US Stamped Envelope Production 1900-1964

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Steps To Produce a Stamped Envelope

The order is not fixed

- Cut envelope blank from paper
- Emboss and print indicium
- Print corner card if needed
- Print precancel if needed
- Gum
- Fold
- Cut window panel/affix window material

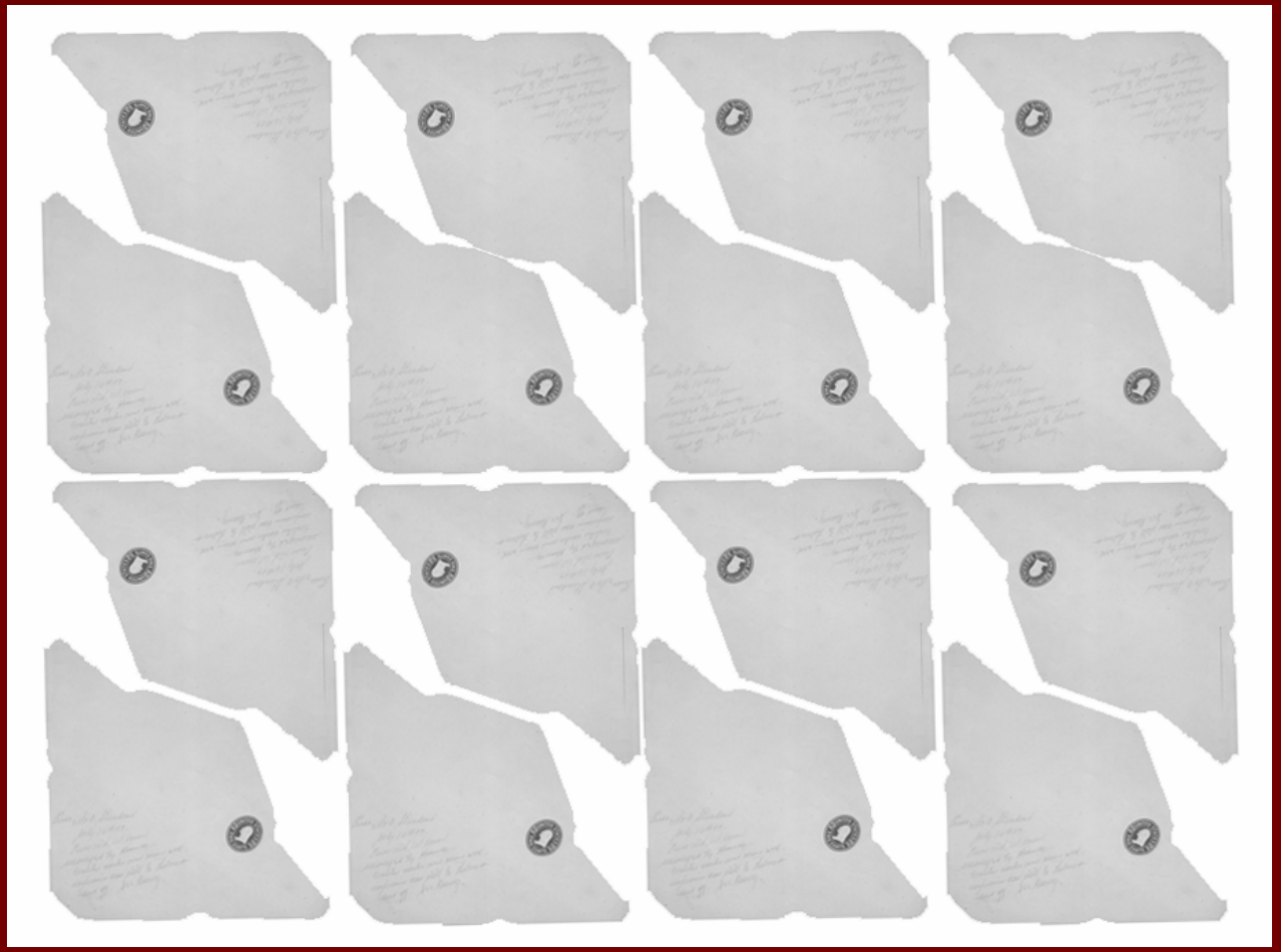
Presses and Machines

- Press: emboss and print only
- Machine: performs one or more steps of envelope production other than embossing and printing
- Combination: Embosses, prints, and one or more step of envelope production

Stamped Envelope Manufacturers

- Hartford, CT
  - Plimpton
  - Morgan
  - Hartford Manufacturing Co. 1903-1907
- Dayton, OH
  - Mercantile Corp. 1907-1915
  - Middle West Supply Co. 1915-1928
  - International Envelope Corp. 1929-1964

Cutting out blanks from a sheet



Morgan, Plimpton, and Hartford Mfg Co.

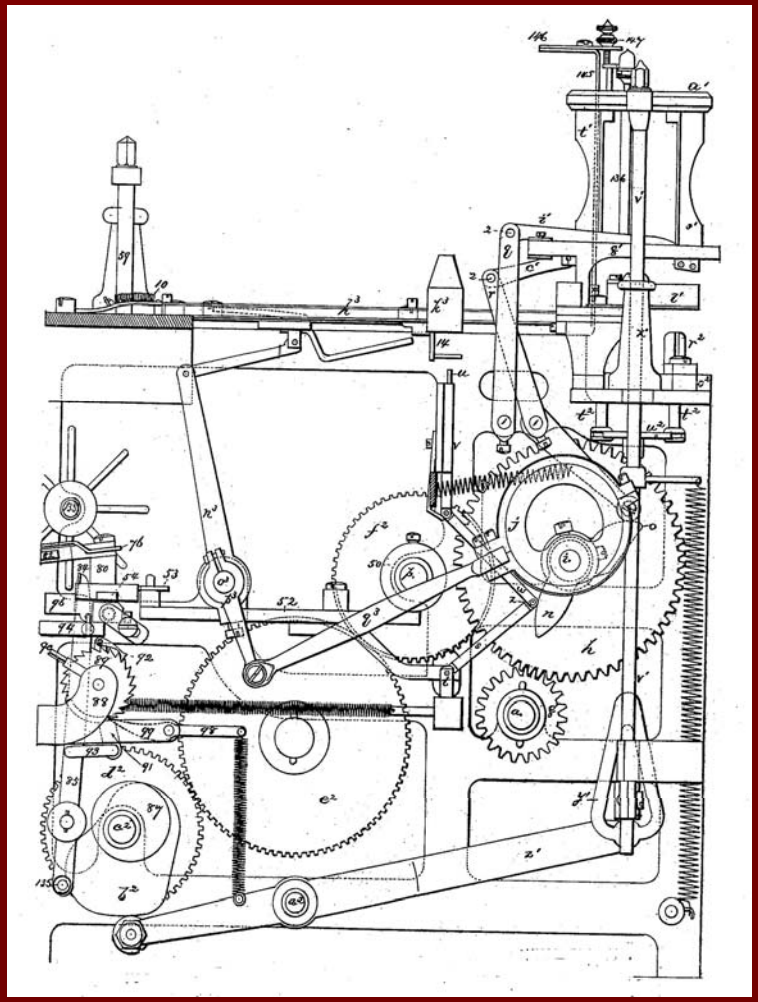
All three companies used the same equipment.

Wickham machine aka “Hartford”

- Horace John Wickham – engineer with Plimpton 1869-1898.
- Combination press and envelope machine
- Reciprocating press
  - Uses flat dies
  - Die comes up from the bottom, imagine a piston
  - Corner card die came up at the same time
  - Designed for envelope production
  - Used at Plimpton, Morgan and Hartford Mfg
  - Continuously improved 1876-1906
- Input: envelope blanks
- Operations: gum, print/emboss, and fold
  - 5,000 envelopes per hour

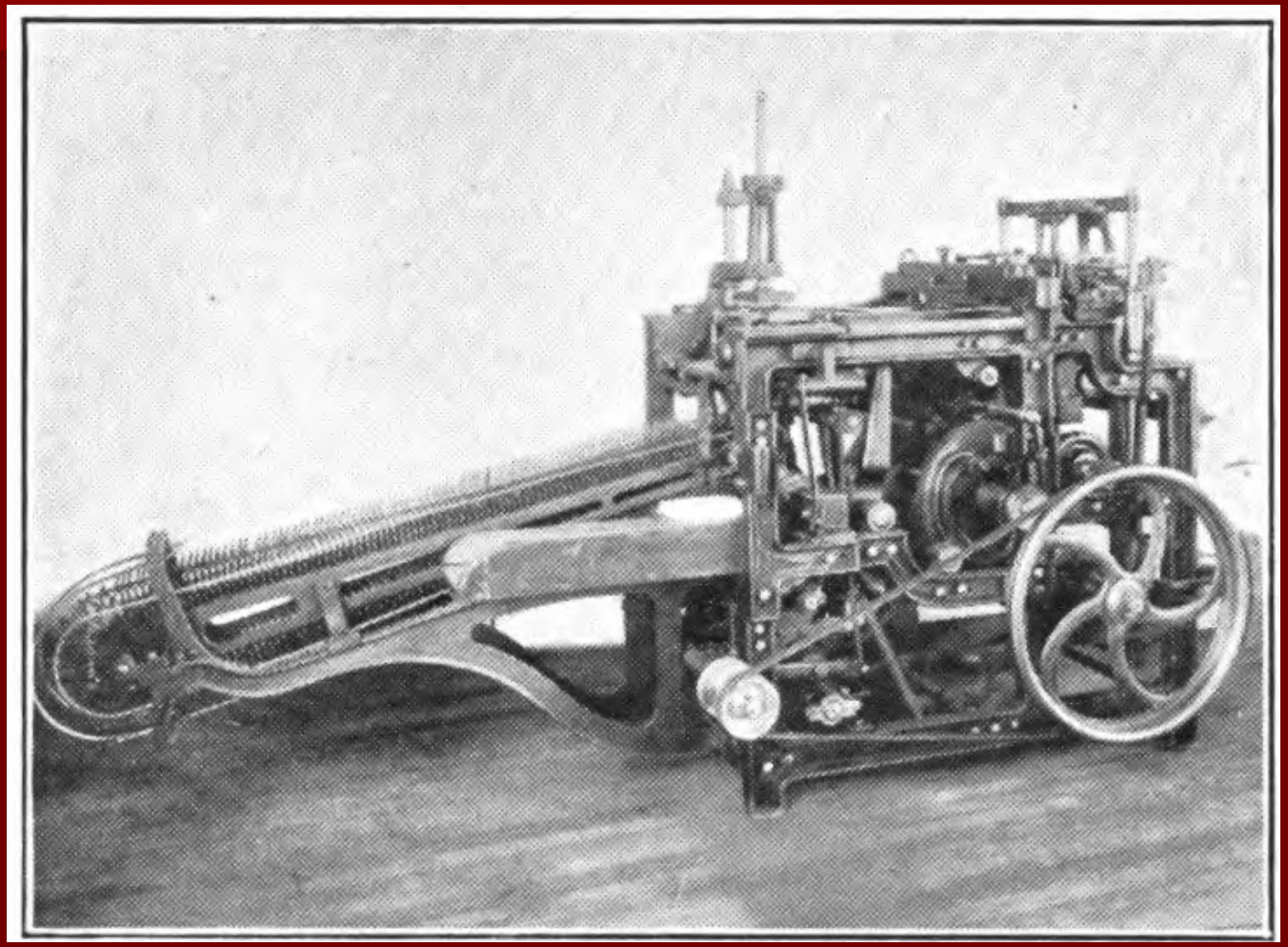
Diagram of “Wickham”

Folding is performed by a “plunger”. The envelope is pushed down a box by a plunger. On the upward stroke the bottom flap is folded down, then the sides, and finally the top by hinged “wings” in the box.



“u” is the die

Wickham machine



Mercantile Corp. 1907 -1928

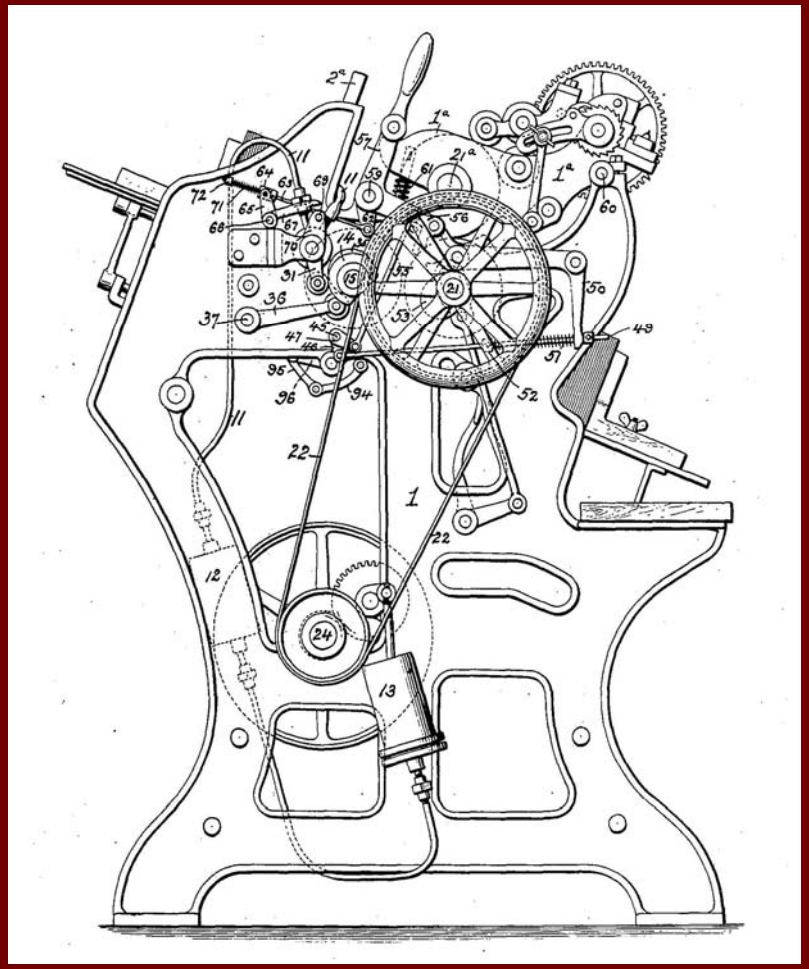
Had to start from scratch.

Locates in Dayton, Ohio to be near paper supplier.

Standard Envelope Co. Press aka "Huckins"

- Irving W. Huckins formed Standard Envelope Co. of Philadelphia. Arthur S. Huckins (son) joined and eventually became president. Company out of business by 1930.
- Rotary press
  - Curved die
  - One embossing die and one corner card die on the printing cylinder
- Used 1907-1940s
  - At least 34 in operation in July 1907
- Input: envelope blanks
- Operations: print/emboss
  - Two colors with one printing cylinder
  - 12,000 printed blanks per hour
- Gumming and folding on another machine

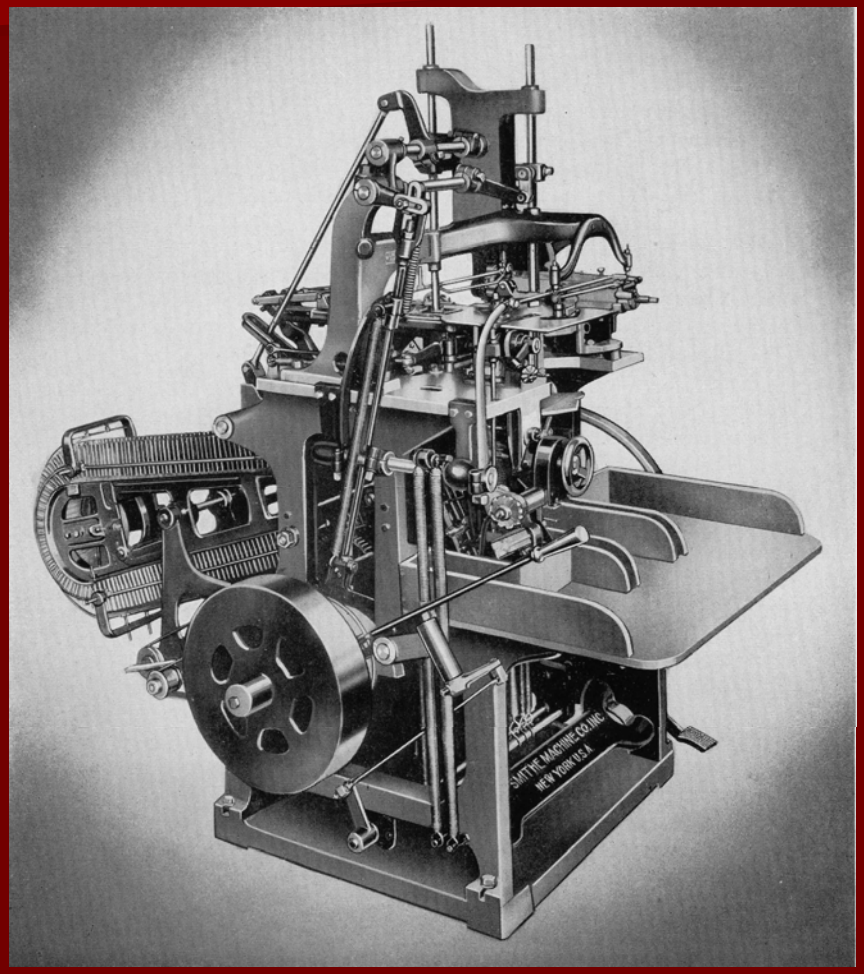
“Huckins” press



Schmidt Champion Plunger Machine

- Auxiliary machine to gum and fold printed blanks
- Called a plunger because a “plunger” would push a gummed envelope into a box with flaps that would cause the side and bottom flaps to fold and seal and the top flap to fold.
- Supplied to Mercantile in 1907

Schmidt Champion Plunger Machine

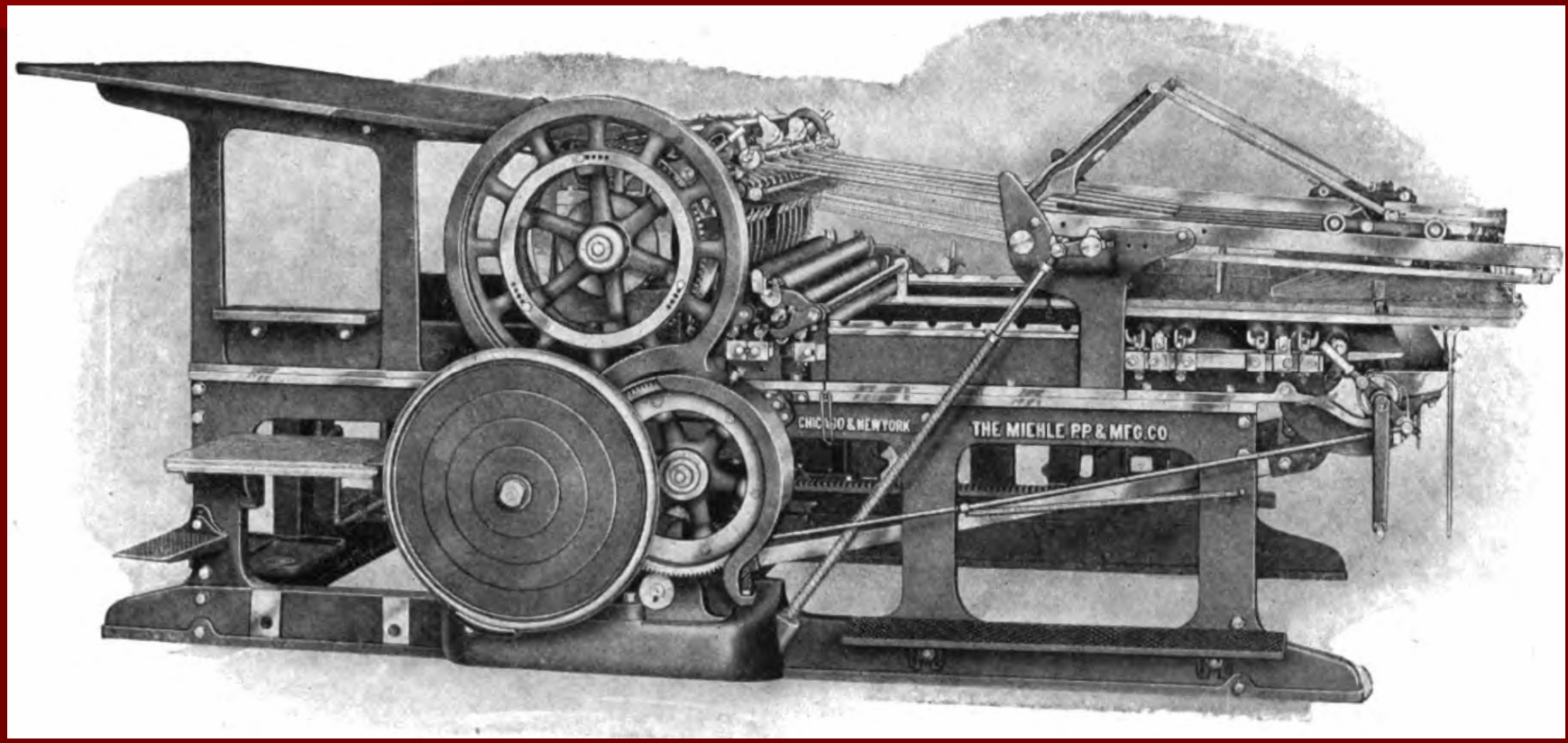


- 3 sizes for different envelope size ranges
- Kit available to adjust to different size
- 5,000 – 7,000 envelopes gummed and folded per hour

Miehle “The Miehle” Press

- Robert Miehle
- Miehle Printing Press and Manufacturing Company of Chicago
- Reciprocating flat bed press
  - Used multiple flat dies
  - Paper cylinder rotated twice while flat bed moved back and forth
  - Printed sheet of envelopes
- Subsequent operations on other machines to cut sheet into blanks and gum/fold.
- Not designed for envelope work – newspapers and Sunday magazines
  - Giant cast iron beast; one version 30 tons
  - Electric engine the size of a beer keg
- Used 1907-1909 and later

“The Miehle”



Cast iron behemoth; one version weighed 30 tons
Electric engine the size of a beer keg

Miehle Miscues

Closeup of top flap

Only miscut Miehle can show tete-beche indicia.

Harris E-1 Press

Corner cards for Miehle printed envelopes were printed on Harris E-1 Press after cutting, gumming, and folding

Harris Automatic Press Co. was located in Dayton, Ohio

“Hartford” machine redux

In 1910 Hartford Mfg Co. is bought by American Writing Paper.

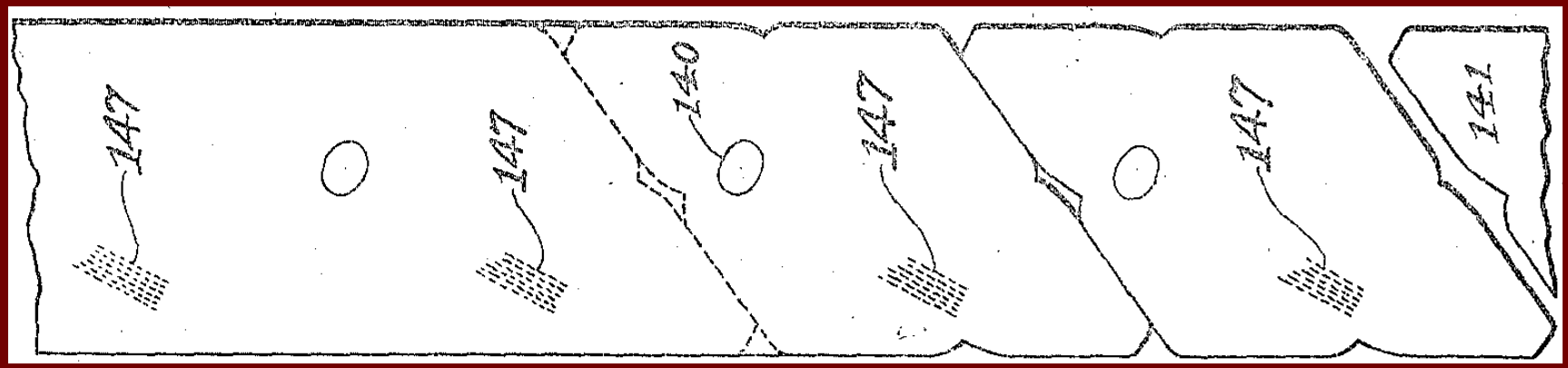
Apparently “Hartford” machines were sold to Mercantile around the same time. I don’t know if before, after, or same time.

Used 1910 – 1932 (perhaps slightly longer)

Kenny machine

- Edward Kenny – engineer with Mercantile Corp.
- Rotary web press
  - Used 4 “spiral” dies each of indicium and corner card
- Cut out envelope from web in several operations
- Still required another machine to gum/fold
- Needed a different envelope shape – low back
- Used 1912 – perhaps just a year into 1925 contract

How web is cut into envelopes



Middle West Supply Co.

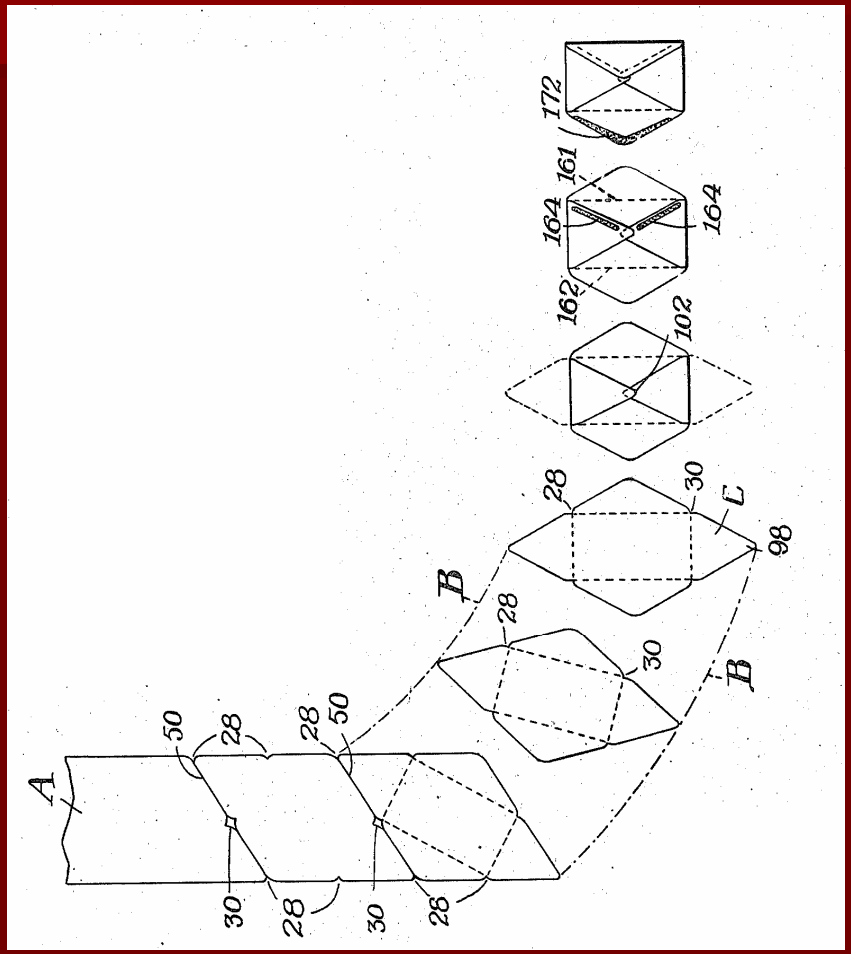
Bought out by Mercantile Corp. after Middle West Supply Co. won the 1915 contract.

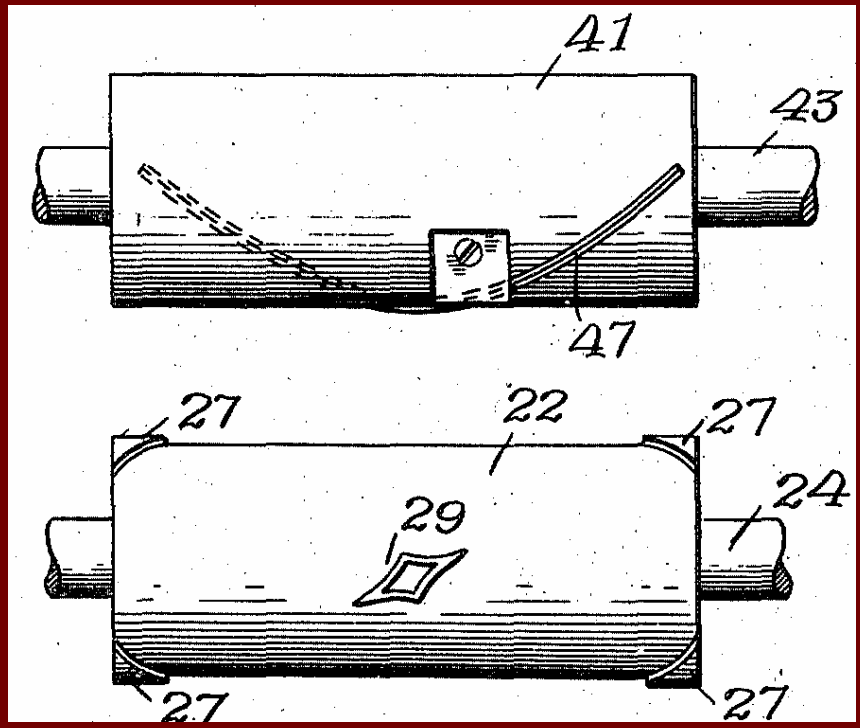
New machine was going to provide reduction in production cost.

Schmidt “Diagonal” machine aka “Smithe”

- Abraham Novick – engineer at Schmidt/Smithe
- Rotary web press attachment
  - Used 1 “spiral” die
- Corner card printed after partially folded
- Operations: print/emboss, cut out envelope, gum, fold
- Low back envelope shape
- Used for a short time starting in 1915
- 34 supplied between June 1915 and March 1916

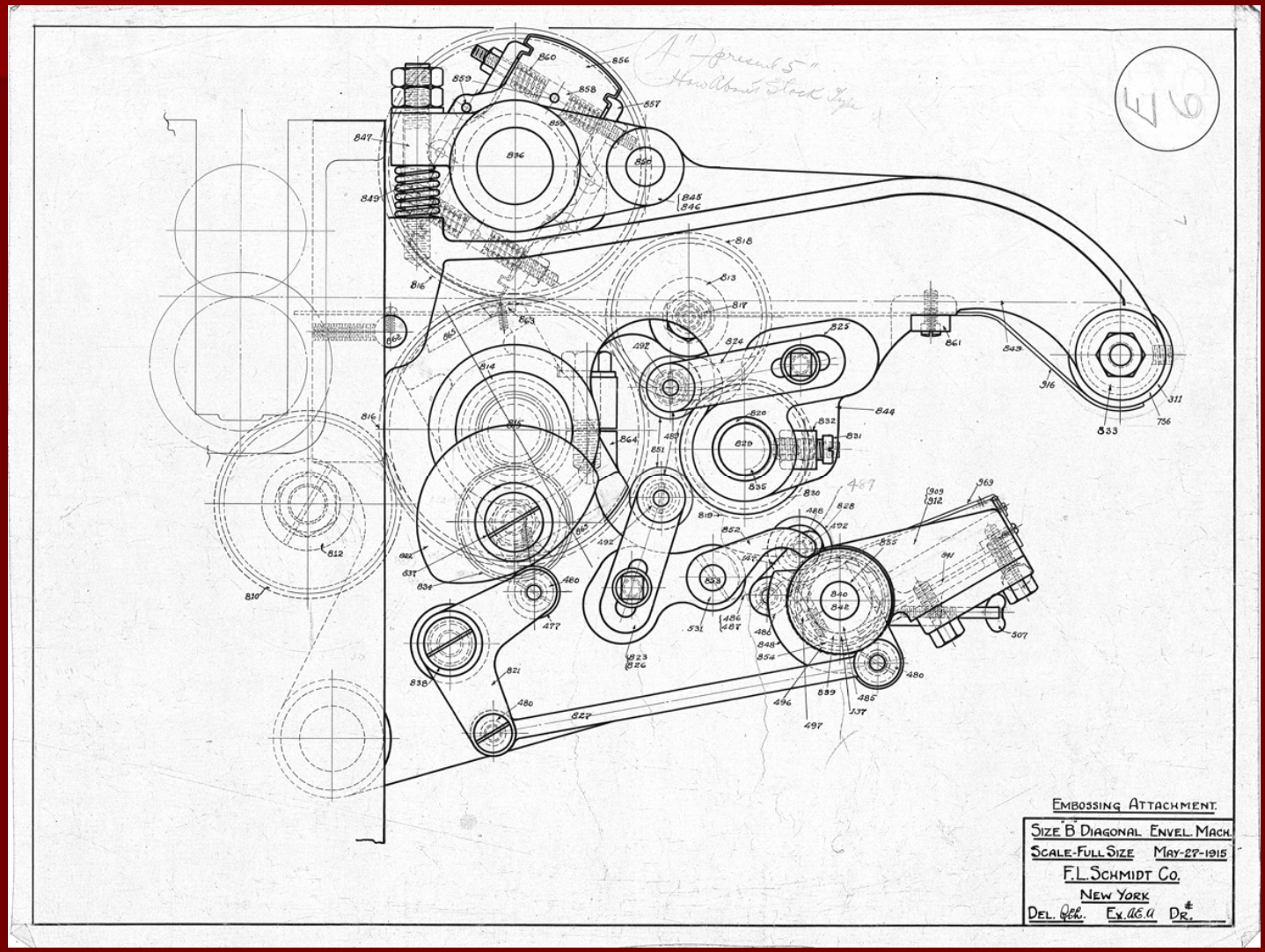
Operation Flow



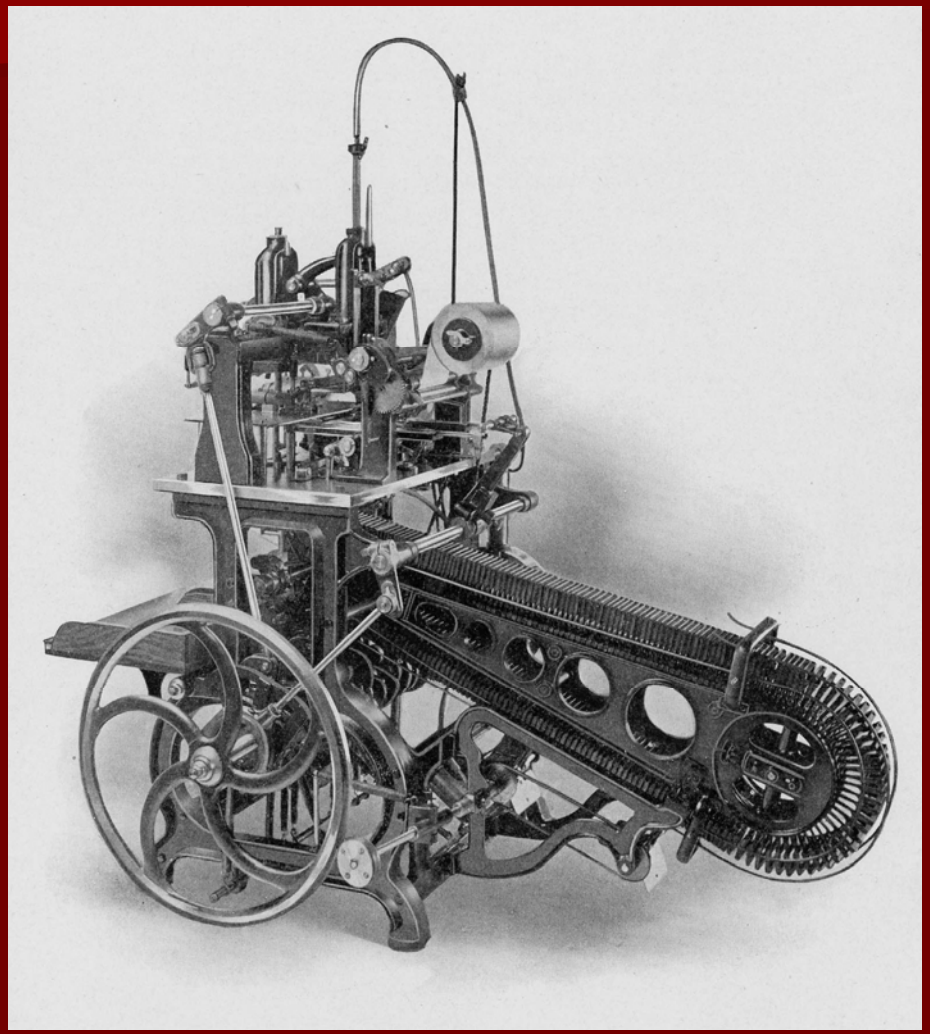


Cutting cylinders

Printing Attachment for “Diagonal”



Schmidt Champion Open Window Plunger machine



- Cuts window, applies transparent sheet, gums, folds
- 5000 envelopes per hour
- 8 supplied in April and May 1916 for two envelope sizes

International Envelope

International Envelope won the 1928 contract.

Acquired the machinery, facilities, and employees of Mercantile Corp. at the end of the emergency extension of 1925 contract

Harris press

- Replacement of Huckins press
- Rotary press
  - Used curved dies like Huckins but for larger diameter cylinder
- Operation similar to Huckins
- Could have two printing cylinders for multicolor work (airmail and precancel)
- Produced 12,500 printed blanks per hour
- Used 1932 - 1964

Airmail Envelope Production on Harris

- Red stamp
  - 1st cylinder: red stamp, red border diamonds
  - 2nd cylinder: blue border diamonds, blue corner card
- Blue stamp
  - 1st cylinder: blue stamp, blue border diamonds, blue corner card
  - 2nd cylinder: red border diamonds
- Orange or olive stamp
  - Red and blue diamonds printed on a Miehle press (probably not the same as used by Mercantile) and cut into blanks

  OR
  - Red and blue diamonds printed on blanks by Harris press

  THEN
  - 1st cylinder: orange or olive stamp
  - 2nd cylinder: black corner card

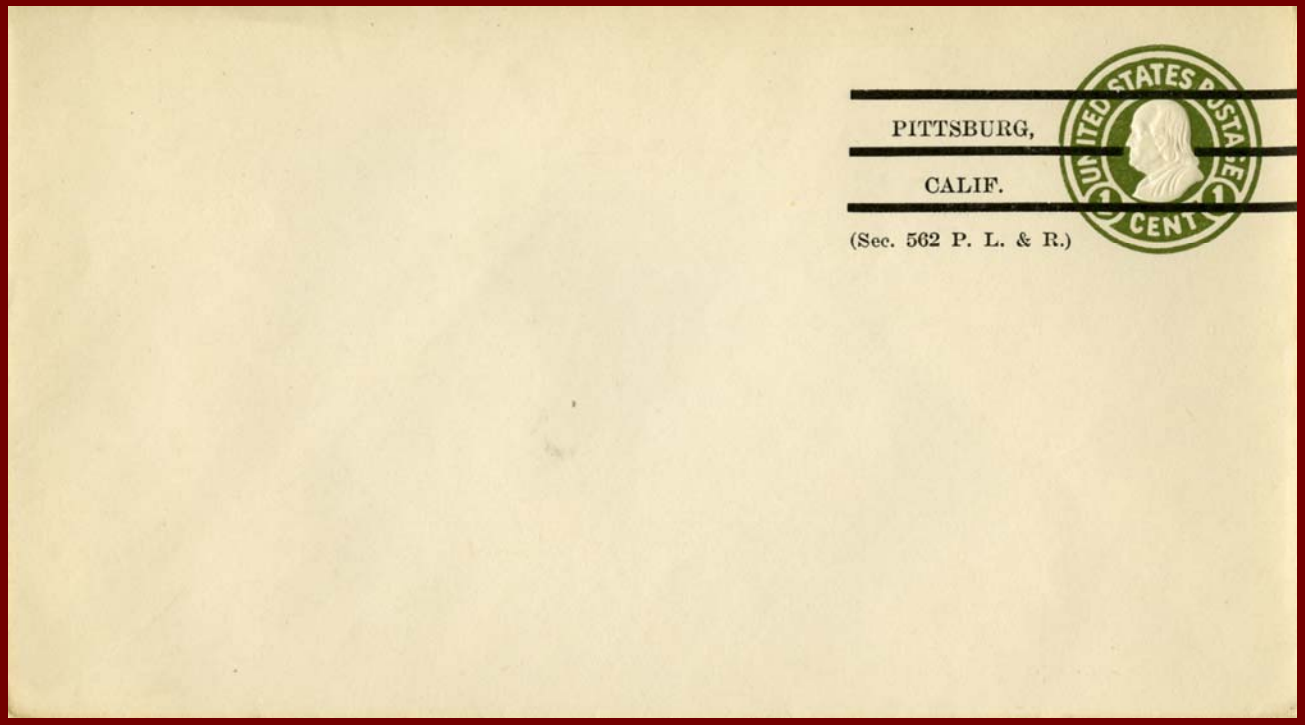
Airmail Envelope Miscues

Lozenge color(s) missing

Images from Philatelic Foundation database of certificates

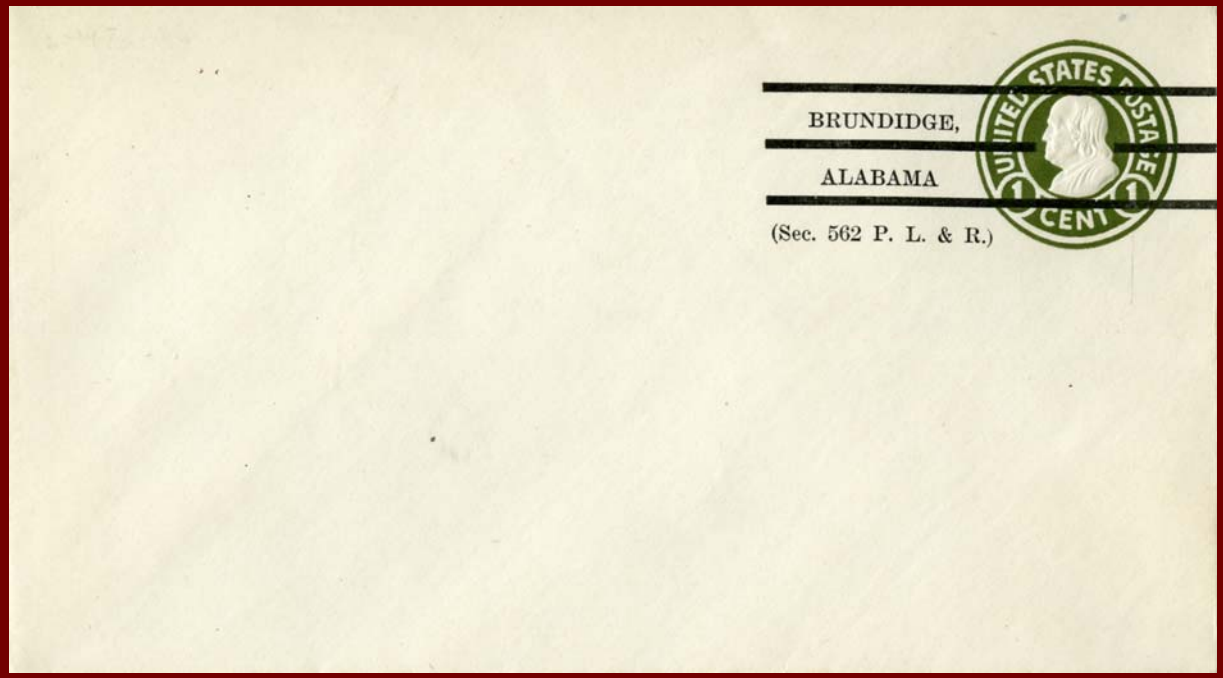
Precancel Envelope Production on Harris

- 1st cylinder: envelope stamp
- 2nd cylinder: black corner card and precancel



Precancel Envelope Production on Huckins

- 1st run through: envelope stamp
- 2nd run through: black precancel



O’Connell machine

- John J. O’Connell – engineer with Mercantile, Middle West Supply, and International Envelope
- Replacement for Wickham machine (1932)
- Similar operation as Wickham but faster
- Like the Wickham printed on the bottom side of the envelope blank
- 7,500 envelopes per hour
- Workhorse for International Envelope
  - 33 machines in use in 1950

Summary of Characteristics

Machine or Press	Hartford/ Wickham	Huckins	Miehle	Kenny	Schmidt/ Smithe Diagonal	Harris	O'Connell
Kind	Flat	Rotary	Flat	Rotary	Rotary	Rotary	Flat
Input	Blank	Blank	Sheet	Web	Web	Blank	blank
Output	Complete	Printed blank	Printed sheet	Printed blank	Complete	Printed blank	Complete
Speed	5,000	7,500				12,500	7,500
Die	Flat	Curved	Flat	Spiral (1)	Spiral (2)	Curved	Flat
Years of use	1876-1907, 1910(?)-1932	1907-1940s	1907-1909 Maybe later	1912-1925	1915-?	1929-1964	1932-1964

References

- Thomas D. Perry, “United States Twentieth Century Envelope Dies” *American Philatelist*. March 1941. 358-373
- Thomas Doane Perry, “U.S. Envelope Stamps. Master Dies and Hubs” *American Philatelist*. January 1955. 247-259.
- Horace J. Wickham. “Improvement in Envelope Machines” Patent 177,048. May 2, 1876
- Robert Miehle. “Printing-Machine” Patent 550,992. December 10, 1895
- Irving W. Huckins. “Envelop-blank printing or embossing machine” Patent 1,118,009. Nov. 24, 1914.
- William H. Banzett and Edmond Kenny. “Machine for Making Perfected Envelop-Blanks” Patent 1,123,658. Jan 5, 1915.
- Abraham Novick. “Envelop-Machine” Patent 1,291,089. Jan. 14, 1919.
- James Logan. “The Beginnings of the Envelope Industry in Hartford, Conn.” *The Red Envelope*. October 1921. 3-32.