



The Hamilton AUTOMATIC Typewriter



Emery M. Hamilton's Masterpiece

The Hamilton Automatic is considered one of the masterpieces of 19th century American typewriter manufacturing. It is exquisitely made, predominantly out of brass, with the quality and look of a fine scientific instrument. There are only eight known examples of this rare and beautiful machine. This article presents what is known about the Automatic and reveals questions still unanswered.

The Automatic has the distinction of being the smallest typebar typewriter ever made. Its 9" by 12" box is about the size of a box of chocolates. For its size, though, its weight is substantial at 12 lbs.

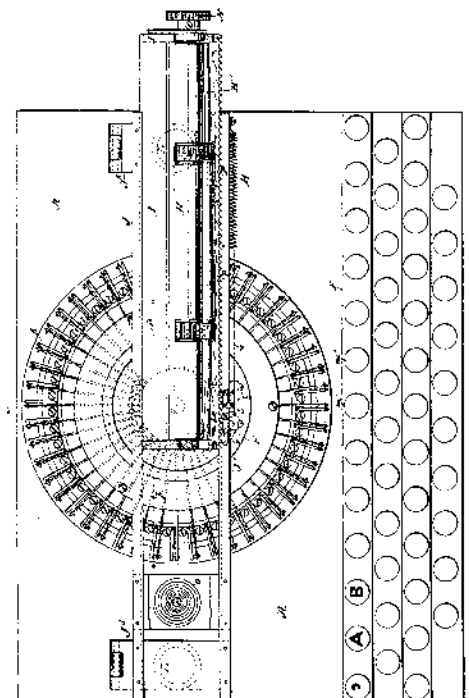
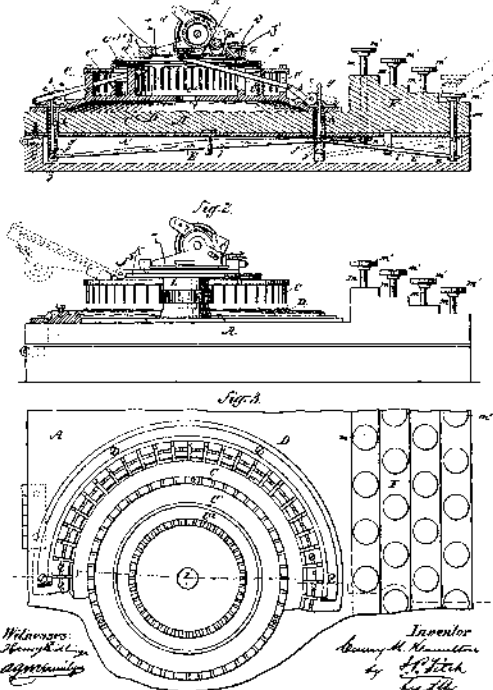
The first thing one notices about the Automatic is the warm coloration of the turned brass key cups with inlaid lacquered characters. Three rows of keys step up gradually to a prominent nickel plated space bar, with the name

by Martin Howard
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AUTOMATIC beautifully engraved across its surface in a monogram style font. Two turned brass posts rise elegantly from the back deck to support the carriage on two parallel rods. A small faceted platen straddles the covered central tower that houses the circular, slotted typebar segment. The small mushroom shaped bell stands alone in full view.

Hamilton's Automatic was the first manufactured typewriter with proportional spacing. This automatic movement of the carriage must surely have been the source of the typewriter's name. The carriage moves the correct distance for the different width of characters.

It moves correspondingly 2 clicks, 3 clicks, and 4 clicks for "I," "H," and "W" width characters. The Automatic's patent was applied for in 1884 and granted in 1887. The Columbia with



its two type wheels also had proportional spacing, but it came later, with its patent applied for in 1885 and granted in 1889.

Here is a rare period account of the Automatic written in 1891.

To this sweeping disposal of type bar instruments one exception must be made. It is the Automatic, a peculiarly neat little instrument sold at 65, retail. It is small, weighs only twelve pounds, and writes only capitals and necessary figures and commercial signs. Its field is that of the travelling man, or for small commercial uses not warranting higher priced machines. It prints from the face of the type, which, when not in use, rests against the ink pad, as in the Yost. The alignment is good, and there is an automatic lock which prevents two type bars coming into collision. If two keys are struck at the same time, only one type prints; the other does nothing. The spacing of this machine has one merit peculiar to itself. Each letter has only so much space as it needs and not as in other machines. W. Mathews, *The Writing Machine* Chicago: Northwestern Christian Advocate of Chicago, 1891, p.10 courtesy of Jos Legrand, Netherlands

The original finish on the brass deck is a bronze colored lacquer coat with a gentle brushed texture. The cover for the circular type-bar segment is finished in a darker bronze lacquer with no brush strokes. Many of the surviving Automatics have been polished and this lacquer finish removed. Surviving Automatics may have a tarnished look but in my opinion, should not be polished in order to preserve the finish of the original lacquer.

The Automatic sold for 65, a surprisingly low price considering its beautiful craftsmanship. Many keyboard type writers of the day were selling for 100.

Emery M. Hamilton, the inventor of the Automatic, was born Jan 22, 1838, in Allegany County, New York. He was one of five children. His father, Horace G. Hamilton, was a pioneer settler in Wisconsin and held various local offices, including that of justice of the peace. Information about this impressive engi-



neer and inventor is scarce; however, in this article some new pieces of the puzzle come together.

In 1861, at the age of 23, Hamilton joined the United States Army as a volunteer. In 1863 he was a major in the 1st Regiment Engineers Corps d'Afrique. His name is listed as E. Manville Hamilton in the records. Hamilton would be known as "Major Hamilton of New York" for the rest of his life.

There is a listing in the 1880 census of New York City for Emery Hamilton and his wife Josephine. Hamilton listed his occupation as a mining engineer and his birth date was shown as about 1837. It was not unusual for dates of birth to be stated in such vague terms.

If "the Pen is Mightier than the Sword," what of the Type-writer?

THE AUTOMATIC TYPE-WRITER.

Is peculiarly well adapted for use by parties who do not employ a stenographer, but write their own letters. The method of operation is easily acquired, and a few days practice will enable any one to write twice as fast as with a pen. The writing will moreover be legible, which is not always the case with handwriting.

This machine is constructed on scientific principles. It is compact, portable, rapid, durable, has permanent alignment, is covered and protected from dust, the impression is made directly from the face of the type, no "ink-ribbon" intervenes between the type and the paper, it is attractive in appearance, and is the only writing machine in the market which will automatically space the letters correctly, with reference to their proper widths. It is a high class machine and is sold at a moderate price.

HENRY ABBOTT, SOLE AGENT,
No. 4 Maiden Lane, New York.

Evidence of his engineering work exists today. One of the names for the Stony Pass trail in Colorado elevation 11,000 feet is Hamilton Pass. It is named after Major E.M. Hamilton, who built a wagon road along the route in 1872.

Towards the end of his life Hamilton lived in Flushing, New York, where he died at the age of 83 in 1921. He had no children. There is no further information about his wife.

Hamilton was a professional inven-

tor with a patent record showing many ingenious inventions registered in his name. The first reference to one of his inventions appears in *Scientific American* in 1871, with a favorable review of an adding machine, "automatically registering the sum totals of the numbers set off upon it." He was only 33.

His first patent was for a "Perspective Diagram Sheet" in 1880. Also during that year, a patent was issued for a T square for use in making perspective drawings, followed in 1882 by patents for an "Electric Telegraph Transmitter" Victor key and a "Telegraphic Receiving Instrument." His Victor key was acquired by L.G. Tillotson & Co., a leading competitor to J.H. Brunell. Tillotson offered various key designs during the 1880s and considered Hamilton's Victor key the "most successful key of the group."

While clearly Hamilton had become captivated in the early 1880s with inventing typewriters, he continued to invent other complex machines, notably the first device "to enable measurements of time, space, or quantity to be easily and quickly recorded by automatically changing mechanism" in 1890 patent no. 424292. The assignor of this patent was Henry Abbott of New York. Abbott would patent his own time recording device in 1897 called the Calculagraph patent no. 583320 and become president of The Calculagraph Co. of New York. Hamilton's last recorded patents, from 1899 and 1901, deal with improvements for the action of piano hammers.

As mentioned, the first three patents for the Automatic were applied for in 1884 and granted in 1887. Further patents for the Automatic followed, along with patents for other ingenious typewriters that were apparently never made. These typewriters will be discussed later in this article.

It is interesting to see that Abbott is introduced as a leading jeweler in the sentence below from *The Phonographic World* May, 1892. Hamilton is also re-

ferred to as a jeweler in various publications. This apparent confusion of profession must have to do with what the profession of a jeweler represented then and what it represents today. People who built and repaired watches and clocks were sometimes referred to as jewelers in the 19th century. Moreover, when someone had a watch in need of repair they took it to a jewelry store. So perhaps the term “jeweler” was also used to refer to people who did fine mechanical work, as both Hamilton and Abbott were doing:


The Automatic Typewriter Company was formed in March of the same year, and the machines put on the market in 1888. Several patents of improvement were also issued to Henry Abbott, a leading jeweler of New York, who was subsequently interested, with other capitalists, in its introduction and sale.

Abbott’s involvement with the Automatic was significant, since two patents were issued to him for improvements to the typewriter in 1890 both applied for in 1888. The first patent (no. 437371) solved the thorny problem described by Abbott: “In the case of type writers much trouble is occasioned by the accidental depression of two adjacent keys.” To solve this problem he introduced “a locking plate which is adapted to be moved longitudinally by the action of the keys of a type writer and to prevent movement of the keys adjacent to the key being operated.”

His second patent no. 437372 packed the typebars into a smaller diameter circle by pulling every second type bar a bit back from the center. This typebar arrangement allowed for a surprising action to have lower and upper case characters type in different colors! With the typebars positioned with two different striking distances from the platen and two concentric inking pads of different colors, this remarkable effect could be achieved. Not surprisingly, this invention did not appear on the manufactured Automatic.

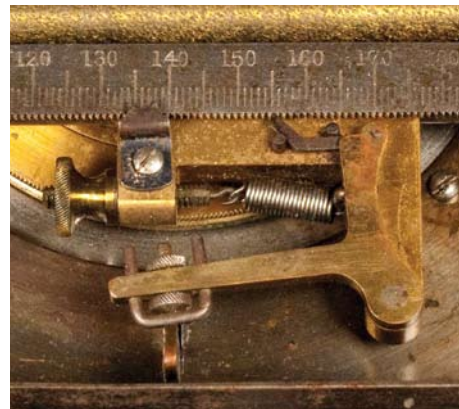
The advertisement on p. 4 from 1890 the only known display ad

THE AUTOMATIC TYPEWRITER.



The Automatic Typewriter comes before the world with but a single case of type, but, we are told, a double case machine will soon be presented. It had seemed that human ingenuity had about exhausted itself upon typewriting machines, yet, the automatic seems to be entirely new. It possesses very many good points. It has perfect alignment, smooth touch, variable spacing, manifold power, lightness, cheapness and compactness. It has a neat appearance and under manipulation it moves along with precision.

for the Automatic shows that Abbott was the sole agent for the Automatic. It states that it “is the only writing machine in the market which will automatically space the letters correctly with reference to their proper widths.” With the word “Automatic” repeated three times around the illustration, there can be no mistake in deducing where the name of Hamilton’s typewriter came from.



Escapement

Good reviews and continued modifications

The Automatic was praised for its “very many good points” in *The National*

To the getter-up of every club of only fifteen new subscribers to the WORLD, sending us remittance for the same of fifteen dollars, before September 1, 1893, we will present, free, as second grand premium, a perfectly new AUTOMATIC typewriter, manufactured at \$65, complete in its own handsome case, and all ready for use. This excellent typewriter has steel type, the type-bar stroke being direct (the same as the Remington and Caligraph), is inked by a pad, and writes on paper the same width as all standard machines. It has 48 different keys and characters. Receipted bill, with guaranteed title, will accompany each machine, and no charge will be made for boxing or shipping.



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Stenographer Vol, 8, August 1890, p. 273, at left, courtesy of Jos Legrand .

The following three Hamilton patents granted in 1890 show further innovations for the Automatic. None appears to have been manufactured.

The double case typewriter referred to in the *National Stenographer* review is Hamilton’s patent no. 430773, which was designed with a platen that would rise straight up, giving two positions for the type bars to strike the platen.

Patent no. 430776 positioned the escapement mechanism behind the platen.

Patent no. 427858 applied for in 1885 promised an intriguing method to type: “My invention has for its main object to provide a type writing machine wherein one finger-key may be used to actuate two or more type bars.”

The end of the Automatic

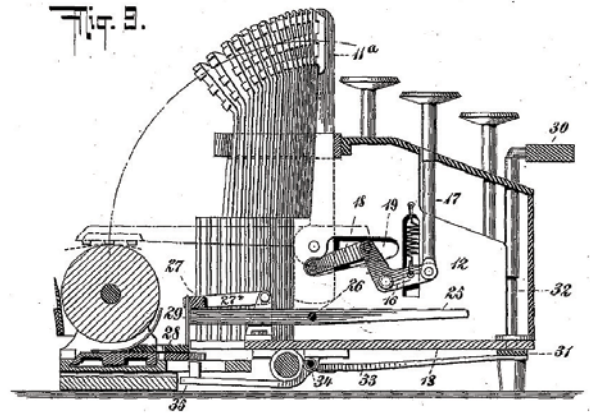
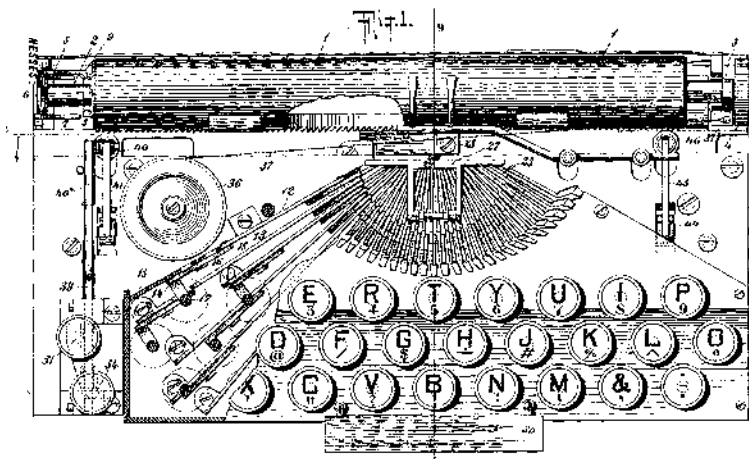
Though it was a remarkably compact typing machine with a light and even touch, the Automatic was short lived. According to *The Phonographic World* of May 1892, “The Automatic was withdrawn from the market in 1891, after an expenditure of about 60,000 for its introduction, the stockholders refusing to invest further, and the factory closed.”

One can speculate on the reasons for its failure, including the position of the spacebar behind the keyboard. G. C. Mares bluntly points out in *The History of the Typewriter*, “the space bar was behind the keys, this being enough to kill the machine itself.” Few if any other

typewriters had their spacebar positioned there, and for good reason. It would have been awkward to move one’s fingers up to activate the spacebar while typing.

Typing only in uppercase characters was a severe limitation, at a time when many fine typewriters gave upper and lower case characters. The Automatic was also a “blind writer,” typing on the underside of the platen. It was not alone at the time in this feature, but it did not show the way forwards.

Loading the paper around



the platen was very awkward. First the platen has to disconnect from its resting position in the carriage, by being pushed quite hard sideways against the locking tension. The platen is then swung upside down to expose the feed roller for the paper. When the paper is gripped, the platen is locked back into the carriage and the paper is finally positioned for typing.

The extraordinary offer from *The Phonographic World* in 1893 see bottom of p. 5 clearly shows that the Automatic was marginalized from the mainstream typewriter market. An Automatic was being promised free to anyone who secured fifteen new subscriptions to the *World*. Free shipping was included! (*The Phonographic World*, 1893, VIII, p. 303, courtesy of Jos Legrand.

Hamilton's frontstrike typewriter of 1897

In April 1896, an entry in the *Illustrated Phonographic World* entitled "Type writers in use in the United States" lists the Automatic among "thousands upon thousands which have been entirely withdrawn from the market." Shortly after that remark, Hamilton visited the offices of the editor and prompted the following published response later that year.

S.T. Smith original proprietor of the S.T. Smith Co., of New York, informed the World editor last month that he is at work inventing a cheap typewriter. E.M. Hamilton, also of New York, inventor in 1887 of the Automatic typewriter, called at the World office last month and informed us that he also has nearly completed the perfection of another just such typewriter. The above gentlemen, or their inventions, have nothing in common. Both will be type bar machines.

The typebar typewriter that Hamilton was promoting was patented in 1897 patent no. 592052, above. It was designed with the same fine detail and overall form as the Automatic. His goal was "to produce a very compact and efficient type-writer" and it appears that he did just that.

With the typebars swinging down to strike the top of the platen, the spacebar in front of the keyboard, and two shift keys moving the carriage backwards and forwards for upper and lower case characters, this typewriter had lots of merits. However, there is no record of its ever being made. If one ever turns up, it will be a major find.



The surviving few

"I just acquired a marvelous typewriter - an all brass Automatic. It came out of an attic in New Jersey and is serial no. 58. The Milwaukee museum has no. 103 and Dennis Clark has 199 and I know of no other Automatics anywhere."

Collector Richard Dickerson used these words in 1986 to announce to the collecting community his major find. And he typed the announcement on his Automatic!

Since that time, five more Automatics have been discovered, mine being the last, bringing the total known to eight.

The known Automatics all have low serial numbers, clearly showing how few were ever made.

Ser. no.

- 58 Dickerson USA
- 103 Milwaukee Public Museum Dietz Collection USA
- 121 Barbian Germany
- 163 Breker Germany
- 168 Russo USA
- 199 Clark USA
- 215 Casillo USA
- 231 Howard Canada

In 1949, the pioneering American collector Carl Dietz discovered an Automatic but was unable to acquire it. In a letter to Ernst Martin author of *Die Schreibmaschine*, an encyclopedic account of all typewriters made up to that time, he conveyed his acute frustration, not knowing that in the end he would acquire an Automatic. Whether it was this one he refers to here will never be known:

Several months ago in one of our nearby towns a man found an Automatic typewriter 1881, Abb.81, page 114 in your book in the attic of an old house. I offered him a fair price for it to be given to the Museum, but he says it is a collector's item and he hopes to get a lot of money for it. What provokes me is that the man does not need the money. I told him he should donate the machine as a matter of civic interest, but he remains adamant. Such experiences are very discouraging. Courtesy of Jos Legrand

Note the incorrect year for the Automatic in the Martin book. This incorrect year has appeared in many publications. In the end, I believe that Dietz eventually found two Automatics.

Who will find the next one? 🐞

I am indebted to Tony Casillo and Jos Legrand for sharing their enthusiasm, knowledge and generous advice in the preparation of this story, and to my wife Susan, who always supported my efforts in this project.