

1838. April 13. F. O. J. Smith writes to Professor Morse that he had just returned from Morris town. Vail had nearly completed apparatus, compact and convenient for traveling. Had also completed straight post-rule, on a plan of his own which operates exceedingly well. Register acts well; pen is provided to make four copies. Encloses a specimen of writing.

1837. September 18. Alfred Vail writes to Morse inclosing check to pay for caveat. Is drawing up agreement, and asks if any objection to his brother becoming a partner without having a voice in the partnership.

Memoranda of sundry expenses per contract incurred by Morse and paid by Vail:

1838 Jan. 25. Paid Mr Greenland as door-keeper two days' exhibition of telegraph \$2.
Jan. 25. Glass tubes for pens and making twelve glass pens, \$1.50. Mahogany for batteries, \$12. Jan. 30, fare to Philadelphia. — 31st, Hotel bill, one night and breakfast, — Feb. 2 Hotel three days, — Feb. 3. Fare from Philadelphia to Washington, — Expenses in Washington, Feb. 3 to March 2, — March 2. Fare to Phila-

delphia to New York and, portage to
University.

1872. October 31. Smith writes to Mrs Vail that he
has conclusive evidence that caveat was
tampered with to cover radical im-
provements introduced after Vail's connec-
tion with it and embodied in the
machine exhibited at Morristown. Gale's
testimony and Morse's own publication in
the Journal of Commerce does not es-
tablish the fact that the machine
made but one mark, namely: - V, V, V.
~~the~~. The machine Vail made, which
was exhibited to Congress and carried
to Europe, could only make dots and
lines. Whoever suggested the new mechan-
ism must have suggested the new alpha-
bet. Morse's alphabet on board the Dully
was of dots and spaces alone. I know
there was a long interval, from October
until February, before the new machine
was perfected. The first presentation
of the diagram of the pendulum mach-
ine was in Gale's deposition in the
Boston case sworn to March 19, 1850.
It was not included in Vail's book
of 1845 from prudential motives. The
caveat as now known did not describe
it nor the lever; it only speaks in

a blind manner of a lever or pendulum without illustrating it. But I believe this only extant record of the caveat is a fraud, and I have very positive proofs of it. Professor Morse and Mr Kendall must have engineered these changes at the patent office. Suggests that the delay in completing new machine was occasioned by partial construction of a pendulum machine.

1873. January 2. Smith to Mrs Vail. Says he has recently determined, and it is admitted by Gale, that his first sight of Morse's instrument was not in 1836 but in the Spring of 1837. Morse never thought of using magnetism until early in the Spring of 1837. Previously it was all electricity for decomposing water. The contest in Europe for priority in the application of magnetism in 1836 and 1837 then came to his knowledge, and as he had never succeeded in decomposition turned his attention to the magnetic. When Gale first saw it it had been converted from two stationary points of a broken circuit into a swinging pendulum. After September 4, 1837 there is no record

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that the pendulum process was ever exhibited to anybody, certainly not after that month of September. The saw-teeth characters were never after used, even for exhibition. It was certainly in September that this change took place, while Vail was producing the new machine exhibited at Speedwell, then Philadelphia, then Washington and then in Europe.

1873. April 17. Smith to Mrs Vail. The journal establishes that the machine, after leaving Washington and Mr Vail's return to Speedwell, to prepare instruments for Europe, underwent a most radical transformation and the horizontal lever was substituted for the pendulum lever, and dots, marks and spaces took the place of the V character.

1873 May 16. Smith to Mrs Vail. Am glad of Vail's letter to Kendall, which is a clear and full explanation and defence of his omission to claim his share of merit in the invention of the magnetic telegraph.

1871. July 28. William P. Vail to Mrs Vail. The

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First trial in Speedwell on a long wire was the 6th day of January 1838. Alfred had many long conversations with me in relation to telegraphy, and I deeply regret I did not ask him to write down many things he told me. Two things I am confident he related to me; - that he invented the simple alphabet now used, and that he also suggested the steel points for the recording lever, Mr. Morse's plan being to use the clumsy and impracticable pen and ink. I do not feel so sure that he first suggested the transmission across the water, but I think he told me he did.

Memoranda from Cooks at Speedwell;

Feb. 11 Alfred Vail at Washington.

Feb 22. G. Vail went to Washington, returned March 1. A Vail returned March 7.

March 23 Professor M. came to Speedwell. 24th Went to New York.

April 11. Professor M. came to Speedwell

13th Morse and Alfred went to New York.

May 12 Alfred came home. Jan 1, 1838, Doctor Gale and G. V. went to New York, Doctor came back January 6. First trial of telegraph Jan. 6. Public exhibition

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10th and 11th. October 29, 1837 Professor
Morse taken ill having arrived the
day before.

1838. February 21. Alfred to George Vail. "The
President and his Cabinet have just
left and I have the pleasure to
inform you that they were highly
delighted and entirely satisfied. The
President proposed the following sentence
'The enemy near' to Prof. M. silently so
that I could not and did not hear
it - It was then put up in numbers
and written on the register. I send
you the actual thing itself which
I wish you to preserve for me. To-
morrow the report is to be offered."

1844. August 14. Alfred to George Vail. I have
also discovered the singular fact that
I can operate two independent circuits
with but one battery; formerly it re-
quired two.

1838. February 13. Alfred to D. Vail and Son.
I have prevailed upon Professor W. to
use the dictionary which he has done
with complete success; but had he
used the alphabet it would have been
a different story. I could not induce
him to give up the alphabet until
the last hour so reluctant was he.

Items of addition to
Telegraph article

Vail devised chess-board.

~~Original forms of keys (Western Union Office)~~

~~Reedle annunciator. Enumerate his inventions &
show range of his genius.~~

— Glance over Vail's book —

Earth circuit (Vails alone)

Henry Clay correspondence

Insert Morse letter to Vail
of May 30 1844

— Britton repeater working both ways

(Vail April 12 1848
perhaps the first)

Memoranda for Editor.

W. Vail wrote the first work on the telegraph
Ever published ¹⁸⁴⁵ "The American Telegraph" translated
in French by Vattier ^{in all libraries} - His right to be mentioned.
Invented the first printing telegraph

Add original contract between Morse & Vail
in which the latter agrees not to assert his
rights to patents. (Probably in N. J. Hist Society)

Have W. Pope read the MS. noting Mess.
for Mrs. Vail's comments. You can substantiate
each NO on her handwriting.

Marked religious character of Alfred Vail
~~accounts for~~ & retiring nature accounts for his
failure to litigate

Did Baxter say that Vail telegraphed took by
sound early in the invention?

~~W. Vail was not the inventor~~

Have W. Pope select drawings
for illustration

W. Vail (MS)
in notes as
inventions