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ETCetera

Magazine of the Early
Typewriter Collectors Association

Number #11 ---- June, 1990

THE MAN WHO CREATED THE CORONA 3



Otto Petermann in his workshop with his prototype for the

ETCetera

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Association

June, 1990
No. 11

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INTERNATIONAL NEWS

The International news column begins in this issue with our annual lecture on typewriter journals. If you really want to know what's going on, you should subscribe to every journal you can. Addresses of the various journals are given at the end of the column.

ENGLAND

The Autumn, 1989 issue of *Type-Writer Times* featured a reprint of the exhaustive 1986 study of the Sholes and Glidden by Richard Dickerson and Donald Hoke. The original appeared (in complete English and German versions) in the Jan., '87 issue of the German magazine *Historische Bürowelt* (back copies may be available). Any collector who really wants to know the differences among the *several* types of this important machine should read this study. The *Historische Bürowelt* ver-

sion has better photos and illustrations, which are pretty important in a reference work of this type, but *Type-Writer Times* comes with one of those glorious color photos on the front.

The same issue of *TWT* includes articles on a fascinating typebar machine invented by Thomas Hall well before Sholes did his work, plus a detailed history of the Horton Typewriter, a rare oblique frontstroke machine of 1883. *TWT* is the journal of the Anglo-American Typewriter Collectors Society. It's edited in New Jersey and printed in England.

GERMANY

Historische Bürowelt didn't publish the fifth of its five issues in 1989. The editors say they didn't have time. The Sept., 1989 issue featured two articles by American writers. One is the second part of Bob Otnes' marathon study of Keuffel & Esser slide rules. Any other slide rule freaks out there? The other is my own piece on the Peerless Typewriter. For those who have never heard of the Peerless, it is usually dismissed as a mere "knockoff" of the Smith Premier. Fact is, it does look almost exactly like the SP, *but* the likeness is only skin deep. It was the product of an arm of the Ithaca Gun Company, which was run by one of the famous Smith brothers who did not join L.C. and the others in their famous enterprise. The Peerless was a very commendable machine, but, alas, it got into patent infringement trouble with SP and seems to have lost, though it appears the litigants reached an out-of-court settlement. The lawsuit was probably over the circular cleaning brush that the Peerless tried to get away with. Until now, most of us never knew the Peerless had a brush like that.

HB also features an intriguing article on the Thürey Model 2 written by Pierre Dickburt. The Thürey is about as odd as they come: a machine with the keys arranged in six *vertical* rows. It's weird and hard to describe. Get *HB* if you want details. Most articles are German with English summaries given. Articles originally written in English appear in their full English versions, with full German translations.

HOLLAND

Nov. '89's issue of *kwbl*, the publication of Dutch collectors, includes some interesting photos and a writeup on the Rapid Typewriter, the first of the thrust action machines. The journal chronicles the early history of this rare item, including the fire that burned down the first factory in 1888. The article also amusingly points out that previous writers had nothing but trouble in counting the Rapid's keys. For those accumulating typewriter trivia, the Rapid had 44 keys, not 45, or 48 as is written elsewhere. *kwbl* articles are in Dutch, with English summaries.

PHILADELPHIA

No, Philly is not a foreign country, but while we're on the subject of other journals, we should at least give some space to *The Typewriter Exchange*, published by Tom Fitzgerald in the city of brotherly love.

The first issue of this year includes part II of Tom's story about the obscure Travis Typewriter, and a short biography of typewriter marketing pioneer W.O. Wyckoff.

ADDRESSES:

Type-Writer Times
Paul Lippman
1216 Garden St.
Hoboken, NJ 07030
(\$20 per year, four issues)

Historische Bürowelt
IFHB
Postfach 50 11 68
D-5000 Köln-50
West Germany
(\$60/year, five issues)

kwbl
Jos Legrand
Kreutzerstraat 24
5011 AA Tilburg
Netherlands
(dfls.60/year-about \$40- 4 issues)

The Typewriter Exchange
Tom Fitzgerald
2125 Mt. Vernon St.
Philadelphia, PA 19130
(\$12/year. 4 issues)

The Man Who Created the Corona 3

by Darryl Rehr



Left: Standard Folding typewriter #2 of 1910. Right: Standard Folding Typewriter #3 c. 1911, a pre-introduction model made before it was named Corona.

Late last year, collector Marco Thorne put me in touch with Hans Petermann, a retired Air Force officer who now lives in San Diego. Hans is the son of Otto Petermann, the engineer who transformed the Standard Folding Typewriter into the famous Corona 3. Hans provided me with a substantial package of materials from which this article is derived.

There are few collectible typewriters with quite the charm of the folding Corona. Almost 700,000 copies of this history-making machine were made, and it remains one of the great success stories of typewriter history. The Corona started life as the "Standard Folding Typebar Visible Typewriter," and Otto Petermann was in on its manufacture from the beginning.

Petermann was born in Switzerland in 1875. After technical school and Army service, he spent two years in London and then emigrated to the United States, arriving in New York on Oct. 6, 1904. Times were tough, and Otto's notes tell of his bouncing from one typewriter company to another before February 20, 1907, when he spent his last cent on a New York *World* hoping to find a job from the classified ads.

With nothing in the paper, he walked to a little firm called the Rose Typewriter Co., where he had made inquiries before. He apparently got a grumpy reception, because he says he decided to write to the President, M.W. Hazen.

Hazen eventually responded, and on Feb. 28, Petermann was at his office, where the two men talked for two hours. Otto got the job, and was instructed to be at the factory at 2234 8th Ave. the next morning. After his first day at work, he noted the following:

"Friday, Mar. 1. - At 10 o'clock at Rose Typewriter Co. Only 4 workers, not a good arrangement. All are good at watching me. Immediately made several proposals for improvements to Mr. Hazen, with respect to better simplification of parts. Will get \$12 weekly pay employed as drill press operator. After 8 days should get \$14 per week. Went cheerfully home for a knockwurst dinner."

From his "several proposals," this obviously overqualified drill press operator became the principal force behind transforming the quirky Standard Folding into the long-lived Corona. The materials he left behind tell us the story of the Corona Company in greater detail than most of us have ever heard.

Early Days at Rose Typewriter

The Standard Folding was the 1904 invention of Frank Rose, who died before it went into production. Rose's son George formed the Rose Typewriter Co. for that purpose. In

1907, when Petermann was hired on, the firm was just tooling up to produce its first machines. Petermann's notes say the first machine was not finished until a year later in March of 1908. In June, the company moved from its dark little loft to a dark, slightly larger loft at 447 W. 26th St. in New York, the address that present literature gives us as the firm's earliest location.

The Rose Typewriter Company was certainly a shoe-string operation. In its earliest days, it was attracted by the upfront cash paid by exporting houses, and consequently, the lion's share of its first business went to overseas customers. This would eventually be quite important to the Corona's creation, but more on that later.

New Bosses Take Over

Early in 1909, as the story goes, New York state senator Ben Conger was on a train, when he saw another traveller typing on an odd-looking aluminum portable machine, the Standard Folding. Conger was immediately intrigued, and, by July of that year, he and a small group of investors bought the company from Rose and formed the Standard Folding Typewriter Company.

Conger and his team decided to get out of the city, and also bought the old Groton Carriage Works in that upstate town, and moved the whole shebang north. A Smith-Corona company newsletter of 1947 describes the move:

"With the transfer of machinery from New York to Groton, the employees of the New York factory were confronted with the alternative of being out of work or risking their scalps among the Indians who were then believed by New Yorkers to inhabit the region north and west of Albany. However certain valiant souls like...Otto Petermann...made the venture."

In fact, Petermann got a promotion along with the move. He was made head of the "experimental" department, and began his work in Groton on August 31, 1909. Company literature says the Model 2 came out in the summer of 1910, but it remains unclear just how a #1 differs from a #2.

On the face of it, the main difference between the two models is the location of the shift keys. A #1 has caps and figure shifts on opposite sides of the machine, but the #2 has them both at the left. Some literature mentions other changes, including the installation of a *ribbon vibrator* on the #2. In an engraving of the original Standard Folding in an early Rose Co. pamphlet (see above right), the machine appears to have no vibrator, but many #1's have been seen *with* vibrators (including ser. #1055 in my collection), so the question remains unanswered.

Petermann continued his experimental work as the company obviously geared up for bigger and better things.

In December of 1910, Conger and his partners went to the public, offering a thousand shares of preferred stock to raise the \$100,000 they needed to make their endeavor a true

M. W. HAZEN, President

Rose Typewriter Company

Factory and General Offices

NEW YORK CITY, U. S. A.

MANUFACTURERS OF



Standard Folding Typewriter as it appeared in an early Rose Co. promotional pamphlet.

breakthrough industry. At this time, the company was making 100 machines per week, and the stock prospectus said plans were being made to double the capacity within a few months. With the new capital, output was to be raised to 400-500 per week by 1912...and then the cash would *really* start to roll in!

Designing the Model #3

While the moguls were planning their expansion, Otto Petermann was planning the product that would carry the ball: Standard Folding Typewriter No. 3. On a sheet of blueprint paper, Petermann typed a 32-item list of improvements he planned. Among them: an all-steel frame (no aluminum), 30 keys for 90 characters, both shifts on left side, shift lock near shift keys, scale, two platen knobs, full-size ribbon (10-12 yds.), line lock, folding arm lock.

The photo on the cover of this issue shows Petermann posing with his prototype, on which he lovingly installed all his improvements. Many of them, however, did not make it into the final version. We never see Coronas, for instance, with two platen knobs or folding arm locks, and the original Corona 3 had only 28 keys. Petermann missed one important improvement in his list of 32: the backspace key. There is none on his prototype, but it does appear on all Coronas.



Proud employees display their work, 1909. Rose Typewriter Company workers pose with seven Standard Foldings. Otto Petermann is at center, rear.

The New Name

Still, Petermann had a winner on his hands, and it was now up to Conger and the big boys to market it in the best way. That included changing the cumbersome name.

The photo on page 3 shows a production copy of the new model with the old name. They even painted it an aluminum color (Petermann's prototype was black). It seems there was at least some thought to preserving the Standard Folding name perhaps to maintain the reputation the machine had already earned under that banner. But, the heavy base of foreign sales moved things in a different direction.

It turns out that "Standard Folding Typewriter" was tough for foreigners to pronounce and difficult, if not impossible, to translate into the cacophony of tongues that yammered into the ears of the machine's overseas agents. For that reason, they went after a simpler, more abstract label, and "Corona" fit the bill. They painted the machine basic black, stenciled "Corona" on it in gold, and put "Standard Folding Typewriter" underneath in parentheses to satisfy the folks who would wonder what became of the old aluminum gizmo.

The "Corona" Debuts

The Corona was introduced with suitable ballyhoo in the last week of February, 1912. A few years later, a national advertising campaign was started, billing the typewriter as "The Personal Writing Machine," which it most certainly was. By 1916, the company was shipping more than 600 typewriters per week, and a backlog of 1,600 orders was

growing. A new factory was built in Groton, and in 1919, another was opened in nearby Cortland.

Corona effectively cornered the market in portable typewriters in its day. Though other firms contemplated competing products, World War I intervened, preventing them from proceeding with their plans. Until the early 20's, Corona was *the* portable typewriter in the world.

Petermann Moves On

Otto Petermann continued with the firm, contributing heavily to the Corona 4 as demand for 4-bank machines became apparent. However, he apparently felt he did not get the credit he deserved, especially because of the long list of patents he held. His son says "He felt he should have gotten royalties. My impression was that Dad was not too shrewd as a businessman and could be easily taken advantage of. He definitely had no peer as a designer and innovator, however. On the other hand, he was very strong-willed and was not always easy to get along with. So it probably was a two-way street in all this."

Petermann left Corona in 1926 after the firm merged with L.C. Smith & Bros. He went into business for himself making sheet metal specialties, continuing until his death in 1961.

The Corona factory in Groton remained standing until its demolition in 1984. The famous name, however, still appears today on the latest electronic word processing typewriters as Smith-Corona remains a leader in typewriter marketing.

Sliding Bar Calculators

by Robert K. Otnes
Palo Alto, CA

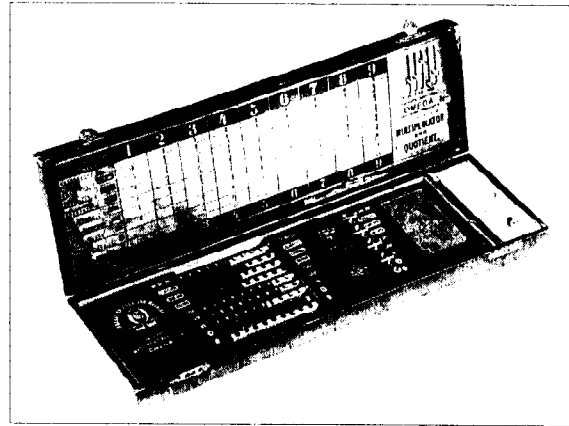


Figure 1: Universal Calculator as pictured in auction catalog of June 10, 1989

A curious adding machine showed up last year at **Auktion Team Köln's** June 10th sale. Listed as item #51 in the catalog, the description, rather roughly translated, runs somewhat as follows:

51. Hand operated Universal calculator with sliding visible position by Justin Bamberger, Munich. Very rare, unusual example. Grade (2/2). Reserve of \$472 with an expected range of \$833 to \$1389.

It actually sold for \$3,194, the sixth highest price realized of all the 508 typewriter and calculator lots put up for auction.

What is this gadget?

Curiously enough, the idea behind it originated in the U.S. The basic machine was patented by S.S. Young in 1849 (U.S. Pat. No 6,601, July 24, 1849). The illustration for this patent is shown in Figure 2. It is a simple device.

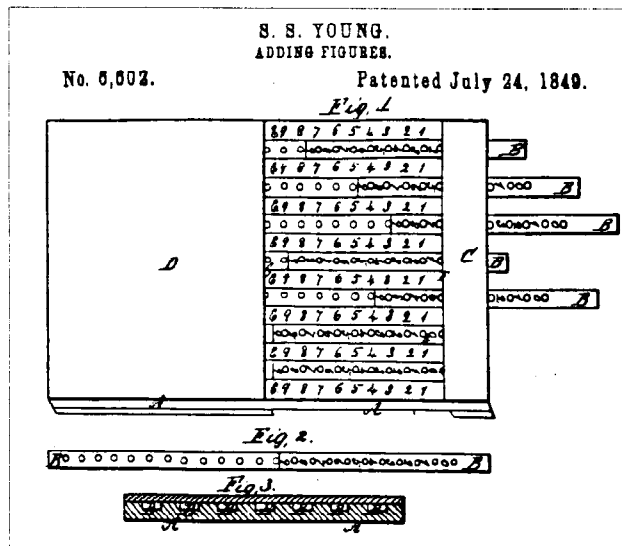


Figure 2: Patent diagram of the Young adder.

As shown in the figure, it has a number of horizontal bars of two types: there are the fixed A type with the numbers 9,8,7,6,5,4,3,2,1, and the movable B type with nineteen equally spaced holes. Between the right eleven holes the number 0 to 9 are placed horizontally. These latter numbers are used to read out the result. To the left of each horizontal 9, there is a vertical line. The bar changes color to the left of the line.

Operation starts with the B bars pushed all the way to the left. This puts all the zeros just to the left of C on the right end of the machine. This is the location where the resulting sum is read. To use the adder, you put a stylus into the hole above the number to be added on the A bar, and then push that bar all the way to the right. The number being added then shows up just to the left of the C readout bar.

You could define the bottom bar to be units, the next tens, the next hundreds, etc. The trick part of using the adder is carrying. When a number to be added has its hole fall in the left (colored) part of the sliding bar, you move the bar all the way to the *left* instead of to the right. Then, you must remember to add a *one* to the next higher digit. If your current sum is 999, and you add 1 to it, you end up doing three of these carries and have a sum of 1000 with the bar being moved the whole way across the device for each of the first three digits.

It may sound complicated from my explanation, but if you had one of the gadgets to play with, you would quickly figure out how to use it and be able to operate it without difficulty.

Though Young seems to have gotten the patent ball rolling on this type of machine, his ideas may have occurred to other inventors as well. A catalog of France's National Conservatory of Arts and Professions (*Arts et Métiers*) shows several devices apparently based on the same principle. The "Additionneur de Perrault," dated at 1699, appears to be functionally equivalent to Young's machines and its successors.

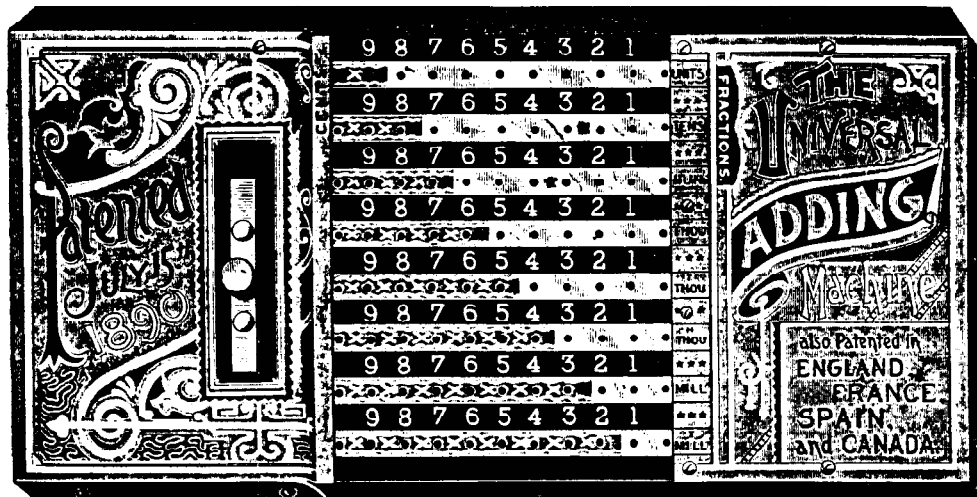


Figure 3: Universal adder of 1892 was made under the patents of G.B. Fowler.

THE LOCKE ADDER Aluminum Model \$5.00

CAPACITY 999,999,999

The \$5 calculating machine which does more work than the most expensive. Adds 9 columns at once; Subtracts—Multiplies—Divides. Simple, rapid, handy.

Cannot make mistakes—lasts a lifetime.

It is all you claim for it.—A. R. Harper, Danville, Ill. We highly recommend it.—Gen. Wallace & Son, Parnassus, Pa.

Size 4 x 10 3/4 inches. Price \$5.00 prepaid in the United States. Write for FREE booklet. Agents wanted. G. E. LOCKE MFG. CO., 71 Walnut St., Kensett, Iowa

Set Our Exhibit, Aisle B, Liberal Arts Building, St. Louis Exposition.

Figure 4: The Locke Adder of 1901. Bars were color-coded in yellow, red and green.

The next two U.S. patents are by G.B. Fowler. The first is 39.222 dated July 14, 1863 and the second is 432.266 granted July 15, 1890. A Fowler machine is shown in Figure 3. Fowler seems to have added several features to the design and brought it to the point where it was widely used. He made the carrying operation easier by adding a cap on the right that prevents a sliding bar from going too far to the right if a carry is required: you always move the bar to the right when adding; if it will not move all the way to the right because it has hit the cap, then a carry must be done, so you reverse direction and move the bar all the way to the left and then carry a one into the next higher position. This feature acted as something of an “automatic” reminder, so that you could accomplish your carry with less thought than with the Young version.

BASSETT AUTOMATIC ADDER

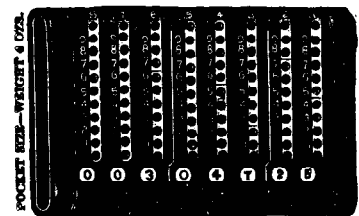
For ADDING, SUBTRACTING, MULTIPLYING

SAVES TIME AND ELIMINATES ERRORS

Makes Adding Accurate—Quick—Easy—for Everyone

Visible Totals—Capacity \$999,999.99—Durably Made

GUARANTEED ABSOLUTELY ACCURATE



Guaranteed Fully Against Defects

Quickly resets to zero. As accurate as the highest priced machines.

**No Levers to Pull
No Keys to Punch**

Figure 5: Ad for Bassett Adder in Johnson Smith Catalog of 1938. Selling price was \$3.75

Another feature is that the readout of the sum was moved to the flip side of the machine. This was probably done to avoid confusing the two sets of numbers that the Young machine has on its face. The Fowler machine was sold under the name Universal, as shown in Figure 3. The machine pictured includes a button at left to lock the bars in place in case you're interrupted in the middle of a long calculation job, or want to preserve the result for reference.

Two other American devices of this type were the Locke, patented December 24th, 1901 from Kensett Iowa, and the Bassett.

The Locke is made of embossed tin and is quite colorful, with the sliding bars painted in alternating reds, greens and yellows. It is similar to the Fowler, except that its readout is neither on the top nor bottom of the moving bars, but rather

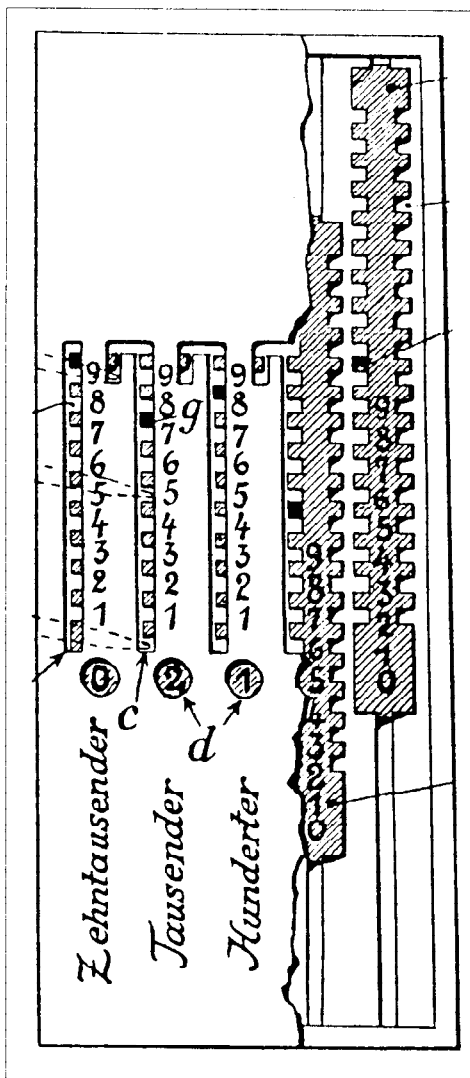


Figure 6: Mechanism of the 1888 Troncet adder

on the side facing the user: the fixed bars are scooped out at the right hand edge just after the 9 so that the result can be viewed. Also, instead of having holes for a stylus, it has raised bumps. Thus, only your fingers are required to operate it. The numbers run in the opposite direction of the Fowler.

The Bassett looks something like the Golden Gem, but the Golden Gem uses a chain mechanism and has automatic carries, whereas the Bassett employs bands and the carries are not automatic. Early Bassetts were made of paper and wood with celluloid bands, while later ones were housed in tin, and used metal bands. The Bassett was sold at least as late as 1938 through high class outlets such as Johnson Smith & Co. Detroit, famous purveyors of whoopee cushions (see Fig. 5).

The Universal Calculator sold at the Breker auction is actually two separate devices in one box. Similar pairs of devices have been on display at the Technical Museum in Stockholm and the Deutsches Museum in Munich. This version of the Young adder is the top of the line, and is really

impressive to see. One of the two pieces looks exactly like a Fowler Universal adder, and may actually have been made by Fowler or under license from him. The principal difference is that it is wider on the right hand side, which permits a visible display to be incorporated into the machine. I have not had a chance to examine the second device, but it would seem to enable one to do multiplication and division, perhaps in conjunction with the adder. Good luck.

Finally, all of this sliding bar action may seem somewhat familiar to you. There is a reason. In 1888, the Frenchman J.L. Troncet came up with his own version. He turned the gadget ninety degrees clockwise and at the top where the nines now are, added a kind of candy cane arrangement for aiding in doing the carries. This device is shown in Figure 6. The candy cane allows you to do a carry operation usually without taking the stylus out of the slot.

Because of this improvement in the design, and the appearance on the market shortly after the turn of the century of other machines such as the Calcumeter and the Lightning Adder, both of which had mechanical carrying mechanisms, the Young-Fowler-Locke machines seem to have disappeared.

The Troncet version was with us until the bitter end of the mechanical calculator era. Millions of these were made, advertised endlessly in popular magazines and comic books for the cheapest of prices (usually about \$1.00). Most of the later versions were made of junk, thrown together in the Orient out of material no doubt rejected by the people making beer cans.

There were exceptions. The German Addiator brand was a nice machine made in a number of models. It not only added, it subtracted using a separate input area, either on the back or on the front below the addition input. And there were others...hundreds of others, making the Troncet a whole other story.

The Europeans seem to be very interested in collecting early sliding bar calculators. A famous Swiss dealer apparently has them on his agenda. The Young adder seems to be exceedingly rare. I have never seen one. For that matter, I have not seen a Universal by Fowler, but chances are that there are some around. Both the IBM collection and I have a Locke, but their general scarcity is somewhat surprising, because they were extensively advertised and promoted in their time. I would guess that the Smithsonian has examples of all of these. I would also guess that a lot of this material is being drained off to Europe without the American collectors even realizing that it is there.

Bob Otnes is ETC's resident calculator expert. He keeps copious files on these things, so if you have information that adds to all this, write to him at 2160 Middlefield Rd., Palo Alto, CA 93401.

The Early History of the Typewriter

by Charles E. Weller

Part Three

We continue Charles Weller's 1918 telling of the Typewriter's story with his quotations from letters he received from C.L. Sholes, typed on successive developmental models of the machine. The reproductions of the actual letters are presented here in the actual size shown in Weller's booklet.

Under the date of July 30th, 1870, Mr. Sholes writes as follows:

"Yours came to hand yesterday. I will make one of the new machines for you. It will be done before November. This is a specimen of the manner in which it will work: that is to say, a specimen of the style of work. I think the machine is now as perfect in its mechanism as I know how to make it, or to have it made. It develops no difficulties whatever. I think this has not failed to space once since it has been started—now a week, and I see no reason to fear that it will fail to space in a year. The belt has too much ink on it yet, but that is not so bad as having too little. I know of no respect in which I can improve it.

"The paragraphs are made by simply touching a key, as in the case of spacing the letters, and by bearing a little on the key it operates as a brake, and keeps the cylinder from shooting around too fast. It is as easy to write or copy poetry on it as prose.

"The machine is done and I want some more worlds to conquer. Life will be most flat, stale and unprofitable without something to invent."

Nevertheless, it would seem that the machine is not quite done yet as he writes under date of September 28, 1870, two months later, as follows: (See right)

"I have made another most important change in the machine, having dispensed with the slotted disk altogether. My disk now consists simply of a flat ring about an inch broad and a quarter of an inch thick, around which the hammers are hung, each one on an independent journal of its own. The top of the disk is, of course, all open on the plan, and easily accessible with a brush to clean the types, or the hand to arrange anything that may be out of order, and the hammers can never stick, as they never touch anything but the little steel journals on which they swing. The ease and freedom and beauty with which this machine works is truly wonderful. I do not refer to the beauty of its print, but the

beauty of its working. The type are too large. It is a set I had on hand, and as I was trying an experiment the result of which I thought was doubtful, I did not wish to get another set. I am myself surprised as the result of the experiment. I had very faint hopes of its succeeding, but I thought it possible by careful adjusting of every hammer that it might work. You can therefore guess of my surprise and pleasure when I found out that it needed no adjusting at all; on the contrary, it adjusted itself * * * * I think it a very great thing to get rid of the slotted disk, which always threatens or manages in some way to hold on to the type or some one of them. In this machine there is nothing for the type to stick in. If a type pauses at all it must be in the open air, as there is nothing to stop it. I earnestly hope we shall soon get to manufacturing with all these improvements * * * * Everything now seems to me as perfect as it can be made, and I feel no inspiration to alter anything further."

MILWAUKEE, WISCONSIN, SEPTEMBER 28, 1870.

CHAR. E.--

I REALLY FORGET WHETHER I ANSWERED YOUR LAST LETTER OR NOT. I AM WORKING NOW ON AN AVERAGE ABOUT SIXTEEN HOURS A DAY AND HAVE NOT MUCH TIME TO DO ANY THING ASIDE FROM MY REGULAR WORK, NOR I NEED TO RECOLLECT ANY THING. YOU INVITED ME DOWN THERE BUT IT IS QUITE IMPOSSIBLE FOR ME TO COME UNLESS I ABANDON EVERY THING HERE. I CAN SCARCELY GET AN HOUR'S LEAVE OF ABSENCE FROM THE BOARD, MUCH LESS A DAY OR A WEEK. DENSMORE HAS JUST TELEGRAPHED ME TO COME IN ALL HASTE TO NEW YORK, BUT I CANNOT DO UNLESS IT PROVES TO BE FOR SOMETHING IMPORTANT ENOUGH TO WARRANT ME IN PUTTING TOO FAR FROM ALL MY PRESENT BUSINESS PURSUITS.

I AM ANXIOUS TO HEAR FROM YOU FURTHER. DENSMORE, I THINK, IS NEGOTIATING WITH SWEET IN NEW YORK, WHO WANTS THE MACHINE IN CONNECTION WITH HIS TELEGRAPH INTERESTS. WITH WHAT PROSPECTS OF SUCCESS HE IS NEGOTIATING I DO NOT KNOW, NOR DO I KNOW WHETHER IT IS IN THAT CONNECTION HE WANTS ME.

I HAVE MADE ANOTHER MOST IMPORTANT CHANGE IN THE MACHINE--- HAVING DISPENSED WITH THE SLOTTED DISK ALTOGETHER. MY DISK NOW CONSISTS SIMPLY OF A FLAT RING ABOUT AN INCH BROAD AND A QUARTER OF AN INCH THICK AROUND WHICH THE HAMMERS ARE HUNG EACH ONE ON AN INDEPENDENT JOURNAL OF ITS OWN. THE TOP OF THE DISK IS OF COURSE ALL OPEN IN THIS PLAN, AND EASILY ACCESSIBLE WITH A BRUSH TO CLEAN THE TYPES OR THE HAND TO ARRANGE ANY THING WHICH MAY BE OUT OF ORDER, AND THE HAMMERS CAN NEVER STICK AS THEY NEVER TOUCH ANY THING BUT THE LITTLE STEEL JOURNALS ON WHICH THEY SWING. THE EASE AND FREEDOM AND BEAUTY WITH WHICH THIS MACHINE WORKS IS TRULY WONDERFUL. I DO NOT REFER TO THE BEAUTY OF ITS PRINT BUT THE BEAUTY OF ITS WORKING. THE TYPE ARE TOO LARGE. IT WAS A SET I HAD ON HAND, AND AS I WAS TRYING AN EXPERIMENT THE RESULT OF WHICH I THOUGHT VERY DOUBTFUL I DID NOT WISH TO GET ANOTHER SET. I AM MYSELF SURPRISED AT THE RESULT OF THE EXPERIMENT. I HAD VERY FAINT HOPE OF ITS SUCCEEDING, BUT THOUGHT IT POSSIBLE, BY CAREFUL ADJUSTING OF EVERY HAMMER THAT IT MIGHT WORK. YOU CAN THEREFORE GUESS BOTH MY SURPRISE AND PLEASURE WHEN I FOUND THAT IT NEEDED NO ADJUSTING AT ALL. THAT ON THE CONTRARY IT ADJUSTED ITSELF.

IT IS NOT ONLY A WONDERFUL IMPROVEMENT IN THE WORKING OF THE MACHINE, BUT IT ALSO WONDERFULLY CHANGES AND SIMPLIFIES THE MANUFACTURE. THE DISK CAN NOW BE CAST AND NEEDS NOTHING ON THE LEATHEN RUT TO HAVE THE FACE SMOOTHED UP. THE HAMMERS CAN ALSO BE CAST OF TYPE METAL AS EASY AS THEY TOUCH NOTHING WHATEVER IN THEIR WORKING AND THEREFORE THERE IS NOTHING TO WEAR THEM OUT. WE PLAN TO CAST THE HAMMERS AND AT THE SAME TIME CAST THE TYPE IN THEM HAVING OF COURSE PREVIOUSLY PREPARED THE TYPE OF BRASS OR STEEL.

AND PLACED IT IN THE MOULD. IN THIS WAY THE TYPE AND HAMMER WILL
 COME OUT OF THE MOULD READY TO GO INTO THE MACHINE WITHOUT FURTHER
 PREPARATION. I THINK IT IS A VERY GREAT THING TO HAVE
 GOT RID OF THE SLOTTED DISC, WHICH ALWAYS THREAWEYS OR MANAGES IN
 SOME WAY TO HOLD ON TO THE TYPE, OR SOME ONE OF THEM. IN THIS MA-
 CHINE THERE IS NOTHING FOR THE TYPE TO STICK IN. IF A TYPE PAU-
 SES AT ALL IT MUST BE IN THE OPEN AIR, FOR THERE IS NOTHING ELSE
 TO STOP IT. I EARNESTLY HOPE WE SHALL SOON GET TO MANUFACTURING
 US WITH A ALL OF THESE IMPROVEMENTS, IN WHICH CASE WE SHALL KEEP
 YOU SUPPLIED WITH THE BEST. BUT I CANNOT THINK THAT ANY FURTHER
 CHANGES ARE POSSIBLE TO ADVANTAGE. THE DISC WAS THE ONLY THING
 LEFT WHICH I HAD NOT REVOLUTIONIZED, THAT IS NOW GONE, WHICH
 MAKES THE MACHINE COMPLETELY A NEW ONE COMPARED WITH ITS ORIGINAL
 CONCEPTION AND CONSTRUCTION. ALL OF ITS PARTS HAVE BEEN THE SUB-
 JECT OF MOST THOROUGH EXPERIMENT, AND I DO NOT BELIEVE ANY OF THE
 M CAN BE CHANGED TO ADVANTAGE. EVERY THING NOW, SEEMS TO ME AS
 PERFECT AS IT CAN BE MADE, AND I FEEL NO INSPIRATION TO ALTER ANY
 THING FURTHER.

BUT LET ME HEAR FROM YOU. YOURS, & C.,
 SHOLES.

The next letter is dated March 14, 1871, nearly six months later, from which it appears that our inventor has not lost all of his inspiration, as his previous letter would indicate, and still further improvements are being made. I quote from the letter as follows:

"I have been running this about two months, and it seems to get better, rather than otherwise. In all that time it had not developed a single difficulty. In fact all such thing as trouble or bother has ceased to enter into the calculation. Densmore is very sanguine of very valuable results from the thing. Since this machine has been running I am getting more hope in the premises; but I must close on account of press of other duties."

Of the association between Mr. Sholes and Mr. Densmore who came upon the scene for the first time in 1870, two years after the manufacture of the first machine I can say little or nothing, except that I remember about that time Mr. Densmore came to St. Louis to see me and satisfy himself in regard to the practical work that had been done on the machine and obtain a testimonial from me in regard to its work. I afterwards learned that he obtained from Mr. Sholes a right to manufacture a machine under his patent for a stipulated sum, and sometime afterwards I saw a card with a cut of a machine that was manufactured under the name of Densmore & Porter and was being used in a commercial school in Chicago, of which Mr. Porter was the principal. The machine contained the same features as the Sholes machines, except that it dispensed with the long wires running from the keys to the bottom of the table attached to the tripets and thence to the type bars as previously described. I understand that this machine was known as the "cantilever" machine, and was operated by means of short stiff wires running laterally with and soldered to the ends of the keys and connected with the type bars in such a manner as to throw them up against the paper as each key was struck. I am unable to describe the machine in detail, never having seen it. The principal effect of the change was to reduce the leverage between the keys and the type bars several inches and confine the movement to a space of not more than two or three inches in depth, which would seem to be an improvement, but the machine did not prove a success for the reason,

as I understand, that it was found that the wires were unable to sustain the lateral strain, and would naturally become bent out of shape, and for that reason its manufacture was abandoned. In the meantime, however, Mr. Sholes continued to manufacture his machines, and the process of evolution was going on looking also towards reducing the size of the machine and getting all its parts into the shortest possible compass, which was the result of the machine sent to me in the fall of 1870, which I have already described.

I will close the reading of this correspondence by reading the last letter in my possession which was written in the spring of 1873, at the time that Mr. Sholes found himself compelled by lack of financial means to abandon the control of the manufacture of the machine and place it in other hands.

Reading between the lines in this letter we detect a vein of sadness, very much akin to the feelings of a mother who is compelled to abandon her child by placing it in the hands of others who are better able to nourish it and care for its future growth.

Under the date of April 30, 1873, Mr. Sholes writes as follows: (See next page):

"I presume not having heard of or from the machine for so long a time you have about concluded that that machine does not live, whatever may be the case with others. But if I am right in that conjecture, you would be entirely mistaken. It not only lives, but apparently at the present is in a most vigorous condition. The kind of work it will do you observe in this specimen, but the amount of labor we have been compelled to perform and the amount of money to expend to get it into its present condition of efficiency has been fearful to contemplate, and, I might add, the number of mortifying failures we have encountered when we thought we had the thing entirely completed have been entirely too numerous to mention.

But we feel that we have got out of the woods at last. The machine is no such thing as it was when you last saw it. In fact you would not recognize it as the same thing at all. I scarcely know how to describe it, and I presume it is not necessary that I should make the attempt. It is now what we call the continuous roll machine, so-called because it was originally made to accommodate the Automatic Telegraph Company, by printing from a continuous roll of paper; that is, paper of any length. This alters the whole character of the machine, and we found after it was altered that the style accommodated all wants better than the old style, and so we made no more of the kind that we made when you were interested in it. It is smaller, handier, neater, more convenient, will do almost every possible kind of work than it was or would be in its old form.

A contract has been made with the Ilion Arms Manufactory, or the Remingtons, at Illion, N.Y., for the manufacture of a thousand machines, which are now in process or progress of construction.

I have nothing particular to say, and you will observe that I have said it."

This last letter, as you will observe by an inspection of the original, is a fair specimen of the work that was done on the machine for some time after it passed into the hands of the Remington company, the work being in capital letters the same as the other machines up to that time. The most important improvement by which the lower and upper case letters were produced by means of the present shifting apparatus was not conceived until some time later.

MILWAUKEE, WIS. APRIL 30, 1873.

FRIEND CHARLIE:---

IN CONVERSATION TO-NIGHT, WITH ALFRED, I LEARNED THAT YOU STILL LIVED, AND HE GAVE ME ONE OF YOUR CARDS, BY WHICH I NOT ONLY LEARNED THAT YOU STILL LIVED, BUT THAT YOU LIVED AT ST. LOUIS, IN YOUR REGULAR BUSINESS OF PHOTOGRAPHING. I PRESUME, NOT HAVING HEARD OF NOR FROM THE MACHINE FOR SO LONG A TIME YOU HAVE ABOUT CONCLUDED THAT THAT DOES NOT LIVE WHATEVER MAY BE THE CASE WITH OTHERS. BUT IF I AM RIGHT IN THAT CONJECTURE, YOU WOULD BE ENTIRELY MISTAKEN. IT NOT ONLY LIVES, BUT APPARENTLY AT PRESENT, IN A MOST VIGOROUS CONDITION. THE KIND OF WORK IT WILL DO, YOU OBSERVE IN THIS SPECIMEN, BUT THE AMOUNT OF LABOR WE HAVE BEEN COMPELLED TO PERFORM AND THE AMOUNT OF MONEY TO EXPEND, TO GET IT INTO ITS PRESENT CONDITION OF EFFICIENCY, HAS BEEN FEARGUL TO CONTEMPLATE. AND I MIGHT ADD, THE NUMBER OF MORTIFYING FAILURES WE HAVE ENCOUNTERED, WHEN WE THOUGHT WE HAD THE THING ENTIRELY COMPLETED IN GOOD SHAPE, HAVE BEEN ENTIRELY TOO NUMEROUS TO MENTION.

BUT WE FEEL THAT WE HAVE GOT OUT OF THE WOODS AT LAST. THE MACHINE IS NO SUCH THING AS IT WAS, WHEN YOU LAST SAW IT. IN FACT YOU WOULD NOT RECOGNIZE IT AS THE SAME THING AT ALL. I SCARCELY KNOW HOW TO DESCRIBE IT; AND I PRESUME IT IS NOT NECESSARY I SHOULD MAKE THE ATTEMPT. IT IS NOW, WHAT WE CALL THE "CONTINUOUS ROLL" MACHINE, SO CALLED, BECAUSE IT WAS MADE ORIGINALLY TO ACCOMMODATE THE AUTOMATIC TELEGRAPH COMPANY BY PRINTING FROM A CONTINUOUS ROLL OF PAPER; THAT IS, PAPER OF ANY LENGTH. THIS ALTERS THE WHOLE CHARACTER OF THE MACHINE, AND WE FOUND AFTER IT WAS ALTERED THAT THE STYLE ACCOMMODATED ALL WANTS BETTER THAN THE OLD STYLE, AND SO WE MADE NO MORE OF THE KIND THAT WE MADE WHEN YOU WERE INTERESTED IN IT. IT IS SMALLER, HANDIER, NEATER, MORE CONVENIENT, WILL DO ALMOST EVERY POSSIBLE KIND OF WORK, THAN IT WAS OR WOULD DO IN ITS OLD FORM.

A CONTRACT HAS BEEN MADE WITH THE MILITARY ARMS MANUFACTORY OF THE REMINGTON'S AT ILION, NEW YORK, FOR THE MANUFACTURE OF A THOUSAND MACHINES, WHICH ARE NOW IN PROCESS AND PROGRESS OF CONSTRUCTION. WE ARE MUCH ENCOURAGED WITH THE PROSPECT OF THE VALUE OF THE THING IN VIEW OF ITS UTILITY.

I HAVE NOTHING PARTICULAR TO SAY, AND YOU WILL OBSERVE I HAVE SAID IT. I TRUST THIS MAY FIND YOU WELL. YOURS,

C. L. SHOLES.

TO BE CONTINUED: ETC #12 will present Weller's testimonial as a "test user" of Sholes' first machines, as well as personal biographical notes on the inventor himself.

A NEW MUSEUM

ETC member Frank Livermore, of Palo Alto, CA, has realized a longtime dream in opening up the new MUSEUM OF AMERICAN HERITAGE. The Museum was actually founded in 1985, but has existed, until now, as an itinerant institution, exhibiting its collections wherever someone

would lend them the space. Now, however, the Museum has found a permanent location in Palo Alto, and is preparing to open to the public full-time.

The Museum is "devoted to the preservation and display of electrical and mechanical devices commonly in commercial or domestic use during the roughly 100-year period prior to the advent of solid state electronics." That means nifty stuff like typewriters, sad irons, bicycles, piggy banks, chocolate molds and all sorts of great junk none of us packrats would ever throw away. My goodness, they've even got a *fortune cookie making machine!*

ETCetera recently received the premiere issue of the Museum newsletter, which proudly announced the location of its new home. The address is 275 Alma Street, Palo Alto, CA 94301. Write to 'em if you want more info, or call them at 415-321-1004.

ETC STATISTICIAN

With most collectibles, there are pretty accurate records of what is available. Typewriters are an exception. Under the ETC umbrella, I will try to fill this void. We are asking all collectors to send lists of every typewriter they have, giving brand, model number and serial number. If it differs from an average machine, add a comment such as: "new condition, parts machine, unusual keyboard, has an original instruction book, special history," etc. Please note original sale date if invoice is available. This will help determine machine ages. Report machines held by non-collectors also. Even if no details are available, the fact that you know of a "World 1 in the parlor of a little old lady in Freehold, New Jersey" will help keep numbers accurate.

Richard Dickerson has already done an outstanding job in researching details on several typewriters. This survey will not try to duplicate his terrific efforts. We are interested primarily in getting census counts on all the typewriters that Richard has not yet had time to study.

We understand that some collectors may not want their names published. Since we still want to know what exists, please cooperate by sending your list. I promise to honor any request for anonymity, listing "US collection," for instance, instead of your name.

ETC will periodically publish summaries of survey results and updates. To encourage full cooperation by all collectors, detailed lists will be furnished to all participants for only the actual costs of postage and photocopies. There will be a nominal charge for non-participants. Results will only be meaningful if they are complete, so PLEASE, everyone, send in your lists to:

Jay H. Respler
230 Randolph Road
Freehold, NJ 07728 USA
(tel. 203-431-1464)

LETTERS

I had occasion to use Paul Lippman's article on collecting Corona 3's (ETCetera #4). I acquired from a typewriter repairman two Corona 3's which his typewriter dealer father had collected in the past. One is 1914 (50126) and has the parenthetical "(Standard Folding Typewriter)" frontpiece label under the word, Corona. I cannot find the *%\$@& serial number on the second one, but from Paul's description might be a year or two later. I already had one from early 1920's with the wider carriage and shifts on both sides. My 1914 one is with a Polish keyboard (courtesy of Beeching's diagrams, p. 44). These two latter Coronas that I just got are quite different in their detailed mechanical designs.

Marco Thorne
San Diego, CA

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In my last letter I told you that after 13 years of looking I finally had a Crandall. Well, things have changed in the past month, and I now have TWO Crandalls! PRAISE THE LORD AGAIN! This one came from an 81-year-old man who lives in North Carolina. He's had the machine for 35 years. His sister-in-law who lives in New Jersey saw an old ad of mine while going through some magazines and notified him. He then wrote me. The machine is in beautiful condition and still works but not perfectly. It also still has its case. The serial number is 18576 so it's a "newer" one. It looks a little different, too, from any that I've seen. Most machines just say "CRANDALL" on the name shield, but mine says "CRANDALL, Mfd. by Crandall Machine Co., Groton, N.Y., U.S.A." The machine also has a knob at the right side that I've never seen before.

Steve Hosier
Lancaster, CA

ADVERTISEMENTS

WANTED: Index typewriter such as Mignon or Odell. Earl Beal, P.O. Box 37, Conway MO 65632. 417-589-3191

FOR SALE: Royal 5. Laura LeDesma, 648 West Pantera, Mesa AZ 65210. 602-892-4636

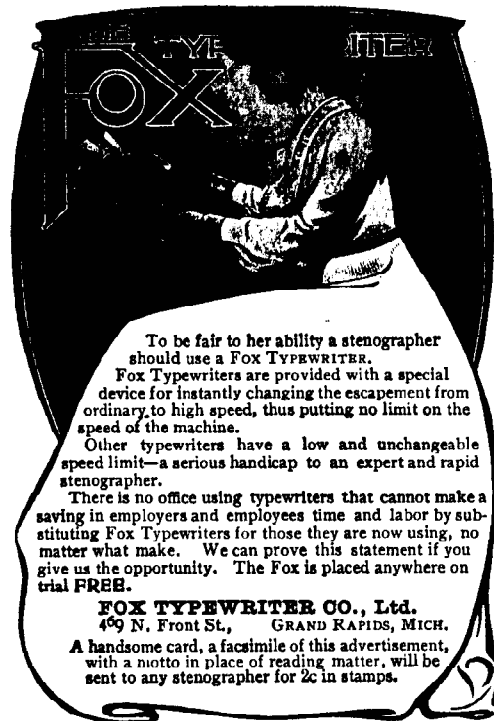
WANTED: Office equipment publicity, ribbon tins, posters, books and magazines, postcards with typewriters. Also calculators. Reinhold Rehbein, Pucciniweg 8, 4019 Monheim, West Germany.

WANTED: for Rem 7: right ribbon spool assembly with shaft, "!" and "A" key levers and one rubber foot. For National No. 5 portable: ribbon spools and mainspring drum assembly with attendant parts. Jim Aphorpe, 34414 Laralak Ave. Leesburg, FL 34788

WANTED: xeroxes or originals of *Phonographic World* or other early TW literature. Jos Legrand, Kreuzerstraat 24, 5011 AA tilburg, Netherlands.

TRADE: Chicago, Bennett, Young American, Stenograph. Darryl Rehr, 11433 Rochester Ave. #303, L.A., CA 90025. 213-477-5229

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A handsome card, a facsimile of this advertisement, with a motto in place of reading matter, will be sent to any stenographer for 2c in stamps.

Found this piece in a tear page ad at my local antique store. I wondered if many people out there, who have a BLIND FOX, ever heard of or saw this! No date given, but I figure it's from the turn of the century.

—Mike Brown, Philadelphia, PA