

all hard rubber products; while for very thin gloves, toy balloons, etc. a shape is dipped into a rubber solution made by dissolving rubber in petrol or benzine. After the articles have been fashioned, they are all subjected to the final step in the vulcanization process—curing under heat. The amount of heat and the length of time depend on the hardness desired.

It would be impossible to get enough new rubber to make the vast number of articles manufactured every year, but fortunately rubber can be used again and again, for although sometimes elasticity is lost, rubber can still be used for a great number of necessary articles. The various attempts to prepare chemically what is called synthetic rubber or to find rubber substitutes have not, so far, met with commercial success. (See also *Gutta-Percha*.)

The chemistry of rubber offers many problems. Natural caoutchouc is composed of carbon and hydrogen in the ratio of five to eight, and has many points of resemblance to turpentine.

**RUBENS, PETER PAUL** (1577–1640). To-day we think of Rubens only as the greatest of all Flemish painters, but he was also a very able diplomatist. He painted masterly pictures of and for crowned heads of Europe, but he was equally skilful in managing delicate affairs of state.

Not only was he the master artist of his day, who had learned all that others could teach him and then gone beyond them, but he was also an accomplished courtier and scholar. He was learned in science and politics, and spoke seven languages fluently. He had a fine presence and a natural charm of manner that gave him prestige in any court circle.

#### The City of Rubens

The Flemish city of Antwerp is proud of being “the city of Rubens.” But, though a citizen of Flanders during the period that it was a possession of the Spanish king, Rubens was born in Germany during his father’s exile from his native land. For eight years he was court painter to the Duke of Mantua in Italy; he was called to the court of France to adorn the palace of the Luxembourg in Paris; and he was knighted by Charles I of England and by Philip IV of Spain when he negotiated the conclusion of peace between these two countries.

But, above all, he was the artist who took the

best from the art of the Italian Renaissance and united it to the best from the art of the North, adding his own individual colouring and boldness of design, to create an art influence that was felt throughout Europe for generations after his death.

In his palatial home in Antwerp Rubens entertained scholars, nobles, and sovereigns. Pupils flocked to him in such numbers that there was always a long waiting list, and orders for paintings came so fast and were of such vast

size that only the design and finishing touches could be done by Rubens. The filling-in was usually done by his paid assistants and pupils, many of whom were themselves masters. Van Dyck, one of the world’s foremost portrait painters, was one of the many who served in the Antwerp studio under the guidance of Rubens.

Rubens’s domestic life was most happy. He has left charming pictures of his first wife and children, for he used them many times as models; while his beautiful second wife, Helene Fourment, is perhaps the most frequently painted woman in history.

Rubens delighted in gigantic compositions. He was never so happy as when he was finishing a huge wall painting for a royal palace or a cathedral. Even while he was acting as Spanish ambassador in England he found time to indulge in his art, and on one occasion he was surprised by a courtier, who exclaimed, “Ah, His Majesty’s ambassador occasionally amuses himself with painting!” Rubens replied, “On the contrary, the painter occasionally amuses himself with diplomacy.”

#### Great Variety in 1,250 Paintings

He excelled in every kind of painting. In the 1,250 paintings to his credit there are animals as skilfully done as if he had spent his life painting nothing else. His landscapes and mythological pictures are masterpieces. His portraits rank among the finest of all ages, and his religious paintings are among the most celebrated in the world of art.

Although it is not known that he practised the etcher’s art to any extent, Rubens exercised a profound influence upon it, through those who prepared plates from his paintings.

Works by this master are to be found in most of the large art galleries. The National Gallery, London, has 30. The famed “Descent from the Cross” is in Antwerp Cathedral; the exquisite “Madonna Surrounded by Children” is in the Louvre, Paris.

PETER PAUL RUBENS



The Flemish painter, scholar, and diplomat who was knighted by Charles I of England.