of an endless ribbon, and the somewhat plastic glass is made to pass between two rollers, one or both of which are embossed. A ribbon of glass about 5 feet wide with one or both sides of the glass impressed with the desired patterns emerges from the rollers and continues on through an annealing lehr. The glass is then inspected and cut to the desired size.

The pot furnaces and day tanks used in the intermittent process provide great flexibility in the number of designs and colors of glass that can be produced. Large-scale production of any particular type or color by this process, however, is relatively inefficient; for this reason the larger plants in the United States use the continuous process.

Wire glass is usually made by the continuous process by feeding the wire netting between the rollers simultaneously with the plastic glass and embedding the netting therein.

^{1/} In one plant, however, the glass is poured from a ladle between a pair of moving rollers, one or both of which are embossed with the desired configurations. These rollers move over a flat table on which the figured glass is deposited as the rollers move from one end of the table to the other--about 11 or 12 feet.

^{2/} An annealing lehr is essentially an oven in which temperatures are gradually raised to a point where the internal stresses that were formed within the glass when the glass was suddenly cooled are largely released. After this point is reached the glass is allowed to cool gradually.

U.S. producers

Number and location.--Virtually all of the production of rolled glass in the United States is accounted for by 8 concerns at 10 plants. Production at these plants consists almost entirely of the rolled glass covered by this investigation. ^{1/} Two firms, accounting for most of the domestic production, also operate other plants for the production of other products; nevertheless, rolled glass represents a substantial part of their total output. The remaining 6 firms are very small, each operating but 1 plant.

Two firms, not included above, produce plate glass blanks, a very small part of which they sell in that form. Another firm, also omitted above, produces small quantities of special types of rolled glass as a very minor part of its business.

Of the 10 plants accounting for virtually all of the U.S. production of rolled glass, 3 are located in Pennsylvania, and 1 each in California, Indiana, Missouri, Ohio, Oklahoma, Tennessee, and West Virginia. Only 3 of the plants employ more than a hundred workers each.

Sales outlets.--The U.S. producers ^{2/} sell their glass to carefully selected distributors and jobbers. These so-called recognized factory buyers, selected according to the judgment of the individual producers, are the only concerns that can buy rolled glass directly from the factory.

^{1/} Polished wire glass, which is not covered by the investigation, is produced at 3 of these plants as a relatively minor part of the total plants' production.

^{2/} Until Oct. 1, 1959, one producer's distribution was handled by one of the large flat glass producers on an exclusive agency basis. Since then, however, this producer has been selling through its own sales force, and the former agent has become (in July 1960) the U.S. sales agent for a rolled-glass producer in England.

Other concerns, such as other distributors and jobbers, and sash, sliding door and jalousie manufacturers, desiring to purchase rolled glass, even in carload lots, must order their glass from the recognized factory distributors at correspondingly higher prices. Under this distribution system the glass may be sold down through succeeding business levels (and at correspondingly higher prices) beginning with the recognized factory buyer and followed by the smaller distributor or jobber, the dealer, and the retailer.

U.S. production and shipments

Data on the volume of production ^{1/} and shipments of rolled glass reported by the U.S. producers for the period 1950-60 are tabulated below:

<u>Year</u>	<u>Production</u> <u>Million sq. ft.</u>	<u>Shipments</u> <u>Million sq. ft.</u>
1950-----	74.9	61.0
1951-----	70.1	56.7
1952-----	67.0	55.4
1953-----	72.2	59.2
1954-----	68.1	61.5
1955-----	81.9	66.3
1956-----	75.2	63.2
1957-----	76.9	59.0
1958-----	57.3	51.4
1959-----	70.9	51.5
1960-----	58.2	46.8

The volume of shipments of rolled glass (table 2) reported by the producers for each year is consistently less than the volume of production. This difference is accounted for in part by the inclusion in the production data, but not in the shipment data, of the quantity of rough-rolled blanks that are further ground and polished into polished wire

^{1/} Includes estimates for the period 1950-57 accounting for up to 8 percent of the total production shown for those years.

glass (ground and polished wire glass is not included in the investigation). The remaining difference is the result of cutting losses and changes in inventories.

The U.S. production of rolled glass declined from 75 million square feet in 1950 to 67 million in 1952, increased to 82 million in 1955, and declined to 57 million in 1958. Production increased to 71 million square feet in 1959, and then declined to 58 million in 1960.

Shipments of rolled glass by domestic producers declined from 61 million square feet in 1950 to 55 million in 1952, increased to a peak of 66 million in 1955, and declined to 51 million in 1958. Shipments remained about the same in 1959 as in 1958 and then declined to 47 million in 1960.

U.S. producers' inventories

The information submitted by U.S. producers indicates that factory inventories of domestically produced rolled glass increased from 18 million square feet at the end of 1954 to 27 million square feet at the end of 1957, decreased to 20 million at the end of 1958, and increased to 28 million by the end of 1960 (table 3). The ratio of the yearend inventory to total shipments for each year amounted to about 35 percent for 1955 and 1956, to 46 percent for 1957, 39 percent for 1958, 53 percent for 1959, and 60 percent for 1960.

U.S. exports

Data obtained from the domestic producers covering their exports of rolled glass indicate that some rolled glass is exported by distributors in addition to that exported by the producers. Data on exports of rolled glass other than colored are compiled by the U.S. Bureau of the Census

and presumably include the exports made by the distributors. The census data covering rolled glass other than colored for the years 1950-60 are shown in table 2. ^{1/} The ratio of such exports to total shipments by the U.S. producers ranges from 2 to 3 percent annually. The principal markets include Canada, Mexico, the Philippine Republic, and the Netherlands.

U.S. imports

The largest importers of rolled glass are the flat-glass distributors and jobbers. However, large quantities of rolled glass are also imported by the manufacturers of jalousies, shower doors, and tub enclosures, and by other fabricators. Importers place their orders for foreign rolled glass with the U.S. agents of the foreign rolled-glass manufacturers. With one exception the same agents also represent foreign sheet-glass manufacturers. As previously indicated, in 1960 a large domestic producer of flat glass became the U.S. sales agent for rolled glass produced in England.

Annual imports of rolled glass were smaller during the 1930's than they have been in recent years. In 1937, the peak year of imports during the 1930's, slightly more than a million pounds was imported. During the period 1950-60, total imports increased almost steadily from 2 million pounds in 1950 to 66 million pounds in 1960 (table 4). Imports at trade-agreement rates of duty ^{2/} rose from nearly 30 million pounds in 1955 to more than 60 million pounds in 1959 and amounted to about 58 million pounds in 1960.

^{1/} Data reported by the producers for the 1950-60 period indicate that a much smaller proportion of their total exports consist of colored glass than of glass other than colored.

^{2/} Imports at statutory (full) rates of duty come from Communist countries designated by the President under sec. 5 of the Trade Agreements Extension Act of 1951, as amended.

No official statistics are available on the imports of rolled glass by thickness, by pattern, or by type (that is, whether wired or not wired). However, rolled glass that is specially processed or colored is subject to an additional duty, and the imports of such glass are separately recorded. Imports of colored or processed rolled glass for the period 1950-60 are shown in table 4.

Belgium has consistently been the source of more than half of the imports of rolled glass by weight (table 5). In 1955 about 71 percent of the total imports at trade-agreement rates of duty were from Belgium. In 1960, Belgium's share of the total was about 62 percent and Japan's about 21 percent. In the first 2 months of 1961, imports from Japan accounted for 32 percent of imports from all countries at trade-agreement rates. Less important suppliers of rolled glass include the United Kingdom, France, West Germany, and Italy.

Imports dutiable at the full statutory rates of duty increased from 0.9 million pounds in 1955 to 8.4 million pounds in 1960; the 1960 imports at the full rates accounted for 12.7 percent of the total imports of rolled glass in that year.

The average foreign value of imports in 1960 amounted to 5.6 cents per pound for imports from Japan and 6.1 cents per pound for imports from Belgium (table 5). The average foreign value per pound of imports from the other western European countries was somewhat higher than that for Belgium. The average foreign value per pound of imports from the Communist-dominated countries has recently (1958-60) been about a half of the average foreign value per pound of imports from Japan.

U.S. consumption

Data on the volume of U.S. consumption of rolled glass for the period 1950-60 were computed by adding the quantity of shipments by U.S. producers (after deducting exports) to the quantity of U.S. imports for consumption ^{1/} (table 2).

The overall trend in U.S. consumption of rolled glass during the decade of the 1950's was irregularly upward. Consumption, amounting to 59 million square feet in 1950, declined to 57 million in 1951, but increased each year thereafter until 1956, when it reached the peak of 79 million square feet. Consumption decreased during the next 2 years, amounting to 70 million in 1958, but increased to 78 million in 1959, and decreased to 74 million in 1960. Consumption was about 30 percent higher in 1960 than in 1951.

The share of the U.S. market supplied by U.S. producers declined during the 1950-60 period. The ratio of the volume of rolled-glass shipments by U.S. producers to U.S. consumption decreased from 99 percent in 1950 to 84 percent in 1955 and to 62 percent in 1960. Most of the increase in the imports of rolled glass is attributable to imports at trade-agreement rates of duty; the share of the U.S. market supplied by imports dutiable at these reduced rates increased from 1 percent in 1950 to 16 percent in 1955 and to 34 percent in 1960. Imports from the Communist-dominated countries, and subject to statutory (full) rates of duty, accounted for 5 percent of total U.S. consumption in 1960; there were no imports of rolled glass from such sources in the period 1950-54.

^{1/} Official import statistics, stated in pounds, have been converted to square feet at the ratio of 1.8 pounds=1 square foot for imports from Japan, and at the ratio of 2.5 pounds=1 square foot for imports from all other countries.

Prices

Prices quoted for rolled glass, whether domestically produced or imported, are on a square-foot basis; and each producer's prices vary according to the pattern and thickness of the glass and whether it is plain, wired, heat absorbing, colored, or surface treated. Prices for domestically produced rolled glass vary also according to whether the glass is in cut sizes or stock sheets. Prices quoted for imported glass, however, are usually the same for stock sheets and cut sizes. ^{1/}

The U.S. producers quote prices for their rolled glass on an f.o.b.-plant basis. They equalize freight with the nearest competing producing plants at the lowest published carrier rate. However, on most of their sales of rolled glass where no comparable type is produced at a competing plant, no freight equalization is allowed. The producers give a 1-percent cash discount for payment in 10 days, and (except on their sales in the six Western States ^{2/}) the two large rolled-glass producers also give a standard trade discount of 10 percent. These two producers also maintain two separate pricelists--one for the six Western States and the other for the rest of the United States.

The U.S. sales agents of foreign manufacturers quote prices for rolled glass on a c.i.f. ex-dock basis, not duty-paid. In general, they have maintained two separate pricelists--one for entries on the Atlantic and Gulf coasts and the other for entries on the Pacific coast.

^{1/} Western European producers quote higher prices for cut sizes of certain specialty types and low-volume patterns. Japanese producers quoted separate prices for stock sheets during 1956 and 1957 only.

^{2/} Arizona, California, Idaho, Nevada, Oregon, and Washington.

The prices quoted for the same type and similar patterns of rolled glass by the two major U.S. producers are identical in most instances. For each of the major types, thicknesses, and patterns there have been consistent increases in price from 1955 to 1960 (table 6). The average prices of domestically produced rolled glass increased by about 40 percent from May 1, 1955, to November 1, 1960.

Identical prices and terms, for the most part, are quoted by the sales agents of the Belgian, British, and West German rolled-glass manufacturers on their exports to the United States. The increases in the prices paid for imports from Western Europe followed closely the increases in the prices paid for domestic rolled glass between 1955 and 1960. From May 1, 1955, to November 1, 1960, the prices paid for rolled glass imported from Western Europe increased by almost 40 percent (table 6).

The prices paid for imports of rolled glass from Japan that weighed more than 24 ounces per square foot varied substantially from year to year between 1955 and 1960 (table 6). By November 1, 1960, prices for such glass were about 18 percent higher than they were on May 1, 1955. The prices paid for Japanese 18- and 24-ounce rolled glass followed similar wide fluctuations. On November 1, 1960, the prices paid for the 18- and the 24-ounce glass were about 52 and 18 percent higher, respectively, than the prices on May 1, 1955.

Employment and wages in U.S. plants

Data on employment, man-hours, and wages were obtained by the Commission from concerns that account for nearly all of the U.S. output of rolled glass. The computed number of production and related workers employed by these concerns and engaged in making rolled glass in 1955-60 is as follows: ^{1/}

<u>Year</u>	<u>Number of production and related workers</u>
1955-----	1,117
1956-----	1,100
1957-----	1,086
1958-----	856
1959-----	812
1960-----	779

Total man-hours, wages, and average hourly earnings of the production and related workers engaged in producing rolled glass, as reported to the Commission, are shown in table 7. The decline in man-hours follows closely the decline in the number of workers. Total wages paid to production and related workers increased from \$3.9 million in 1955 to \$4.2 million in 1957, declined to \$3.4 million in 1958, amounted to \$3.7 million in 1959, and to \$3.6 million in 1960. Average hourly earnings of these workers increased steadily from \$1.82 in 1955 to \$2.53 in 1960.

Profit-and-loss experience of domestic producers

Data showing their profit-and-loss experience on rolled glass were obtained from seven concerns that accounted for virtually all the rolled glass produced in the United States for sale in 1955-60. The seven

^{1/} In computing the employment data shown in the tabulation above, the number of workers engaged in producing rolled glass at three multi-product plants was calculated on the basis of the ratio of man-hours worked on the rolled glass under investigation to the man-hours worked on all products.

concerns operate nine plants in which rolled glass is produced. The profit-and-loss data furnished by these concerns are summarized in table 8.

The aggregate net sales of rolled glass by the seven concerns ranged between \$13 million and \$15 million per year in 1955-60. The aggregate net operating profit of the seven concerns was equal to 17.6 percent of aggregate net sales in 1955, to 15.6 percent in 1956, to 13.3 percent in 1957, to 9.3 percent in 1958, to 12.8 percent in 1959, and to 7.9 percent in 1960.

Principal Considerations Bearing on the Finding of
Commissioners Talbot, Jones, and Dowling

The finding of Commissioners Talbot, Jones, and Dowling that rolled glass is not being imported into the United States in such increased quantities as to cause or threaten serious injury to the domestic industry producing rolled glass is based principally on the following considerations.

1. U.S. production of rolled glass is dominated by two large firms-- the Mississippi Glass Co. and the American-Saint Gobain Corp. (controlled by the Saint Gobain company of France). These two firms account for the great bulk of the U.S. production and shipments of rolled glass; each produces and sells well over 10 times as much rolled glass as any one of the eight other U.S. rolled-glass producers. As a result, these two companies control the pricing structure of the industry; and the trend of production, shipments, profits, and other economic data for this industry are largely determined by the operations of these two firms.

The dominance of these two large producers was outstandingly demonstrated by the inability of the Libbey-Owens-Ford Glass Co. to find an adequate alternative domestic source of supply of rolled glass to take the place of the rolled glass it formerly obtained from the Blue Ridge Glass Corp. This situation forced Libbey-Owens-Ford in 1960 to begin selling rolled glass produced by Pilkington Brothers, Ltd., of England.

2. The two major U.S. rolled-glass producers have confined their sales to factory recognized buyers. The Mississippi Glass Co. has been selling rolled glass to only independent factory recognized buyers and the

Pittsburgh Plate Glass Co.'s warehouse outlets. Until late 1959 American-Saint Gobain sold its entire output of rolled glass through an exclusive sales agent, Libbey-Owens-Ford; since then it has been selling through its own sales force to factory recognized buyers. As a result of this rigidity in the distribution system adopted by these two major producers and followed by several of the small producers, many dealers, jobbers, and fabricators must compete with the same factory recognized buyers from whom they are forced to buy domestic rolled glass. This preferential treatment has forced many of these firms and encouraged others to import rolled glass.

3. Although their profit margins were generally favorable, U.S. producers of rolled glass increased their prices for rolled glass by more than 40 percent during the period 1955-60. Such a striking increase hardly improves the ability of domestic glass to compete with imported glass. In October 1960 domestic producers increased their prices for rolled glass by more than 9 percent. In the light of this trend in prices it is surprising that imports have not been more substantial. However, the increase in the prices of rolled glass from Western Europe has closely followed the large increase in the prices of domestically produced rolled glass and has tended to minimize any widening of the price differential between domestic and imported rolled glass.

4. The consumption of flat glass products, as well as the consumption of all other construction materials, has been highly responsive to fluctuations in building construction. This is reflected in the trend in

shipments of rolled glass. Shipments of domestic rolled glass were substantially lower in 1952 and 1953 than they were during the construction boom that reached its greatest proportions in 1955 and 1956, a period when the consumption of rolled glass in the United States reached an all-time high. As could be expected following this boom, shipments declined to a lower level during the period 1957-59. However, the level of U.S. producer's shipments of rolled glass during 1957-59 was only about 5 percent below the level of their shipments for the 3-year period immediately preceding the construction boom. Shipments of domestically produced rolled glass were about 9 percent less in 1960 than in 1958 and 1959; this decline was due, for the most part, to the recession in 1960. The substantial increase in imports at full rates of duty from the Communist-dominated countries also contributed to the decline in domestic shipments in 1960.

To some extent shipments by U.S. producers have been affected by the competition between rolled glass and rigid plastic sheets, particularly by the increased use of corrugated plastic sheets for skylights and interior partitions and the use of flat plastic sheets for shower and tub enclosures, interior partitions, and lighting fixtures.

U.S. producers appear to restrict the competitiveness of their rolled glass with the imported glass by the smaller number of patterns they offer. While most of the patterns that the major U.S. producers sell are available from foreign producers, the latter offer many more patterns than the

U.S. producers, and export to the United States sizable quantities of rolled glass having highly decorative and distinctive designs not regularly available from U.S. producers.

5. U.S. producers' inventories of rolled glass were somewhat higher at the end of 1959 and 1960 than at the end of the construction-boom years of 1955 and 1956. However, these higher inventories were not much larger than those at the end of 1957, a recession year. To a major extent the higher inventories at the end of 1960 are attributable to the decline in building construction in that year.

6. U.S. employment of workers in the production of rolled glass has declined since 1955-56, the peak of the building-construction boom. The decline in employment that followed in 1957 and 1958 was the normal result of the decline in construction. The further decline in employment in 1960, like the decline in production, is for the most part the result of the recession and the decline in the consumption of rolled glass in that year.

7. In contrast with the decline in employment, the aggregate wages paid workers engaged in the production of rolled glass in the United States were just as high in 1959 and 1960 as they were, on the average, for the preceding 4 years. This was the result of an increase of more than 40 percent in the average hourly wages paid those workers between 1955 and 1960.

8. Imports of rolled glass, which were small before and immediately after World War II, increased substantially for the first time in 1955

during the construction boom. However, the increase in U.S. producers' shipments between 1951 and 1955 exceeded the increase in imports. A substantial decline in imports occurred in 1957, owing to the recession in that year; in 1958 and 1959 imports increased with the increase in building construction. As a result of the combined effects of the recession and the increase of imports from Communist-dominated countries, imports entered at trade-agreement rates of duty declined in 1960 by about the same proportion as U.S. producers' shipments of rolled glass. Only in 1956 and 1958 did imports increase when there was any decline in U.S. producers' shipments.

9. In both of the years 1959 and 1960, imports that entered at the full rates of duty from Communist-dominated countries virtually doubled. In 1960, when both imports at trade-agreement rates and U.S. producers' shipments declined, imports from Czechoslovakia, Poland, and East Germany accounted for more than 12 percent of total U.S. imports of rolled glass. Available information indicates that imports from these countries alone accounted for about two-thirds of the rolled glass that was made into jalousies in the United States in 1960.

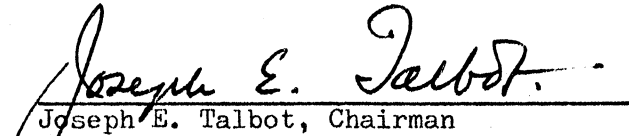
Many distributors and fabricators of rolled glass, particularly those located in Florida and the other east coast markets, have been forced to import lower priced glass from trade-agreement countries in an attempt to compete with the low-cost rolled glass imported from Communist-dominated countries. This is particularly true for those firms that cannot buy directly from U.S. producers and for manufacturers of jalousies and shower doors.

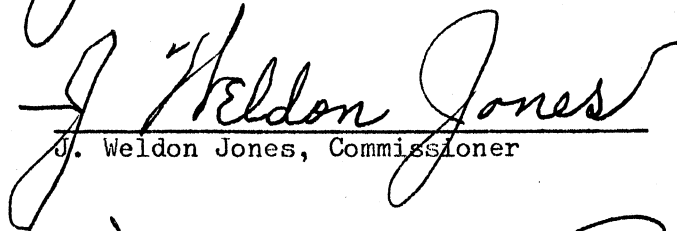
10. With the decline in building construction after 1955 and 1956 and the decline during those years from the all-time high in the consumption of rolled glass in the United States, the profits of U.S. producers from the production and sale of rolled glass also declined. The ratio of net operating profit to net sales of rolled glass for seven U.S. producers (accounting for virtually all of the U.S. production of rolled glass) declined from 17.6 percent for 1955 to 9.3 percent for 1958, increased to 12.8 percent for 1959, and declined to 7.9 percent for 1960. These profit ratios show that the production and sale of rolled glass by U.S. producers has not resulted in serious injury. Even in 1960--a recession year--the average profits for the domestic industry were relatively good.


The net profits and the profit ratios of the U.S. industry as a whole would have been even higher for all of the years 1955-60 had it not been for one very small U.S. producer that consistently lost money in all 5 of these years. Had it not been for this firm, the U.S. producers would have had an average profit ratio of 8.5 percent in 1960. This small producer was the only firm in any of the years 1955-60 that lost money on its production and sale of rolled glass.

11. In view of the foregoing considerations, we conclude that there is no evidence supporting a finding that the U.S. industry producing

rolled glass is being seriously injured or threatened with serious injury as a result of increased imports, either actual or relative.


Joseph E. Talbot, Chairman


J. Weldon Jones, Commissioner


William E. Dowling, Commissioner

PRINCIPAL CONSIDERATIONS BEARING ON THE FINDINGS AND RECOMMENDATION
OF COMMISSIONERS SCHREIBER AND SUTTON

In connection with our finding that rolled glass is being imported in such increased quantities as to cause serious injury to the domestic industry producing like products, we observe that the precarious condition of this industry is due directly to the precipitous rise in import volume and that the investigation affords abundant evidence that virtually all the statutory criteria of injury are present. Clearly, we are not dealing here with serious injury that is merely "about to occur" or that is only "imminent." All of the principal facts developed in the investigation clearly show that the domestic industry has already incurred serious injury from imports, that such injury is now present, and that it will continue unless an adequate remedy is applied. Highlights of the available information that bear on these matters and considerations which have led us to our conclusion are set forth below.

Between 1955 and 1960 the quantity of imports at trade agreement rates of duty increased 108 percent--from 12 million square feet to 25 million square feet--and the foreign value of imports rose 119 percent. In 1960 imports were equivalent to 53 percent of domestic shipments compared with only 18 percent in 1955. Imports in 1960, when a recession slowed total demand, were only 4 percent smaller than the record imports of 1959, and they supplied 34 percent of total U.S. consumption compared with 16 percent in 1955. Thus imports have increased both on an absolute and relative basis and have taken over a growing share of domestic consumption.

With a large and constantly increasing share of the U.S. market for rolled glass preempted by imports, it is hardly surprising that shipments by domestic plants should decline--which they have. In 1955, when imports were still relatively moderate, domestic plants shipped 66.3 million square feet of rolled glass. In 1959, when there was a quick ascent of imports to record levels, domestic shipments were 51.5 million square feet. In 1960 domestic shipments declined sharply to 46.8 million square feet--or 29 percent below the 1955 shipments--as imports continued at a high level. Whereas domestic producers supplied 99 percent of U.S. consumption in 1950 and 84 percent in 1955, by 1960 this ratio had decreased to 62 percent. Manifestly, the sharp decline in domestic shipments and the rapid displacement of domestic glass by imports would not have taken place without broad and serious effects on the operations of the domestic industry.

Sharply decreased domestic production and sales have not been the only results attributable to the rapid invasion of the U.S. rolled glass market, for employees in the domestic industry have been called upon to bear part of the burden of increased imports by taking a substantial reduction in total employment. Whereas 1,117 production and related workers were engaged in the manufacture of rolled glass in 1955, in 1960 the number of such workers had dwindled to 779, a decline of 30 percent. The decline in the number of workers was also accompanied by a substantial decrease in total man-hours worked, which dropped from 2,133 thousand in 1955 to

1,431 thousand in 1960. Total wage payments did not show corresponding decreases, mainly owing to the fact that between 1955 and 1960 average hourly wages increased 39 percent. As a consequence, domestic producers found it necessary to increase prices to offset the substantially higher wage costs, as well as higher material and fuel costs, and this action further impaired their competitive position vis-a-vis lower-priced imported rolled glass.

Burgeoning yearend inventories have been another misery confronting domestic producers. Such producers' inventories increased from 18 million square feet at the end of 1954 to 27 million square feet at the end of 1959, and to 28 million square feet at the end of 1960. The ratio of closing inventories to total shipments was 60 percent for 1960, much higher than the ratio of 35 percent for 1955. Furthermore, although shipments of domestic rolled glass in 1960 were 24 percent below those in 1954, producers' yearend inventories in 1960 were 54 percent higher than in 1954.

The results of the investigation also leave no doubt that there has been a major deterioration in the overall financial position of the domestic rolled-glass industry. The profit-and-loss data compiled by the Commission cover seven concerns that accounted for virtually all the rolled glass produced domestically in 1955-60. In 1960 these concerns had a total net operating profit before income taxes of only \$1,030,000, a decrease of 61 percent from the net operating profit of \$2,641,000 in 1955. Not only does the domestic industry have substantially fewer profit dollars available

for use in the struggle against import competition, but the ratio of net operating profit on sales has also declined sharply. For 1960 this ratio was at the lowest level of any other recent year and was 55 percent below the ratio for 1955.

It is no mystery why the domestic industry has lost a large segment of the U.S. market to imports with the grievous consequences of substantially reduced sales, employment, and profits. At the wage levels that prevail in the United States, domestic producers are not in a position where they can meet the significantly lower prices at which imported glass is available in the U.S. market compared with prices for comparable domestic glass. This price competition is intensified by the practice of foreign suppliers in quoting cut sizes at the same prices as stock sheets, whereas domestic producers find it necessary to charge extra for cut sizes to offset additional costly factory operations. Foreign suppliers also adjust their prices to assure invasion of particular geographic markets irrespective of their own costs. For example, Japanese glass, regardless of greater transportation and other costs involved, is available at lower prices on the Atlantic and Gulf coasts than on the Pacific coast. Thus the lowering of prices--to whatever level is necessary to achieve sales--has been the primary weapon of foreign suppliers in their major invasion of the U.S. market.

In view of the facts set forth above, we conclude that the domestic rolled-glass industry has been seriously injured and is entitled to adequate relief from what obviously has been, and continues to be, destructive import competition.

Walter R. Schreiber
Walter R. Schreiber, Commissioner

Glenn W. Sutton
Glenn W. Sutton, Commissioner

Principal Considerations Bearing on the Findings
and Recommendation of Commissioner Overton

I find that, as a result, in part, of the customs treatment reflecting the concession granted thereon in the General Agreement on Tariffs and Trade, rolled glass provided for in paragraph 221 of the Tariff Act of 1930, whether or not subject to additional duty under paragraph 224 of that Act, is being imported into the United States in such increased quantities, both actual and relative to domestic production, as to threaten serious injury to the domestic industry producing the like product.

As outlined by Commissioner Sutton and myself in the report on escape-clause investigation No. 7-95 (Rayon Staple Fiber), the following steps must be taken by the Commission in making a determination under section 7 as to whether a basis exists for escape-clause action: The Commission must find (1) that imports have increased (either actual or relative) as a result, in whole or in part, of the duty or other customs treatment reflecting the trade-agreement concession; (2) that there has been serious injury or threat of serious injury to the domestic industry; and (3) that the increased imports have contributed substantially toward causing or threatening such serious injury.

In this case all three of these conditions for an affirmative finding for relief are present to a marked degree.

Current imports are entering at an increased rate, both actual and relative, within the meaning of section 7 of the Trade Agreements Extension Act

The last concession in the rate of duty on rolled glass was negotiated in 1956, and as a result of the concession, the duty was reduced in three annual stages, beginning June 30, 1956. The 3-year period preceding 1956--1953 to 1955--constitutes a proper representative period from which to measure the increase in imports for the purposes of section 7. There were no significant international disturbances during that period, and the rolled glass industries throughout the world had by then fully recovered from the effects of World War II.

The imports of rolled glass that entered at reduced rates of duty have increased sharply since 1955. Imports in 1956 and 1957 were twice as large as the average volume of imports during the 1953-55 period; in 1958 they were nearly three times as large, and in 1959 nearly 3-1/2 times as large.

From the foregoing and from additional facts obtained in this investigation it is clear that the rolled glass encompassed by this investigation is being imported at an increased rate, both actual and relative, within the meaning of section 7.

The domestic industry is being threatened by serious injury, and increased imports have contributed substantially toward causing such threat

Separately and in the aggregate, the criteria pertinent to a finding under the escape clause clearly support a finding of a threat of serious injury.

Domestic production was about 29 percent lower in 1960 than in 1955 and domestic shipments were likewise 29 percent lower. Even though the volume of domestic consumption of rolled glass increased considerably during the 1950 decade, the volume of domestic shipments declined persistently after 1955 and both domestic shipments and production were much lower in 1958 and 1960 than in any year in the 1950-57 period. The entire expansion in the market for rolled glass during that decade, as well as a substantial part of the market that the domestic producers formerly had, were lost to imports. In 1950, domestic producers supplied 99 percent of the U.S. market, and during the following 10 years this share declined almost continuously until in 1960 the U.S. producers supplied less than 62 percent. Imports at concession rates of duty accounted for almost all of the sharply and persistently increasing share of the market supplied by all imports.

Even at the producers' low level of operations--at barely 50 percent of capacity in 1960--inventories accumulated and were equal at the end of 1960 to 60 percent of sales in that year. This ratio of inventories to sales was the highest on record, and with large amounts of their liquid assets thus tied up the financial plight of the producers has worsened. Both the number of workers and the hours these employees worked decreased steadily during the 1955-60 period; by 1960 the number of employees had declined 30 percent, and the hours worked, 33 percent. Average hourly wages increased nearly 40 percent during the 1955-60 period, but because

of the sharp decline in employment, aggregate wages paid were 7 percent less in 1960 than in 1955.

Although domestic producers have increased their prices since 1955, these prices have not been high enough to offset the sharply higher labor costs, particularly since 1958. Faced with devastating competition from imports along the seaboard areas, as well as with these sharply higher costs, the domestic producers had two choices: (1) They could try to retain their weakening position in the coastal markets where import competition was becoming deadly (the difference in delivered prices between imported and domestic glass was substantial) by absorbing completely the increased labor costs, or (2) they could raise their prices slightly and recover at least part of their increased labor costs and withdraw largely from the coastal areas, where their distribution costs were highest.

The evidence adduced in this investigation shows that the rolled-glass manufacturers chose the latter course, suffering a substantial loss in volume of business but retaining part of their profit margins. The ratio of net operating profit (before taxes) to net sales declined in each succeeding year (except 1959) during the 1955-60 period. This ratio, amounting to 17.6 percent in 1955, fell to 7.9 percent in 1960; the aggregate amount of net operating profit (before taxes) declined from \$2,641,000 in 1955 to \$1,030,000 in 1960--a decline of 61 percent.

The foregoing facts establish beyond question that the domestic industry concerned is presently suffering substantial injury, and unless the current rate of imports is reduced this injury will shortly culminate in serious injury.

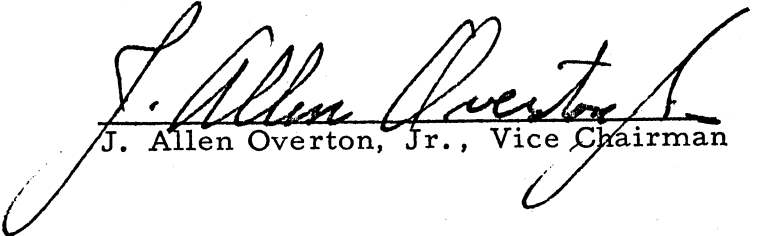
I conclude, therefore, that rolled glass, provided for in paragraph 221 of the Tariff Act of 1930, whether or not subject to additional duty under paragraph 224 of that Act, is being imported into the United States in such increased quantities as to threaten serious injury to the domestic industry concerned; and, that in order to prevent such injury it is necessary that the duty on rolled glass imposed under paragraph 221 of the Tariff Act of 1930, be increased from 0.625 cent per pound to 2 cents per pound.

I accordingly recommend that the appropriate tariff concession in the General Agreement on Tariffs and Trade be modified to permit the application of such increased rate.

As the majority pointed out in the report on escape-clause investigation No. 7-97 (Baseball and Softball Gloves), I wish to note that the escape clause is designed to meet emergencies confronting domestic industries arising out of injurious competition from imports. This is evidenced by the fact that the escape clause in the General Agreement on Tariffs and Trade (Article XIX), which I am recommending be invoked in this case, is expressly addressed to the withdrawal or modification of concessions to meet emergencies, the clause being entitled "Emergency action on imports of particular products". It is not designed to permit the establishment of increased import restrictions on a permanent basis but only "for such time" as may be necessary to prevent or

remedy serious injury. The statute explicitly recognizes this principle of "review" of escape actions provided for by Executive Order 10401 (3 CFR 1949-53 Comp., p. 901) with a view to the restoration of the concession treatment when the emergency is over.

I am fully cognizant of the fact that the establishment of the increased rate which I am recommending will eliminate the discrimination in tariff treatment under paragraph 221 against products of communist-controlled countries identified by the President pursuant to section 5 of the Trade Agreements Extension Act of 1951. (Products of such countries are presently dutiable at the "full" rate, 1-1/2 cents per pound, as compared with the tariff-concession rate of 0.625 cents per pound applicable to products of "most-favored" nations.) However, this is one of the results of the operation of the escape-clause procedure which only Congress can correct. The present policy of Congress is that the products of the communist-controlled countries shall not receive the benefits of trade-agreement reductions. It is the Congressional policy that, otherwise, products of communist countries shall receive the same treatment as the products of "favored-nation" countries.


J. Allen Overton, Jr., Vice Chairman

STATISTICAL APPENDIX

Table 1.--Rolled glass:^{1/} U.S. rates of duty, June 18, 1930-
May 1961

Tariff paragraph and description	Tariff Act of 1930		
	Statutory rate	Modification under GATT	
		Rate	Effective date
Par. 221:			
Rolled glass (not sheet glass)			
fluted, figured, ribbed, or			
rough, or the same containing a			
wire netting within itself-----	1½¢ per	0.75¢ per lb.	1-1-48.
	lb. ^{2/}		
		0.7¢ per lb.	6-30-56.
		0.67¢ per lb.	6-30-57.
		0.625¢ per lb.	6-30-58.
Par. 224:			
. . . rolled . . . glass . . . by			
whatever process made, when			
bent, frosted, sanded, enameled,			
beveled, etched, embossed,			
engraved, flashed, stained,			
colored (except glass . . . not			
less than 1/4 of 1 inch in			
thickness, when obscured by			
coloring prior to solidifica-			
tion), painted, ornamented, or			
decorated, shall be subject, in			
addition to the rates otherwise			
chargeable thereon, to a duty			
of-----	5% ad	5% ad val.	1-1-48.
	val. ^{2/}	2½% ad val.	6-6-51.

^{1/} Dutiable under par. 221 or pars. 221 and 224 of the Tariff Act of 1930.

^{2/} Currently applicable to the products of Communist-dominated countries or areas designated by the President pursuant to sec. 5 of the Trade Agreements Extension Act of 1951. The products of Poland were subject to these rates only during the period Jan. 5, 1952-Dec. 15, 1960, inclusive.

Table 2.--Rolled glass:^{1/} Shipments by U.S. producers, U.S. exports of domestic merchandise, U.S. imports for consumption, and apparent U.S. consumption, 1950-60

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
	61.0	56.7	55.4	59.2	61.5	66.3	63.2	59.0	51.4	51.5	46.8
Shipments by U.S. producers ^{2/}	2.5	2.2	1.7	1.9	1.6	1.6	1.6	1.6	1.2	1.3	.9
U.S. exports of domestic merchandise ^{3/}	.8	2.8	4.4	3.9	5.2	12.0	16.4	13.4	18.9	26.1	25.0
U.S. imports for consumption entered at-- ^{4/}	-	-	-	-	-	.3	1.1	1.2	1.1	1.9	3.4
Trade-agreement rates of duty	0.8	2.8	4.4	3.9	5.2	12.3	17.5	14.6	20.0	25.0	25.4
Full rates of duty	59.3	57.3	58.1	61.2	65.1	77.0	79.1	72.0	70.2	78.2	74.3
All rates of duty	Quantity (million square feet)										
Apparent U.S. consumption	Percent of U.S. consumption										
Share supplied by--	98.7	95.1	92.4	93.6	92.0	84.0	77.9	79.7	71.5	64.2	61.8
U.S. producers ^{5/}	1.3	4.9	7.6	6.4	8.0	15.6	20.7	18.6	26.9	33.4	33.6
Imports for consumption entered at--	-	-	-	-	-	.4	1.4	1.7	1.6	2.4	4.6
Trade-agreement rates of duty	1.3	4.9	7.6	6.4	8.0	16.0	22.1	20.3	28.5	35.8	38.2
Full rates of duty	Dutiable under par. 221 or pars. 221 and 224 of the Tariff Act of 1930.										
All rates of duty	Includes estimates for the period 1950-57, amounting to less than 8 percent of the total. The shipments of rough plate glass amounting to less than 1 percent of total shipments are included.										

^{1/} Dutiable under par. 221 or pars. 221 and 224 of the Tariff Act of 1930.
^{2/} Includes estimates for the period 1950-57, amounting to less than 8 percent of the total. The shipments of rough plate glass amounting to less than 1 percent of total shipments are included.
^{3/} Excludes exports of colored glass, which are believed to be somewhat less than those of uncolored glass.
^{4/} Official import statistics, stated in pounds, have been converted to square feet at the ratio of 1.8 pounds=1 square foot for imports from Japan, and at the ratio of 2.5 pounds=1 square foot for imports from all other countries.
^{5/} Excludes exports.

Source: Compiled from official statistics of the U.S. Department of Commerce and from data submitted to the Tariff Commission by U.S. producers.

Table 3.--Rolled glass: U.S. producers' yearend inventories and ratio of yearend inventories to shipments, 1954-60

Year	Total yearend inventory <u>1,000 sq.ft.</u>	Ratio of yearend inventory to shipments <u>Percent</u>
1954-----	18,320	29.8
1955-----	22,944	34.6
1956-----	22,531	35.7
1957-----	27,047	45.8
1958-----	20,185	39.3
1959-----	27,423	53.2
1960-----	28,213	60.2

Source: Compiled from data submitted to the Tariff Commission by U.S. producers.

Table 4.--Rolled glass:^{1/} U.S. imports for consumption, by kind, 1950-60

Type of rate applicable and type of glass	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Trade-agreement rates of duty:											
Plain 3/	1,786	6,541	10,431	8,882	10,619	26,961	38,942	31,836	43,780	58,006	55,283
Colored and/or processed	244	446	536	895	2,517	2,939	1,996	1,540	1,840	2,609	2,660
Total	2,030	6,987	10,967	9,777	13,136	29,900	40,938	33,376	45,620	60,615	57,943
Full rates of duty: Communist-dominated or controlled countries:											
Plain 3/	-	-	-	-	-	860	2,774	2,963	2,854	4,703	8,409
Colored and/or processed	-	-	-	-	-	-	9	-	-	-	-
Total	-	-	-	-	-	860	2,783	2,963	2,854	4,703	8,409
All rates of duty:											
Plain 3/	1,786	6,541	10,431	8,882	10,619	27,821	41,716	34,799	46,634	62,709	63,692
Colored and/or processed	244	446	536	895	2,517	2,939	2,005	1,540	1,840	2,609	2,660
Grand total	2,030	6,987	10,967	9,777	13,136	30,760	43,721	36,339	48,474	65,318	66,352
Foreign value (1,000 dollars)											
Trade-agreement rates of duty:											
Plain 3/	89	336	534	487	585	1,405	2,336	1,686	2,412	3,516	3,354
Colored and/or processed	19	34	46	71	195	237	173	136	153	229	237
Total	108	370	580	558	780	1,642	2,509	1,822	2,565	3,745	3,591
Full rates of duty: Communist-dominated or controlled countries:											
Plain 3/	-	-	-	-	-	15	72	86	68	102	234
Colored and/or processed	-	-	-	-	-	-	1	-	-	-	-
Total	-	-	-	-	-	15	73	86	68	102	234
All rates of duty:											
Plain 3/	89	336	534	487	585	1,420	2,408	1,772	2,480	3,618	3,588
Colored and/or processed	19	34	46	71	195	237	174	136	153	229	237
Grand total	108	370	580	558	780	1,657	2,582	1,908	2,633	3,847	3,825

^{1/} Dutiable under par. 221 or pars. 221 and 224 of the Tariff Act of 1930.

^{2/} Preliminary.

^{3/} Also includes rolled wire glass.

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

Table 5.---Rolled glass: 1/ U.S. imports for consumption, by principal sources, 1950-60

Type of rate applicable and country	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959 <u>2/</u>	1960 <u>2/</u>	
	Quantity (1,000 pounds)											
Trade-agreement rates of duty:												
Belgium	1,710	6,059	9,736	8,288	10,353	21,194	35,513	27,965	33,270	38,586	35,746	
Japan					43	453	448	277	4,161	12,103	12,026	
United Kingdom	246	543	802	642	388	2,909	887	803	1,275	1,985	1,363	
France	73	92	116	416	862	1,733	2,389	1,766	3,696	3,126	3,113	
West Germany				51	1,029	2,019	1,205	2,556	3,026	2,548	2,214	
Italy					375	375	26	1	171	1,803	2,574	
All other	1	293	232	140	461	1,217	470	8	21	464	877	
Total	2,030	6,987	10,967	9,777	13,136	29,900	40,938	33,376	45,620	60,615	57,943	
Full rates of duty: Communist-dominated countries												
Grand total	2,030	6,987	10,967	9,777	13,136	30,760	43,721	36,339	48,474	65,318	66,332	
Foreign value (1,000 dollars)												
Trade-agreement rates of duty:												
Belgium	85	308	497	453	606	1,144	2,172	1,484	1,817	2,303	2,194	
Japan					3	17	18	12	200	666	679	
United Kingdom	20	43	58	59	33	183	73	52	103	241	142	
France	3	4	8	23	49	93	136	114	237	210	210	
West Germany			5	17	67	127	81	157	196	186	161	
Italy						16	2	2	11	162	162	
All other	3/	15	12	6	22	62	27	1	1	31	73	
Total	108	370	580	558	780	1,642	2,509	1,822	2,565	3,745	3,591	
Full rates of duty: Communist-dominated countries												
Grand total	108	370	580	558	780	1,657	2,582	1,908	2,633	3,817	3,525	
Unit value (cents per pound) <u>4/</u>												
Trade-agreement rates of duty:												
Belgium	5.0	5.1	5.1	5.5	5.9	5.4	6.1	5.3	5.5	6.0	6.1	
Japan					6.5	3.8	4.1	4.2	4.8	5.5	5.6	
United Kingdom	8.1	7.9	7.2	9.1	8.5	6.3	8.2	6.4	8.1	12.1	8.2	
France	3.9	4.7	5.7	5.5	5.7	5.4	5.7	6.5	6.4	6.5	6.7	
West Germany			9.0	5.9	6.5	6.3	6.7	6.2	6.5	7.3	7.3	
Italy						4.4	6.1	5/	6.2	6.4	6.3	
All other	4.8	5.3	5.4	4.6	4.9	5.0	5.7	4.3	6.3	6.7	8.3	
Average	5.3	5.3	5.3	5.7	5.9	5.5	6.1	5.5	5.6	6.2	6.2	
Full rates of duty: Communist-dominated countries												
Average	5.3	5.3	5.3	5.7	5.9	5.4	5.9	5.3	5.4	5.9	5.8	

1/ Dutiable under paragraph 221 or pars. 221 and 224 of the Tariff Act of 1930.

2/ Preliminary.

3/ Less than \$500.

4/ Calculated from the unrounded figures.

5/ \$2.29 per pound (data probably in error).

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

Table 6.--Indexes of prices quoted by U.S. manufacturers^{1/} and U.S. sales agents of foreign manufacturers^{2/} for rolled glass offered for sale in U.S. markets on specified dates, May 1, 1955-Nov. 1, 1960

(May 1, 1955=100)

Date	Heavy rolled glass ^{3/} from--			Thin rolled glass from Japan ^{4/}	
	U.S. producers	Belgium, West Germany, and the United Kingdom	Japan ^{5/}	18-ounce	24-ounce
1955:					
May 1-----	100.0	100.0	^{5/} 100.0	100.0	100.0
Nov. 1-----	107.8	100.0	^{5/} 100.0	100.0	100.0
1956:					
May 1-----	107.8	102.2	^{5/} 100.0	100.0	100.0
Nov. 1-----	113.1	102.2	^{5/} 116.5	142.5	95.8
1957:					
May 1-----	113.1	106.9	^{5/} 116.5	142.5	95.8
Nov. 1-----	120.9	112.5	^{5/} 92.6	101.3	92.1
1958:					
May 1-----	120.9	112.5	94.4	101.3	92.1
Nov. 1-----	130.7	112.5	94.4	101.3	92.1
1959:					
May 1-----	130.7	125.2	94.4	101.3	92.1
Nov. 1-----	130.7	125.2	107.0	118.2	102.3
1960:					
May 1-----	130.7	125.2	107.0	126.4	106.8
Nov. 1-----	140.2	137.3	117.7	151.6	117.8

^{1/} F.o.b. plant.

^{2/} C.i.f. dock, duty-paid.

^{3/} Based on prices of rolled glass 1/8-inch thick or more.

^{4/} Indexes shown are for imports from Japan on the Pacific coast. Prices for imports from Japan on the Atlantic and Gulf coasts were the same as those on the Pacific coast except for indexes shown for Nov. 1, 1956, and May 1 and Nov. 1, 1957. The indexes for these dates for imports on the Atlantic and Gulf coasts are 158.0 (for 18-ounce), 106.1 (for 24-ounce), and 128.1 (for heavy rolled glass).

^{5/} Includes only 1/8-inch rolled glass. Thicker rolled glass was not available for export to the United States on this date.

Source: Computed from data submitted to the U.S. Tariff Commission by U.S. producers and U.S. sales agents of foreign manufacturers.

Table 7.--Total man-hours, wages, and average hourly wages of production and related workers engaged in producing rolled glass in the United States, 1955-60

Year	Man-hours worked	Wages paid	Average hourly wages
	1,000 man-hours	1,000 dollars	
1955-----	2,133	3,890	\$1.82
1956-----	2,126	4,045	1.90
1957-----	2,078	4,222	2.03
1958-----	1,587	3,370	2.12
1959-----	1,498	3,677	2.45
1960-----	1,431	3,618	2.53

Source: Compiled from data submitted to the U.S. Tariff Commission by U.S. producers.

Table 8.--Profit-and-loss experience of 7 U.S. producers on their rolled-glass operations, 1955-60

Item	1955	1956	1957	1958	1959	1960
Net sales-----1,000 dollars---	15,031	12,998	14,803	13,369	14,113	13,040
Cost of goods sold-----do-----	10,694	9,593	11,068	10,328	10,825	10,651
Gross profit-----do-----	4,337	3,405	3,735	3,041	3,288	2,389
General, administrative, and selling expense-----1,000 dollars---	1,696	1,380	1,763	1,792	1,482	1,359
Net operating profit before income taxes-----1,000 dollars---	2,641	2,025	1,972	1,249	1,806	1,030
Ratio of net operating profit to net sales-----percent---	17.6	15.6	13.3	9.3	12.8	7.9

Source: Compiled from data supplied the U.S. Tariff Commission by the domestic producers.