

"The Seven Ages of Johns-Manville"

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The Seven Ages of Johns-Manville

A typical American corporation grows up. From single-hearted production to many-handed distribution. From hard-fisted Manvilles to hard-headed Morgans. From a family's source of livelihood to a nation's speculative favorite.

THE law delights in defying common sense, but now and then its flights of fantasy are touched with genius—as when, for example, it preposterously assumes that a corporation is a person. Compare this perspicuity of the law with the fatuity of those men who regard a corporation as a number in the great game of stock-exchange roulette, who would write a corporation's history in the form of a series of stock-market quotations. A speculator might record as corporation history that he had sold Johns-Manville common at $50\frac{3}{4}$ in 1926; that he had bought it at $24\frac{2}{4}$ in 1929; had sold it at 90 in the same year; bought it at $148\frac{3}{4}$ in 1930; and had ended by selling it again at $48\frac{3}{4}$ on the seventeenth of December last. Actually, the speculator had done little but describe the history of a speculator's state of mind. Compare these fantastic fluctuations with the much more credible and interesting story of Johns-Manville, the corporate person:

First the infant (mewling and puking in its nurse's arms). Sixty years and more ago, H. W. Johns had a windowless office in William Street, New York, and a "factory" built on a filled-in swamp in Long Island City—a factory with one full-time employee, a superintendent who hired help whenever there was an order to be filled. About the same time, C. B. Manville was mixing cement in the cellar of his home in Milwaukee and carrying it out in pails to cover his neighbors' furnaces. This unprepossessing infant business had, however, the *traits* from which Johns-Manville grew. Johns was making a roofing of felt and other substances waterproofed with pitch; Manville was doing primary insulation.

Next the schoolboy (with shining morning face). Asbestos had come into the market. Salesmen of Mr. Johns were explaining to customers what it was: a mineral, but not a metal, composed of slender fibers and found in veins of rock; it made roofing and insulating materials fire resistant. The public was taking to it. Paper and a dozen other useful products were compounded from asbestos, but asbestos cloth, still a rarity, had to be imported. It was valued at about \$1 a square inch and was kept in office safes. In short, the business as a growing youngster was nourished not on shredded wheat but on a new food, asbestos.

The lover (sighing like furnace). America was the land of furnaces, and every one

of them presented an opportunity for insulation, just as every rising house had to be roofed. In 1901, Mr. Johns was dead, and Mr. Manville's business had passed into the hands of his able son T. F., who united the two firms and launched the new H. W. Johns-Manville Company on a lover-like, impassioned quest for profits. The infinite complexity of the company that exists today is largely traceable to the young lover's adventures.

The soldier (seeking the bubble reputation even in the cannon's mouth). By 1918, Johns-Manville had developed a magnificent physique; it had the power to strike hard where there lay a possibility of profit, and in the person of T. F. Manville it had a leader who struck boldly. In the few years of War-time expansion, Johns-Manville stormed one stronghold of profits after another. It may not have been a well-machined, well-regulated army, but it had terrific hitting power, and its success was in proportion. Virtually at the peak of its career, when the bubble reputation was within its hands, T. F. Manville, its leader, fell in battle. That was in 1925. For the moment, Johns-Manville's genius for success had outstripped its organization. The dead leader's field marshals were at a loose end. Soon a new leadership had to be called in, but the era of soldiering bequeathed a company whose rank and file are veterans of marches and assaults, of the days of raids and conquests.

The justice (his belly with good capon lined). In 1927, the company passed from family control and management to the bankers and to the public, for its control was sold by H. E. Manville (younger brother of T. F.) and other executives of the company to J. P. Morgan & Co. Johns-Manville now stood on a financial rock; the soldier was home from the wars, ready to settle down, eager for more stable successes. To obtain these, Morgan & Co. installed as president of Johns-Manville the most able executive they could lay hands on: T. F. Merseles, who had made an outstanding success as head of Montgomery Ward. He took matters in hand for a year and a half, when he, too, died. He was succeeded by one of his own lieutenants, Lewis H. Brown. At the time of Mr. Merseles' death in 1929, business was already on the down grade. The fruits of the reorganization are yet to be tasted, because their ripen-

ing has been retarded by the long winter of depression. None the less, the reorganization has gone on, and Johns-Manville is already a much changed corporate person. The ambition of its leaders is that it shall come to sit on the bench of the substantial, deliberate citizens, occupying in its own right a place analogous to that, say, of General Electric.

THE management of Johns-Manville has so set its stamp upon the company that it is well worth while to examine the men who in recent years have made it what it is.

In the first place: T. Frank Manville. He came very near to being the type of the old-fashioned captain of industry. His career began in shirtsleeves and ended in the metaphorical silk hat, not only because his potent touch turned things into gold, but because it turned them into the property of T. F. Manville. He talked at top speed in a low voice that was hard to understand, and he would brook no interruption. He had a thorough grasp of the very simple principle that the way to make money was to sell things—any things—for more than they cost. He liked salesmen to be worth big salaries, and did not hesitate to pay them in proportion. He had three great field marshals of sales: L. R. Hoff, George Nicol, and J. S. Carroll. The result was that his sales staff literally sold roofing by the acre and pipe insulation by the mile. The result is also (according to report in the industry) that Johns-Manville probably has today more men of independent means on its pay roll than any other company of equal size.

T. F. Manville not only built up his shock battalions of salesmen; he had magnificent confidence in them. If any manufacturing company was on the market, his impulse was to say: "Sure, my men can sell that product at a profit"; and accordingly he bought all sorts of unrelated businesses or acquired them in payment of debts, putting them in the charge of his field marshal of production, W. R. Seigle. His salesmen once sold (besides roofing, insulation, and various asbestos products) such items as a speedometer, a refrigerator, a toilet seat, electrical fixtures, fire extinguishers, fiber cuspidors, and wastebaskets. The almost fantastic variety of Johns-Manville products today is in part a relic of this policy. Only



THREE PRESIDENTS OF JOHNS-MANVILLE: LEWIS H. BROWN, T. F. MANVILLE, THEODORE F. MERSELES

Young Mr. Brown, who today with quiet calculation charts a stable future for the company; dominant Mr. Manville, whose bold leadership in a few years made it big by making big profits; and Mr. Merseles, who ably and briefly held the stage between them.

last year did the company, in an attempt to rationalize its varied field of operations, give up marketing steam traps for radiators.

One evening in October, 1925, he went home to the Plaza Hotel, where he had lived alone for three years, called a waiter to order his dinner, and dropped dead of heart disease. There is no doubt that he had wished to put the company on such a basis that it could consolidate its gains after his death. Not long before, he had negotiated for sale of control to J. P. Morgan & Co., but had changed his mind before the transaction was consummated. He left a net estate of \$22,179,049, and his will (as reported at the time it was assessed for taxation) gave 25,000 shares of Johns-Manville stock to his son, T. F. Manville Jr. (by now twice divorced), who was not in the picture as his father's successor; the same amount to his daughter, Lorraine, wife of the comedian Jay Gould; and 40,000 shares to be sold at half its value to Johns-Manville employees who at that time were receiving over \$10,000 a year, and had been with the company five years. Somewhere between fifty and one hundred employees profited in the neighborhood of \$50,000 apiece under this provision.

So far as the mantle of "T.F." descended on any one, it fell on his younger brother, Hiram Edward Manville. During "T.F.'s" lifetime, "H.E." had always remained in the background. He did not have his brother's terrific drive, but he was universally liked in the company.

Since then, "H.E." has become better known. He has a magnificent 385-acre estate at Pleasantville, New York, where a French

château perches majestically on a hill. In 1928, his daughter, Estelle, was married there to Count Folke Bernadotte, nephew of the King of Sweden (but without rights of reversion to the throne). The wedding was of unprecedented splendor: colored spot lights played on the wedding cake and movie cameras on the bridal party. Since then Mr. and Mrs. H. E. Manville have made several sumptuous trips to Europe in their yacht (which has an extra-length bed for the tall King Gustaf), the last of the trips, in 1930, being marred by the death of the Queen of Sweden. Mrs. Manville immediately announced the cancellation of all social engagements out of respect for the royal family. Young Count Gustaf Edward of Wisborg is named after the King and after his maternal grandfather, H. E. Manville.

At his brother's death, "H.E." was among the employees who were given stock at half price (he likewise received a smaller cash bequest). It soon became apparent that what the company most needed was strong financial backing. To obtain this, he purchased the 25,000 shares of T. F. Manville Jr., and induced the other employees to sell him the stock which they had received at half price, so that it was possible in 1927 to sell control of the company to J. P. Morgan & Co. (a revival of the transaction which T. F. Manville had failed to carry through).

The sale to Morgan brought a new personnel upon the scene.



Wide World

RELATIVES OF THE KING OF SWEDEN

His nephew, Count Bernadotte, and niece, Estelle, daughter of H. E. Manville (the only Manville still active in the company), at their gorgeous wedding three years ago. The ushers wear the gold and blue of their Swedish regiments.



THE LAYING-ON OF ROCK CORK

... which is not cork at all but limestone fabricated into a light, fluffy wool, then made into slabs with asphalt. In this dark chamber of a cold-storage plant, it serves as insulation against heat. It performs the same function in half the electric refrigeration units in use today, Frigidaires among others.

"H.E." became chairman of the board, and then chairman of the executive committee, the post in which he is active today. The board of directors, which had consisted largely of the company's employees, was transformed into a group of notables. Today the board includes, besides the present president, two Morgan partners—Francis D. Bartow and George Whitney; also Alfred P. Sloan Jr., president of General Motors; Walter H. Aldridge, president of Texas Gulf Sulphur; Clarence M. Woolley, chairman of American Radiator; George B. Everitt, president of Montgomery Ward; and H. E. Manville. W. R. Seigle (former production manager) is the unique chairman of this board. Much, if not most, of his time is spent at the large New Jersey laboratories which have been created under the new *régime*; and so devoted is he to their progress that, in the evening, when most board chairmen are returning placidly to their Park Avenue apartments, he motors to his home in exclusive Westchester where, in an extensive private laboratory, he continues his work far into the night.

In July, 1927, the Morgan management having taken charge, there was installed in the presidency of Johns-Manville another man with the initials T. F. M.—Theodore Frelinghuysen Merseles (accented on the penult). One might have expected that, in this new era, individualism would disappear from the company. As it happened, the Morgan influence, reaching out to find an able executive, had chosen a man who was quite as much an individualist as T. F.

Manville, but with a great difference. He, too, had his own way of doing things. He himself did not bother with too many figures and analyses. He carried a little black notebook in which were set down by months the gross sales and the net profits of whatever company he was with. Other statistics he left to his assistants. During his long career, he got on well with his boards of directors because he did not believe in telling them too much; he showed them the results, but did not invite them to worry about things they did not properly understand. From his employees he managed to extract an immense amount of work; and although his decisions were instantaneous, his methods summary, he took infinite pains with any man, young or old, who seemed to have promise.

In eighteen years as vice president and general manager of the National Cloak & Suit Co., he made his mark. It was of him that the story was told concerning a woman, employed as a stylist, who was very anxious to go to Paris to keep up with the trend of fashion. At last he consented, but when she reported ready to set out, he gave her a ticket to Paris, Kentucky, and instructions to spend several weeks there, learning what her customers really wanted. It was merely an example of his method.

In 1921, J. P. Morgan & Co. took him away from the cloak-and-suit business to make him president of Montgomery Ward, which in that year enjoyed a deficit of \$9,000,000. He was fifty-eight at the time, and did not believe it was fair to his wife

to transport her to a new city. So he commuted to his head office in Chicago from his home in Bronxville, New York. He left New York every Monday on the *Twentieth Century* and returned from Chicago every Friday by the same train, doing a week's work in the interval. Thus passed some 250 weeks, and by 1926 Montgomery Ward showed a \$9,000,000 profit.

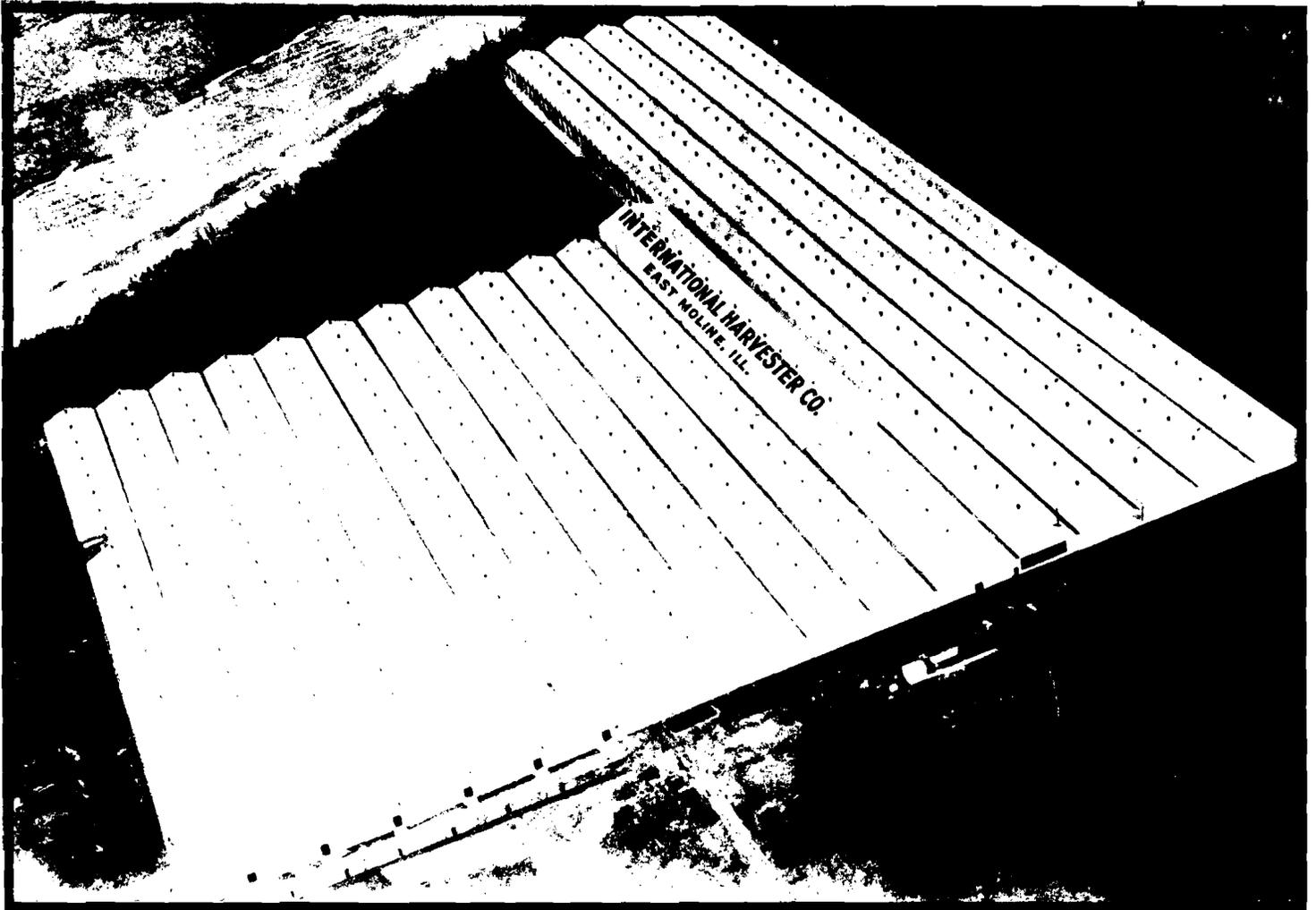
This was the man whom Morgan & Co. made lord of Johns-Manville. At the time, Mr. Merseles knew practically nothing of the business. He was chosen only as an able specimen of the more or less mythical species "executive." His first step was to lop off all possible expenditures, and subsequently to restore only those which were too badly missed. The year 1928 was prosperous in industry generally, so it is impossible to tell how much of Johns-Manville's increase of 35.2 per cent in profits rightly can be credited to his management.

His management, however, was vigorous. He made a habit of having one new idea for the improvement of the business every day. On a morning he might wake up with the idea of having a new product. When he arrived at the corner of Madison Avenue and Forty-first Street, at the Johns-Manville Building, he would impart it vigorously and repeatedly to his associates, who might scratch their pates in perplexity. Before the week was out, or the month, some one would discover, tucked away in his mind, a useful product that Johns-Manville was equipped to produce. Other more deliberate plans which Mr. Merseles had for adding to the company's list of products will be described presently.

In January, 1929, he went to the Pacific coast for a "vacation," which consisted in good part of visits to Johns-Manville plants and offices in California. He never returned. On the evening of the sixth of March, he died suddenly, like the other "T.F.," of heart disease in the Del Monte Hotel at Del Monte.

His death did not result in a violent change in the character of the company. W. R. Seigle, who had been master of production under T. F. Manville, was advanced to chairman of the board; and Lewis H. Brown, brought originally by Mr. Merseles from Montgomery Ward & Co., succeeded to the presidency. At that time Mr. Brown was only thirty-five, and there were a good many publicity-mongers who were eager to capitalize his comparative youth. He very wisely evaded them, for Johns-Manville was still in process of reorganization, and business was already slackening—a foretaste of the universal depression which for two years has submerged many of the most ably conducted companies.

Before turning his back on publicity and retiring to work at his new desk, Mr. Brown announced a continuation of Mr. Merseles' policies. There is a distinct difference, however, between Mr. Brown and his predecessor. Mr. Merseles was one of those able executives who surround themselves with expert assistants—men who measure and



ACRES AND INTERIORS

Asbestos fiber embedded in cement and pressed into large sheets, either plain or corrugated—such is the product that Johns-Manville calls transite. It is used as siding and roofing (thirty-four acres are spread on the International Harvester plant above) as “flare-backs” (to prevent the spread of oil fires), as a special protection against corrosive smoke and gases, as worktable tops, and even for decorative effects—an example of which may be seen (right) on the walls and ceiling of a bedroom in the home of James L. Breese, Southampton, Long Island.

catalogue the progress of a business. Their careful calculations he himself both absorbed and ignored until the time came to make one of his abrupt decisions. Mr. Brown was one of those expert assistants, the careful weigher and examiner—in the new tradition of business executive. In him the transition from the old *régime* to the new—in which Mr. Merseles was the intermediate stage—is accomplished. The picture is the more striking because Mr. Brown is still under forty; because the company which he heads is filled with veterans of twenty years service in the campaigns of T. F. Manville: men like Hoff, Nicol, Carroll, and S. A. Williams, who had led many a spectacular assault.

ALL this, the story of Johns-Manville and its management, is practically the type development of American industry in the last few decades: from little to big, from family ownership to public ownership, from individualist to professional. There is another striking aspect of the corporation's character—the fields of its activity.

The public has a crude notion that Johns-Manville manufactures asbestos products for the building trades. The company has far outgrown this concept. Today, Johns-Manville products number some 1,300 to 1,400, and are not only too numerous but too



dissimilar for inclusion in any one catalogue. In only the most general sense, for the purpose of making its activities intelligible to the public, the company divides its products into four classes: building materials, insulation materials, acoustical materials, and friction materials. Its wares include not only asbestos products, but also products of magnesia, asphalt, limestone, and diatomaceous earth. The company runs quarries, mines, paper mills, textile mills, brick kilns, and laboratories. It furnishes (besides roofing, siding, and flooring) fireproofing and soundproofing materials, heat and electrical insulations, machine packings, friction materials. Its products are used not only in the building trades, but in steel manufacture, sugar refining, road construction, automobile making, oil refining, railroading, and refrigeration. This is admittedly only a patchy outline of its work.

. . .

THIS vast spread of activity is only partly the result of exuberant confidence in being able to make profits at many trades—largely it is the result of three influences common throughout industry, but seldom found active together in one company. The first of these is the proposition that a company does well to secure its sources of raw materials. Johns-Manville was a company making roofings and insulations, both of which contained considerable quantities of asbestos. Over a period of years, asbestos mines were acquired in the province of Quebec and the state of Arizona. As soon as J. P. Morgan took over the company, it was determined to secure ample supplies of future raw materials. Mr. Merseles ordered a comprehensive survey, and the company's mineral-bearing properties in Canada were so enlarged that today



SKELETONS AS INSULATION

This microscopic photograph reveals the remains of the long-dead diatoms. Their skeletons of silica collected ages ago on what was then the bottom of the sea. Because of the many small voids between skeletons, the sandstone which they compose is an excellent insulator against high temperatures (up to 2,600 degrees Fahrenheit), as well as a filter to take the impurities from syrups out of which sugar is made.

Johns-Manville owns enough unmined asbestos to supply its needs for from fifty to seventy-five years.

The second of these principles is that a company does well to find as many uses as possible for its products and by-products. Since it entered asbestos mining, one of Johns-Manville's products has been raw asbestos. To its manufacture of roofing and insulation of asbestos, the company has added the manufacture of asbestos paper, of asbestos cloth, asbestos shingles (made of asbestos and cement), transite (of similar composition but made in large sheets for other uses). Some of these uses for asbestos have taken the company into far

fields. The manufacture of asbestos cloth led to the making of brake linings for automobiles and facings for clutches (used in all sorts of industrial machinery)—things that have nothing to do with either roofing or insulation, but which followed logically from the desire to find uses for asbestos.

The third of these principles is that it makes for economy of sales effort to offer a complete line of products for any given type of service. Consider insulation, which is one of Johns-Manville's four great fields of activity. Johns-Manville had a variety of insulating products, most of them containing asbestos. They were excellent materials for preventing seepages of heat between the temperatures of 32 degrees and 1,500 degrees Fahrenheit. If a Johns-Manville salesman called on a prospect who happened to need insulation for temperatures under freezing or over 1,500 degrees, he went away empty-handed, at least as far as that part of the purchaser's requirements. With no extra expense, the salesman could have sold insulation of those types if he had had it to offer. What is more, he could have said to his client: "We are the logical people for you to do business with. We can sell you any insulation you need, and therefore we have no motive for selling you any product not the best for your purpose."

Within the last three and one-half years, Johns-Manville has worked out this very situation in the following way: an excellent high temperature insulation was being marketed by a company in California. There, at a place called Lompoc, was a deposit of diatomaceous earth. This stuff is in effect a kind of sandstone, but it is composed of the siliceous skeletons of microscopic animals that lived and died in the sea ages ago. It is very porous, and therefore an excellent heat insulator. It is chemically of the same composition as sand, so it will melt or fuse



A HILL OF NATURE-MADE INSULATION AT LOMPOC, CALIFORNIA

In 1928, Johns-Manville, to complete its roster of insulation materials, purchased the Celite Co. Bricks of celite, the substance whose close-up appears

at the top of the page, are cut directly from the sides of this quarry. When dry, this stone holds so much air in its pores that it floats on water.



Courtesy Frank K. M. Rehn Galleries

PYRAMID OF FLAME BY CHARLES BURCHFIELD, A MAN WHO SEES MERIT IN COMBUSTIBILITY

only at terrific heats (over 2,600 degrees Fahrenheit). It is cut in bricks directly from the hills or, for very high temperatures, is made into bricks from a powdered form. Therefore the company mining and selling this "celite," as it is called, was bought by Johns-Manville.

Then Johns-Manville had a product to sell for use in insulating blast furnaces and oil-cracking stills, etc., which operate at high temperatures. As in the case of asbestos, possession of the raw material led to other activities. In concrete making, celite is often used, in divided form, to make the concrete pour more easily. Consequently celite is sold for use in buildings, road surfaces, and bridges. Celite in divided form is also an excellent filter. Therefore, it is sold for straining the impurities out of many liquids, notably syrups before the sugar is crystallized out of them. It is also sold for filtering sewage, for thickening certain kinds of paint, and as an ingredient of various cleaning and

polishing powders sold for household use.

Now Johns-Manville had filled the high-temperature void in its insulation service. The low-temperature field remained. There was also (in Indiana) a company which had a patent on a process for melting a certain type of limestone and blowing into it jets of compressed air and steam. The molten limestone flew into the air and came down a few feet away in a fibrous form resembling wool, and having most of the advantages of both rock and wool. By mixing this rock wool with asphalt, a fire-resistant, non-deteriorating slab was made which could be used with advantage to replace cork as an insulator for cold storage and refrigeration. Accordingly, in 1929, Johns-Manville bought the maker, Banner Rock Products Co.

In this way, it acquired the insulation which is used in many ice and cold storage plants, in the Frigidaires of General Motors; all told, about half the refrigerators now in use are insulated with it. (Johns-

Manville likewise pioneered in the development of other types of insulation used to keep refrigerator cars cold, and steel railroad cars warm enough for human beings to occupy in winter.) Like celite and asbestos, rock wool has secondary uses. It is blown by fans into the walls of old houses, thereby insulating them against the winters of New England and the summers of Texas, and at the same time tending to reduce fire hazards. The Burgess Laboratories of Chicago had invented a type of perforated metal box filled with rock wool, which acts as an efficient sound absorber. The rights to manufacture this product were bought by Johns-Manville and "San-acoustic" tile was added to the company's list of acoustical materials. So the endless chain of diversification goes on.

Behold the result—a vast and miscellaneous spread of new activities—but a complete picture of insulation that may be summarized roughly as follows:

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And Now—

Radio in Every Room

HOTEL HOLLENDEN in Cleveland, famous for its comfortable, home-like atmosphere and courteous, unobtrusive service, now presents to its guests the latest in modern radio equipment. Every Hollenden room is now provided with a four-station selective radio speaker, adjustable as to programs and volume. Full public address equipment is also available for conventions, meetings, etc.

Hotel Hollenden, right in the heart of the city, is the Cleveland home of discriminating business and professional men, executives and experienced travelers. The famous Crystal Dining Room, the Coffee Shop and the Oyster Bar provide a choice of good eating places, and the rates, starting at \$3.00 single, are moderate. A 300-car garage is in the building.

I extend a cordial personal invitation to you to make the Hollenden your headquarters the next time you are in Cleveland.

Sincerely yours,

Theo. De Witt
Vice Pres. & Gen. Mgr.

In Cleveland—is The
HOLLENDEN

THEO. DE WITT,
Vice Pres. and Gen. Mgr.

Half a Pair of Shears

USING Market Research or Technical Research alone, is like using half a pair of shears. One is worthless without the other.

Spending money for Technical Research for a product for which no market exists or spending money for Market Research for a product which cannot be economically manufactured is ruthless waste.

BKW Service co-ordinates its research activities. Wasteful research is eliminated, for each problem is viewed both from the Technical and the Market angle.

An interview incurs no obligation yet from it may develop a definite research program for creating profits.

BIGELOW, KENT, WILLARD

and Company, Inc.

Consulting Engineers and Accountants—
Merchandising Counselors

PARK SQUARE BUILDING, BOSTON

The Seven Ages of Johns-Manville

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Many Products From	Approximate Temperature Range (in Fahrenheit degrees)
CELITE	400 to 2,500
ROCK WOOL	100 to 1,000
ASBESTOS	100 to 700
MAGNESIA	100 to 600
WOOL FELT	40 to 200
HAIR FELT	-400 to 100
ROCK CORK	-400 to 100

This policy bore fruit in the insulation field and in other fields as well. Since 1928, Johns-Manville has bought not only Celite Co. and Banner Rock Products Co. It has also bought the Weaver-Henry Manufacturing Co. of Los Angeles (to improve the geographical distribution of its roofing plants); the Preformed Asphalt Products Co. of Dayton, Ohio (which makes asphalt expansion joints, useful in roads built of celite concrete, and asphalt planking used to surface bridges as well as for flooring purposes); the Biegler Manufacturing Co. of Chicago (makers of asphalt floor tile, an addition to Johns-Manville's line of floorings). As with insulation, as with building materials, so also (largely) with acoustical materials and friction materials, Johns-Manville increases its products and buys companies progressing toward that millennium when in each of its fields it shall be the Great Omniproducer.

SO much for the picture of Johns-Manville, a complex organism with a complex past. What of its present prospects?

We are in the midst of a depression, a thoroughly whole-souled and heartfelt depression. Johns-Manville is there with the rest of corporate humanity. Its sales and profits are reduced. The building industry, the automobile industry, the oil industry, the steel industry, the railroads—in short, most of its large customers are in the slough.

Many similarly situated companies are laying grandiloquent schemes, not only for recovery, but for preventing any repetition of the situation, ever. Johns-Manville has attempted to lay no plans of this kind, whether good or bad. It sits in no conferences for the reorgan-

ization of industry. Its management has definitely adopted the policy of attending to its own problems and leaving the depression to cure itself. The company can afford to sit tight without alarm, for although earnings were only \$230,000, or thirteen cents a common share for the first quarter of 1931, Johns-Manville's financial position and organization are intact—as they could hardly have been had the management been intent only on the greatest possible profits in the shortest possible time. The following outline may give some idea of what the problems of Johns-Manville are:

In the first place diversification—of goods in type and price; of customers; and last but not least, of raw materials. Johns-Manville's policy has been aimed at all these ends. At the moment, the raw material question is as much to the fore as any of the others. Asbestos was for years the chief ingredient of many, if not most, Johns-Manville products. The world at present uses about a quarter of a million tons yearly of this mineral, the largest producer being Canada, with lesser amounts in South Africa, Rhodesia, and Russia.

In the years since the War, Russia has been practically out of the picture, but is now returning. Already Russia is producing about three times its pre-War quantity, and at the completion of the Five-Year Plan will have multiplied its present production by five. The threat of Russian dumping faces this industry as it faces others, but Johns-Manville, by having branched out in the uses of other raw materials, celite, rock wool, etc., is already partly protected from the resulting price disorganization.

In the second place, Johns-Manville has the task of making continual adjustments to its markets. The demand for some of its numerous products periodically disappears, and the company must be continually on the alert to find others to replace them. In 1927 and 1928, the company had a large sale of insulated roofings for oil-

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storage tanks, perhaps \$1,000,000 worth of business in a year. Abruptly, the oil business changed its methods, ceased storing oil above ground, and abruptly the \$1,000,000 market vanished. Johns-Manville made a swift about face and developed a good overnight business in insulation for pipe lines, and high-temperature insulation for oil-cracking stills. A few years ago, the sudden popularity of the four-wheel brake on automobiles at once greatly increased the demand for brake linings, and made the old style linings obsolete. For Johns-Manville, it was practically a question of developing a new material. Not only have faster driving speeds and growing traffic congestion put new calls on automobile brakes, but the public constantly demands more of its brakes in the way of silence, efficiency, and wear. A taxi company, for example, cannot tolerate squeaking brakes because it would soon lose all its business. To cap the situation, good brake performance is dependent not on abstract "quality" of brake lining, but on its rightness for a particular vehicle: a difference in brake design or in the weight of the automobile usually requires an entirely different brake lining. With manufacturers changing their cars every year, the brake-lining business is in a continual state of flux.

Sometimes their trends are constructive (for the company) rather than destructive. The increasing distaste for nerve-racking noise in all departments of life is such that Johns-Manville's pioneering in the control of sound is gradually bearing fruit. Elsewhere, the noiseless typewriter has been recognized, and the silenced subway turnstile; Maxim has invented a silencer for open windows, and the replacement of telephone bells by lights is going on in places; there is an outcry in cities for silent welding to replace noisy riveting in the construction of buildings; and London is talking about silencing its subways—a job that would be in Johns-Manville's field, and which is already being studied in J.-M.'s laboratory. Meanwhile Johns-Manville—having developed half a dozen types of interior finishes that absorb sound instead of reflecting it back again and again to the human ear, and also special

bases to absorb the sound and vibration of machinery—is well placed to take advantage of the new demand for restful surroundings.

Yet foresight is not the only thing required in facing a series of changing markets. Foresight must be backed by preparation and a good part of preparation is research. Since the new management took charge, Johns-Manville has become a company with a first-rate research laboratory. There questions of pure science are investigated but (unlike General Electric laboratories, for example) only such questions as have a bearing on manufacturing problems. Its appropriation for research, patents, and sales engineering has mounted steadily, even during the depression, to the figure of \$750,000 a year (equal to 27 per cent of the amount of dividends on the company's preferred and common stock). In the third place, Johns-Manville has a problem in gaining the recognition which it deserves. It occupies a unique position—it has competitors but no competitor: in nearly every product that it produces, it is faced by competition; but in its field as a whole, or even in any large part of its field, no one company faces it with an equivalent array of products. More curious still, in most of the individual fields in which it competes, it is not the largest producer of a given product (more often the second or third largest); yet as a company, it is larger than almost any other company competing with it in any way. This situation gives it certain advantages. For example: it can afford to spend more on research than any single competitor, the overhead of employing able scientists being divided between the various branches of its business, no single one of which could individually afford to hire the technical knowledge that is available to it as part of the whole.

On the other hand, Johns-Manville products are most of them of such a nature that they cannot be patented. The result is that many competitors who spend nothing whatever on research or development are able to imitate Johns-Manville products. This situation would be of less significance if Johns-Manville could gain public recognition for the wide range of its services and products—a range



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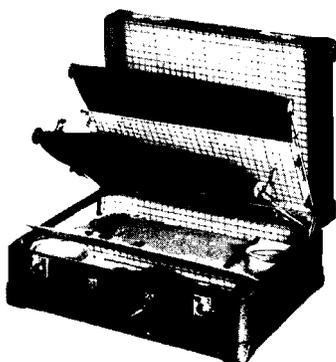
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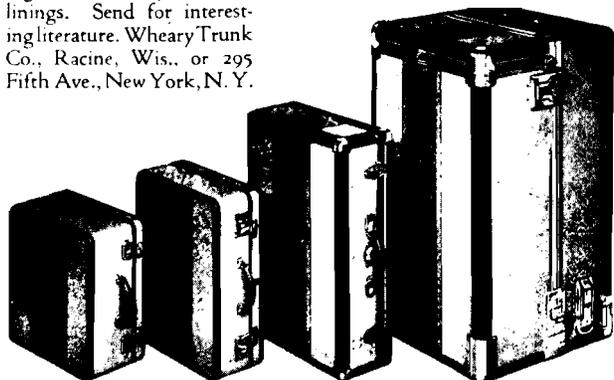
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that is not out of keeping with its ambition to be a sort of General Electric in its own field. But the fact that Johns-Manville activities are so complex and have no common denominator has been an obstacle to public appreciation of what Johns-Manville really is. Moreover, because Johns-Manville products are so diverse, they have to be distributed in some cases to consumers and in others to dealers, to jobbers, or to manufacturers; so the distribution problem is very complex and troublesome. Diversity is the company's strength, and complexity is its stumbling-block.

WHAT of the policies and progress of the company under its new management? Have all the acquisitions made by the company been wise? The first thing done when control passed to the bankers was to invest in a large ore reserve of asbestos. Thereby the company obtained assurance against a scarcity of the mineral. A few months hence, the Tariff Commission is to hold hearings on the question of the "dumping" of Russian asbestos fiber, and Johns-Manville will be one of the companies appearing to urge a permanent embargo (a temporary embargo has already been established by President Hoover). On the surface, this circumstance would suggest that overproduction, and not scarcity, is the most immediate raw-material problem. Another question of wisdom arises in connection with the Johns-Manville practice of paying cash for its new properties. The justification of this method of purchase is that cash can always command a slightly better bargain than securities; and that now, in time of depression, the company is not under the necessity of paying dividends on a capital inflated by the sale of quantities of stock. However, most of the purchases were made before the fall of prices late in 1929, during a time when most farseeing companies seized the opportunity to make similar acquisitions in exchange for their stock, then

valued at inflated prices—or to obtain the cash for such acquisitions by selling stock to the public.

In 1926, Johns-Manville had \$16,610,000 invested in land, buildings and equipment; in 1929, \$25,748,000. The difference represents cash investment. This money came partly from earnings and partly from a reduction of working capital, which had apparently been unnecessarily large. Invested in fixed assets, it is yielding a higher return than it did formerly as current assets. However, even in 1929, a boom year, the company's net income per dollar of fixed assets was less than before (twenty-two cents in 1929; twenty-nine cents in 1926).

In weighing these considerations, of course, it must be borne in mind that the company is in a state of transition, that it takes a certain time to bring new properties to a full degree of productivity. For a larger view of Johns-Manville's growth, one must go to some such figures as those below (it should be mentioned that until the new management took charge in 1927, the company's annual report consisted simply of a single sheet of figures signed by the president without certification by a public accountant).

The results for 1928 are not highly significant because they represent a year of transition; the results for 1930 are for obvious reasons even less representative of normal operation. Nor is the really significant thing about the company that its stock touched 48¾ last December, or that, in 1929, boom enthusiasm for the names of Morgan and Merseles drove the stock up to 242¾. Indeed, the only certain fact of importance is a fact that can not be reduced to figures: that Johns-Manville is today a widely diversified business, which means exceptionally able management is required to tie all the strings together; that it is managed by able professional executives; that their plans are laid for building a sound, stable concern; that every pulse beat of the business is recorded and under control.

	Sales	Net Profits
1913 (pre-War)	\$16,636,000	\$1,103,000
1925 (last year under T. F. Manville)	39,201,000	3,017,000
1928 (first year under T. F. Merseles)	47,915,000	5,580,000
1930 (first year of the depression)	49,492,000	3,268,000