

PAPERS FROM THE HISTORY SEMINAR OF KALAMAZOO COLLEGE

No. 22. The Upjohn Company, 1884-1932

by Richard Broholm
January, 1950

The Upjohn Company

1884-1932

"An institution is the lengthened shadow of one man "



W.E. Upjohn

History Seminar
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January 25, 1950.

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TABLE OF CONTENTS

The Upjohn Pill and Granule Company 1866-1902 - - - - -	1
Early History - - - - -	1
Sales - - - - -	9
Further Expansion in the 1890's - - - - -	11
Speculation - - - - -	13
Competition - - - - -	14
The Upjohn Company 1902-1908 - - - - -	16
Period of Financial Strain - - - - -	16
Sales - - - - -	20
The Upjohn Company 1909-1932 - - - - -	22
Reorganization - - - - -	22
Laxatives - - - - -	23
Food and Drug Administration Act of 1906 - - - - -	24
American Drug Manufacturers Association - - - - -	25
Research - - - - -	27
Employee Relations - - - - -	29
Appendix - - - - -	34
Bibliography - - - - -	37

PREFACE

Although this paper is, primarily, a study of the growth of The Upjohn Company, it would be impossible to divorce the business from the man who founded this enterprise and who carefully shaped the Company's policies. The Upjohn Company is an excellent example of the Emersonian epigram, "An institution is the lengthened shadow of one man."

The Upjohn Pill and Granule Company
1866-1902

"An institution is the lengthened shadow of one man"

In the Personal Column of the Kalamazoo Gazette there appeared this brief bulletin in the year 1885, "A Hastings physician, Dr. W. E. Upjohn, has announced that he will move to Kalamazoo soon with his family."¹ Little did the residents of that flourishing city of 20,000 realize upon reading this announcement, that this "Hastings physician" would establish one of the largest and most famous pharmaceutical houses in the world in their very own city. Now could they appreciate the leading role that Dr. William Upjohn would play in the life and growth of the city, itself.

It was on the 5th day of June, 1853, that William Erastus Upjohn, the ninth child of Dr. Uriah Upjohn, a pioneer physician of Kalamazoo and Richland, and his wife Maria, was born in the city of Richland.² For the purposes of this paper, no attempt will be made to cover the early period in Dr. Upjohn's life other than to mention briefly that he was educated in the public schools of his day, and also attended the old Richland Seminary before he entered the University of Michigan. He enrolled in the University College of Medicine and Surgery, from which he was graduated in 1875.³

1 Kalamazoo Gazette, Jan. 25, 1885

2 Compendium of History of Kalamazoo County, Michigan, ms. David Fisher and Frank Little, eds., in the Kalamazoo Public

3 Library history alcove, 1906.
Kalamazoo Gazette, Oct. 18, 1932

So at the age of 22 Dr. Upjohn hung out his shingle in Hastings, Michigan, which is about 40 miles from Kalamazoo, and started a practice which soon led to a discovery heralded by medical circles as being "one of the most important advances of modern pharmacy, and certainly an epoch-making event in the manufacture of pills."¹ It was also during these first few years of his practice that William Upjohn found himself a wife, one Rachel Babcock, whom he married on the day before Christmas, in the year 1878. There were five children from this union, four girls and one boy, William Harold, who was destined to play an important role in the development of the Upjohn Company.

It was during the course of this early practice in Hastings that Dr. Upjohn recognized the need for an improvement in the means of administering medicine to his patients. Most medicants of the day were in fluid form, bulky and large in volume, making it difficult for the doctor to carry them. There were some pills in use but their effectiveness was almost nil due to the lack of uniformity and also to their all "too frequent habit of passing through the human system not a bit worse for the wear."² The pills that were then in use grew hard and, therefore, insoluble with age. And what made matters even worse was the fact that it was virtually impossible to tell a fresh one from an old one.

There was an article entitled, "Pills Under the Hammer" by J. Fred Windolph, which appeared in "The Pharmaceutical Era",

¹ The Pharmaceutical Era, D.O.Haynes & Co., Detroit, Dec.31,1896

² Ibid.

the pharmacists' "Bible" of that day, and which destroyed confidence in the mass pills of the day more aptly termed, "shot-gun prescriptions." One day, while taking a walk, Mr. Windolph had noticed a pill that was embedded in an inch thick wood fence. Surmizing that it must have been some irate neighbor who hoped to discourage a serenading cat with this expensive substitute for rock salt, Fred Windolph had proceeded to experiment with 25 of the most commonly prescribed pills. The experiment consisted of placing each pill on a 1" thick pine board and then pounding it with a hammer until either the pill or the board gave way. Out of the twenty five pills tested, only one crumbled under the blow of the hammer. Pill No. 3 was a typical example of the other twenty four tested, it "was an ovoid compound Rhubarb Pill, gelatine coated and as hard as a rock, if not more so -- a single blow driving it deep into the wood without any perceivable effect upon its shape or coating. Later experiments with one of these pills showed that it could be driven unscathed clear through an inch board and then through a piece of lead pipe without so much as ruffling its cover."¹

Disheartened because it was necessary to use such inferior medicines, Dr. Upjohn began to experiment in his spare time in an attempt to produce a pill without an excipient² or at least with so little excipient as to not interfere with "the solubility or disintegration of the pill in gastric juice."³

¹ Windolph, Fred J., "Pills Under The Hammer", The Pharmaceutical Era, D.O. Haynes & Co., Detroit, Dec. 10, 1896.

² excipient, i.e. an inactive substance used to give preparations a suitable form or consistency, but which in the case of the mass pills caused a hardening of the pill with age.

³ Kalamazoo Gazette, Oct. 18, 1932.

Although much of his early experimentation was fraught with more failures than successes; nevertheless, due to a determined will that was always a prominent characteristic of Dr. W.E., he finally succeeded in producing a pill that was completely free of any excipient. This important discovery was supplemented by the finding of a method by which the pills could be given a suitable coating. This was necessary in order that their pillular form might be preserved. The sugar coating that was finally found not only could be adapted to a wide range of attractive colors,¹ but it also was thin enough to be quickly soluble so that even the weakest stomach could dissolve it. More than this, the protective coating and entire absence of moisture rendered the pill permanent and unchangeable.² Because the pill could be so easily crushed or pulverized, Dr. Upjohn decided to name it the "Friable" pill. The inscription on the early form of the company's trade mark was "Upjohn's Friable Pills, Can be Reduced to a Powder Under the Thumb."³

Although at first Dr. Upjohn had little thought of ever building up a full-scale business around the "Friable" pills, he nevertheless did distribute them to some of his neighbors and colleagues. The pills were an almost instant success and soon Dr. W.E. found it necessary to divide his time between his attic "factory", where he produced the pills by hand, and his practice

¹ History of the Upjohn Company, ms., by Dr. L.N. Upjohn, prepared for the American Pharmaceutical Association, June 12, 1934.

² The Pharmaceutical Era, op. cit., Dec. 31, 1896.

³ A Talk to Foreman and Supervisors, ms., by Dr. L.N. Upjohn, Nov. 20, 1940.

in Hastings. Afternoons and evenings he practiced medicine, while in the mornings he made pills. He began to get an increasing number of orders from physicians in neighboring towns and within a year or two he was shipping "Friable" pills to neighboring and even distant states.¹

Finding his attic "factory" too small and cramped for the production that was demanded by the increase in orders, Dr. Upjohn was obliged to find larger quarters. And so it was that, in 1884, approximately four years after his first experiments with the "Friable" pill, Upjohn moved his expanding business to the upper floor of an old feed mill in Hastings.² There was the added advantage of power in this converted elevator room, so that he was prompted to invent the first real machine for the manufacture of "Friable" pills. "Here it was that the Dr. bought and used his 1st 100 ounce can of quinine for the making of quinine pills, costing \$165.-- no mean sum in these days."³

The fame of these amazing pills spread quickly, so much so that within a year Dr. Upjohn found it necessary again to look for larger quarters. There was also a need for better transportation facilities, improved labor conditions, and above all sound financial backing in order to permit further expansion. It was because of these considerations that Dr. Upjohn moved his family and growing business to Kalamazoo in 1885.⁴

¹ The Kalamazoo Gazette, Oct. 18, 1932.

² Refer to Appendix 1 for a picture of the feed mill.

³ The Kalamazoo Gazette, Oct. 18, 1932.

⁴ The Kalamazoo Gazette, Oct. 16, 1928.

Here he was able to obtain the necessary capital from his older brother, Dr. Henry U. Upjohn, who at the time was a practicing physician in Kalamazoo.¹ The two brothers then formed a partnership and located their pill "factory" in the basement of a building on South Burdick Street which is now occupied by the F.W. Woolworth Company store.² "Old residents here (it was remarked in 1928) still remember being able to look down through a small sidewalk window and see the pill machine at work."³

It was in this same year, 1885, that Dr. W.E. and Henry Upjohn were joined by their two younger brothers, Frederick and James. Under the leadership of Dr. William Upjohn, these four brothers directed the activities of their growing enterprise, which they now called "The Upjohn Pill and Granule Company." Much credit for the solid founding of this Company must go to the ingenuity and ability of these four men; three of whom (W.E., Henry and James) possessed unusual inventive ability and had a good deal of mechanical skill. Most of the machinery used in their plant was invented by one of the brothers.⁴

Before even a year had passed, it was again necessary to seek larger quarters, so the budding business was moved to a two-story brick structure, 36 feet square, which was directly in back of its first basement location.⁵ This move was heralded

¹ A Talk to Foremen and Supervisors, cited above.

² L.N. Upjohn, op.cit.

³ The Kalamazoo Gazette, July 13, 1928.

⁴ The Kalamazoo Gazette, Feb. 26, 1886.

⁵ Refer to Appendix II for a picture of the building.

by an article entitled, "More Pills", which appeared in The Kalamazoo Gazette: "Workmen yesterday began excavating behind the Upjohn block on South Burdick Street for an addition to the factory of The Upjohn Pill and Granule Company which will be a three-story¹ brick structure. This comparatively new company formed last year is building up an immense trade all over the country. Notwithstanding the fact that most of the work is performed by machinery invented by a member of the firm, six or seven hands are kept constantly employed packing the finished product."²

In this same year, 1886, the Company printed its first price list³ of "Friable" pills which, although it occupied only a single page, presented a rather extensive line of pharmaceuticals including: "186 pill formulas made from 56 drugs; 30 botanicals,⁴ 20 chemicals, 5 alkaloids and 1 glucoside."⁵ The Upjohn "Friable" quinine pills were the most popular drug in the pill line, due to the widespread acceptance of the drug itself, which at this time was considered almost a "cure-all." At one time, the sale of these quinine pills amounted to over 40% of the total sales of the company.⁶ Another one of the company's leading products was Blaud's iron pills, which had a greater content of ferrous iron and also greater stability than

¹ Only two stories were completed.

² The Kalamazoo Gazette, Feb. 26, 1886

³ Refer to Appendix III for a copy of the 1886 price list.

⁴ "botanicals" - a crude vegetable drug, consisting of roots, herbs, and bark.

⁵ The Story of an American Enterprise, The Upjohn Company, prepared and printed under the direction of Dr. L.N. Upjohn, 1945.

⁶ A Talk to Foreman and Supervisors, cited above.

was generally the case. There was also a great variety of cathartics, foremost among which was the "little specialty Pill Anti-Constipation Upjohn." These pills were found in almost every medicine cabinet from coast to coast.¹

The year 1887 had barely begun when the Company suffered a severe blow in the sudden death of Dr. Henry Upjohn, who, although only 43 years of age and still in the prime of life, succumbed to an attack of typhoid fever. Dr. William Upjohn in speaking of this disaster said, "Thus was taken from the new effort all the financial backing as well as the professional advice which was hoped to be of great benefit to the organization."² Dr. W.E. attempted to carry on the business without any means of support. However, in November, due to the increasing need for more machinery and also for a sales organization, the Upjohns obtained a corporate charter with a capitalization of \$60,000.³ The Company was then set up under the management of the three brothers, who had taken a majority of the shares of stock, with Dr. W.E. as President and General Manager, Dr. James Upjohn as Production Manager, and Frederick Upjohn later took over the management of the New York branch, which was established in 1890.⁴ The capitalization of the Company served as a big boost to Dr. W. E., because it gave him the necessary money to pay off the \$10,000. debt which had been incurred and

¹ A Talk to Foremen and Supervisors, cited above.

² The Kalamazoo Gazette, Oct. 18, 1932

³ Ibid.

⁴ Dr. L. N. Upjohn, op. cit.

also enough money to build for the future.¹ The stock which was not taken by the three brothers was divided up among several prominent physicians, two druggists, a New York attorney, and some other citizens of Kalamazoo.²

The volume of business again warranted a change to larger quarters, so in 1888 the Company purchased a plot of ground with 45 feet frontage on East Lovell Street opposite the school administration building. This four-story building was the first in a series which make up the plant as it exists today.³ With its 15,000 square feet of floor area, and its occasional druggy smells, it soon became known as "The Pill Factory."⁴

Sales

When Dr. Upjohn first began to make the "Friable" pills in his attic "factory" and later in the second floor of the Hastings mill, the sole advertising for his product was by word of mouth. However, as the business expanded and was moved to Kalamazoo the Company began to advertise in medical and trade journals such as The Pharmaceutical Era.⁵ Also, during this early period from 1886 to 1900, the brothers made personal trips to a few of the larger cities where they established distributing agents among the wholesale druggists.⁶ Dr. W.E. in a letter to one of his employees in 1887 speaks of establishing a line of the Company's drugs in both Philadelphia and Kansas City. "Our man in Washington seems to be doing good work although the orders are small.

¹ Interview with W.F.Little, Director and Supt. of Production.

² A complete list of the stockholders at this time can be found in the Appendix IV.

³ The Kalamazoo Gazette, April 18, 1888.

⁴ The Story of an American Enterprise, cited above.

⁵ Ibid.

⁶ A Talk to Foremen and Supervisors, cited above.

We think he is doing his work well." "Mr. Geo. McKelway, the man we met in Washington, who is a druggist in Philadelphia and was much pleased with our goods, has purchased a line and sent out a man, Dr. Gardner, to do retail work among the profession in Philadelphia. He will be able to do us great good and seems to have the inclination. We trust that we may not be disappointed in this." "Brother Jim has been two or three weeks in Kansas City, Mo., opening up the work there; preparatory to Mr. Meads advent there." ¹ By 1900 the Company had representatives in New England, New York, Philadelphia, and four in the western field, including locations in Kansas City and San Francisco. The success in the East was so pronounced that, as already noted, in 1890 it was necessary to open up a New York office under the management of Fred L. Upjohn.²

Another method of advertising used during this early period was a wall cupboard bearing gold letters on the glass doors which read, "Upjohn's Friable Pills." These cupboards, which were sent to retailers all across the country, came in three sizes, "with \$50, \$100, and \$200 assortments of representative pill formulas."³

In 1895, while Fred Upjohn was just becoming established in New York City, a New York druggist by the name of Fred Windolph⁴ called Mr. Upjohn to the back of his store, saying that he had something to show him. He thereupon proceeded to demonstrate the

¹ Letter from Dr. W.E. Upjohn to a Miss Mary S. Kirby, ms., written on Oct. 15, 1887.

² The Kalamazoo Gazette, Oct. 18, 1932.

³ The Story of an American Enterprise, cited above.

⁴ Refer to footnote 1, page 3.

hammer test, which has been described, with the pills of some competitors. Fred Upjohn seized upon the idea as being a good advertising scheme and so brought it back to Kalamazoo. Here men were set to work making pill board samples, which were then sent out to physicians and druggists by the tens of thousands. Because these samples were made to show up the competitor's product they caused a great deal of ill-feeling toward the Upjohn Company on the part of its competitors.¹

Further Expansion in the 1890's

Through its large volume of sales of quinine pills, The Upjohn Pill and Granule Company continued to prosper financially, as was evidenced by the better than \$100,000 which the Company had invested in personal and real estate by 1890. At this time the top five stockholders and the amount of stock they held were: Dr. W.E. Upjohn-443 shares; Mrs. R.B. Babcock Upjohn (his wife)-200 shares; James T. Upjohn-200 shares; Fred L. Upjohn-400 shares; and A.B. Barnes-273 shares. The next highest in number of shares held was Mrs. H.D. Jones with 73.²

In 1891, business had improved to such an extent that it was necessary to build a five-story brick addition which cost an estimated \$20,000. In the new plant, which covered a floor space of thirty-two thousand square feet, were housed offices, a salesroom, and several laboratories. Fifty skilled workers were kept constantly employed in a business which now had an

¹ A Talk to Foremen and Supervisors, cited above.

² The Kalamazoo Gazette, Feb. 27, 1891.

investment of \$150,000 and whose annual output exceeded the \$200,000 mark. In contrast to the 186 pill formulas listed by the Company in 1886, the line had by this time been increased to more than 2,000 kinds of pills, of which "at least five hundred are kept as staple articles of trade." ¹

Another addition was erected in 1895, which now increased the Upjohn plant to three buildings "of artistic architectural design, delightfully located, open at all sides and surrounded by spacious lawns." ² In 1896, The Pharmaceutical Era carried this description of the Upjohn plant in its December issue: "The interior is equipped with every modern improvement, lighted throughout with electricity, and floored with polished maple. Power is furnished by a central steam plant, supplemented by three dynamos."

"A glance through the laboratories impresses the visitor with the absolute cleanliness, perfect order and exact precision maintained. The element of care may be appreciated by a single instance. All the poisonous drugs are kept in a special room, the door of which is provided with two locks. Two entrusted employees carry one key each, but of course, one cannot enter without the other, and the responsibility of accurate weighing, checking, etc. is divided up between the two, thus reducing the possibility of a mistake to a minimum." ³

¹ Portrait and Biographical Record of Kalamazoo, Allegan and Van Buren Counties, Michigan, Chapman Bros., Chicago,

1892.

² The Pharmaceutical Era, op.cit., Dec. 31, 1896

³ Ibid.

The special methods which were employed in the manufacturing of the "Friable" pills required special apparatus which was reputed to be "the largest in the world devoted exclusively to the manufacture of pills"¹ and "so perfect in self-adjustment that they may almost be said to possess reasoning powers inherent in themselves."² Most of these pill machines including not only those used strictly to make the pill, but also machines used in sorting, sizing, counting and packaging were invented and developed by the Upjohn brothers themselves.³ One such machine which was described in a pharmaceutical magazine in 1891 as a pill counter or enumerator and bottling machine, received these plaudits from the author of the article: "It is not only a great labor-saver, but it is far more exact in the enumeration of pills than counting by hand or any other system of measuring. Not only can it be employed for pills, but for enumerating any product to which it is adapted." "Druggists will see the great utility of this invention and will congratulate the Upjohn Pill and Granule Company upon its production."⁴

Speculation

Early in the year 1891, there appeared in The Pharmaceutical Era an advertisement of The Upjohn Pill and Granule Company, which announced a big sale on quinine pills; "In consideration of the fact that we have recently purchased large supplied of

¹ The Pharmaceutical Era, op. cit. Dec. 31, 1896

² Portrait and Biographical Record, cited above.

³ Dr. L.N. Upjohn, op. cit.

⁴ The Pharmaceutical Era, op. cit. March 1, 1891

Quinine at favorable prices, we have reduced our price list on Quinine Pills, as follows:

	100	5000	5 oz.
1 gr.	\$.25	\$1.10	\$3.50
2 gr.	\$.45	\$2.00	\$3.50
3 gr.	\$.60	\$3.00	\$3.50
4 gr.	\$.90	\$4.00	\$3.50
5 gr.	\$1.00	\$4.75	\$3.50

Note: Our Competitors are constantly referring to our 5 oz. bottles of 2 grain Quinine Pills as a thousand package. Do not be deceived by this. Each package contains 1092 pills."¹

It is said that Dr. W. E. has speculated in quinine at this particular time, having bought in the neighborhood of \$50,000 worth. Although he thought the market on this drug was going up, it unfortunately reversed itself and dropped very quickly, forcing the Company to take quite a loss. It was probably this experience that prompted Dr. Upjohn to establish the policy of buying only "from hand to mouth." Since that time, the Company has never speculated on any drug or product."²

Competition

The fact that Dr. Upjohn's speculation in quinine was not successful, due to the quickly failing interest in the "Friable" quinine pill, was as handwriting on the wall for The Upjohn Pill and Granule Company. Where at one time the "Friable" pills had been something new, a great improvement over the inert mass-pills, and a product which was widely acclaimed and sold over the entire nation, there now arose severe competition in the form of the new compressed tablet. The compressed tablets were

¹ The Pharmaceutical Era, op. cit., March 1, 1891

² A Talk to Foremen and Supervisors, cited above.

much easier to manufacture than the older "Friable" pills and therefore were about half as expensive.¹ Dr. William Upjohn had, back in 1884, put a product on the market which was vastly superior to anything in the pharmaceutical line of pills, thereby proving a serious blow to the pharmaceutical manufacturers of that day. Now in the year 1890, the advent of a product superior in many ways to the "Friable" pill proved a similar blow to The Upjohn Pill and Granule Company. Pills were going out of fashion. New customers were exceedingly hard to find and the old ones became difficult to hold.²

Thus, when the Company entered the new century it was hardly in a comfortable financial condition.

¹ From an interview with Mr. D.G. Knapp, the present Treasurer of The Upjohn Company, 1950.

² A Talk to Foremen and Supervisors, cited above.

The Upjohn Company

1902-1908

It was quite natural that the Company should add tablets to its pharmaceutical line in order to keep pace with its rival manufacturers, so in 1891 hypodermic tablets were introduced into the Company's catalog. By 1894, a full line of compressed and coated tablets had been added plus elixirs,¹ fluid extracts, tinctures, and ointments.² No longer did the name, The Upjohn Pill and Granule Company, fully describe this expanded business. In 1902, therefore, the name was shortened to The Upjohn Company.³

Meanwhile, although the sales volume had been on the increase (except for the period in the 1890's when the Company was still in its transition from pills to tablets), the business itself had become less profitable due to the fact that more money was needed to continue the program of building expansion, pay wages, and carry customer accounts. Unfortunately, during the early period when the business had been quite prosperous, the Company had failed to set aside cash reserves which could be used during times of financial strain.⁴

Two other factors made the competitive situation worse;

1) There was no Food & Drug Act, at this time, to regulate the manufacture of pharmaceuticals; therefore, unscrupulous drug

¹ elixir - a medicinal powder (once thought of as a drug which would prolong life, i.e. the elixir of life).

² Upjohn Company catalogs for the years 1891 and 1894.

³ The Kalamazoo Gazette, Oct. 18, 1932.

⁴ A Talk to Foremen and Supervisors, cited above.

manufacturers would under-bid their rivals to get a contract and then use inferior materials in the actual production in order to meet costs,¹ Dr. W. E. chose to rely on the quality of his product for sales. Signs were kept posted which read, "Keep The Quality Up,-W.E. Upjohn."² Later, in a eulogy to Dr. Upjohn, which appeared in the Company magazine, these words were written: "Possibly the most important thing we learned from Dr. Upjohn was the ideal of quality. He insisted that every Upjohn product be 'true to the label'."³

2) The second factor that greatly hampered the Company during this period of financial strain was the lack of understanding of cost accounting methods. It was extremely difficult, therefore, for the Company to estimate accurately the cost of production of a particular drug. Due to the competitive bidding for contracts it often happened that a company, in its eagerness to obtain the contract, would under-estimate the cost and thereby lose money rather than make it.⁴

It was during these lean years, 1891-1910, that Dr. W.E. learned a great deal about business methods and in doing so developed his managerial ability. "He had to borrow, notes had to be met when due, and with numberless details that go along with such experiences, he became skilful in financing."⁵

¹ Dr. L. N. Upjohn, op. cit.

² Ibid.

³ Overflow, (Upjohn Company magazine), February issue-1932

⁴ Dr. L. N. Upjohn, op. cit.

⁵ A Talk to Foremen and Supervisors, cited above

So it was that in 1902, two important events took place. The name of the Company, as has already been mentioned, was changed. And secondly the capital was augmented by the sale of additional stock which helped to alleviate, somewhat, the financial condition.¹ However, there was no change in the management until 1909.

It was during this period of financial strain that Dr. Upjohn framed one of his wisest and most significant policies, although many of his colleagues must, at the time, have doubted the wisdom of such a move. Despite the fact that the Company was in a depression and was borrowing money, Dr. W. E. did not "play it cautious" and enter into a policy of retrenchment. Instead he began to expand his personnel and build for the future by hiring a large number of young men and training them in various departments. He did this despite the fact that he often had a hard time scraping together enough money to pay their salaries.² "It was his expressed policy to select and develop men rather than hire them away from other firms. His method was to assign a man a job, give him a free hand, occasional counsel, and very little criticism. With very few exceptions, sales executive posts were filled by advancement."³

Two of the men who were introduced to the Company between 1900 and 1909 and who played important parts in its development were:⁴

¹ A Talk to Foremen and Supervisors, cited above.

² Ibid.

³ Dr. L. N. Upjohn, op. cit.

⁴ The references to the following men were taken from L. N. Upjohn, History of the Upjohn Company, ms.

Mr. John S. McColl, who joined the Company in 1900 as an accountant at the age of 23. He showed such ability and capacity to learn that in nine years he had advanced to the position of treasurer for the entire Company. He later became vice-president and chief financial officer.

In 1907, a physician at the Kalamazoo State Hospital, S. Rudolph Light, M.D., entered the Company. He was trained in the affairs of the Production Department. He quickly assumed the duty of Superintendent of Production and in 1909 was elevated to the post of vice-president.

Dr. Upjohn also encouraged his relations to join the organization. So in 1904, Dr. L. N. Upjohn, who was the son of one of the founders, Henry U. Upjohn, became a member of the firm after having been a professor at the University of Oklahoma Premedical School. In 1906, he became the manager of the New York Branch upon the retirement of Fred L. Upjohn. Dr. L. N. was later to serve as President and Chairman of the Board.

Then in 1907, William Harold Upjohn, Dr. W. E.'s only son, entered the Company after having taken special courses at the University of Michigan which were to groom him for the job of president and general manager upon the retirement of his father. He had exceptional organizing ability, which made him an ideal choice to assume the responsibility of setting up a cost accounting system for the Company. He served as the secretary of The Upjohn Company and, later, as the vice-president and general manager until his untimely death in 1928.

The year 1905 saw the death of Dr. W.E.'s wife, Mrs. Rachel Babcock Upjohn, on the 5th day of July, 1905.¹ Thus was added

¹ Mary S. Kirby, Upjohn Family Record, ms.

a deep personal sorrow to the burden which already confronted him- that of strengthening the business so that it might survive this time of financial difficulty.

Sales

By 1900, the sales staff of the Company had increased to twenty-one men travelling directly from the office in Kalamazoo, and eight from the New York branch office. The Company had also established a representative, Mr. Sellman, in San Francisco. Most men would have been satisfied to continue with the present staff, considering that the business, at this time, was far from being financially comfortable. However, Dr. W.E., realizing that there was still much sales territory which as yet had not been reached and that here was the key to future prosperity, advanced Mr. George C. McClelland to the position of sales manager for the entire Company.¹ Mr. McClelland, who had already established himself as being an accomplished and aggressive salesman with The Upjohn Company, "entered vigorously into the work of developing a sales force with such marked success that the sales staff was immediately prepared to take advantage of the new product,"² Phenolax, which was introduced in 1909.

A second branch office was opened in 1909, in Kansas City, with Mr. Malcolm Galbraith as its manager. He had at one time been a druggist in Toronto, Canada, and then from 1903-1909, a representative of the H.K. Mulford Company. In 1930, he was advanced to the position of director of sales for Upjohn's.³

¹ Michigan, A Centennial History of the State and Its People, Vol. 5, edited, The Lewis Publishing Company, Chicago, 1939.

² Dr. L.N. Upjohn, op. cit.

³ Ibid.

Then in 1906, the San Francisco agency, under the direction of Mr. Sellman, became a full-fledged branch office. Thus the business had three branch offices, one in New York, Kansas City, and San Francisco, which operated successfully without any further additions until 1931.¹

As a result of Dr. Upjohn's wise policy of expansion in the field of sales, the Company "gradually acquired more new customers and became more prosperous. Notes were paid up, and the business was once more placed on a good sound basis, ready to go ahead with the next opportunity."²

It might be interesting for the reader to make a comparison between present day advertising and the calling card of Mr. Henry K. Thompson, who was a salesman with The Upjohn Company during the early 1900's:

"It's Results That Count

Mr. Thompson always considers an interview or an appointment a great pleasure; asking only a minute of your time. If time is money, that minute will not be lost but will appear big on the profit side of your account. Your phone calls or orders are solicited with the assurance of prompt attention.

Henry K. Thompson
86 Choep Place, Detroit, Mich.

Representing The Upjohn Company"³

¹ Dr. L.N. Upjohn, op. cit.

² A Talk to Foremen and Supervisors, cited above.

³ Reproduced from the calling card of Mr. Henry K. Thompson, a salesman with The Upjohn Company in the early 1900's.

The Upjohn Company
1909-1932

A reorganization of the ownership of The Upjohn Company took place in 1909, with Dr. W. W. Upjohn purchasing outright the interests of his younger two brothers, Fred and James Upjohn. Fred withdrew to give all his time to other business interests which he had in New York. James retired from the Company to re-enter the practice of medicine; and, later, he became quite active in politics, serving as State Senator from his district.¹ As a result of this move, Dr. W. E. owned or controlled virtually all the stock of the Company.² The men who took over the running of the business in 1909 were: Dr. W.E.-President; Dr. Rudolph S. Light-Vice President; J.S. McColl-Treasurer, and Dr. H.B. Osborne-Secretary.³ The net worth of the Company, at the time of reorganization, was \$174,000 as compared to \$100,000 in 1890.⁴ This is a fairly good indication of the fact that the Company had been having a rather severe financial troubles in that it had increased its net worth only about \$74,000 over a period of 19 years.

However, despite the rather gloomy outlook, conditions were destined to become brighter and soon. One day in 1906,

¹ Story of an American Enterprise, cited above.

² Ibid.

³ Dr. L.N. Upjohn, op. cit.

⁴ From an interview with Mr. D.G. Knapp, the present Treasurer of The Upjohn Company, 1950.

Dr. L.N. Upjohn was talking with Dr. W.E. about a way to re-vive the old Pill Anti-Constipation Upjohn, because the Company no longer had a "big-seller" such as the "Friable" Quinine Pill back in the 1880's. And Dr. W.E. replied with confidence, "Well, it¹ has been a big thing, but never mind, some day we will have another one."² Little did he realize, then, how prophetic his words were, for in two short years The Upjohn Company had placed on the market "Phenolax Wafers," which proved to be the looked for "big-thing" and thereby greatly advanced the business of the Company.³

The discovery of the laxative qualities of phenolphthalein was made in Hungary in the late 1890's. Previous to this time the substance had been used only as a chemical indicator, turning pink when introduced in acid. "Certain wines were not taxed in Hungary and to distinguish these grades the government added a small amount of phenolphthalein. It was through consumption of this wine that laxative qualities of phenolphthalein were first noted."⁴

Two other American pharmaceutical houses had by 1907 attempted to market phenolphthalein tablets, but with little success. At the same time, chemists in The Upjohn Laboratories were hard at work to perfect a laxative from phenolphthalein which, unlike their competitor's products, would sell. However, the Company almost made the same mistake that had "killed" the

1 "it" refers to the Pill Anti-Constipation Upjohn.

2 A Talk to Foremen and Supervisors, cited above.

3 American Chemical Industry-The Chemical Companies, edited by William Haynes, Vol. 6, D. Van Nostrand Company, Inc. New York, 1949.

4 The Kalamazoo Gazette, Oct. 18, 1925.

the previously marketed ones. For it was first thought that the laxative should be in pill form and although the pill was completely tasteless, thereby overcoming a disadvantage of previous cathartics, Dr. W. E. felt it lacked the necessary appeal to become a major selling product. And so he suggested, "Why not a pleasant flavored tablet to provide the pleasant tasting cathartic that people are waiting for."¹ This proved to be the idea that others had missed. The new product was called Phenolax. It was widely acclaimed by the medical profession "because it was a new and meritorious product and fitted a waiting market."² Phenolax not only brought back the Company's old customers who had deserted at the time of the compressed tablet, but many new customers, and with them increased business. At one time, this popular laxative reached 25% of the Company's total sales.³

During the early 1900's, there were three events which later proved to have been instrumental in the growth and resultant prosperity of The Upjohn Company. Two of these events were important for the pharmaceutical industry as a whole and the third was of great consequence to the Company, itself.⁴

Food and Drug Administration Act of 1906

Ever since its infancy, the pharmaceutical industry had had very few restrictions placed upon its individual members. It was possible for shrewd manufacturers to cheat their

¹ A Talk to Foremen and Supervisors, cited above.

² Ibid.

³ Ibid

⁴ Story of an American Enterprise, cited above.

customers by using inferior materials and workmanship in the production of their various pharmaceuticals. As has already been mentioned in this paper¹, companies which indulged in these unscrupulous practices were able to under-bid and under-sell their competitor's products. This fact provided for untold financial hardships on the reliable drug companies, such as The Upjohn Company², who demanded that their products be of the highest quality. In 1906, however, Congress passed the Food and Drugs Administration Act, which set up certain standards that had to be met by the drug industry. Although it was somewhat slow to take effect, nevertheless, this act did much to strengthen the position of the legitimate companies.³

American Drug Manufacturers Association

The Upjohn Company became a charter member of the American Pharmaceutical Manufacturers Association in the early 1900's. This organization undertook studies of cost accounting methods - a problem which had bothered The Upjohn Company for some time.⁴ However, the Company withdrew from this smaller organization in February, 1912, to become a charter member of the National Association of Manufacturers of Medicinal Products, which name was later shortened to the American Drug Manufacturers Association.⁵ The A.D.M.A. included not only the principal pharmaceutical

¹ Refer to page 17

² "Dr. Upjohn knew that it cost money to make quality goods and he charges accordingly." from the December issue of the Company magazine, Overflow, 1932

³ Dr. L.N. Upjohn, op. cit.

⁴ Refer to page 17.

⁵ Story of an American Enterprise, cited above

houses, but also the manufacturers of chemical and biological products, crude drugs, and surgical dressings. One of its main functions was to promote greater advancements in methods of production through the medium of consulting committees made up of representatives of the various drug companies. Another function was to support and cooperate with the Food and Drugs Administration of the U. S. government in order to promote better pharmaceutical standards and practices. However, the function which was most beneficial to the Upjohn Company, at this particular time, was the continuation of the study of cost accounting methods started by the American Pharmaceutical Manufacturers Association. Dr. W.E.'s son, Wm. Harold Upjohn, in collaboration with the A.D.M.A., devoted his time almost entirely to the perfection of a cost accounting system.¹ As a result of these studies, one of the best cost accounting manuals in the United States was published by the American Drug Manufacturers Association.²

This proved to be a great boom to the drug industry, for now a pharmaceutical house could bid on a contract with full knowledge of just what the costs of production would be and also how much profit would result. A very simplified illustration of how cost accounting works would be this: Each operation in the plant, such as mixing, compressing the tablet, bottling, labeling, etc., is figured out as to total cost (this includes lighting, floor space, labor, machinery, materials, etc.). Then the total cost of each operation necessary to

¹ Dr. L.N. Upjohn, op.cit.

² Ibid.

produce a certain article is added up, thereby giving the company a very accurate estimate as to the total cost of production.¹ No longer was it necessary to guess at the costs involved in producing a drug.

Research

The third event which might be said to be the most important of the three in relation to the Upjohn Company, was the acquisition in 1913, of a young chemist, Dr. Frederick Heyl, then a professor of chemistry at the University of Wyoming. Previous to this position he had been Assistant Chemist at the Bureau of Chemistry of the U.S. Department of Agriculture at Washington during 1909-1910.²

Immediately upon entering the Company, he took over the duties of chief chemist. "Dr. Heyl contributed greatly to the development of the Upjohn laboratories and their products through perfecting of chemical control in all departments, and in the founding and development of research laboratories which were later to assume much greater proportions under his leadership as Director of Research."³

As a result of this expansion in the Research Department, there were several notable achievements in commercial pharmacy introduced by the Upjohn Company during and after the 1st World War. Among these were an improved form of digitalis⁴ in

¹ From an interview with D.G.Knapp, present Treasurer of

² The Upjohn Company 1950
American Chemical Industry, op. cit.

³ Dr. L.N. Upjohn, op.cit.

⁴ Digitalis made from the dried leaf of the common foxglove it serves to stimulate stomach action and to increase the secretion and discharge of urine.

1921, and at the same time "a new line of effervescent salts, chief of which was Citroc carbonate¹ for the administration of systemic alkalies."² The Company chemists had been at work over six years in an effort to produce an alkali preparation which was not unpleasant to take. Finally, after much research and hard work, Citroc carbonate was placed on the market where it immediately received wide acceptance.³ Then, in 1912, scientists in Germany discovered both water and oil-soluble vitamins. The oil-soluble vitamins A and D became the most prominent, at first, because they helped "revive the use of cod liver oil, which had practically been abandoned by the medical profession for about a generation."⁴ Soon most of the pharmaceutical houses in this country were marketing cod liver oil standardized for vitamin A. The Upjohn Company was one of the last houses to appear with this product. However, due to an idea conceived and developed in the Research Department, the Upjohn cod liver oil was not only standardized for vitamin A but also D, which promised to be the more important of the two. The research chemists also found a source of supply for a very fine and nearly tasteless cod liver oil which was infinitely more attractive to the consumer. Thus Super D cod liver oil was introduced in 1928 and soon assumed leadership in its field.⁵ Research was continued in this new field of water soluble vitamins and later several vitamin B products were brought forth.

¹ Citroc carbonate- a soluble salt used to neutralize acid in the human system.

² Story of an American Enterprise. Cited above

³ From an interview with Mr. D.G. Knapp, present Treasurer of the Upjohn Company, 1950

⁴ Dr. L.N. Upjohn, op. cit.

⁵ Ibid.

Due to the rapid advances in research, resulting in increased business, it was necessary to build an addition to the Upjohn plant in 1922. "Construction work on a \$45,000 addition to the Upjohn Co. Plant on East Lovell St. will commence tomorrow morning." said the Gazette in that year. "The new factory building will be made of brick. It will be located on Taylor St. just east of the main building of the plant. The addition will be four stories high and will have a deep basement, excavation of which has been started. The new building will be used as a part of the manufacturing division of the Upjohn Co." ¹

Employee Relations

The fact that employment in the Upjohn Company has been and probably always will be highly prized and sought after, does not seem strange to those who are aware of the deep personal interest that Dr. Upjohn always took in his employees. This interest is evident in many ways. For instance, Dr. W. E. was one of the pioneers in the Saturday half-holiday movement, which he instituted in the plant more than 30 years previous to his death in 1932.² He was the first in Kalamazoo to adopt a group insurance plan for all employees with dependents and without cost to them.³ He was always among the first to promote higher wages and shorter working hours,⁴ which might explain why there is no union in the plant today. Dr. Upjohn was constantly thinking of ways in which he might better serve his employees,

¹ The Kalamazoo Gazette, 1922, (clipping file in the Kalamazoo Public Library.

² The Kalamazoo Gazette, Oct. 18, 1932.

³ Michigan, A Centennial History, op. cit., Vol. 5

⁴ Overflow, Jan. 1932

such as the Company cafeteria, operated each year at a substantial loss to The Upjohn Company.¹ There was always a very close relationship between Dr. Upjohn and his employees which left little room for formality. They often addressed him simply as "Dr. Will", and he was able to call each one of them by name. When an employee would make a mistake he would often say, "You can't always be right, but keep on trying."²

Dr. Upjohn once summed up his philosophy by saying "that what mankind should work toward is a conscious preration of the accidents and incidents of life."³ But it was not Dr. Upjohn's policy merely to philosophize and not act, so when the men returned from France after the 1st World War and had to be absorbed into civil life, The Upjohn Company took more than its quota. Dr. W. E. also insisted that the Company should take on its share of the disabled. This was not a policy that he followed only during war periods, for "through the years many have been given a place to work, when it cannot be said that their employment contributes anything of a particular value to the normal operations of progress of the Company."⁴

After the war Dr. W. E. gradually began to turn over the active management of the Company to his son, Wm. Harold, who had played such a vital part in the establishment of a sound

¹ Michigan, A Centennial History, op. cit., Vol. 5.

² From an interview with Mr. W.F. Little, Director and General Supt. of Production-The Upjohn Company, 1950.

³ The Kalamazoo Gazette, Oct. 18, 1932.

⁴ Overflow, Jan. issue, 1932.

cost accounting system. Dr. Upjohn had long dreamed of the day when he would turn over the reins of a business, which he had built from a shoestring, to his son. However, his dreams were soon to be shattered when on the 15th of October, 1928, his son, Wm. Harold Upjohn, died in Bronson Hospital, following an operation for hernia which had been performed over a week before. His death came as a great surprise and shock to the family, for he had seemed to be making an excellent recovery from his operation.¹

Again Dr. Upjohn was forced to assume general management of the business. Despite the fact that he was past seventy five years of age, Dr. W. E. spent two years in re-organizing the personnel of the Company so that he could retire in 1930. Upon his retirement, Dr. L. N. Upjohn took over the office of President, while Dr. W. E. became Chairman of the Board. It was in this same year that Mr. Donald S. Gilmore joined The Upjohn Company staff. Mr. Gilmore, whose mother Dr. W. E. had married on the 25th of October, 1913, had for some time been an executive of Gilmore Brothers Department Store. "He brought into the Upjohn business an invaluable type of merchandizing experience which had hitherto been unrepresented in the Company staff."²

On Tuesday morning, October 18, 1932, at his Brook Lodge home near Augusta, Dr. William E. Upjohn died from a heart attack superinduced by a throat infection. He was 79 years old but was said to be still young in spirit and mind. "He was

¹ The Kalamazoo Gazette, Oct. 15, 1928

² Dr. L.N. Upjohn, op. cit.

taken ill at the weekend shortly after he spent several hours inspecting the 2,000 acre farm on which he dreamed of developing a great unemployment relief project." ¹ Thus he spent his last few hours planning another way in which he might help his fellow men. It is quite fitting that this be so, for Dr. Upjohn's whole life had been tuned to serving others. It would be impossible to name all of his philanthropies, for most of his contributions were given anonymously; however, some of his more important gifts were: a gift to the city of the Civic Auditorium; gift of a large tract of land to the city for recreational purposes; contributions to both the Gateway and Milham Park Golf Courses; gift of the Kauffer House, now known as the Art House of the Kalamazoo Museum and Art Institute; and the establishment of the Kalamazoo Foundation, an organization to receive and administer such charitable funds as might be left to it by public spirited donors. It was said of Dr. Upjohn, that he seldom donated to a cause without at the same time giving of himself. He, himself, was often heard to say that "the gift without the giver is bare." ²

Thus he not only left behind him a business which was destined to become one of the largest and most famous pharmaceutical houses in the world, but hundreds of people who looked upon him as Kalamazoo's first citizen and their dearest friend.

"We are bowed in sorrow; our hearts are at half-mast; one loved and honored has been

¹ The Kalamazoo Gazette, Oct. 18, 1932.

² Dr. L.N. Upjohn, op. cit.

summoned to the Realm Beyond We must pause to do honor to his memory; then lift ourselves up in a united effort to carry on in doing those things he had hoped to live to accomplish."

So spoke the Mayor of Kalamazoo on the day of his death! ¹

¹ From a speech of Mayor Lewis C. Wright, printed in The Kalamazoo Gazette, Oct. 18, 1932.

APPENDIX

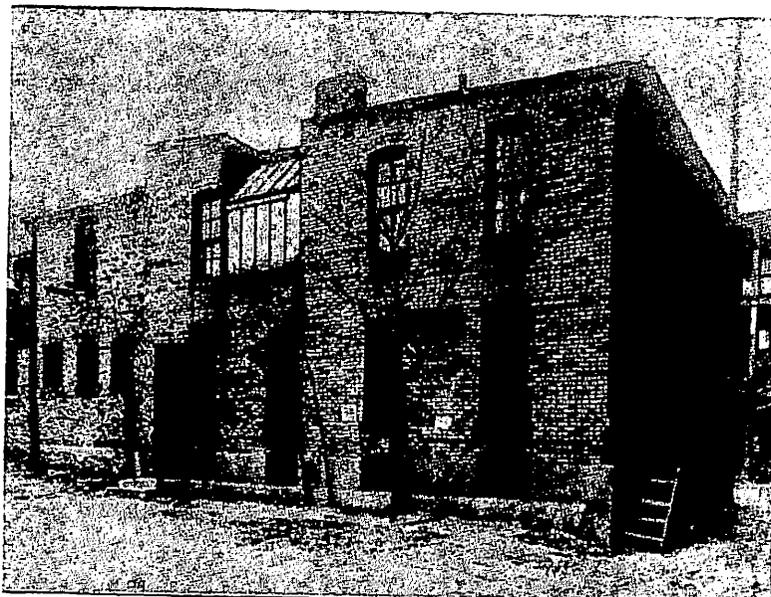
I

The feed mill beside the railroad track in Hastings, Michigan, where Dr. W.E. produced his first machine-made pills in 1884.



II

The two-story brick building (Kalamazoo) to which Dr. Upjohn moved his plant, late in the year, 1885.



APPENDIX

III

Printed copy of the 1886 Upjohn Pill and Granule Company catalog.

THE UPJOHN PILL AND GRANULE CO.

Manufacturing Pharmacists, KALAMAZOO, MICH.

Our experience as physicians indicate to us the great importance of reliable and permanently soluble pills. We will not therefore sacrifice their peptic efficacy for appearance. Hence it is that we do not wax and highly finish our pills, and for the same reason do not coat our dark goods with sugar, as an insoluble sub-coating is indispensable to prevent discoloration. The covering of sugar on our white and licorice on our dark goods is only sufficient to obscure the taste.

Main catalog table listing various pharmaceutical products such as Aconite Root, Aloe, Alumina, and others, with their respective quantities and prices.

SPECIAL LIST AT NET PRICES.

We invite the attention of the purchaser to the advantages that may be secured by purchasing from this list in five ounces and pound quantities, and in view of the growing importance of Granules to the physician we will furnish them in bottles containing three thousand at one dollar per thousand.

GRANULE LIST.

Our facilities for manufacturing Granules are most complete, enabling us to produce them superior in quality and at a price that must add prominence to this most admirable method of administering remedies. We list these goods at a uniform price as follows: Bottles containing 1000, \$1.50 per bottle; 500, eighty cents per bottle; 200, forty-five cents per bottle.

Sub-table listing specific granule products like Quinine Sulphate, Castor Oil, and others, with their prices.

Our Prices are based upon the cost of the very best material procurable, and full quantity indicated. Pills are offered in the market, in pound quantities, actually below the cost for full weight of good honest material named in the formula. We are not soliciting such trade.

APPENDIX

IV

The Original list of stockholders in 1887 when the Upjohn Pill and Granule Company was incorporated:

Physicians: Drs. H.B. Hemenway, H.B. Osborne, Irwin Simpson, C.T. Wilbur, J.T. Upjohn, and W.E. Upjohn of Kalamazoo, also Dr. Henry D. Jones of East Chatham, New York; attorneys: J.W. Osborne, E.A. Crane; druggists: Browne and Birge; other investors: D.C. Groesbeck, J.W. Kirby, A.B. Barnes, Ira Ransom, F.W. Wilcox, F.A. Vernor, Thomas Hewitt, F.L. Upjohn, and John M. Gilmore.

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