JOHN SILAS LUNDY

James Eckman

"My right is driven in, my centre is giving way, the situation is excellent, I attack."

> --Ferdinand Foch (recounted by B. H. Liddell Hart)

The antithesis above, attributed to the generalissimo of the Allied armies on World War I, was regarded with a robust skepticism by Captain Liddell Hart, but even so, the literal sense of the concoction applies neatly to the life and works of a seasoned captain in the unending struggle for medical progress, John Silas Lundy. Adversity may have deterred, but never ended, his march toward the objectives he set for himself; disappointments did scarcely more than to whet the keen edge of his determination; opposition, far from persuading him to retreat, in each instance taught him to circumvent even more formidable impediments to advancement in the future. What Sir Winston Churchill said of Britain in the desperate year of 1942 might well be said also of John Lundy: that he "always wins one battle--the last."

He was 18 months old when his father, a general practitioner in the Territory of Dakota who carried his medicaments and medical aids in saddlebags as he rode out on that blustery frontier to minister to his stricken patients, died of pneumonia. As a small boy Dr. Lundy was helping another general practitioner in the oddly named town of Inkster to administer a mixture of one part alcohol, two parts chloroform and three parts ether.* He continued this youthful renegade practice of anesthesiology until he was graduated from the University of North Dakota in 1917. Then he entered Rush Medical College in Chicago.

While he had been there about a year a Massachusetts physician, lamenting the sorry state of anesthesiology in general, wrote to a medical journal with a flagging semblance of hope: The field of anesthetics and anesthesia is teeming with the ripening grains of relief and benefit and is patiently waiting to be rescued from deleterious properties and methods through the agency of the light of scientific study, research, experience and acquired technic. Who will be the fortunate, proud gatherers of this precious harvest?

Clearly he did not know, but one who did was not far from the scene. Dr. Lundy was graduated from Rush in 1920, and he began to produce general anesthesia in the Columbus Hospital in Seattle, Washington, in October of that year. In 1921 he brought a used Gwathmey gas machine; in 1923 he had Foregger of

*An ancient preparation. As a boy of 12 years Dr. Charles Horace Mayo in 1877 was administering it to the patients of his father, Dr. William Worrall Mayo.--Mayo, W. J.: Discussion of "The Medical Books of William Worrall Mayo, Pioneer Surgeon of the American Northwest," by T. E. Keys. Proc. Staff Meet, Mayo Clin. 16:501-505 (Aug. 6) 1941. New York City build for him a portable four-gas machine (nitrous oxide and oxygen, oxygen, carbon dioxide, ethylene and an etherizer). It was the first apparatus of its kind. He never lost interest in inhalation anesthesia. It was in 1923, also, that he administered the new agent, ethylene, introduced in that year, to produce general anesthesia.

Ethylene, in point of fact, was the fulcrum on which the locus of the professional career of John Lundy would be moved to its permanent mooring. He has recounted the incident himself, but his version is open to emendation because, doubtless in deference to the renown of the chief figure in it, he suppressed the action which exemplifies his own indomitable spirit of inquiry:

In the few years that I was in Seattle when I began to practice anesthesiology I was active in the King County Medical Society. Finally I was appointed editor of the bulletin of that society and increased the number of pages from four to 32, paying expenses by means of advertisements. As a result of this effort I was elected secretary of the King County Medical Society shortly before I left Seattle in 1924. On the night of the election and annual banquet for the retiring president, it happened that Dr. William J. Mayo, who was on his way to Australia and New Zealand, was a guest speaker. As secretary of the society I was seated next to him on the platform and we talked about ethylene anesthesia. It was clear that this type of anesthesia was not in use at the Mayo Clinic. Actually, what was clear was that until that moment Dr. W. J. Mayo had never heard of ethylene anesthesia, and he gave Dr. Lundy a reply in which mention of that particular agent was conspicuously absent. The young man did not propose thus to be put down. At the end of the dinner, as an officer of the society, he stood in the receiving line, and when he was able to move near to the eminent surgeon he attacked once more with renewed persistence: "Dr. Mayo, what are you doing with ethylene as an anesthetic agent at the Mayo Clinic?" The distinguished guest, likely startled a bit, must have been sufficiently impressed with the audacity of the young man from North Dakota, for the denouement, even if understated, was electric:

He asked me to walk to the railway station with him after the meeting, and just as he left for his train to Vancouver he invited me to come to the Mayo Clinic. I did so.

Or, as Dr. Mayo recounted it in 1929:

Six years ago, in January, I was going to Australia and New Zealand and I stopped in Seattle to attend a medical meeting and a banquet for several hundred persons. Across the table from me sat a young and handsome man who interested me immediately in his talk about anesthesia. When the meeting was over, I asked him to walk to the station with me, as I was taking the train for Vancouver. He said he thought research ought to be done in anesthesia. He was not situated so he could do research. I asked him how he would like to come to Rochester and he said he would like nothing better. Before I left, I had made arrangements?with him to come to Rochester, ______ and when I returned from Australia he was here. Since then the Section on Anesthesia in the Clinic has been in the hands of Dr. Lundy. He has not only done remarkable research himself but has encouraged other men to see what can be done, and what we can expect of research in anesthesia.

Once at the Mayo Clinic, in 1924, Dr. Lundy needed his well-known proclivity for turning ironic humor back upon himself, for he has recalled that even though he was to be quartered in a medical building less than 10 years old, his desk and office consisted of an apple crate tipped on end in a corridor. Possibly that bizarre sanctum stimulated him to resolve, as he has said he did, to "make one contribution to anesthesiology for each of the 35 years which lay ahead of me... I tried to keep five projects in anesthesia going all the time, hoping for one good harvest each year while I was here [the Mayo Clinic]."

What he found at the Mayo Clinic were excellent facilities for the practical application of anesthesia in the form of a corps of 18 nurse anesthetists, but few, if any, resources from which he might extract a program for research in anesthesiology. But on January 1, 1925, Dr. Charles F. McCuskey joined him, and Dr. Lundy was able thus to plan the establishment of a section of anesthesiology in the Mayo Clinic and a program in postdoctoral training in the University of Minnesota Graduate School at Rochester which would lead to the conferring of a graduate degree in anesthesiology by that university. Residents in other fields of medicine and surgery began to spend a university quarter or more in Dr. Lundy's then, new section, and/on November 1, 1935, the first resident in anesthesiology in the Mayo Graduate School of Medicine to obtain an advanced degree in that specialty from the University of Minnesota was enrolled. He was the late Dr. Edward B. Tuohy, who had begun a fellowship in medicine in 1933, and he obtained the degree of master of science in anesthesiology on June 15, 1936. The title of his dissertation was: "A Comparative Study of the Physiological Activity of Cobefrin and Epinephrine." Before Dr. Lundy retired in 1959 he was to train 900residents in graduate work in anesthesiology, 210 dentists and 250 physicians who did not specialize in that field.

Dr. Ralph M. Tovell joined Dr. Lundy as a member of the staff in 1929, Dr. Edward B. Tuohy and Dr. R. Charles Adams joined him in 1935 and Dr. Lloyd H. Mousel in 1939. Dr. T. H. Seldon completed a residency in anesthesiology in 1939 and joined Dr. Lundy in 1940, and Dr. John A. Paulson, who came in 1947, after a residency in anesthesiology interrupted by World War II. Each of these men became acknowledged authorities in various aspects of anesthesiology while they were in Rochester: Tovell on anesthesia records, Tuohy in general physiology, Mousel in anesthesia problems in the area of the chest, Adams in intravenous anesthesia, Seldon in blood

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transfusion and Paulson in the training of nurse anesthetists. By 1970 the section of anesthesiology put together by Dr. Lundy in 1925 with one associate had proliferated to consist of 26 consultants assisted by a veritable corps of residents in that specialty.

In 1925 he introduced his concept of "balanced anesthesia" and in 1932 he introduced a special solution of procaine for use in spinal anesthesia.

Because it was evident to him that anesthesiologists need a practical knowledge of anatomy fully as much as surgeons do, he established a laboratory of anatomy at the Mayo Clinic in 1927 and conducted it for 20 years. In 1933 he was asked to supervise the transfusion of blood to children, and in 1934 to all patients. In 1935 he established at Saint Mary's Hospital in Rochester the first blood bank in North America. In 1937 he launched a periodical, <u>Anesthesia Abstracts</u>, an especially useful survey of the literature which developed from a local journal club he had started a year earlier.*

Anesthesia Abstracts persisted until 1965, when the editor, Miss Florence A. McQuillen, C.R.N.A., of Chicago, had to abandon the onerous work of preparing it. In 1940 he helped to establish the journal, <u>Anesthesiology</u>, published by the American Society of Anesthesiologists, Inc.

*It is significant of the thoroughness with which he worked that at the first meeting of the journal club on February 18, 1936, wheccalled in Dr. Richard M. Hewitt, a skilled medical editor of long experience, to coach the members in making their abstracts of papers in the literature. Many years later, with a fine exercise of that stiletto irony which he often turned upon himself, he wrote:

In those early years I felt as if I were garbed in Joseph's coat of many colors. I was anxious to join some organization in which a physician like myself, with my primary interest in everything pertaining to anesthesia, might take part in a relationship which would be of mutual benefit to society. to physicians and surgeons and especially to patients. Y therefore applied to the American College of Surgeons, since every member of that organization had a basic concern with anesthesia. But the College refused to consider me for membership because I was not a surgeon.* I then applied to the American College of Physicians, which straightaway gave me the same reception. I thus remained suspended in a medical limbo. and I often maintained that I was in fact the last person the patient ever saw between the attending physician or surgeon and the undertaker. But, since I never became known for indecision or abnegation, I was set about to hot up the fire and see what rare distillation I could brew.

What he brewed was pretty heady stuff. Whenever he was in Chicago he exhorted Dr. Olin West, secretary and general manager of the American Medical Association, to do something

*But what the American College of Surgeons would not do, the Northwestern University Medical School would. In 1959 that school appointed him to the faculty as an associate professor of surgery, a post he held until 1962. which would at least give the semblance of professional recognition to the specialty of anesthesiology. Eventually the urbane Dr. West capitulated: the mill wheels of the great medical presbyterium speeded up sufficiently to produce, in 1940, the Section on Anesthesiology of the American Medical Association. Dr. Lundy served it as secretary for 17 years.

A number of years previously he had set in motion a series of moves which in 1935 impelled the New York Society of Anesthetists, founded in 1905, to change its name to the "American Society of Anesthetists, Inc." Another change, effected in 1945, brought about the name now in use, the "American Society of Anesthesiologists, Inc." Out of this organization, as a culmination of efforts undertaken years previously by Dr. Lundy, Dr. Paul M. Wood and others to form a body which would recognize the competence of physicians who did not specialize exclusively in the practive of anesthesiology, was evolved the American College of Anesthesiologists, initiated in 1947 as a component of the American Society of Anesthesiologists, Inc.

In Lundy's annual report of the Section of Anesthesiology of the Mayo Clinic for 1935 is the unportentous sentence: "In 1935, we frequently kept citrated blood in the ice box for as long as fourteen days and found that it could be administered satisfactorily with the usual benefits accruing to the patient 13 and without an undue incidence of untoward reaction." What this prosaic statement does not disclose is the fact that Lundy and his associates, by using refrigerators in the laboratory of surgical pathology of Dr. William Carpenter MacCarty at Saint Mary's Hospital in Rochester, had set up the first blood bank in North America. The Cook County Hospital in Chicago instituted such a service in 1938.

He was indeed a busy practitioner and an indefatigable investigator. On June 18, 1934, he introduced the clinical use of Pentothal sodium, and on March 17, 1942, he and his associates opened the first post-anesthesia room in this country at Saint Mary's Hospital.

He had used Amytal intravenously as early as 1928; when pentobarbital sodium was introduced in 1930 he cut a pawky caper by indulging in some acronymic disport. He took the N from Na (for sodium), the E from ethyl, the M from methyl, and the BUT from butyl. A suffix, AL, commonly used to denote compounds of barbiturate derivation, completed the acronym, Nembutal, previously known simply as "No. 844" from the Abbott Laboratories. An engaging incident of technical symbiosis took place in 1930, when Sir Ivan Magill visited the Mayo Clinic: he demonstrated to Dr. Lundy his technique of endotracheal anesthesia and Lundy showed him how to produce anesthesia intravenously with Nembutal. Subsequently each stimulated interest in application of the other's afore-mentioned technique of anesthesia. Dr. Lundy began to use sacral block anesthesia before 1929, and out of that circumstance arose still another eminently useful organization: the old Anesthetists' Travel Club. He put it together in December, 1929, by inviting about a dozen anesthesiologists to witness the production of sacral block anesthesia in the operating rooms of Saint Mary's Hospital in Rochester, The club persisted; but in the interest of congenial intimacy the membership was not greatly expanded. In 1952 the Anesthetists' Travel Club became the Academy of Anesthesiology, with Dr. Lundy as the first president. In 1956 he helped to organize the Anesthesia Memorial Foundation embodying a revolving loan fund for the assistance of young men interested in training in anesthesiology.

Some of his contributions have been, like many practical aids, the quintessence of simplicity and therefore of wide and ready application. One was a hook for holding the suction tube off the floor of the operating froom or elsewhere during aspiration, so that the tip would not become contaminated. He described it in six terse sentences. In 1957 he modified the tip of the standard Magill endotracheal tube so that it assumed the shape of a penpoint, a configuration which made it easier to introduce the tube through, say, the nose, with less bleeding than that which attended passage of the tube with the In 1950 he expressed a need for a old spoon-shaped tip. removable plastic stylet to be used with an indwelling plastic needle so that it would not be necessary to keep solution running continuously through the needle to assure a patent lumen This need was satisfied in 1958, when the manufacturer was able to meet the requirements Lundy stipulated. A simple and

readily available agency for producing speedy vasodilation for venipuncture actually consisted of nothing more complicated than the application of heat via an electric hair dryer.

In point of fact, he was as much interested in the simple, the practical, the readily applicable measure as he was in the most involved or esoteric anesthetic procedures because he was incessantly concerned with the widest and most useful application of anesthesia itself within medicine and surgery. It is entirely understandable that he became deeply concerned with the problems of dental anesthesia, and his efforts in this respect brought him the gratitude and amity of dental practitioners. He addressed himself also to the distress of headache, chronic debilitating pain, iatrogenic hazards, addiction to narcotic agents by medical and paramedical personnel, prevention of fire and explosions in operating rooms, anesthetic techniques which the solitary general practitioner could carry out and anesthetic and analgesic procedures particularly effective in times of war or civil disasters.

He was not a facile writer and he knew it, but his contributions to the literature, succinct and without artful ornament, were considerable. In 35 years the average would be calculated at one paper written every six weeks of his active career. He was careful in the preparation of a paper and he had something of the native shrewdness of the entrepreneur in his approach to medical letters. "If I can get the word 'treatment,' into a title, he once remarked, "I know that people will read it. If I use the word, 'theory,' or 'review,' I know they will pass it by." The capstone of these writings certainly is the notable <u>Clinical Anesthesia</u>, which appeared just as the nation was plunging into World War II. It was a conspicuously successful volume, used almost universally in the armed forces.

In respect to other literary interests he has always been devoted to biography and history, to which he gave indefatigable attention all his life. He knew intimately the bleak, often cruel land from whence he had sprung. In 1957, on a train from Tokyo to Yokosuka with a curiously inept friend who within 2 minutes managed to upset an ash tray all over Lundy, derange the mechanism of the windows, smash his head on the overhead luggage rack and generally perpetrate wanton carnage in an otherwise sleek and sedate railway coach, Lundy sought to suppress his exasperation by gazing out at the passing scene. At the moment the train was speeding by rolling fields of bright yellow mustard. The sight seemed to depress him.

"When I was a boy in Dakota," he said in morose reminiscence, "people there had a hard time most of their lives, and a lot of it was caused by their incessant fight to conquer wild mustard. They never did. But here they seem to encourage the pestiferous stuff." He was much pleased, after he removed to Seattle, to discover that in the town of Custer, Montana, he could buy chokecherry jelly, a confiture for which he had been searching for a number of years. As a boy, he said, he had watched women look for the chokecherry on the boundless North Dakota plains, and if they were successful the end result in many a kitchen was chokecherry jelly.

When, in 1952, he became editor of the section on pain of the <u>Journal-Lancet</u>, the appointment epitomized a chapter in his life which gave him much satisfaction, but which very few of his colleagues knew about: a subterranean local practice of therapeutics. As an anesthesiologist he was expected to practice his specialty in the neatly reticulated confines of the hospital. But he never was a docile domestic bird to be thus caged: his ministrations were at the call of anyone in town who wished to summon him for the relief of pain or distress. Evenings, week ends and holidays never meant surcease to him when a stricken person dispatched a call to him. In the occult conduct of this practice beyond the pale he was surely among the last of the practitioners in Rochester who customarily made house calls.

When the central figure of granitic authority at the Mayo Clinic departed with the death of Dr. William J. Mayo in 1939, the complex organization he had built thenceforward was governed by committees--a system of democratic probity in theory but also of pedestrian locomotion in terms of action. Lundy gave the back of his hand to all committees of any nature. "A camel is a horse that was put together by a committee," he would declaim with obvious glee, and he was also much given to recalling how, one day, Dr. William J. Mayo summoned him Mayo to a meeting of the Board of Governors of the/Clinic. When Lundy arrived, the silver-haired benevolent autocrat of the medical center explained a project which Lundy had placed before him previously, and disposed of the matter by saying simply to the assembled counsellors: "Dr. Lundy has proposed this particular measure and I hear no objection to it."

A little while before Lundy was to retire in 1959, an old friend of his presented him with a quantity of noteheads imprinted only with the indicium:

COMMITTEE FOR THE SUPPRESSION

OF JOHN SILAS LUNDY

In continuous session for 35 years of magnificent frustration

In an access of Ludiferian delight Lundy dispatched one to a kindred spirit, the late Dr. Charles William Mayo, with the blithely defiant pronunciamento: "One more month and I'm away free and clear."

Other adventures of the Little Corporal of Lethe are no less colorful. Dr. George A. Halkenbeck, who was President Johnson's surgeon in 1965, tells of the time some residents were having a bad time performing venipuncture in an infant at Saint Mary's Hospital in Rochester. They finally capitulated and called Dr. Lundy, a master at that particular maneuver. He found the vein at once, inserted the needle and turned away to stalk down the corridor to the operating rooms. The residents, understandably discomfited by the incident, decided to cozen the chief. One of them skipped out into the corridor and sang out in feigned disquiet: "Dr. Lundy! The solution is not flowing into the vein!" The stocky, resolute figure retreating serenely down the corridor did not pause or miss a step. But he did turn his head slightly as he replied over his shoulder in sublime confidence: "Open the clamp and it will."

In 1943 a good friend of his was serving as a civilian consultant to the Surgeon General of the Army in Washington. He wished to enter the Army as a medical intelligence officer but could not do so because of a bilateral hernia. Correction of the defect would remove the impediment to commission, and the consultant resolved to have the operation done. But how to get Lundy for the anesthesia in a large and inordinately crowded hospital during wartime? He decided that direct challenge might bring off a prosperous outcome. When Lundy, also a civilian consultant, reported one day at the Office of the Surgeon General, his friend began to chivvy him at once.

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"John," he said, "I've got to go back to the clinic to have a herniorrhaphy and I'd like to have you for the anesthesia, but I know that's impossible under the madhouse confusion of wartime surgical practice."

Lundy recoiled as if he had sustained a deadly insult. "Who in hell says it's impossible?" he snapped, "Just give me the date of the operation."

Many days later, when the friend reached the operating room without any especial prearrangements, the first and last sight he remembered was the saturnine visage of Dr. Lundy peering down at him, eyebrows arched in good-natured derision under his askew surgical cap.

"In two words," he groused, "this fellow is im-possible."

For getting about locally he had a decrepit and debilitated horseless carriage for which he evidently entertained a deep and possibly atavistic affection. One day, as he was turning into Broadway in Rochester, some impetuous bumpkin of a motorist stove broadside into his little conveyance, sweeping it up under the canopy of a filling station and folding it up like an accordion. Lundy, stunned but unhurt, clambered out of it with infinite dignity, sat down on a bench and, imperturbable as some Levantine satrap at a court <u>audiencia</u>, gave the affrighted attendant explicit directions as to where he was to be taken and what was to be done for him. The police notified a friend of the incident, and the friend at once sought to reach Lundy in his room at the hospital. A distraught Sister of Saint Francis answered the telephone in extreme agitation.

"O," she wailed, "if you know where he is, I wish you'd tell us. He got up, put on his clothes and whisked out of here before any of us knew it."

Lundy had complete dissociation for the incident and to this date does not remember the sequelae: the essential details are those volunteered by the police and the hospital. Lundy's concern extended only to the demise of his little car.

Another notable encounter took place during World War II at the Walter Reed Medical Center in Washington, where Lundy, as a civilian consultant to the Surgeon General of the Army, often gave demonstrations of various anesthetic techniques. On this day he was teaching venipuncture, in which his skill was regarded as almost supernatural. An officious medical officer who in subsequent years became a world-famous surgeon, inexplicably took leave of his reason sufficiently to chaff Lundy on some superficial positioning movement.

Lundy, a civilian not in any way subservient or answerable to the military, turned a baleful eye upon him and rasped: "After thirty years in intravenous techniques I do not propose to take instruction from some sodbuster just conscripted into the Army."

Most of the observers were civilian physicians only recently impressed into military service. Their delight was unbounded. Inflexible regulations meant nothing to him except as authority figures at which he could toss a pungent jape now and then. Assigned to a particular hospital for the practice of his specialty, he gave that sequestration all the deference a restless ameba would have given a drop of water. When a friend of his was to undergo an operation in a hospital other than his own, he contrived to have a colleague take his place in his usual quarters while he slipped in to conduct the anesthesia for his friend in the off-limits hospital. The patient's most vivid recollection of the session was Lundy's acute displeasure as he tossed needle after needle over his shoulder, like a boy shucking away peanut shells at a ball game, and grumping most audibly: "Is there such a thing as a sharp needle in this abattoir? This poor fellow will fall asleep of boredom while we bumble around looking for a plausible needle."

What the ideal physician should be is and has been a notion open to endless philosophical speculation and disputation. The patient to whom John Lundy had ministered never had any doubts about the question. When such a patient drifted back to consciousness after an operation the first person he saw invariably was Dr. Lundy, checking his condition, eyes sharp for the possible manifestation of the slightest untoward symptom or sign. The victim of sudden pain deep in the night could be confident that Lundy would hurry to his house to respond at once to his call. The patient who had chronic intractables pain soon learned that if one measure failed, Lundy, like Foch, would attack from some other vantage point, over and over again, like a beleaguered but dauntless English bulldog. The surgeon with whom Lundy was to work could expel any foreboding of misadventure from his mind: at 6:30 in the morning Lundy would be at hand, superlatively prepared and resolved to produce for each patient the most salutary type of anesthesia which the sum of his knowledge, skill and experience could effect. The exotic compound of brimstone and Tobasco sauce which his hematopoietic system seemed to produce in abundant quantities often exploded in showers of fiery expletives, when a <u>Geheimrat</u> injudiciously sought to put him down, but the surgeon who valued felicitous operative results always called for Lundy, however much the two might have been at odds with each other.

It would hardly do to leave the impression that the portly pathfinder of anesthesiology was unaware of his eminence in his field. Hardly. In 1954 <u>Picture Roto Magazine</u> of the <u>Minneapolis Sunday Tribune</u> in the issue for October 17 published a list of the 11 most celebrated members of the staff of the Mayo Clinic. The editors, during preparation of the piece, prospective called the clinic for help in selecting the 11/peers. When a friend told Lundy that he was one of the 11 about to be thus gazetted, he did not seem surprised or elated. Rather,-he cocked an eyebrow dourly and said: "Who else did they pick?" When he retired and departed for Chicago in 1959 the medical scene in Rochester suffered a grievous loss of color, liveliness and a degree of amiable flamboyance. The somewhat ascetic daily tasks in the vast medical center to which he had given 35 years lost the happy, irreverent leavening of outrageous jest and sally which invariably announced the procession of Lundy about his appointed rounds. But he was never lost to mind.

Appropriate indeed was the encomium given to him by his colleagues in his field only two years before his exodus from the Mayo Clinic in 1959:

We salute Dr. Lundy as one of the great pioneers whose name will be remembered as long as our specialty endures. We salute him for his continuing unselfish vigor in carrying forward the advancement of his specialty today. We recommend [sic] him for the inspiration and support he provides to everyone interested in increasing the margin of safety and in alleviating the pain of patients everywhere. Millions have benefited by his achievements.

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Memorandum from Dr. James Eckman

May 15, 1973

This chapter was sent to Dr. Perry P. Volpitto, Department of Anesthesiology, Medical College of Georgia, Eugene Talmadge Memorial Hospital, Augusta, Georgia, 30902, on October 28, 1970.

It was to be part of a projected book by Dr. Volpitto, to be called <u>Catalysts</u> of <u>Twentieth</u> <u>Century Anesthesiology</u>.

We never heard anything further about Dr. Volpitto's book or the disposition of this chapter.

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