



Yardleygram

In 1932, Herbert Yardley of the American Black Chamber, the forerunner of the NSA, published a book of cryptographic puzzles called *Yardleygrams*. It is set as a fictional challenge between an old spy and a young man interested in codes.

What follows is a paraphrase of one of his ciphers. It can be solved with a pencil and paper. Yardley recommends using graph paper.

A Hundred Faces

German Intelligence had sent a spy to New York City. Because he was a master of disguise, neither the Black Chamber nor the FBI could identify him. His code name was H-24. The Black Chamber called him the “Man with the Hundred Faces.” The Post Office intercepted one of his letters, posted in the upper 30’s, and chemical tests revealed a secret ink. Once developed, the secret ink spelled out the following cipher text.

The letter was followed, and it led to H-24, who was captured.

ciphertext:

PNADE NTYFO URXEM TLIDE EORG NENTS HTWPI PHTIW AVELO AWA

decipher: Very difficult transposition cipher. Some are *horizontal*—the plaintext is written into a grid starting at one corner and proceeding line-by-line, then taken off horizontally. Some are *vertical*. Some are *diagonal*—the plaintext is written into a grid starting at one corner, then proceeding diagonally up or down the grid. This one is *spiral*.