

THE KING OF INSTRUMENTS RETURNS

America's leading organist describes the victory of a noble voice over technological "improvements"

By E. POWER BIGGS

Sometime in the last century, the organ—the favorite instrument of Bach, Handel, and Mozart, and in their view the king of them all—was toppled from its throne. When it lapsed from public favor, it lapsed from grace. It lost its aristocratic voice and manners, developed slovenly habits, and grew increasingly windy, pompous, and boring. Senility, one might say; after all, is it not among the oldest of living instruments? But old age had nothing to do with it. The organ's deterioration began with the arrival of modern technology (here, as elsewhere, not an unmixed blessing) and its application to organ building. The old instrument was, in fact, the victim of too many efforts to improve it.

But in recent years there has been a great change, an upsurge of interest in the organ at its royal, or pre-electrical, best. And this, paradoxically, has also been the result of technological advance. For organists are now able to go back over the centuries, so to speak, to find old instruments scattered in out-of-the-way places in Europe—some the very instruments on which such composers as Bach, Handel, Mozart, and others even earlier played—and to bring them back to life for a general public by means of recordings. As a result, many people are for the first time listening critically to organ tone.

Taking off for a concert trip, a flute player pops his instrument into his pocket. The violinist tucks his under his arm. Paderewski took his own piano in his private railroad car (although today serviceable recital instruments can be found in most major cities). Yet for the organist, any thought of taking his instrument with him is about as practical as moving the Rock of Gibraltar. You have to go to the organ—sometimes a matter of hundreds or even thousands of miles. For it by no means follows that the greater the metropolis, the better is the organ to be found there. I myself have criss-crossed Europe to seek out splendid old instruments in towns and remote villages from Iceland to the Tyrol and provincial Spain. Last year, for the recording of Handel's Sixteen Concertos for Organ and Orchestra, I was fortunate in locating an organ that the composer had not only played but had helped to design. I found it in the middle of the Forest of Arden, in the small parish church on the estate of the Earl of Aylesford at Great Packington in Warwickshire. By extraordinary good fortune this organ had survived two hundred and ten years in the condition that Handel himself played it. Not that it had been mute in the intervening centuries; but it had been, to say the least, inaccessible. (Electricity had never been supplied to the building in which the organ stands, so that it was necessary to have a power line laid across many fields and sheepfolds to run the recording equipment.)

But why go to so much trouble to ferret out the remote old organs of another age when there are so many newer, bigger, supposedly more efficient ones nearer at hand? You might think it an exercise in mere antiquarianism until you hear the differences between them. Not only are many of the veterans of two and even three or more

In this detail from a French tapestry woven about 1500, the lady plays a positive organ (a small, free-standing, portable type), while a servant pumps the bellows.

centuries still in prime playing condition, but they are unique in that they convey the exact sounds the composers heard when they wrote for them. Moreover, they are far better musical instruments than the huge electrically controlled behemoths you find in many tabernacles, concert and convention halls, and churches in our own day.

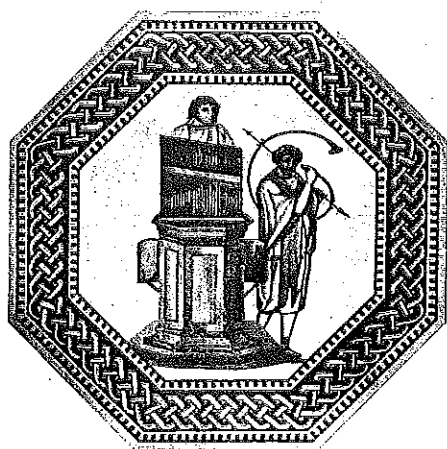
Consider the organs at Lüneburg, Lübeck, and Hamburg, once played by Johann Sebastian Bach. To hear the master's music on these warm and articulate instruments is almost to hear it for the first time. Consider, too, a name less generally associated with the organ—Wolfgang Amadeus Mozart. Mozart's letters to his family are full of references to his delight in playing different organs, and on one occasion he wrote to his father: "To my mind and ears, the organ is the king of all instruments." As a young man he even played the organ in the Thomaskirche in Leipzig, where Bach had been the cantor a few decades before. Doles, Bach's pupil who was now the cantor, was so moved that he declared Mozart to be the reincarnation of his great master.

A trip three years ago down the Mozart organ trail led me to such small German and Austrian towns as Kirchheimbolanden, Mörlenbach, Fügen, Ybbs, which no less than the greater Salzburg have never forgotten their share of Mozartiana and kept the instruments he loved alive. Going north, the oldest organ of all that I played on was in the little village of Oosthuizen in Holland. It dates from 1521, the year that Cortez conquered Mexico, and one year short of a century before the Pilgrims left from nearby Leyden for the New England shores. Holland is really the organ Eldorado: from A to Z, in Amsterdam, Alkmaar, Bolsward, Gouda, Haarlem, on through the alphabet to Utrecht, Zaandam and Zwolle, one finds magnificent examples of early organs, well cared for and appreciated, and—in fact—each the pride of the town.

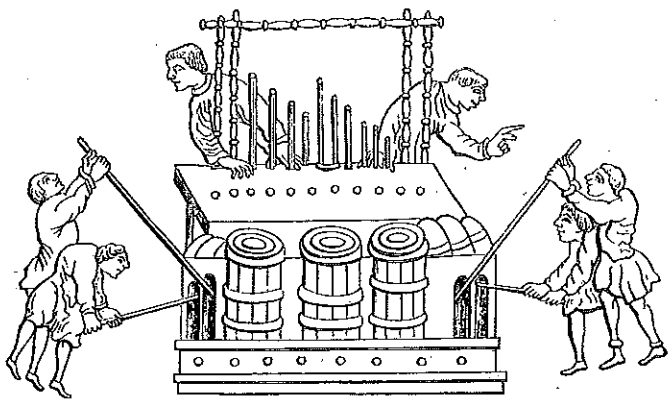
Two, three, and even four hundred years old, as some of these organs are, one is impressed—upon playing them—by a feeling of their youthfulness. They have served great music these many years for the simple reason that they were built on sound artistic principles. Yet working within these principles, which define basic matters of construction and more subtle aspects of pipe voicing, builders achieved an amazing range of tonal variety. The mellow tones of early English organs match the music of Purcell and his contemporaries. The larger instruments of Holland and North Germany, bolder and more clearly focused in sound, coincide with the sturdy proclamation of the music of Buxtehude and Bach. The organs of South Germany and Austria, though equally fine, are better adapted to the slightly more easygoing counterpoint of Pachelbel. In Italy organs were mostly small, yet of an elegant sound. Spain and Portugal developed a style of organ all their own, stressing the imperious flare of trumpet stops in fanlike array—*Trompeta Real* and *Trompa de Batalha*—but omitting almost entirely any development of the pedals.

Through all these instruments, small and large, from different centuries and from builders scattered across Europe, runs a thread of identity of construction and voicing. In attempting some definition of these characteristics, it must be said at once that all this explanation represents no new discovery. Methods of seventeenth- and eighteenth-century design that account for tonal excellence have been ably expounded for more than fifty years by Albert Schweitzer and other authorities. Moreover, a few—a very few—builders in Europe never forgot them.

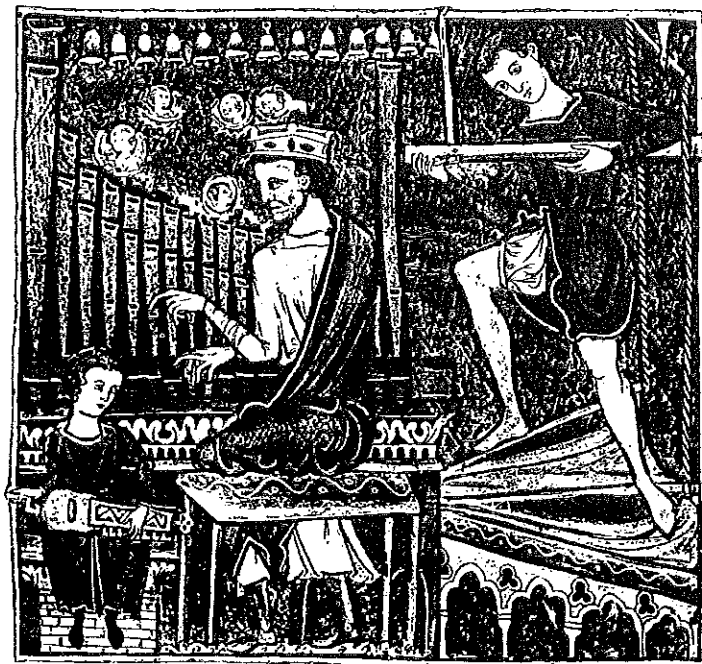
The organ's growth and longevity are rooted deep in history. It originated in the Panpipes of antiquity (as did the flute), and there were recognizable organs as long as two thousand years ago. The Emperor Nero was said to have been quite an expert player on the *Hydraulus*, an early form which gained stable air pressure from the weight of water. His affection for the instrument was considerable. The story goes that at a time of great political danger, facing an insurrection against him headed by Vindex, Nero whiled away a day of conference with his military advisers by playing for them on a new *Hydraulus* and explaining its construction, finally remarking that he would have it transferred to the theater—"Vindex permitting."



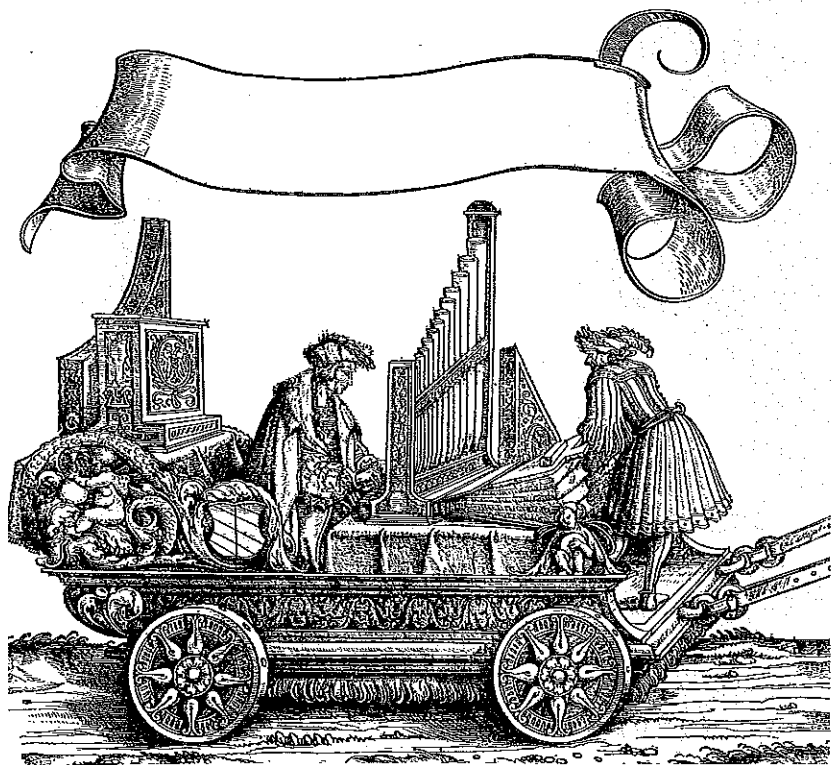
Roman mosaic depicts hydraulus and trumpet.



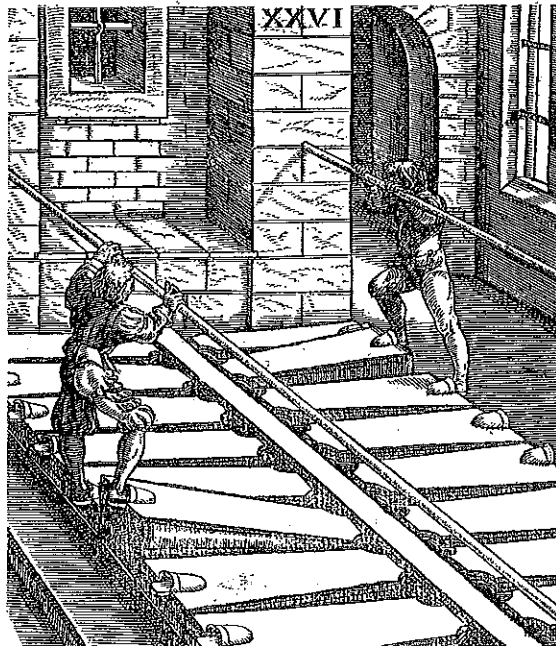
Above: The three water casks indicate that this double organ, illustrated in a twelfth-century manuscript, is a hydraulic model. It required four men to work the air pumps and two players—one of whom may have played the basic melody while the other supplied an accompanying voice. Right: The Bible mentions only King David's talent for the harp (I Samuel 16:23), but the thirteenth-century Rutland Psalter shows him seated at an up-to-date pneumatic organ. The man at the right treads a pair of alternating bellows; the one at lower left is playing a hurdy-gurdy.

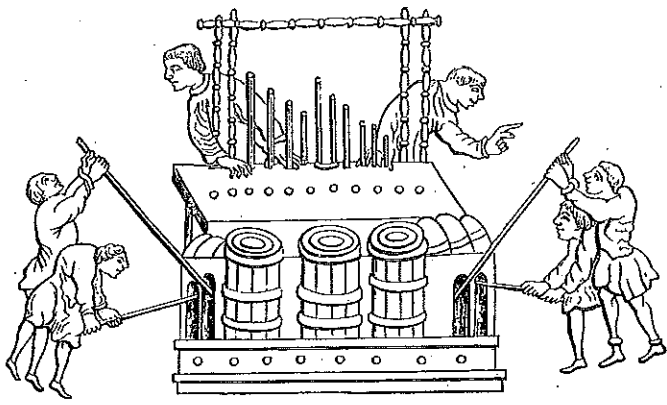


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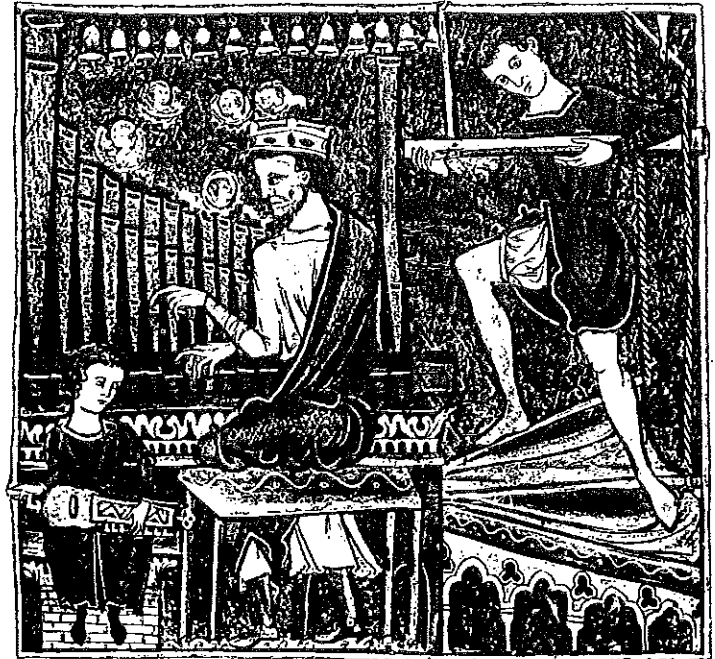


Left: One of the most famous organists of the sixteenth century was Paul Hofhaimer, chief musician to Emperor Maximilian I at Innsbruck and Salzburg. This woodcut by Hans Burgkmair shows him playing a positive organ mounted in an ornate processional car. Below: Twenty bellows provided air pressure for the organ at Halberstadt, Germany, built in 1361 and described by Michael Praetorius in 1615. It took ten strong men, each standing on a pair, to pump them.

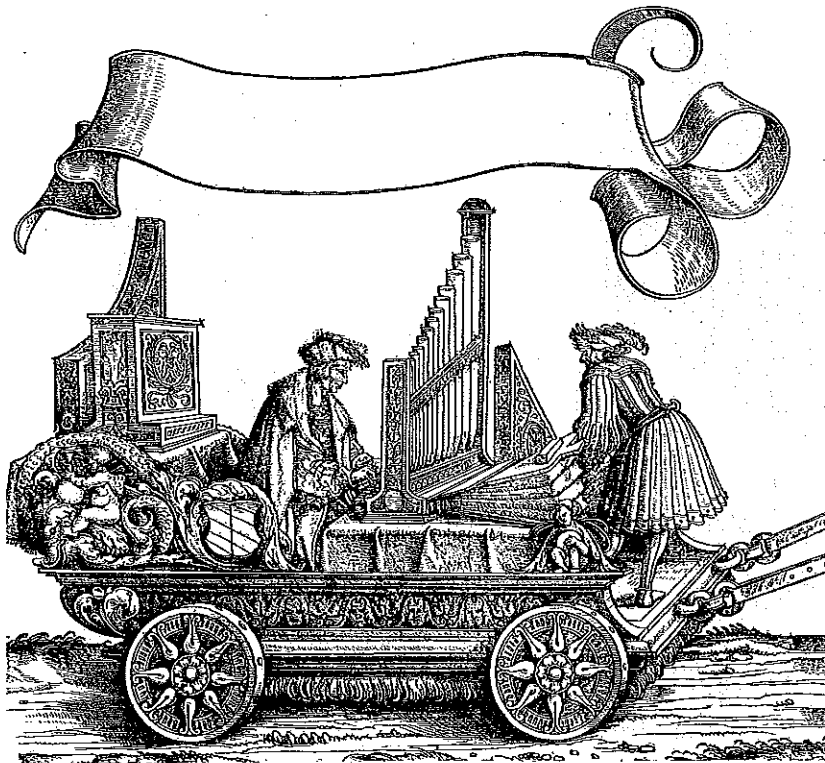




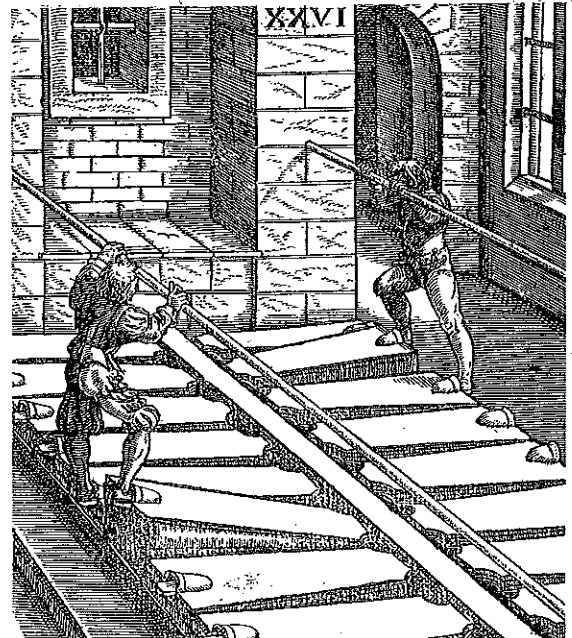
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In medieval times, organs were exchanged as gifts between royalty. In the eighth century the Byzantine Emperor Constantine Copronymus V gave an instrument to King Pepin the Short, and in the ninth century Charlemagne received a similar gift from Byzantium. In view of these and other gifts, perhaps we should rename the "King of Instruments" the "Instrument of Kings."

Meanwhile, the organ, previously a "pagan" instrument, had been adopted by the Church and was steadily being developed in size and improved in ease of playing. By the tenth century, quite large instruments existed, such as the one at Winchester with no less than four hundred pipes. And by the year 1361, an organ with three manuals was constructed at Halberstadt. The pedal organ, to be played with the feet, was introduced shortly thereafter.

The violin dates roughly from 1500, the piano from about 1725, and the modern orchestra is a development of only about the past century and a half. But by the year 1415, when Henry V triumphed at Agincourt, the organ was a powerful instrument capable of producing "grandiose" sounds. It reached perfection by the time of Bach and Handel. The builders of the great baroque organs made their instruments more complex and gave them magnificent housing, but they never lost sight of their starting principles. Apart from their ornate cases, covered with decorative cherubim calling to seraphim, those organs were straightforward and functional, so that while baroque architecture may imply extreme elaboration, a baroque organ denotes simplicity. It was only much later, with the coming of electricity, that the musical identity of the organ became radically changed as its structure, voicing, and internal working were completely altered. In the process, its artistic purpose—the very reason for its existence—was forgotten. In effect the organ became (and still is, in most of our contemporary building) a great telegraphic switchboard, with the player clacking the keys and electricity and magnets operating the playing mechanism. The intimacy and sense of musical contact between player and pipes, so naturally afforded by the direct keyboard-to-pipe tracker action of the older instruments, were lost. Therewith went the organ's graciousness of articulation and tone. The sound lost nobility and became spongy and inarticulate. The bellowing cinema organ of recent times was the nadir—although musically harmless, since no real organ music was played on it anyway. Today's pipeless electronic instruments, though, are ersatz and worse.

By general agreement, the man who perhaps more than any other represents the high period of classic organ building was Arp Schnitger, son of an Oldenburg woodworker, who was born in 1648 in the village of Schmalenfleth on what is now the Dutch-German border. In the course of his long life, Arp Schnitger built one hundred and fifty organs on both sides of the Rhine. A Schnitger organ at Charlottenburg was to be the pride of Frederick the Great of Prussia, and another of his instruments helped interest Peter the Great of Russia in the art of music. Albert Schweitzer has remarked that "all things musical" focused in Johann Sebastian Bach; equally, Arp Schnitger, designing in his workshop in the little village of Neuenfelde, near Hamburg, is the focal point of the finest in Dutch and North German organ building, and many of his instruments were played by Bach.

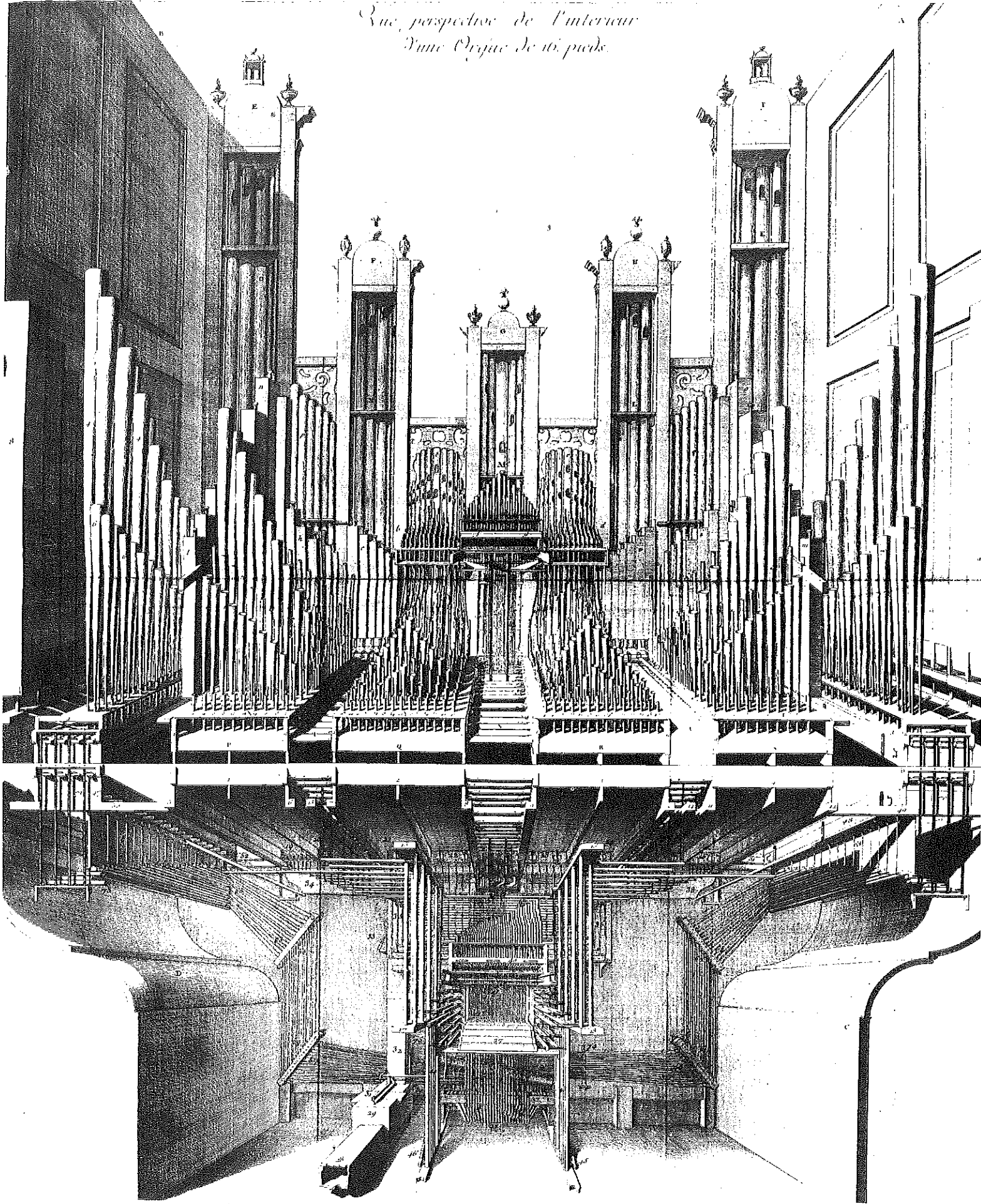
Schnitger had critical ears, musical insight, the skill of his craft, and endless patience. But he had more. He knew and followed a set of principles concerning organ design and construction which had been evolved over hundreds of years. Just as surely as the understanding of weight distribution, thrust, and support enabled medieval architects to throw their Gothic arches to the sky, so a grasp of equivalent principles of pipe design and voicing, of wind chests and wind supply, of key and playing action, unflinchingly guided men like Schnitger in the construction of their instruments. It is no fanciful figure of speech to say that the vertical up-rushing arches and spires of the Gothic builders is equaled in the tonal columns of the organ. And the exuberance of the baroque period that followed is reflected in their rich organ cases, as well as in the

The image shows a page of a musical score. At the top, it is marked 'Allegro'. The score includes staves for Violin I and II, Viola, Bassoon, Trumpets, Organ (with 'Tutti' and 'marcato' markings), and Cymbals. The organ part is particularly prominent, showing complex rhythmic patterns. The dynamics are marked 'f' (forte). The score is for a passage from Handel's Organ Concerto No. 3.

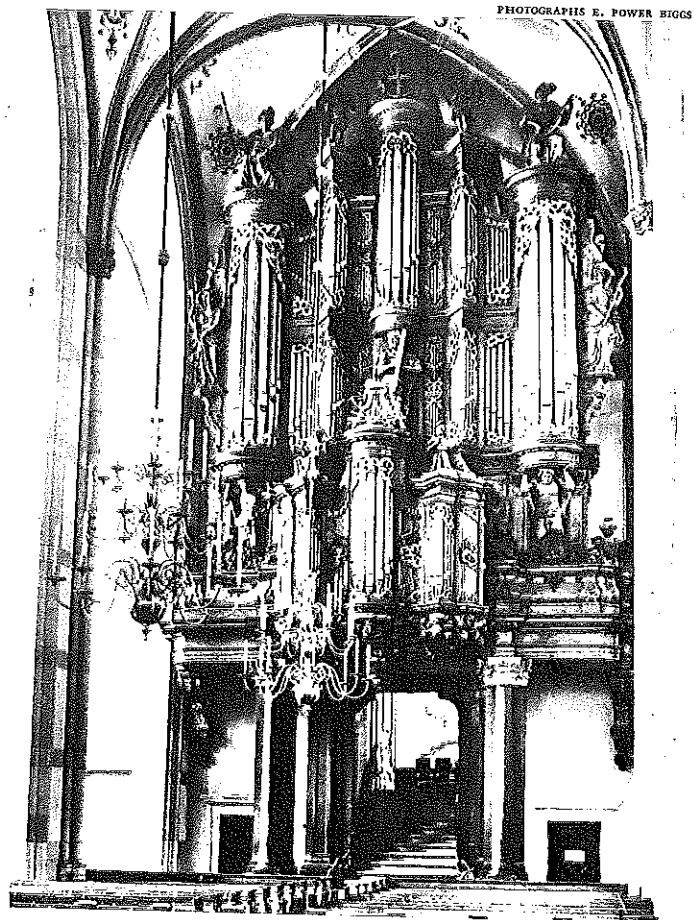
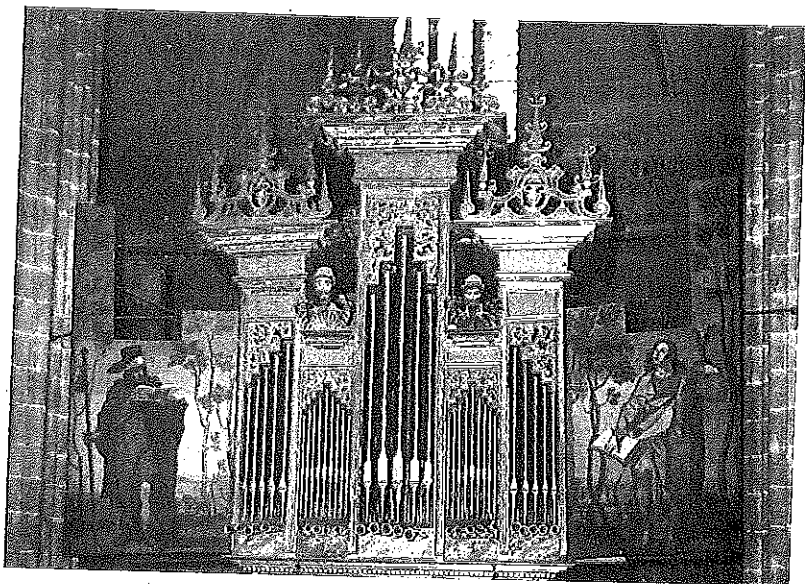
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*Passage from Handel's
Organ Concerto No. 3.*

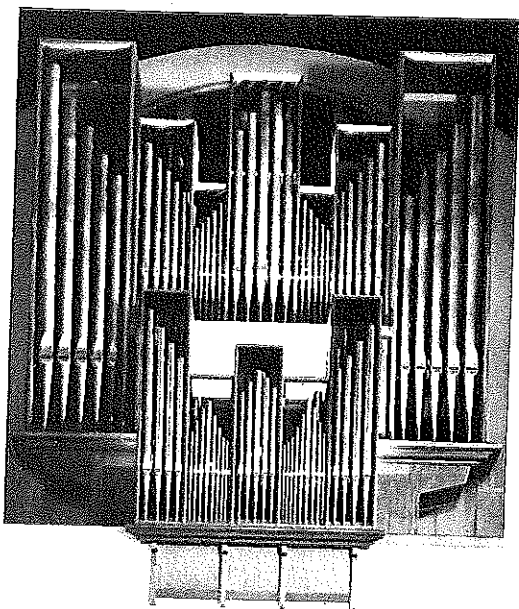
*Vue perspective de l'intérieur
d'un Orgue de six pieds.*



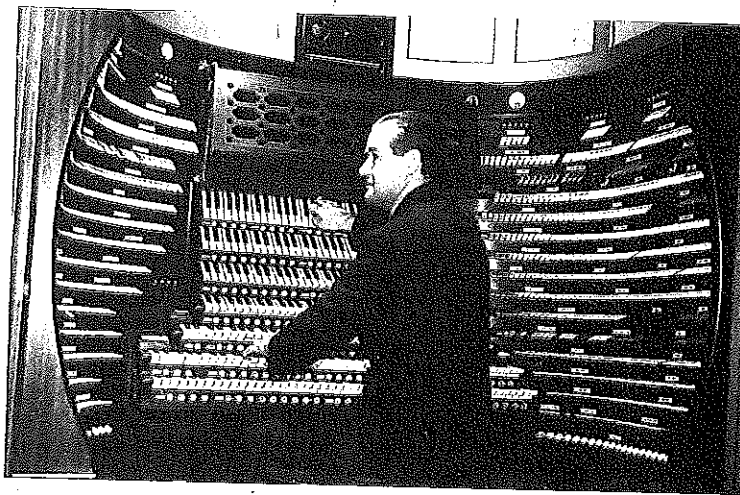
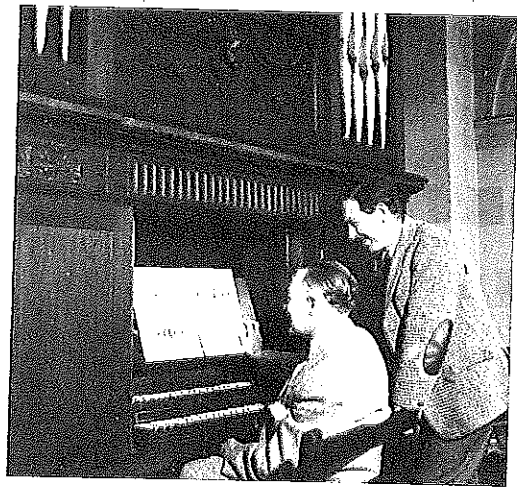
This rear view of an eighteenth-century organ shows, with unusual clarity, the elaborate system of trackers needed to connect the keys and pedals with the various pipes.



PHOTOGRAPHS E. POWER BIGGS



Upper left: Small organ, cast in 1557, in the New Cathedral at Salamanca, Spain. Above: Arp Schnitger's last organ, designed for St. Michael's Church in Zwolle, Holland, and completed by his sons in 1720—an instrument of incomparable sonority. Left: The new tracker-action organ, built by D. A. Flentrop, in the Busch-Reisinger Museum of Harvard University. Lower left: E. Power Biggs and Lord Guernsey with the Handel organ at Great Packington, England. Below: Mr. Biggs tries the biggest organ ever built—32,000 pipes!—in Atlantic City, N. J.



splendor of their sound. Buildings, instruments, and music went hand in hand.

As an illustration, consider Bach's organ Toccata in D minor. Play this work on the organ at Lüneburg, which Bach himself played and where the idea for the composition may have taken form in his mind. The three opening notes emerge with the authority of an arresting declaration. But the 32d-note rest that follows is no mere silence. It is made dramatic by the lingering suspension of the sound in the air, the tone receding gradually down the church. Then, before the echo has died away, in comes the continuing phrase, and so on, in an exciting alternation of musical statement and the suspension-in-air afforded by reverberation. The whole Toccata, a masterpiece of simplicity and shrewd writing, is inextricably bound up with the qualities offered by the instrument—alternation of manuals, contrast of registration, high pitch played against the low thunder of the pedals—and with the acoustical buoyancy and fascinating merging of sound into silence made possible by the building itself.

The conclusion is that there is one—and only one—way to build an organ, and that the excellence of the old is not a mere matter of luck, or antiquity, or acoustics. Most church and concert organs of today are not an "extension" of the old, as their apologists claim. There are basic disparities. Nor are fundamental differences in construction and voicing to be bridged by a few changes in present-day building habits. Not at all: the change must be complete, and literally must come from the inside out.

What are some essential characteristics of the old? There are half a dozen points of contrast between the old organs and our conventional modern ones: in the cut and voicing of the pipes that create the tone; in the design and working of the wind chests that supply air for the pipes; in the shape and movement of the valves that admit air to the pipes; in the pressure of the wind that activates the pipes; in the connections and sense of contact between pipe valves and keys at the console; and finally, in the actual placement of the organ in the room, auditorium, or church, and in whether or not the organ has a case.

Comparing the two, one finds, first, that the classic organ pipes were voiced to produce accent, or "chiff," at the beginning of their tone. Pipe tone had the essential characteristic of any other musical instrument, the ability to enunciate a musical phrase. Most modern organs are inarticulate in their tonal attack. Their tone is a spongy "AAH" while that of the older instruments is more of a "PAAH" or "CHAAH." It is largely through the presence and emphasis of these transient starting tones that a builder gives the organ its character. Moreover, since it is the beginning of a tone that commands attention, and since music is projected by a series of subtle accents, it is the lack of this "classic" voicing, and the consequent flabbiness of sound, that is so unsatisfactory in our modern organs.

Then, the old wind chest by its very design ensured complete unanimity in the speech of different pipes. The addition of electricity to the modern wind chest has disturbed this cohesion and altered, to their tonal detriment, the characteristics of wind flow to the pipes. Furthermore, the action of the older valves was more gentle in admitting air to the pipes. By comparison, the action of a modern valve is too abrupt, and the miniature blast of air which it emits tends to give the pipes a gulping quality. A low wind pressure produces a floating tone, a fact well known to the old builders but often disregarded by modern designers.

Connection between the keys and the air valves forms the nervous system of the organ. For centuries this connection was achieved by the simplest means imaginable—a system of direct mechanical linkage by wooden trackers. The many ingenious minds who have evolved the modern electric action have not begun to succeed in equaling the response and subtle inflection possible in the centuries-old tracker system. No player, having enjoyed the responsive touch of a good tracker organ, is content to go back to the comparatively dull response of even the best of electric actions. But electricity is welcome in an organ as a means of supplying air pressure, for it mat-

Carrying it too far

D AERIAL ORGAN

Northwest Orient Airlines has installed an electric organ in one of its Strato-cruisers, and beginning today passengers flying between Minneapolis-St. Paul, Milwaukee and New York City will make their way through the clouds trailing organ music. A Lowery organ, weighing 190 pounds, roughly the same as a healthy male passenger, has been fitted in place of four seats on the left side of the plane. The plane's public-address system speakers have been enlarged from five-inch to eight-inch speakers, the better to hear the music.

Six Twin Cities organists will take turns flying at the lofty keyboard of the mighty Lowery, playing half-hour programs with fifteen-minute intervals of silence.

ain increased her allowance from \$280 to

ters not whether a rotary fan or human muscle at the bellows is the source of this.

Thus, the older organs not only have marvelous tone but also, if they are in adjustment, the most responsive action for saying something musically. Pipe speech seems to be right at the tip of one's fingers and is controllable to a surprising degree.

It is almost a new thought to assess an organ by its voicing and responsiveness rather than by the number and variety of its stops. Even though an organ is a gathering together of a multitude of wind instruments (i.e., the pipes) organized into ranks, or stops, it remains a keyboard instrument played by keyboard techniques. The coordination of keys, action, chests, pipes, and the articulation, beauty, and cohesion of tone are the measure of a "King of Instruments."

Finally, in the matter of placement, we have fallen into poor habits this past century. In older design, it was basic that the organ must be fully in the open within the room or church. That is, one should practically be able to walk around it, as around a piano. A chief reason for open placement was to allow mild and unforced pipe voicing. Moreover, the instrument must face and speak directly into the room, not from around a corner. A well-planned organ case is essential to define and project the different divisions of the instrument. It enables the pipes to "get hold" of the air more effectively. At the same time, the case serves somewhat as a sounding board, a function that is readily recognized by feeling through the touch its sympathetic vibration while the organ is being played. For all their ornateness, baroque cases did function precisely this way. They are hardly in vogue today, but the same musical benefits can be obtained in simple case designs.

It is in Holland today that one finds, perhaps, the clearest answer to the artistic challenge of the past. Modern organs of Holland, typified by those of D. A. Flentrop of Zaandam, translate the principles of the old into exciting reality for today. The new organ recently installed in the Busch-Reisinger Museum of Cambridge, Massachusetts (illustrated on page 78), is a recent importation from Zaandam. As one plays its sensitive tracker action and listens to the buoyant and articulate pipe speech, one senses the long arm of Arp Schnitger, the old renewed in the new, and one wonders how on earth musicians and builders ever came to gravitate away from such musical sounds.

To be sure, the genius of the organ is for the performance of polyphonic music. But whether that music be the exhilarating fabric of a Bach fugue, with its interweaving of many melodies, the softer voices of a simple chorale prelude, the romantic polyphony of Reubke, Rheinberger, Franck, or the writing of Hindemith and other modern composers, it will sound at its best in the musical terms of the classic organ. That a Stradivarius is excellent for the whole range of violin literature surprises no one. Hearing the best of romantic and modern compositions played in the slightly fastidious tones of the classic organ, one is no longer bemused by the idea that the organ needs a variety of essentially movie-house sounds under the guise of romantic voices. One is inevitably led to the realization that the classic organ is *the* organ—and the classic ideal is a unity, complete and self-sufficient. It is inevitable that the developing taste of players and listeners will cause such instruments to be constructed in America. Modern composers who deal with the same musical elements as did Bach and Handel, although in a different manner, will find the modern "true-classic" organ as powerful a medium for strong musical thought as did the earlier masters. Undoubtedly organ builders will discover that modern materials and techniques can afford improvements on the basic construction of the centuries. But principles of wind chests, pipe design, voicing, and playing action will remain the same as they were hundreds of years ago—a tribute to the generations of artist-craftsmen who perfected them.

E. Power Biggs has probably been heard by more people than any organist in history. Newest record: "Music for Organ and Brass" by Gabrieli and Frescobaldi (Columbia).