

General Headquarters, Box 91
June 3, 1947

File 436-241

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Meeting with Glass Fibers, Inc.

A meeting was held on May 27 with the patent attorney and business advisor of Glass Fibers, Inc., Col. H. A. Toulmin, patent attorney and industrialist of Dayton, Ohio, and a Mr. May, employed by Glass Fibers, Inc. at Toledo as their patent contact man. Practically the entire discussion on their part was carried on by Col. Toulmin.

Col. Toulmin was entirely unwilling to discuss any details of the Owens-Corning Fibreglas patent structure, except that he categorically stated several times that they were familiar with all details of the Owens-Corning patent structure, that they had, after full consideration, advised Mr. Bernard that his process and equipment did not infringe any claim of Owens-Corning patents. When we tried to discuss the separate features, such as orifice plates, composition, viscosity of the melt, fibre diameter, or any other point, he stopped the discussion and said that he was not prepared to explain why he felt they did not infringe, and that we would have to take his word for it or wait until we were aware of their operations so that we could make an investigation of our own.

He said definitely that they were unwilling to discuss the Owens-Corning patents in the abstract, for instance as they would apply to Owens-Corning operation or the operation of an Owens-Corning Licensee or competitor, - that their relations with Owens-Corning were good and that he would consider it improper for him or Glass Fibers, Inc. to appear to conspire with us in attempting to establish that the Owens-Corning Fibreglas patents were invalid.

He stated he had written instructions from Mr. Harry O. King to advise us in general terms regarding their operation and to advise us of his conclusions regarding the relation of the Owens-Corning patents to their operations.

It developed that Col. Toulmin had really prepared only to show us, again in very general terms, why it would be to the advantage of Johns-Manville to enter into some sort of commercial arrangement with Mr. Bernard and with Glass Fibers, whereby we should obtain the advantage of association with the outstanding glass fibre production expert of the world (Mr. Bernard), and to associate with qualified business men such as Mr. Randall Bernard, Mr. Harry O. King, and Mr. Gordon Reed, all of whom were financially independent and capable business men. Since this was the only subject Col. Toulmin seemed fully prepared to discuss, we discussed it as far as he was willing to go.

Col. Toulmin said that he would recommend to Glass Fibers, Inc. that they enter into some sort of cooperative arrangement with Johns-Manville, for which company he has a high regard on the basis of their reputation in the business world,

MTC 017448

wherein essentially Johns-Manville would put up the money and Mr. Bernard would supply the technical information necessary to construct and operate the plant and the profits would be divided between Johns-Manville and Glass Fibers on some equitable basis. The arrangements could be such that the stock was divided about equally, in which case Glass Fibers might put up a portion of the money. On the other hand, it might be like a management contract wherein Glass Fibers would receive a portion of the gross sales price for a limited number of years. Twenty-five years was mentioned as a possibility, perhaps a limit. It might be arranged that Johns-Manville would put up all of the capital and give a certain number of preferred shares and a small number of common shares to Glass Fibers, Inc. He stated any such plan would presume a separate retainer fee for Mr. Bernard.

He explained several times that this was more than a patent license, that Mr. Bernard was thoroughly ingenious, one of the few such individuals in the world, thoroughly familiar with all details of glass fibre operations. He emphasized above all that it is the benefit of Mr. Bernard's knowledge and experience rather than the patent rights which would be of most value to any outside company. He referred a few times to the fact that these products would undoubtedly cut into Johns-Manville's sales and that we might just as well participate in this drawn glass fibre business ourselves so that we should at least have some control over it.

However, he quickly explained that they have a large number of patent applications on various features of their operations and that they expect very good patent coverage ultimately. They have three issued patents which are drawn to their preliminary work and do not disclose much of their present operations. These patents were:

2,150,017
2,229,489
2,294,266

These patents have been ordered and will be studied as soon as we receive copies.

Both Mr. May and Col. Toulain were quite sure that the Bernard process would produce not only continuous textile fibres which they have produced during the past month, but also staple textile fibres, staple fibres for insulation, of the super-fine type fibre, and coarser staple insulation fibre.

The information we were able to elicit on the construction of the equipment or operation of the process was limited. The furnaces are electrically heated. He would not state whether electrostatically or by electric resistance. He stated the efficiency of the electrical heating was high and that the method was entirely new with Mr. Bernard. We believe there is a fore hearth in which the approximately final temperatures and viscosities are developed, after which careful control by electric heating is maintained at the points of fibre drawing. He did state that this was a combination of pressure extrusion and drawing of the fibers.

He stated one of the great advantages of their process was that the controls were so effective through the electrical heating that there were few broken fibres and

MTC 017449

that production was substantially uniform from the beginning to the end of the run. He said the filaments were "to some extent" self-starting, but he did not elaborate.

He would not state whether platinum orifices were used or whether any orifices were used, but fell back upon the statement that he assured us that we "need not worry" about the orifices, either as to their operation or as to any conflict with Owens-Corning's patents.

Thus far, they have produced only continuous textile fibres which they state they can produce with a finer fibre diameter and with lower equipment and operating costs than Owens-Corning. He agreed to send us samples.

He stated that he would give us a calculated or informed guess on equipment costs by stating that one unit will produce 85 lbs. of continuous textile fibre in a 24-hour day. Ten such units, producing 850 lbs. per 24 hour day, would involve an investment of about \$500,000, not including building or power plant, but including a liberal amount as operating capital and contingencies to take care of errors in construction and preliminary operations. One unit for producing 85 lbs. of glass fibre per day is small and would occupy less space than one small office.

It was our understanding from the statements made that the actual cost of all glass equipment, including the glass tank, marble machine, furnaces, electrical heating equipment, controls, etc. would amount to about \$25,000 per unit, where a number of units, ten or more, are installed, not including the building or the power plant.

They have not used this equipment to produce superfine fibre, but they are certain it will produce fibre as fine as the "A" or superfine fibre of Owens-Corning. The production per unit would be lower for the finer fibre, perhaps slightly more than one-half that for the continuous textile fibre, or 45 lbs. per 24-hour day.

While the two units which have been constructed have not been run for a sufficiently extended period to give accurate cost data, Col. Toulmin said their operation to date indicated an actual production cost of 30% less than Owens-Corning production cost of the same fibre. One of the two present units had been operated about a month, the other for a few days.

It should be recalled, however, that Owens-Corning state that they have made some recent changes in their equipment which will result in a production cost substantially one-half their present costs on the stable fibre. I believe this Owens-Corning reduced cost does not apply to continuous textile fibres.

Col. Toulmin was very firm in stating they did not infringe any Owens-Corning patents and that if they did infringe, Owens-Corning would not sue them and if Owens-Corning should for any reason sue them, he would not hesitate to call in the Department of Justice and that he was certain the suit would not be continued. He did not make it clear as to whether Owens-Corning was in such an exposed spot that they would not sue any outside company or whether this attitude was based upon particular information available only to himself or his client.

It was not made clear whether Glass Fibers, Inc. would be willing to grant Johns-Manville a license under their patents (if and when they issue) with a normal royalty payment and with the necessary technical assistance on correct construction and operation of a plant, but each time the subject was approached Col. Toulmin turned to the proposal for a cooperative company or a cooperative operation which he considered more advantageous to all concerned. He made it quite clear that he considered the selling of the "know how" on a cooperative basis to be more important than the exact patent protection which might be acquired.

For the continuous glass textile fibre, Col. Toulmin calculated that with production of 85 lbs. per day from each unit, the sales from ten units at \$1.50 per lb. would be \$1275.00 per day. He assumed that the profits would be approximately 30% of the sales price, leaving gross profit before taxes of \$380.00 for each 24-hour day from the ten units, or approximately \$120,000 per year with a total investment of \$500,000, exclusive of building and power plant, and with gross sales of \$400,000 per year.

He stated these figures were not the result of extensive operations but that they were approximately correct and that any error would be on the conservative side.

It should be noted that there is some discrepancy here. If they produce for 30% less than Owens-Corning and have only a 30% profit margin, this would make Owens-Corning profit zero.

From Col. Toulmin's entire attitude, I believe that he is anxious to make some kind of a tie-up on a commercial basis with Johns-Manville. He stated he had no authority to make any proposal to Johns-Manville but that his statements during this meeting were based upon what he would be prepared to recommend to Glass Fibers Inc. and that they generally accepted his recommendation.

Mr. Bernard was stated to be quite familiar with glass compositions and to have no difficulty in obtaining the exact composition required. They make up their own glass in their own glass tank from which they make the marbles which are added to the furnaces.

A separate memorandum has been prepared on our discussions with Col. Toulmin on matters other than glass fibre.

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VCK:mp

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MTC 017451