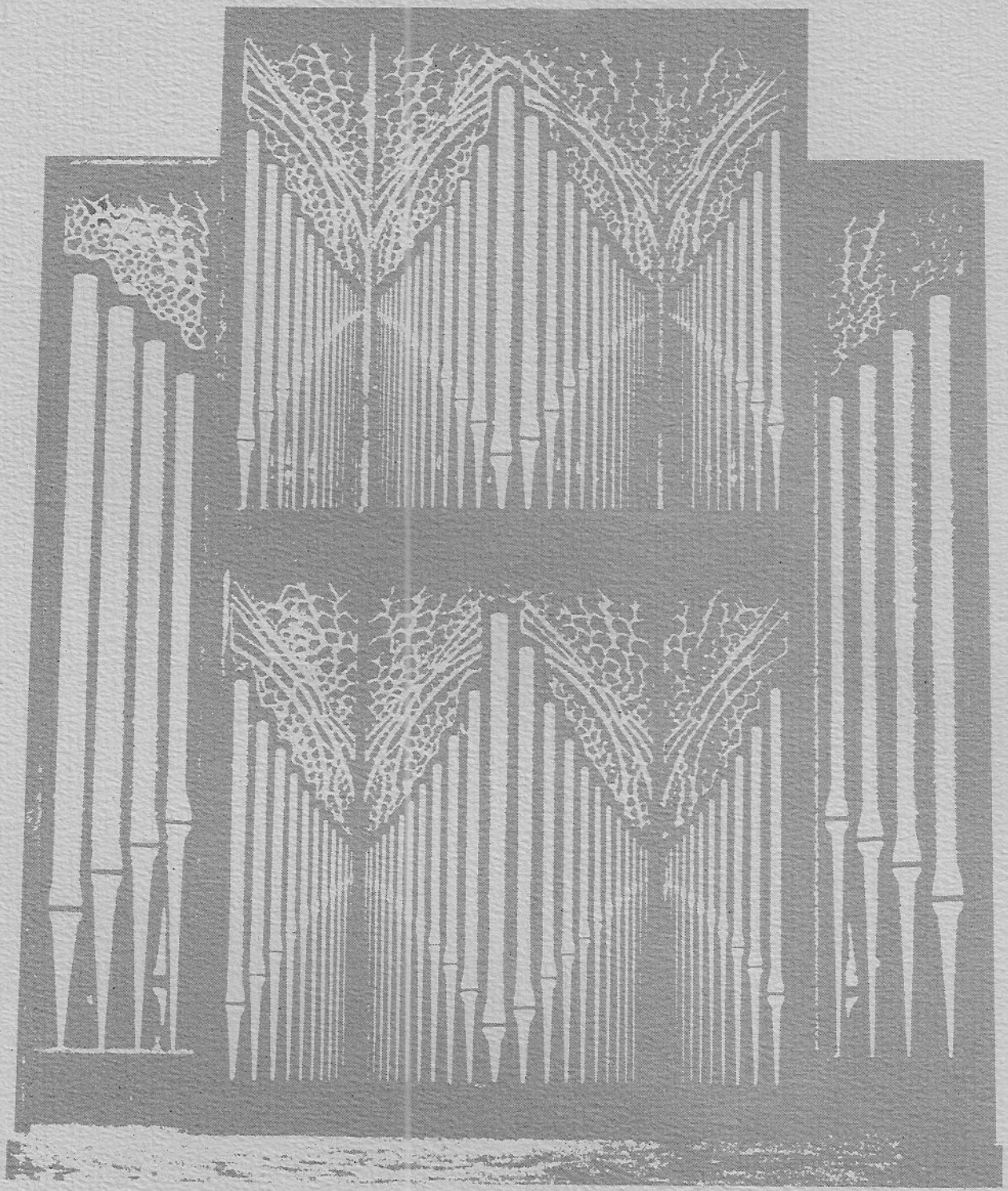
JOHN BROMBAUGH OP. 21

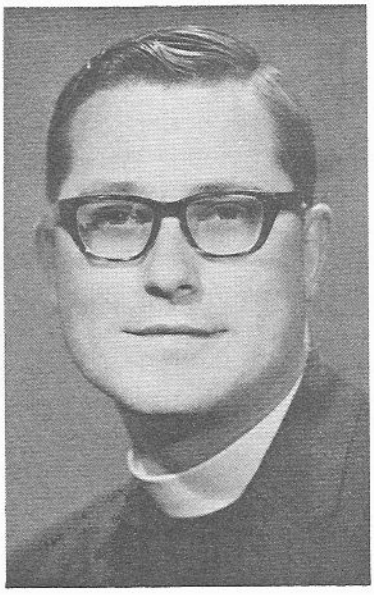


ST. MARK'S EPISCOPAL CHAPEL

STORRS, CONNECTICUT

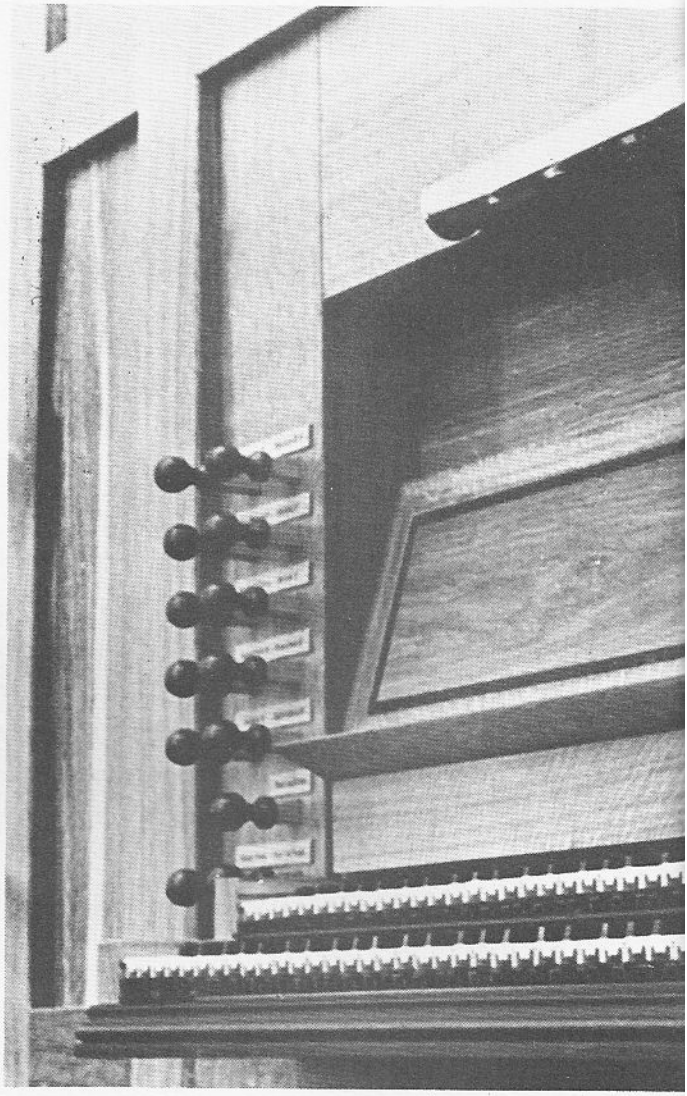
JOHN BROMBAUGH OPUS 21: DEDICATED TO THE GLORY OF GOD AND GIVEN IN MEMORY OF MICHAEL WILCOX (1939 - 1974)

The impetus for the purchase of Opus 21 came from Michael Wilcox, Priest-in-Charge of St. Mark's Chapel 1969-1974. It was Fr. Wilcox's dream to have a truly distinguished instrument for the Chapel. To that end, he convened an Organ Committee, which led to a contract with John Brombaugh and Associates in December, 1974. This organ is a tangible memorial to Michael Wilcox; but for this Congregation, his real memorial is what he gave to us and what we carry of him in our minds and hearts.



A LETTER FROM THE BUILDER

The pipe organ as the principal musical instrument for the Christian Church is the result of development extending back over a thousand years. Benedictine monks, through acquaintance with a gift from the King of Byzantium to Charlemagne's father King Pepin in 800 A.D., found the sounds helpful in the liturgical proclamations of their order. Already in 940 an instrument of 400 pipes was reported at Winchester Cathedral, and by the late Middle Ages organs were common in churches throughout Europe and England, sometimes having pipes as large as 32 feet long in their façades.

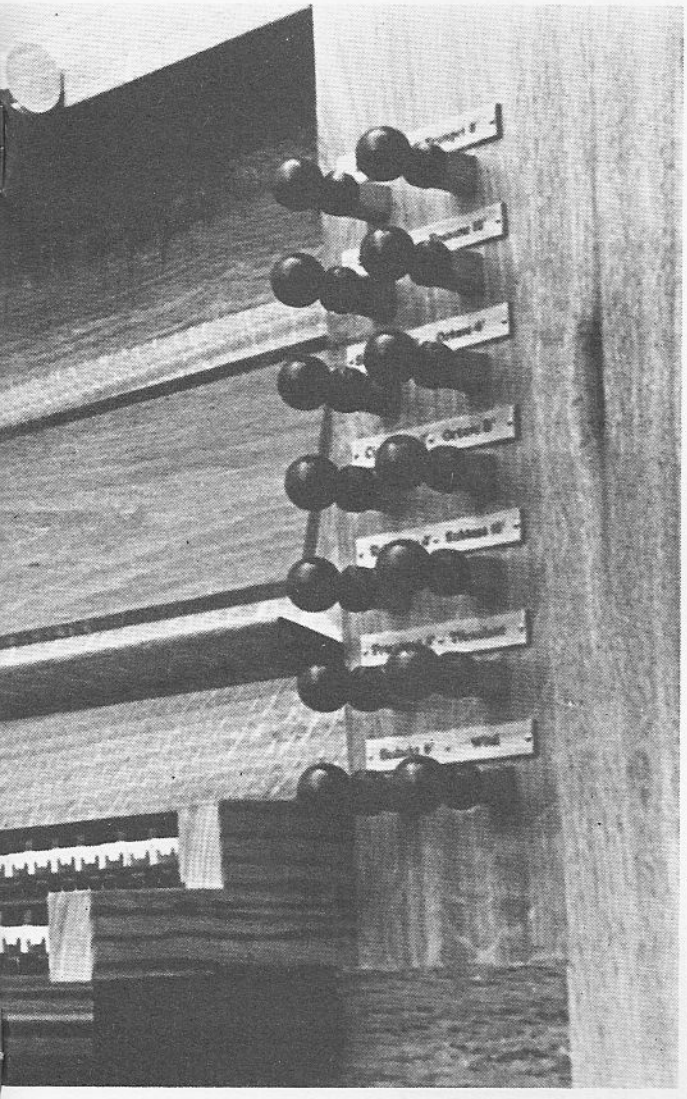


The quandary resulting from the Reformation of the Church left congregations with many opinions on what to do with the organs. Those holding to the liturgical forms kept the organs while those finding no biblical warrant for such instruments tended to forbid their use and even went to iconoclastic desecrations to get rid of them. Only in Holland did the non-liturgical Dutch Reformed Church keep them as "municipal property" because of their love for extra-liturgical organ music such as Jan Pieterzoon Sweelinck would play daily during the lunch hour to the Amsterdam businessmen gathering in the Oude Kerk of St. Nicolas. In England organs were retained through Cranmer's association with Luther and the development of the congregational hymn, but only about twelve organs remain in England from prior to the Restoration in 1660, due to destruction in the period of the Separatists and Cromwell. Since the majority of early settlers in America came because of rebellion against liturgical churches, organs were uncommon among us until more recent times when the value of music to the human spirit became more apparent.

The historic overview thus tells us there are many more aspects an organ should fulfill than what is apparent from our recent past. Consequently, worldwide there has been a resurgence of mechanical action to play from the keyboards and stop controls. Likewise the intense, *vocale* sounds from ancient instruments are an inspiration for us to use as models. But in no period of human creativity in which excellence has occurred has this excellence been obtained solely by copying from the past. And we may not do so today.

The musical resources of St. Mark's instrument are disposed over two manuals and pedal which control the slider windchests by the means of suspended tracker key action and a simple mechanical stop action. An electric blower supplies the wind to fill a large wedge-shaped bellows behind the organ which is then conducted into the various windchests at a pressure to support a column of water 82 millimeters. The Great and Pedal are combined on a pair of windchests located behind the base of the large façade pipes; the Positive windchest is in the upper center behind the base of the upper façade

pipes. Excepting the eight deep bass pipes of the 16 ft. Subbass which are made of alder wood, the remaining 1410 pipes are made of a lead/tin alloy which has small traces of antimony, copper, and bismuth. These metal pipes were made with help from Jacques Stinkens in Zeist, Holland, and Gene Bedient in Lincoln, Nebraska. The temperament (i.e., the tuning of the musical scale) is a variation by the builder to that ascribed to J. S. Bach's student, Johann Phillip Kirnberger, which was however already in use in northern Europe by the mid-16th century.



The casework is made of hand planed white oak fumed in strong ammonia that has accelerated what would have been accomplished by natural aging. The upper back and side panels are of western red cedar, a very stable wood with lively acoustical properties. The pipe shades were designed and carved by Jeffrey Lake in Alaskan yellow cedar backed by western red cedar. The pipe mouths were gilded with 23 carat gold leaf by Josiah Fisk. The naturals of the manual keyboards are plated with cow shinbones prepared in our shop. The manual sharps and stop knobs are from African ebony. The keycheeks are from zebrawood, the pedal sharps from Brazilian rosewood, the pedal naturals and the stop rods from maple, and the black strip in the music rack from oak sunk in a North German peatbog for many centuries. The windchests and bellows are made of white oak, western red cedar, sugar pine, and sheep and cow leather.

As we near the end of the 20th century in America, the painstaking planning and craftsmanship needed to bring a project of this type to satisfactory completion is becoming a rarity in our civilization, as the members of St. Mark's Chapel have observed during the final weeks of our work with them. Thanks are due to many who have helped, among them the church's director of music, Virginia Herrmann, and her husband, Heinz; our advisors and close musical friends William Porter and Dr. George Becker; to the many men and women of the parish who have assisted and have been so hospitable to us during planning and installation; to my teacher, former boss, and close friend Charles Fisk for lending us encouragement, help and supplies from his workshop in Gloucester, Massachusetts; and to my shop associates Ted Marks, Jeff Lake, Randall Jansen, Josiah Fisk, Robert Spies, Ferdinand Mettler, Munetaka Yokota, my sons Eric and Daniel, Greg Harrold, John Farmer, Steve Cook, Edward J. Soehnlen, James Morse, and Roger Welch.

It is the hope of all of us who have participated in the making of this organ for St. Mark's in Storrs that it will be worthy of the special cultural atmosphere found here in New England.

IN NOMINE JESU
John Brombaugh, Organbuilder
May 1979

THE TRACKER ACTION ORGAN

Brombaugh Opus 21 is an outstanding example of modern engineering technology applied to the historical principles of organ-building. "Tracker Action" refers to the fact that the means whereby the fingers and feet of the organist cause air to flow through the pipes is a direct mechanical one. There are no electrical wires, solenoids, lead tubes, or secondary ventils interposed between the keys and the pallets (valves) which control the flow of air to the pipes.

When the organist depresses a key, a long, thin rod of wood is brought downward by a few millimeters. This motion is transferred laterally as needed by means of a rollerboard to the respective pull-down for the pallet beneath the pipes for each note. The rollerboard (the pedal rollerboard is shown in the accompanying photograph of the pedal action) is necessary because the bass pipes do not stand above their respective keys, nor do the treble pipes. This equalizes the demands of the pipes upon the windchest. Note the arrangement of the façade pipes: if a chord were to be sounded in the bass, those large pipes would rob air from the smaller pipes of the treble if their distribution was in ascending order of pitch, as suggested above.

The great advantages of the mechanical tracker action are two: first, it permits a direct contact between the hands of the player and the pipe; and second, it is easy to maintain. The modern methods used in the construction of St. Mark's instrument have permitted a very light key action, in contradistinction to the sometimes leaden touch of nineteenth century instruments. This permits a greater degree of responsiveness in touch than is possible with the older instruments or with the spongy feel of electric-action instruments.

A further distinctive feature of our instrument is the use of pipes with a high lead content. Most nineteenth and early twentieth century organs used pipes with a high tin content. The use of high lead content pipes allows the development of the "vocale" sound so important in earlier instruments.

All divisions (Great, Positive, and Pedal) of Opus 21 are unenclosed. This means that there are no swell boxes or swell shutters to add to the weight and complexity of the mechanism or to hamper the egress of sound. Dynamics are achieved by the interplay of the Great and Positive divisions of the organ and/or by the addition and subtraction of stops. This makes St. Mark's instrument especially suited for the performance of Baroque music, although works by nineteenth and twentieth century composers can be played effectively as well.

SPECIFICATIONS FOR OPUS 21

Disposition:

GREAT:

Quintadena	16
Praestant	8
Holpijp	8
Octave	4
Spitzflöte	4
Nasard/Tierce	2 2/3, 1 1/5
Octave	2
Mixture	III-V
Trumpet	8
Vox humana	8

POSITIVE:

Gedackt	8
Praestant	4
Rohrflöte	4
Flute	2
Sesquialter	II
Scharff	III
Dulcian	8

PEDAL:

Subbass	16
Octave	8
Octave	4
Posaune	16
Trumpet	8 (from Great)

Tremulant to the entire organ in Schnitger construction
Couplers: Great/Pedal, Positive/Pedal, Positive/Great

BUILDERS OF THE ORGAN

John Brombaugh

Ted Marks	Ferdinand Mettler	John Farmer
Jeff Lake	Munetaka Yokota	Steve Cook
Randall Jansen	Eric Brombaugh	Edward J. Soehnlen
Josiah B. K. Fisk	Daniel Brombaugh	James Morse
Robert Spies	Greg Harrold	Robert Welch