## CONTENTS




# ETCetera

**Magazine of the Early Typewriter Collectors Association**

**Number #12 ---- Sept., 1990**


# CAN THIS BE REAL?

*Secretaries in Worcester, Mass. type on an IBM electric (left) and a Thurber Patent Printer (right). To find out why, see page 4.*

# ETCetera

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**Sept., 1990**
**No. 12**

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## EDITOR'S NOTES

IN PRINT: *Pennsylvania Magazine* finally got around to printing the article I wrote for them two years ago on typewriter connections to the Keystone state. These magazine editors are slow to print material once submitted to them, but better late than never. It still spreads the word about typewriter history. *Yankee* magazine recently ran an article about an old-time tyewriter repairman in Connecticut and the famous writers he maintained machines for. *The Office* magazine ran the article I wrote for them on keyboard evolution in their April issue, and they've booked me to do something on historical dictation equipment for December. The latter will show up in ETCetera in some way, shape or form eventually. If anybody has any info on the subject, do get in touch with me.

Oddball syndicated columnist L.M. Boyd recently ran an item that is of interest to typewriter collectors. He informed us that those sentences for test typing that include all the letters of the alphabet have a name. They're called "pangrams." Now we know.

ABC's *Good Morning America* ran a brief item calling the following the *only* English pangram using each letter *only once*:

Mr. Jock, TV quiz PhD.,
bags few lynx.

The *GMA* people are obviously not attuned to typewriter trivia. *We* know another each-letter-once pangram that sounds just as good:

J.Q. Vandz struck my big
fox whelp.

If you think such knowledge is totally useless, think again. These are swell sentences to give that flea market find a quick test to make sure each letter works.

†††

I had the pleasure of visiting Richard Dickerson at his home in Pasadena, CA a few months ago. Fellow collector George Collord III, of Portland, ME was there as well, and the three of us had the unusual opportunity to view three Sholes & Gliddens at the same time. This unlikely event (somewhat akin to the alignment of the planets!) was made possible by my good luck in finding a second S&G last February, so I was able to bring two S&G's to set alongside Dick's machine for the unusual display. However, Richard upstaged us all by showing off his beautiful Ford typewriter (serial number *72* ). This fine machine is the aluminum frame model, and is chock full of interesting details. I hope to twist Dick's arm enough to get him to write an "Anatomy of the Ford" article for us in the future.

A tip when having a seller ship a machine to you via UPS. Tell the seller to list *you* as the shipper (c/o his address) on the UPS slip. Also have him put your name on the return address. If, by any chance, the machine is broken and there is a claim to file, you can do it directly without having to go through the seller. UPS pays claims only to the shipper. Also, be sure to save the UPS number on the ticket that's taped to the package. UPS won't do *anything* without this number. I've learned the above through sad experience. Hope it will help others avoid some trouble.

†††

Note the ETCetera INSERT in this issue. It's a way of squeezing more material in without having to go to another full bifold sheet. The INSERT will contain ephemeral info like ads & roster updates. Others will follow.

## WARNING

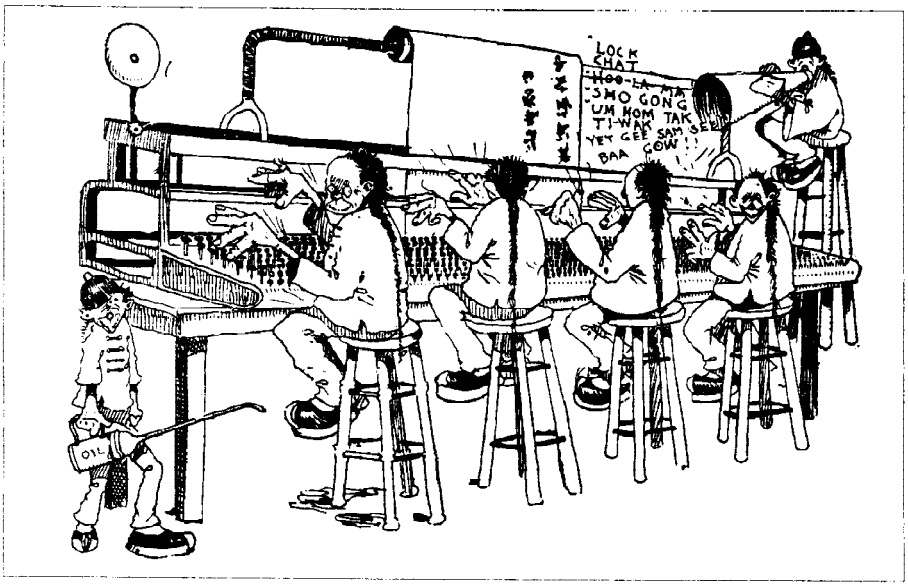
*Somebody* out there is fraudulently using *my name* in calls he is making to other collectors.

It's wierd, but it's true. He's calling folks up and saying "This is Darryl Rehr..." But he *isn't.*

I may be tough to negotiate with on occasion when trading machines in or out of the collection here, but I've never dealt with anyone dishonestly, nor done anything which justifies this kind of nonsense.

I'm not sure just what this clown hopes to accomplish, but collectors should keep their antennae out for a charlatan among us. After all, he may decide to pick somebody *else's* name to use, too.

# A CHINESE TYPEWRITER




*The San Francisco press was racially cruel to the Chinese in 1900, but what a typewriter! We don't know if it really existed.*

*This item appeared in the San Francisco Examiner, Jan. 22, 1900, and was quoted in The Typewriter and Phonographic World of March, 1900.*

The latest marvel of mechanical ingenuity stands in the rear room of a Chinese newspaper office on Dupont street. The machine is a triple-geared back-action Chinese typewriter built on standard lines and containing 5000 keys, all on one board.

Ordinarily 6,000 characters are required in the written language, one for each word in the entire vocabulary. The inventor, who is a Chinese, says that people who use his typewriter must be content to worry along with 5,000 words, as the machine already requires too much building space.

Two rooms knocked into one apartment afford shelter for this remarkable contrivance. The keyboard is twelve feet long and two feet wide. Each key or character is of red enamel on a white ground, and the general effect is that of a proclamation posted on a deadwall in Chinatown. The mechanism was made in Japan and put together here by Tap Key, the inventor, whose name doubtless inspired him with the idea.

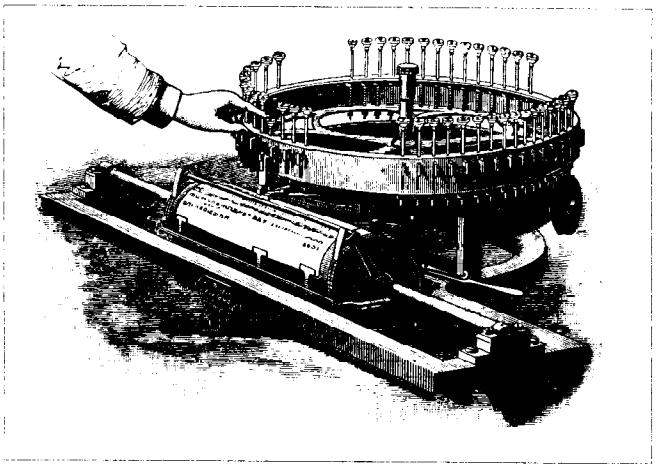
Whether the Chinese typewriter is destined to fill a long-felt want or a junk shop is still a question. The editor says that he isn't strong enough or long enough in the reach to dash off items on the twelve foot keyboard and businessmen are reluctant to build extensions to their emporiums for the accommodation of the machine.

The inventor is general superintendent of the typewriter which requires four men and one boy to operate it. While running full speed the machine makes so much noise that the gentleman giving dictation uses a megaphone. By a scientific arrangement of the 5,000 keys in four divisions of 1,250, each operator strikes those in his section when the proper time comes. After hitting a letter the operator sings out as in keno to appraise the others that he is keeping up with the game. The boy jabs the punctuation marks along one end of the board at a signal from the superintendent, who also acts in the capacity of oiler and looks out that the bearings do not become too hot.

Though cumbersome in many respects, this machine is much faster than the old method of writing or printing by hand with a camel's hair brush. The paper, instead of moving laterally, as in the American typewriters, is affixed to a roll extending upward and back from the center of the machine and is fed in and out like a shuttle, though much slower.

This roll is the width of standard wall paper and is printed lengthwise in sections. Beginning at the upper right hand corner of a section the characters are imprinted down the edge, then up again, the spacing being done by the punctuation boy, until the entire width is filled in across to the left hand edge. Another section is then let down from the roll, and then another until all the work in hand is finished.

Letters, circulars, speeches, handbills, documents, proclamations, etc. are thus prepared, sliced off with scissors and sent around to the customers ordering them. Professional Chinese handwriters, who understand the rules of composition, solicit this work. With a comprehensive idea of what is wanted the professor sits on a high stool near the typewriter and dictates his thoughts to the four muscular key-thumpers through a large tin megaphone. The smashing and banging of the machine and the fierce shouts of the working force suggest a riot in a boiler factory. Chinatown is proud of its typewriter as indicating a noble stretch on the road to civilization, and there is some talk of bestowing a medal upon the inventor.



*Thurber's 1843 writing machine as illustrated in Scientific American, April 30, 1887.*

# Thurber's Patent Printer

## *Hidden Treasure in Worcester, Mass.*

**by Darryl C. Rehr**

The circular-keyboard typewriter invented by Charles Thurber in 1843 is well known to typewriter collectors. Most of us have seen it by way of the often-printed cut which first appeared in an 1887 issue of *Scientific American* (see above). However, most of us *don't* know that the machine is still around, safely kept in Worcester, Massachusetts. This fabulous specimen has a checkered history that has seen it languish in storage for most of its life, with only occasional respites for public display. Maybe that's why you probably have never seen an actual photograph of the machine. But ETCetera likes to bring you things you've never seen before, and that's the genuine article up there at top right on page 5.

Our photo here, as well as on the cover, come from the Worcester *Sunday Telegram* of June 19, 1960. They were originally taken for an article written soon after the machine was most recently "re-discovered." This took place some time that year at the Worcester Historical Museum, where it apparently had lain in storage for an unknown number of decades. It went on display for a brief period in 1960 before being once again relegated to a dark cellar, where it remains today.

The history of Thurber's Patent Printer begins with its inventor, who was born Jan. 2, 1803 in East Brookfield, Mass., son to the pastor of the local church. He grew up to become first a schoolteacher, and later on a state senator, a bank director, and member of the board of Worcester's Gas Light company.

Among his many vocations, perhaps most important to us was his partnership with his brother-in-law, a gun manufacturer named Ethan Allen (no relation to the Revolutionary War hero). Once again, as we have seen so often in typewriter history, a *gun maker* is involved in typewriters. Thurber and Allen went into a partnership between 1837 and 1856, after which Thurber finally retired. It was during this era that the Thurber typewriter was conceived, patented and built.

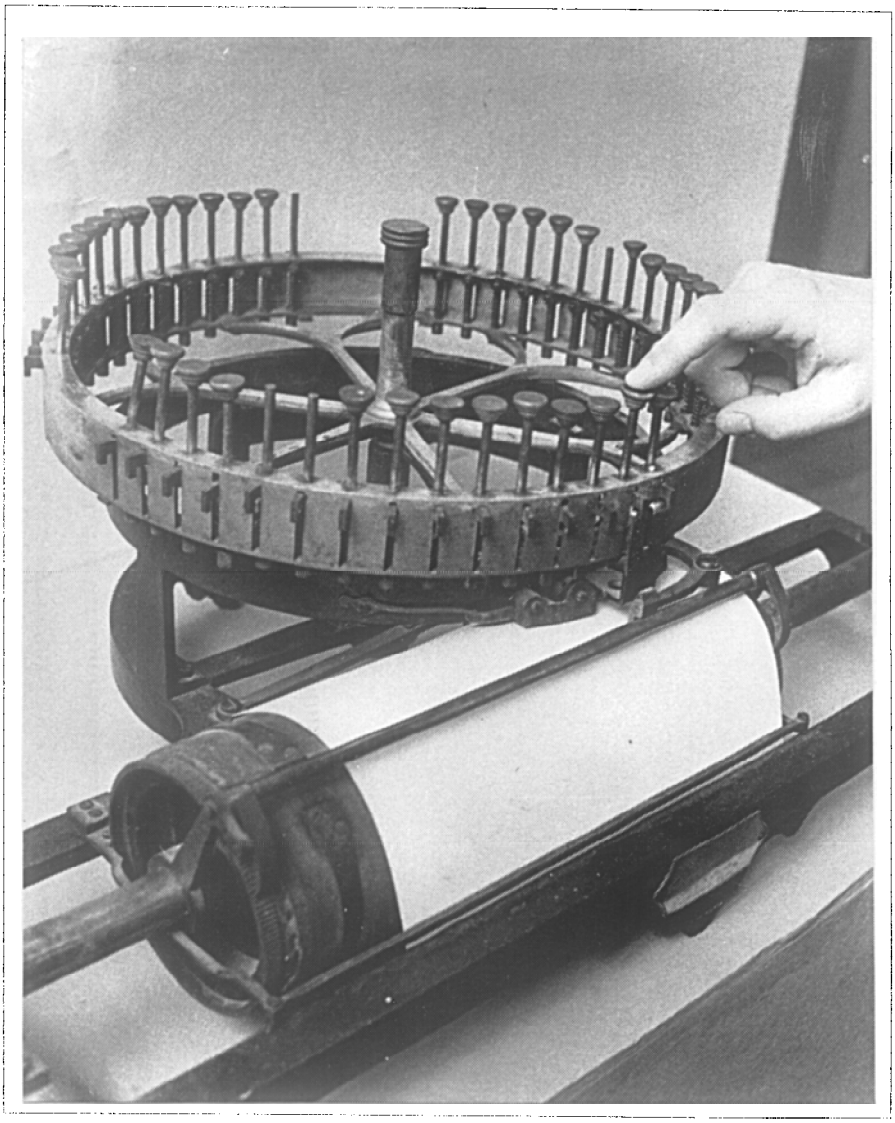
The inventor called his machine "Thurber's Patent Printer" in his U.S. patent No. 3228, granted August 26, 1843. This quote from the patent paints a vivid picture of Thurber's vision:

> "This machine is intended as a substitute for writing, where writing with a pen is invonvenient by reason of incompetency in the performer. It is specially intended for the use of the blind, who, by touching the keys on which raised letters are made and which they can discriminate by the sense of touch, will be enabled to commit their thoughts to paper. It is intended for the nervous, likewise, who cannot execute with a pen. It is useful for making public records, as they can be made with this machine as accurately as with a common printing press. It is intended for those who wish to keep a legible record of daily events, so that they may be read with ease and dispatch by others; and the various useful purposes to which it may be applied will readily suggest themselves to every one."

Thurber is often credited with coming up with the idea of using a cylindrical platen in the same way it is and has been used on typewriters since the Sholes & Glidden of 1874. However, this feature is conspicuously absent in the 1843 patent. Instead, the paper carriage is a very curious flat design. It moves the paper left and right for changing lines. For printing the letters, it moves toward and away from the operator, like the motion of a desk drawer. The typist would have had to turn his head *sideways* to see the work! The patent also explains the machine's *proportional spacing* capability, a remarkably advanced feature for such an early machine.

Thurber produced a 15-key demonstration model to submit with his patent, but the full-sized machine is a 43-key

model (the Sholes & Glidden, by comparison, had 44). For years we have been tantalized by the Thurber machine, not only because of the original specimen, but also from apparent examples of its work.



*Thurber machine as photographed by the Worcester Sunday Telegram in 1960. (Photo ©1990, Worcester Telegram & Gazette)*

Those examples are two surviving letters said to have been written on the machine. The most-recent is one dated February 3, 1846, written from Norwich, Connecticut, where Thurber was living at the time. This letter has frequently been reproduced in typewriter history books. It begins, "We have, at length completed one of Thurber's Mechanical Chirographers..." Notice he doesn't call his machine the "Patent Printer" at this time. It's an important point, and we'll get back to it soon. The February 3 letter was written to some Washington, D.C. patent attorneys asking for help in arranging a trip to the capital to exhibit the machine to investors.

An earlier letter, very seldom seen by collectors, is a personal note written by Thurber to a Sarah Wheelock of Shrewsbury, Mass., dated January 28, 1846. Unfortunately, our copy of this letter is unsuitable for reproduction. Its appearance is essentially similar to the later letter. The content is mostly personal, but it closes with the key sentence, "This letter I write with my new machine. The letters you will notice are not smoothly formed, because the machinery is somewhat imperfect. The machine however operates as well as ever I expected."

The Wheelock letter was presented in 1935 to the Martin County (Minnesota) Historical Society. A relative of Miss Wheelock was a local resident.

Now for a surprise having to do with "Chirographers" and "Patent Printers" and why the difference is critical.

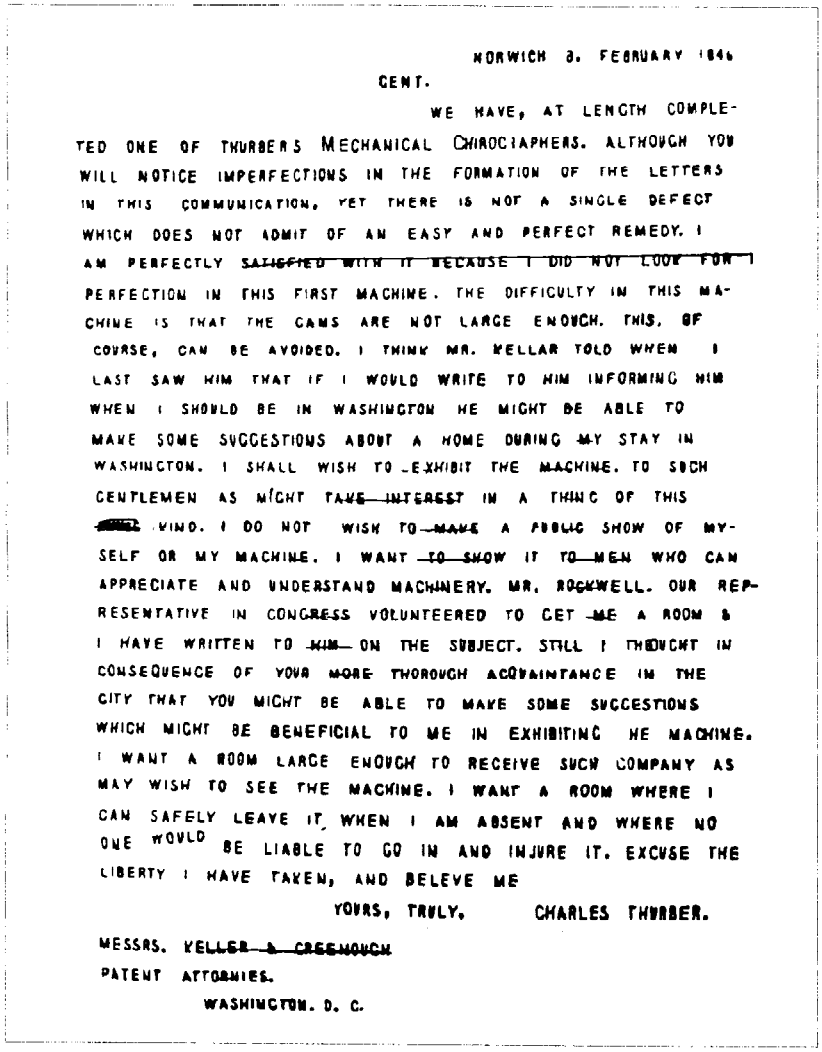
Most of the writing we've seen about the Thurber machine are derived from that original *Scientific American* article of 1887, Thurber's patents and a piece from *Phonographic World* in 1891. However, I have recently come upon the text of a speech about Thurber delivered to the Worcester Historical Society in 1920 by Albert Fay. I haven't been able to confirm it, but Fay was almost certainly a typewriter executive, and most likely connected to Remington.

Fay reminds us that the machine Thurber called his "Mechanical Chirographer" was not the round-keyboard device at all, but his later 1845 invention which mechanically duplicated *handwriting* through an ingenious system of cams, levers and mechanical linkages. This overlooked fact drastically changes our view of the 1846 letters.

The February 3 letter was reprinted in Dan Post's edition of *The History of the Typewriter* by G.C. Mares. Consider Post's comments about the letter:

> "To improve the document's legibility, obviously, someone long, long ago elected to retouch the whole thing with a pen, letter-by-letter...The labored result, unfortunately, has more the effect of hand-lettering than a state of the art specimen of typewritten matter."

But couldn't it also be that the letters were *not* retraced, but were originally "drawn" mechanically by a machine that simulated writing by hand? Such an instrument could have as easily produced "hand-printed" letters as it could have produced "longhand."



NORWICH 3. FEBRUARY 1846

CENT.

WE HAVE, AT LENGTH COMPLETED ONE OF THURBERS MECHANICAL CHIROGRAPHERS. ALTHOUGH YOU WILL NOTICE IMPERFECTIONS IN THE FORMATION OF THE LETTERS IN THIS COMMUNICATION, YET THERE IS NOT A SINGLE DEFECT WHICH DOES NOT ADMIT OF AN EASY AND PERFECT REMEDY. I AM PERFECTLY SATISFIED WITH IT BECAUSE I DID NOT LOOK FOR PERFECTION IN THIS FIRST MACHINE. THE DIFFICULTY IN THIS MACHINE IS THAT THE CAMS ARE NOT LARGE ENOUGH. THIS, OF COURSE, CAN BE AVOIDED. I THINK MR. KELLAR TOLD WHEN I LAST SAW HIM THAT IF I WOULD WRITE TO HIM INFORMING HIM WHEN I SHOULD BE IN WASHINGTON HE MIGHT BE ABLE TO MAKE SOME SUGGESTIONS ABOUT A HOME DURING MY STAY IN WASHINGTON. I SHALL WISH TO EXHIBIT THE MACHINE. TO SUCH GENTLEMEN AS MIGHT TAKE INTEREST IN A THING OF THIS KIND. I DO NOT WISH TO MAKE A PUBLIC SHOW OF MYSELF OR MY MACHINE. I WANT TO SHOW IT TO MEN WHO CAN APPRECIATE AND UNDERSTAND MACHINERY. MR. ROCKWELL. OUR REPRESENTATIVE IN CONGRESS VOLUNTEERED TO GET ME A ROOM & I HAVE WRITTEN TO HIM ON THE SUBJECT. STILL I THOUGHT IN CONSEQUENCE OF YOUR MORE THOROUGH ACQUAINTANCE IN THE CITY THAT YOU MIGHT BE ABLE TO MAKE SOME SUGGESTIONS WHICH MIGHT BE BENEFICIAL TO ME IN EXHIBITING HE MACHINE. I WANT A ROOM LARGE ENOUGH TO RECEIVE SUCH COMPANY AS MAY WISH TO SEE THE MACHINE. I WANT A ROOM WHERE I CAN SAFELY LEAVE IT, WHEN I AM ABSENT AND WHERE NO ONE WOULD BE LIABLE TO GO IN AND INJURE IT. EXCUSE THE LIBERTY I HAVE TAKEN, AND BELEVE ME

YOURS, TRULY, CHARLES THURBER.

MESSRS. KELLER & GREENOUGH

PATENT ATTORNIES.

WASHINGTON. D. C.

*Letter from Charles Thurber to some Washington patent attorneys written on his "Mechanical Chirographer."*

Now, take another look at the letter (page 6). See the formation of letters, especially H, Y and W? They don't look *anything* like type, but *do* have the appearance of pen-or-pencil-drawn characters. Now, notice the several horizontal lines running through several words at a time. What kind of machine would be more likely to create that kind of error? A keyboard machine, or a drawing machine like the "Mechanical Chirographer" (see p.7) where the paper might occasionally be dragged under a stationary pen before the operator noticed it was stuck? Finally, note the fourth sentence, "The difficulty in this machine is that the *cams* are not large enough." Thurber's 1845 Mechanical Chirographer is *based* on cams, while the 1843 Patent Printer doesn't apppear to have a single cam in it.

Our conclusion is inescapable. For years we've overlooked the obvious and just *assumed* the existing Thurber letters were written on his keyboard machine. Not so. Thurber had more faith in his 1845 drawing device, and in 1846, he was preparing to present it to investors. The investors, however, never showed up.

In his speech, Fay said the Worcester Historical Society was in posession of an early version of the Mechanical Chirographer. If it is still there, those on staff are unaware of it, providing the diggers among us some "material for further research."

It's worth noting at this point that Thurber's concept of a machine to produce pen-written letters has come back into fashion recently. Panasonic, Sharp, Silver Reed and Brother have all produced little computer-controlled machines that "draw" letters with pens (usually of 4 different colors). These novelties, no doubt, are destined to become our collectibles of the future.

But back to the round-keyboard "Patent Printer." Most literature assumes the round platen worked the same way it did on standard typewriters of later years, but Fay tells us otherwise. On the existing model, the platen rotated on its axis for letter spacing and moved longitudinally for line spacing. That's exactly how Sholes handled his original round platen, before changing the configuration on his final prototypes.

It is likely the Worcester machine was manufactured by the gun company in which Thurber was a partner. The typewriter's components, while crude, have the sort of professional finish that would have been within the capabilities of a gun-making outfit.

When Thurber moved away from Worcester for the last time, his house was sold to Charles B. Pratt, an ex-mayor of the city. In 1884, Pratt was rummaging through a barn on the property and found, to his surprise, Thurber's *two* writing machines. Fortunately, he knew exactly what to do with them. He gave them to one Herbert R. Cummings, a local newspaperman, and, it so happens, the agent for *Remington* in the area. Cummings was, at the time, fighting the battle to introduce the typewriter to local businessmen. In his 1920 speech, Albert Fay said Cummings "found that most of the hard-headed practical business men of that day could not, even by argument, be made to see any more clearly than Thurber had, forty years before, the wonderful possibilities of this machine."

Cummings took the two machines, which were wrecks, and and did a reasonable job of restoring them. Recognizing the relation that the round-keyboard "Patent Printer" had to modern typewriters, he called the Remington boys.

Cummings, you see, apparently knew a good promotional gimmick when he saw one. Remington subsequently

toured the machine all over the country, exhibiting it to the curious everywhere. This was probably the impetus for *Scientific American's* writeup in the April 30, 1887 issue, source of the famous cut. A Remington magazine ad of March, 1891 pictures the Thurber machine, saying it was on display at the Boston office of Wyckoff, Seamans & Benedict. *The Phonographic World* wrote about the machine in its November, 1891 issue, praising Cummings for his restoration efforts.

When the Remington tour ended, Cummings gave the Patent Printer along with the Mechanical Chirographer to the Worcester Historical Society, where they were eventually put in storage. The Patent Printer most certainly reappeared in 1920 for Fay's speech, and may have remained on display through the 50th anniversary of the typewriter celebrated in 1923. I have a book entitled *The Boy's History of Invention* copyrighted 1924, which includes a full chapter on the history of the typewriter, and has a photograph of the Thurber machine in the layout.

In any case, the machine was probably then stored once again, not to resurface until 1960 or so. The June 19, 1960 issue of the Worcester Sunday Telegram says, "Through the years, the old model was relegated to cellar status. It was discovered recently by Mrs. Elizabeth Cassidy, director of Worcester Historical Society...Exhibited at the Worcester State Mutual Life Assurance Company of America, the Thurber wonder caused much interest. Among those who found it of particular appeal were some 200 women whose skilled fingers ripple away at modern machines throughout the big home office." (see cover photo).

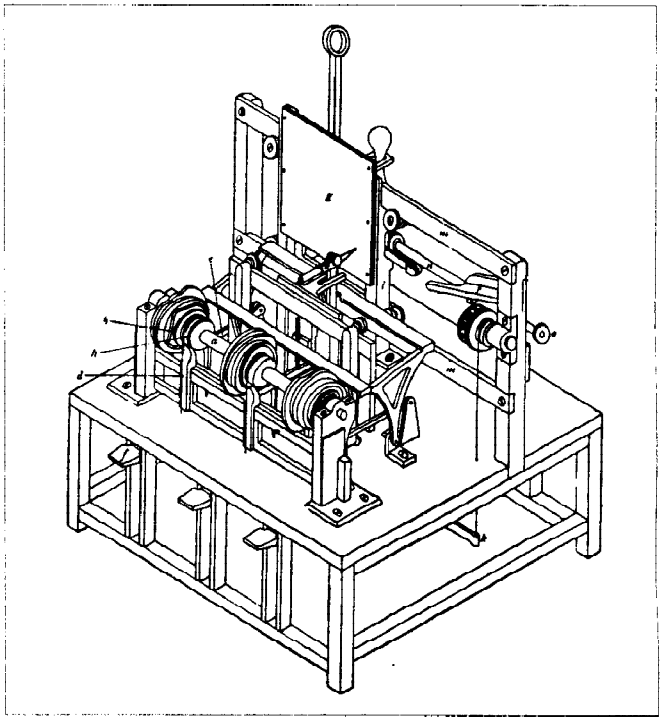


*Diagram of Thurber's "Mechanical Chirographer."*

Today, the machine is once again hidden away in the Historical Society's cellar. There are no current plans for a public exhibition, but the Society staff says it will try to accomodate any serious collector who wants to see the machine. Just make sure you call ahead.

# Clark Collection Moves West

Dennis Clark, of Norwich, CT has shipped his entire collection (about 430 machines) to the National Office Equipment Historical Museum in Kansas City on a long-term loan—at least *seven* years.

The machines will be on public display, making the museum home to the best such exhibit in the U.S. and probably the world. Included are rarities like the Jones Typographer of 1851, and *seven* Sholes & Gliddens.

Dennis told ETCetera he felt the machines should be more accessible--and besides he says his old New England home is a "firetrap."

NOEHM is located at 12411 Wornall Rd., Kansas City, MO 64145.

*The Clark Collection shortly after arrival at NOEHM in Kansas City, mid-July, 1990. Photo courtesy Todd Holmes.*

# The Early History of the Typewriter

**by Charles E. Weller**
**Secretary, National Shorthand Reporters Association**

## Part Four

*Our serialization of Charles Weller's history has now reached the fourth installment. Weller was a young clerk in Milwaukee who knew C.L. Sholes, and watched the development of the first typewriter from its very beginning. The Weller story is an important primary source in typewriter history. Few libraries have copies, so keep yours on hand for future reference.*

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### Original Features In Present Machines

Notwithstanding the vast improvements that have been made in the mechanical movement and superior workmanship, and the many little ingenious devices which have been added, and characterize the typewriter of the present day, still we find that the main features which constituted the invention are the same now as those contained in the first typewriter, which consists of the circular disk or metal ring round which are hung the type-bars, each striking at a common center, the ribbon movement and movement of the paper carriage connected with the keys by the universal bar, the spring motor which was substituted by Mr. Sholes in place of the awkward clock work movement with the weight, which was a troublesome feature of the first machine, and although the change in this feature is not referred to in the letters which have been preserved, it was done away with in the machine that was sent to me during the fall of 1870. This change, however, was purely mechanical, and was naturally suggested by the evolution of the clock from the weight to the spring motor. All of these features were the result of much study and experiment on the part of Mr. Sholes and his associates during the five years that intervened before turning over the manufacture of the machine to the factory at Ilion. The real invention, however, consists in the circular metal ring or disk, with the type bars striking at a common center which is found today in all type bar machines. I may add also, that since the manufacture of the machine passed out of Mr. Sholes' personal supervision, he still continued to work on improvements up to the day of his death in 1890, giving the benefit of his work to the company to who he had turned over the manufacture in 1873.

### Discouraging Features

The discouraging feature connected with the manufacture of the first machines, and which it seemed impossible to overcome, was the crude workmanship which tended to impede the action of the machine, which required smooth and certain movement of its most delicate parts. The workmen in the little machine shop did the best they could with the imperfect appliances at hand; but it was like trying to make a watch in a blacksmith shop, and it was only after repeated and heroic efforts to overcome these obstacles that Mr. Sholes was compelled to relinquish personal control of its manufacture and place it with the Remington company at Ilion, N.Y., as stated in his last letter. Previous to this he had expended sums of money in an endeavor to perfect his invention to the extent of producing a thoroughly reliable working machine that would find favor with the public, in which effort I am told that he expended all of his private funds, even to the sacrifice of his little home in order to raise the necessary means for the attainment of that end. Failing in that endeavor he made a contract with the Remington Arms Company, where skilled workmen were employed with all the appliances at hand for working in steel in the manufacture of their fire arms.

**C.L. Sholes**

It was these defects that compelled us to abandon the use of the first machine in our regular work. The second machine that was sent up to me in the fall of 1870 although a great improvement on the first one and very well adapted to correspondence and ordinary light work was still subject to impediments and stoppages necessitating more or less delay in repairing and remedying the difficulties, and as time was an important element with us we were compelled to return to the old method of preparing our transcripts.

This is all that can be said, so far as the writer's personal recollections are concerned, as to the early history of the typewriter. A most interesting volume could have been written by those who at the time had full knowledge of all the details connected with the many experiments that were tried and abandoned from time to time, and the numerous disappointments made to surmount the obstacles that arose here and there, standing in the way of the manufacture of an absolutely reliable machine that could be passed into the hands of the ordinary operator and used for months without a hitch or break of some kind, occasioning vexatious delays, which naturally militated against the use of the machine, and I may say here that it was nearly ten years after the work was undertaken in an establishment where the most skillful mechanics were employed with all the necessary appliances for accomplishing the finest work in steel, that a machine was manufactured that was entirely devoid of the defects, which stood in the way if its general use.

## Personal Notes

In this connection it is proper that something should be said of the life and character of the man whose inventive genius has lightened the labors of shorthand reporters and materially lengthened their lives. Speaking for myself, I have no doubt but that without the valuable aid of the typewriter I would have been laid on the shelf, so to speak, years ago, a sufferer from writer's cramp or some other affliction superinduced by overwork, and I have no doubt that many others of our profession can bear testimony to the same effect.

With those who were so fortunate as to know Mr. Sholes during his life, the acquaintance was one which carried with it the most pleasing recollections. Old residents of Milwaukee will remember his appearance on the street, his tall slender figure, his long flowing hair and his remarkably clear bright eyes, with that far-away look in them peculiar to men of his genius.

His genial nature is reflected to some extent that have been read from his letters. He was a devotee of the royal game of chess, and never so happy as when seated at the board opposite an opponent worthy of his steel. A quiet vein of humor ran through his ordinary conversation, and he would frequently quote passages from the poets, paraphrasing the in a grotesque style which was calculated to cause those worthies to rise up in righteous indignation at the unwonted liberty that had been taken with their lines, but also an inveterate punster. The pun crept into his ordinary conversation in the most natural way and he was never guilty of carefully paving the way for a choicely preserved specimen of that character which is a most exasperating feature of some of our would-be wits.

As an illustration of his happy facility in that line, a friend at one time accompanied him to his modest home, which was lighted with kerosene lamps, which was the bane of all good housekeepers in those days, and upon entering the front door he beheld a large grease spot on the hall carpet caused by the dripping from a hanging lamp. Raising his eyes to the ceiling he broke out with Byron's well known apostrophe,

> "Ye isles of Greece, ye isles of Greece,
> Where burning Sappho loved and sang."

In the midst of a game of chess, seeing a check-mate loom up in the distance he would hurl defiance with Goldsmith's couplet, embellished in rustic style,

> "E'en though that cloud were thunder's wust,
> And charged to squash him, let it bust."

A man of most gentle and modest demeanor, he was not lacking in moral courage when occasion required it. At one time during the civil war we were lunching at a restaurant at the capital of Wisconsin. The restaurant was fitted up with small booths in which patrons could enjoy their meals in semi-privacy. As we were waiting for our order two officers of the union army passed us and sat down in the adjoining compartment, when one remarked to the other "That's the fellow who wrote us up in his paper and said we ran like white cats at Wilson's Creek." The remark was made in a low tone, and might have been passed by with one less sensitive of personal criticism, but Mr. Sholes' quick ear caught it, and rising at once he appeared at the entrance of the booth with the questions "Are you alluding to me, sir?" The officer was naturally taken aback with the sudden appearance of the tall form, and the question propounded in the most quiet even tone, and somewhat defiantly replied, "Well, you are the editor of that paper, and I suppose you are responsible for its statements." Mr. Sholes replied, "You are very much mistaken sir. I had nothing to do with the publication of that statement, and if I had seen it in time it never would have been published. I have too much regard for the boys who are fighting our battle while we are enjoying the comforts of our homes to allow them to be slandered in the public press." The explanation was made in such a manly way and with such evident sincerity that it called forth a most profuse apology, and after a few pleasant remarks in which Mr. Sholes expressed his regret that his age prevented him from serving in the field in defense of his country, the two separated the best of friends.

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*TO BE CONTINUED: Part five of our serialization will appear in ETCetera #13. It will include Weller's dim views on others who claimed to be the typewriter's "inventor."*

# BACK TO BASICS

**For the Beginning Collector**

### A BEGINNER'S STRATEGY FOR RESTORATION

For most of us, restoring old typewriters is strictly a do-it-yourself affair. It is usually too expensive to have a true professional work on our junkers, even if a qualified pro can be found. So, if you're not a typewriter technician, what do you do? While not an expert myself, I have done some decent restorations, and can at least share my ideas.

First, gather yourself a good set of tools, the more the merrier. Here's what you need:

* an **electric rotary tool**: important all-around cleaning/polishing device - also buy wire brushes, felt buffs, metal polishing rouge (white or yellow - check jeweler's supply stores), rubberized abrasive discs like Cratex
* **screwdrivers**: all sizes, especially small ones and some with skinny blades to handle fine-slotted machine screws, also an *offset* screwdriver and phillips-head
* **brushes**: toothbrushes, round brushes, etc. for cleaning in hard-to reach spaces
* **pipe cleaners**: for cleaning in even harder to reach spaces; Q-tips, too
* 3-M green **scouring pads** - great all purpose scrubbers
* **needle nose pliers**
* **long handled tweezers**
* **dental picks**: for scraping away crud in tiny crevices, also good for installing and removing springs
* some **small metal files**

That'll pretty much get you started. These are the tools that I use all the time and can't be without. Next, you'll need a supply of cleaners and lubricants. Don't use WD-40, as it leaves a residue that can seize up the works after time passes. Check your local machinists supply stores and electronics stores. They stock spray machine oil, mixtures of oil and solvent, solvent alone, etc. You'll need to experiment with several of these to see how best they're used in different situations. When you're in the hardware store and see a cleaner or solvent that may sound good, buy it and try it. Let us know how it works.

## Your Workbench

Next, set up a convenient place to work. An out of the way table in the garage is best. Some of us can't leave their junk lying out all the time, and must set up a workplace so things can be put away after each session. I keep all my tools in two Rubbermaid tool-carriers. When I work, I just plop them down on top of my work table (the top of an old cabinet sitting on the balcony of my apartment). That makes it easy to put everything away when I'm done.

A suggestion for your work surface: cover it with a couple thicknesses of plastic dropcloth. This will give you a surface that can be replaced easily when things get impossibly dirty. It also forms a wrinkled surface that you will appreciate the first time you drop a tiny screw and see that it *doesn't* roll off onto the floor (where you'll *never* find it).

## Tackling the Job

Now, you should be ready to go to work.

If this is your first time, choose a machine that isn't worth a fortune, so you don't have to worry if you really screw it up. A Blickensderfer is an excellent choice.

The basic strategy for restoration is:

1) take things apart
2) clean and/or polish them
3) put them back together

Sounds simple, but if you try to do the whole machine at once, you're dead. Instead, disassemble part of the machine a little at a time - no more, say, than takes about half an hour. You'll need the next half hour to put it back together. It's not a bad idea to take it apart, then put it right back together and do it a *couple* of times until you have it down. When you're sure, then you can do the cleaning that needs to be done. In any case, if you can help it, *never* leave something unassembled overnight. You're bound to forget how to put it back together.

To be even more thorough, keep a notebook and draw pictures. When you take apart the right hand side of the Blickensderfer carriage, for instance, you'll find notes are invaluable. That particular assembly has about six layers of parts, each of which has to fit in a correct position. By keeping notes, you can get 'em back together with no trouble.

Be careful when you take things apart. Be sure to eyeball everything well so you don't remove one screw and find it held together a dozen different parts which have just collapsed into your hands. You'll never have technical manuals immediately at hand, so remember, it's up to you to figure it out.

## Cleaning in Place

If there are parts of the machine that you just can't get apart (I can't work with rivets well, for instance), just leave them assembled. You can generally clean them in place, and they'll be fine.

In fact, some situations call for leaving everything assembled and cleaning it all in place. One collector has successfully soaked machines in kerosene, and another in a mixture of kerosene and diesel. The basic procedure here is to fill a tub with the cleaner, put in the machine (after removing all the rubber parts) and let it sit. When done, hose it off with the nozzle of your garden hose. Once rinsed, it has to be lubricated. If using kero and diesel, just put it back in that. If using kero, you'll need to dump it in a tub of machine oil. The oil should displace the water and prevent any rust. I've never tried a big production like this, but others have, so I'm passing it on. I don't think it'll give you a great

restoration if the gunk on the machine is fossilized as so much of it often is.

### Which Cleaning Method?

Whether assembled or together, you must decide what kind of cleaning is needed for each part of the machine.

Generally, you should do whatever is least intrusive. You don't want to start grinding away with abrasives when a simple brush with solvent will do.

If a part is just crusted with loose dirt and/or grease, solvent with a stiff brush may take it all off. Be careful not to get solvent on painted parts. The paint may dissolve.

If the dirt and grease is very old, it may be hardened and need more drastic action. That's time for the rotary tool. On plated parts, first try buffing with the felt buff and jeweler's rouge. You may find this will immediately give you a brilliant shine. Be generous with the rouge, and re-apply it to your buff frequently. It'll turn black on you from the heat, but don't worry. When you're finished, remove the residue by hand with a rag and solvent (alcohol is good for this).

If parts are not plated, try whizzing them with your rotary tool's wire brush. These things are expensive and they throw off the most irritating splinters, but that's the way they are. Otherwise, they're terrific for removing gunk, especially in hard to reach places. You'll also find they wear out quick.

If you find that you have rust or other corrosion to deal with, it's time to call in the Cratex. This is an abrasive imbedded in rubber, formed into wheels, rods and bullets for use on the rotary tool. It comes in various grades, but I almost always use the fine and extra fine. Cratex will gently grind away corrosion, and also part of the metal surface. On plated parts, it will remove the plating, but that's OK if the plating is flaking or corroded. Who needs flaked or corroded plating? After using Cratex, the surface will be bright, but dull, so follow it up with jeweler's rouge. This will give you a mirror bright surface, depending on your patience. This is a fine end product as far as I'm concerned, but others may want to have this prepared surface re-nickeled professionally. But beware, it's kind of expensive.

If you are working with long, narrow parts like pull rods or carriage rails, try cleaning off the crud by dry scouring them with a green 3-M scouring pad. It'll go a lot faster than working your way down the length with a rotary tool.

### Cleaning Painted Surfaces

Painted surfaces require a whole different strategy. Solvents are often harmful to paint, but not always. Test an inconspicuous spot before you proceed.

One of the best harmless treatments for painted surfaces is to clean them with shop hand cleaner. This is the greasy stuff used to get horrible auto-shop-type grime off your hands. It does a very nice job on typewriters, too. Just rub it on and scrub it gently with an old toothbrush and then wipe it off. Wiping it off may take some doing, since it gets into all the crevices, but between your rags and your Q-tips and your pipe cleaners, you should be able to get it all. This stuff leaves behind a thin, shiny, oily coating which I would guess acts to protect your machine. If the toothbrush doesn't give you enough scrubbing power, use hand cleaner with the 3-M scouring pad, but be very gentle. One caution here: don't use cleaner that has ammonia in it. It will cloud any varnish layer that happens to be on your machine, and can remove decals.

If you have bad rubs or dull spots in your paint, use auto polishing compound to rub it into shininess. This takes a lot of work, but it is effective. Polishing compound will also remove decals, so you may need to carefully work around them.

When finished working on a machine's painted surface, a coat of high-quality paste wax will give you a nice glossy shine. Briwax is the stuff most hard-core antiquers use.

There is no *one way* to restore an antique typewriter. And you may not always want to restore. Very rare machines should seldom be subjected to this treatment. Their "as found" condition speaks to their individual histories, and most collectors agree they should be gently cleaned, and that's it. For more common machines, it doesn't make much difference, so plunge ahead, and fill your shelves with beauties.

--D.R.

## HOLD A COLLECTORS MEETING

ETC stands ready to help you if you'd like to organize a meeting for typewriter collectors in your area. Anyone planning a meeting can get a computer printout from the editor of mailing labels for all current members in his area—or whatever area you'd like. What's more, there's absolutely no charge.

Since our mailing list is on computer, it's relatively simple to do a search by state and spit out a strip of mailing labels. All *you* have to do then is xerox a bunch of invitations, and just slap the labels on the envelopes.

## INTERNATIONAL MEETING

While we're on the subject, you should know that Jack Lacy is organizing an *international* meeting of ETC at NOEHM in Kansas City for May 10-11. You don't want to miss it. The big drawing card is the Dennis Clark collection now housed at the museum (see p. 7). For info, write Jack at P.O. Box 790, West Covina, CA 91790.

## CENSUS REQUEST

Jay Respler continues to assemble his "census" of typewriters, but he needs everybody's collection list. If you haven't sent yours, here's his address:

JAY RESPLER
Advance Business Machines
230 Randolph Rd.
Freehold, NJ 02278

# More on the Multigraph

In ETCetera #10, the article *Imitating the Typewriter* mentioned the Gammeter Multigraph as the industry leader in machines which produced form letters in quantity, imitating the look of the typewriter. Some new material has now come to our attention telling us more about this interesting device and its history.

The following is excerpted from a promotional booklet published by Multigraph in the 1940's.

"Early in the present century important changes were taking place in selling. Flashily-dressed, loud-talking and long-drinking 'drummers' were rapidly becoming an extinct species. Thinking and doing men were taking their places. And the whole business structure was responding to new leadership.

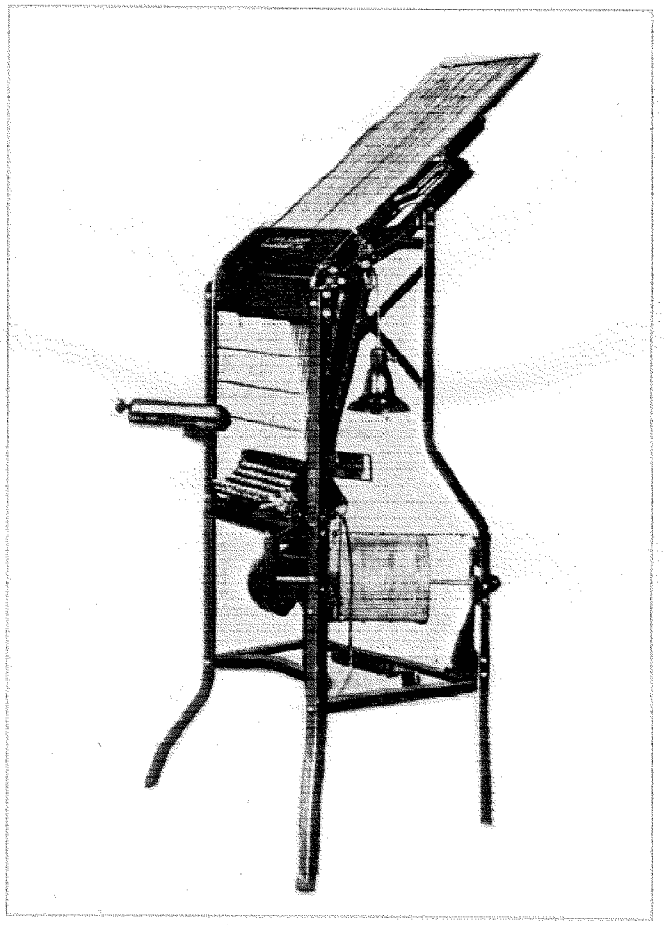
"Among the best of the new type of salesmen was a young typewriter salesman in Cleveland, Ohio— Mr. Harry C. Gammeter. Gammeter saw typewritten matter duplicated by the slow and costly process of having typists write the same message over and over again, or by the use of only slightly more satisfactory duplicating processes. The sales letter was being adopted by retail stores, large manufacturers and all sorts of businesses. Even the slow methods of producing these letters were producing new profit gold in excess of the cost.

"Gammeter asked himself, 'Why not build a machine to produce facsimile typewritten letters in quantity, and make accuracy and neatness certain, with a saving of time and money?'

"Early in 1901, Mr. Gammeter began work on what was to be the answer to his question. After several months of labor his first crude model was completed. This new-born device, which he called a 'multigraph,' was a flat bed machine consisting of two parallel flat plates joined by four rocker arms and held in position by a spring. The upper section consituted the printing form into which was locked printers' style type. The lower section formed the printing bed.

"Letters were produced on this model by laying carbon paper over a letterhead on the printing bed and then bringing the top section down sharply against it. But Gammeter saw the imperfections in carbon paper reproduction and dreamed of a machine that would turn out quantities of facsimile typewritten letters by *printing them through an inked ribbon.*

"Mr. Gammeter and associated engineers later adopted the rotary principle. Their first model consisted of two revolving drums mounted end to end in a horizontal position. One was fashioned with a channeled surface which held an adequate supply of the sliding type which had been specially made for the Multigraph. The second, or printing drum, was also made with channels into which the type was slid, one character at a time, from the composing drum.



*Multigraph Set-O-Type*

"When the letter had been set in type on the printing drum, a blank letterhead was fed into the machine, between the ribbon-covered type and the platen, and the printing drum was turned by hand. As it revolved a letter was produced which closely resembled typewritten matter."

The booklet goes on to describe the quick success of Gammeter's product. The first lot of 100 machines made in 1903 was quickly sold. Less than two years later, the business built a six-floor factory with 150,000 square feet of floor space, and was licensing distributors all over the world.

In later improvements, Gammeter separated the printing and composing components of the machine, so the two operations could go on at once. Later, he added capabilities for direct inking, and many sorts of removable type segments, curved electrotypes and all the paraphernalia needed to make the Multigraph a true in-house printing system.

Most remarkable, however were the "Set-O-Type" machines, which automated the typesetting process. These came in several models, and automatically put the type in its place upon operation of the keyboard. Here was a typesetting typewriter used to set printers type in a machine that was used to imitate the typewriter, which originally was used to imitate printers type. What a curious circle of imitation! And wouldn't you love to find one to play around with!