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THE H & V - KENT STORY

Research is the real economic life blood of industry today. This is even more true of a State like Massachusetts, which is quietly undergoing a complete change in the character of its industry, from heavy dependence on textile products to a more evenly divided economy. This change, while of long-term character, has been helpfully pushed along by the many accomplishments of its research laboratories. Scores of new companies have been born in such industries as electronics, atomic energy, foods, chemicals, plastics, metal working and its many facets, paper and others. The refreshing story of progress and accomplishment in many of these firms has been, for the most part untold, but is slowly being brought to light.

One of the very gratifying results of research is that oftentimes the initial objectives lead one into completely unanticipated fields of development. This has been more than true with one of the research projects of the Hollingsworth & Vose Company, nationally known paper makers of East Walpole, whose wartime research lead to the Standard Military Gas Mask Filter, later adapted to United States Atomic Energy Commission requirements, and straight from there to the filter tip of one of America's fastest growing cigarettes, "Kents".

The real story of this amazing development began during World War II. It is a dramatic tale of a wartime search for a new and more efficient gas mask filter for the military forces. It was known that the existing gas masks would not be effective against extremely small particles of toxic dispersions which the enemy had available for use against our troops. High priority was given to this research by the Army, Navy and the National Defense Resources Committee. As a result of the cooperative efforts of the A.D. Little Company, Army Chemical Corps, Naval Research Laboratory, The Hollingsworth &

Vose Company, and others, researchers came up in 1944 with a unique mineral fibre, which when combined with other fibres in a paper, produced an outstanding filter.

Later, when the problem of purifying the air of minute radioactive dust particles in Atomic Energy Commission plants and laboratories came up, scientists again found the solution in this same amazing fibrous filter material. It was considered the greatest air cleansing advancement ever made, and at the time it was classified by the Military for security reasons.

The current story concerning the commercial application of this unique filter material to a cigarette filter really began in Washington about 1950, about which time the material was declassified. On reading one of the technical papers covering the wartime development on these types of filters which was presented at the President's Conference on Air Pollution, Dr. Harris B. Parmele, Director of Research of P. Lorillard Company, contacted Hollingsworth & Vose officials to ascertain the feasibility of a joint development program for a tobacco smoke filter, incorporating similar filter material. Prior to this, Dr. Harold W. Knudson, who had been associated with the Navy's research work on the new filter, during the early days of the war, had come with the Hollingsworth & Vose Company as its Technical Director. Dr. Parmele found that Dr. Knudson and other Hollingsworth & Vose officials had already been thinking along those same lines, but had been waiting for the process to be declassified by the Government.

With this mutual interest established, a joint program of further development was initiated in the Fall of 1950. The first results of the early testing of the original filter material were startling. Based on the performance of a water-laid sheet material, such as made on a paper machine,

the filter was too good! It not only took out the tars and irritants common to tobacco smoke, but it took out the smoke too. In other words, the filter material, as then manufactured, was too effecient, taking out 100 per cent of the smoke, and leaving only hot air — hardly acceptable to a cigarette smoker! In addition, the process did not lend itself mechanically to satisfactory commercial mass production of a cigarette filter. It was at this point that a research approach was made to an air-laid filter, as contrasted to the original water-laid filter.

Facilities at Lowell Technical Institute, through its Research Foundation, were engaged for initial development. Later, pilot scale operations were transferred to the McCard Textile Company at Bedford. The results of this development work indicated quickly that the researchers were on the right track, and in July of 1951, the new material was accepted by P. Lorillard Company, and plans were made ready by Hollingsworth & Vose Company officials for full-scale commercial production. About this time, it was decided that the new product, being entirely different from Hollingsworth & Vose Company's regular products, and using different raw materials, equipment and personnel, would not integrate well with standard paper production. Thus, H & V Specialties Co., Inc., a wholly-owned subsidiary was formed for the purpose of manufacturing this type of filter material. Officers and directors are, Aubrey K. Nicholson, President; Bruce G. Lennox, Treasurer, Mark Hollingsworth, Amor Hollingsworth, Jr., and Guy W. Walker, Jr. General Manager is Lorrel B. Nichols, Technical Director is Dr. H.W. Knudson.

Immediate plans were made to construct a new building of approximately 6,000 square feet on the property of the Hollingsworth & Vose Company's West Groton Mill.

Commercial shipments from the pilot plant operation in Bedford to Lorillard's Jersey City plant began in February, 1952. The following month the new cigarette, the "Kent" (named for Herbert R. Kent, then President, and now Chairman of the Board of P. Lorillard Company) embodying a filter made with H & V's new material, was announced in three major American cities, New York, Chicago, Los Angeles. The introduction of the new cigarette was publicized with a big press luncheon at the Waldorf Astoria in New York. Because sub-micronic particles, 0.2 of a micron, or two ten thousandths of a millimeter are removed by the new filter material, Lorillard officials coined the word "Micronite" for the filter. Thus the Micronite Filter incorporated in the Kent cigarette quickly distinguished the new filter cigarette from other competitive brands. The public's acceptance of Kent was so sensational that within nine months, H & V, whose production had since shifted from Bedford to the new plant at West Groton had increased its producing units from one to four and was now operating twenty-four hours per day, six days a week. In the meantime it became evident that the original building needed to be doubled in size in order to accomodate increased production and a new research laboratory. In the meantime, a major advertising campaign, in both newspapers and magazines, topped by Lorillard's TV program "The Web", had pushed sales unbelievably.

New production requirements from Lorillard, received the day ground was broken for the new plant addition at West Groton indicated that even this new capacity would be insufficient within a very short time. As H & V is the sole producer of the new filter material, it was decided that it would be unwise to concentrate total production in one building or location. It was at this point that a major decision had to be made. Since Lorillard's

two major producing plants were in Jersey City and Louisville, it might have been logical to locate the second manufacturing unit nearby one of these cities. However, H & V officials wanted to stay in New England, and preferably Massachusetts. Immediate steps were then taken to try to locate a suitable building that might be quicly adapted to this type of manufacture. Fortunately, a textile property in the village of Cominsville in the town of Oxford, formerly occupied by Comins & Company as a woolen mill was available. This plant contained 45,000 square feet of manufacturing space. Production equipment was set up in May 1953, and by January, 1954, three producing units were operating twenty-four hours a day.

While all this was going on the cigarette industry was facing a major problem with the adverse publicity concerning the effects on health of cigarette smoking. This, of course, ~~has had an adverse effect on the sales of regular cigarettes, but~~ has given further impetus to the demand for filter type cigarettes. All to the advantage of H & V, whose filter material production has continued to increase as Kent sales have increased.

Current production, from both plants, is being shipped at the rate of five full freight cars, and thirty trailer truckloads per month, going to Lorillard's Jersey City and Louisville plants.

The production of this new product has meant additional sales to many New England equipment manufacturers. Basic production units included modified Saco-Lowell and Whiting Machine taxtile equipment. In addition, humidity control equipment by Parks-Cramer Co., of Fitchburg, ~~dust collecting~~ air cleaning equipment by Turner & Haws Engineering Co., of West Roxbury, vacuum stripping equipment by Abington Textile Machine Works of Boston and Abington, duct work by Fitchburg Sheet Metal and special card clothing by Howard Bros. Mfg. Co., of Worcester, has been installed.

What makes the Kent cigarette so popular?

Both H & V and Lorillard officials keep the exact composition of the filter material a closely guarded secret. But it is known that it consists of a carefully blended mixture of specially selected textile fibres, together with a highly refined mineral fibre. When ~~bonded~~ supported by crepe paper, the combination makes the cigarette filter. According to company officials, the current competitive brands of filter-tip cigarettes, old or new, do not equal the performance of Kents on tar and nicotine removal.

Thus, research has spawned another new industry, adding further to the industrial economy of Massachusetts. Other new products may come from this development, since Hollingsworth & Vose Company and H & V Specialties Co., Inc. has filed patent applications in the United States and several foreign countries covering the basic filter material.