

US Stamped Envelope Production During the Mercantile/International Envelope Era 1907-1964

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The Collectors Club

Steps To Produce a Stamped Envelope Die

- Create master die
- Create hub from master die
- Create working dies from hub



Master die



Hub



Working die

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

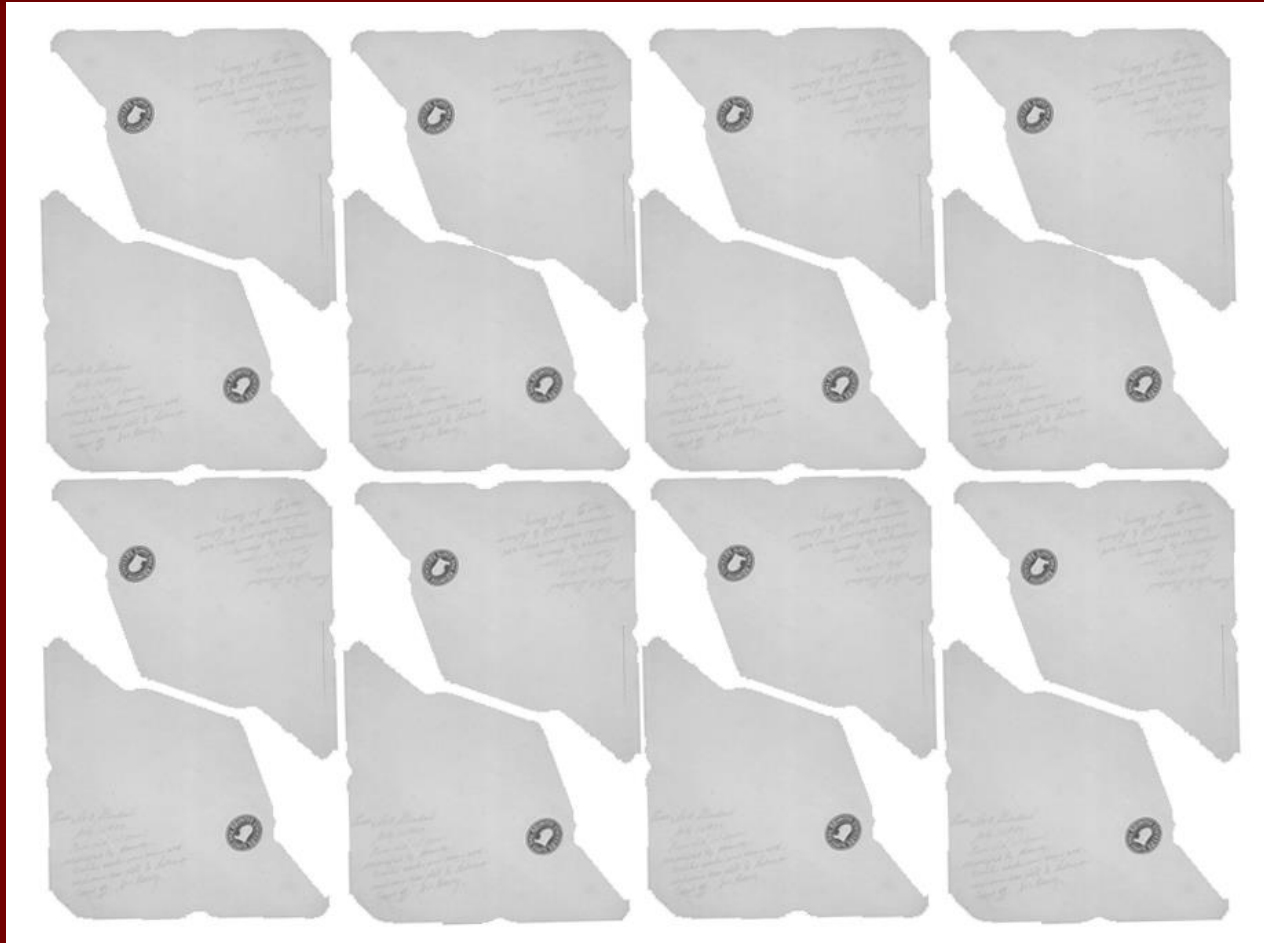
Presses and Machines

- 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
 - Really Mercantile Corp.
 - International Envelope Corp. 1929-1964
 - Bought out Mercantile/Middle West Supply Co.

Cutting out blanks from a sheet



Morgan, Plimpton, and Hartford Mfg Co.

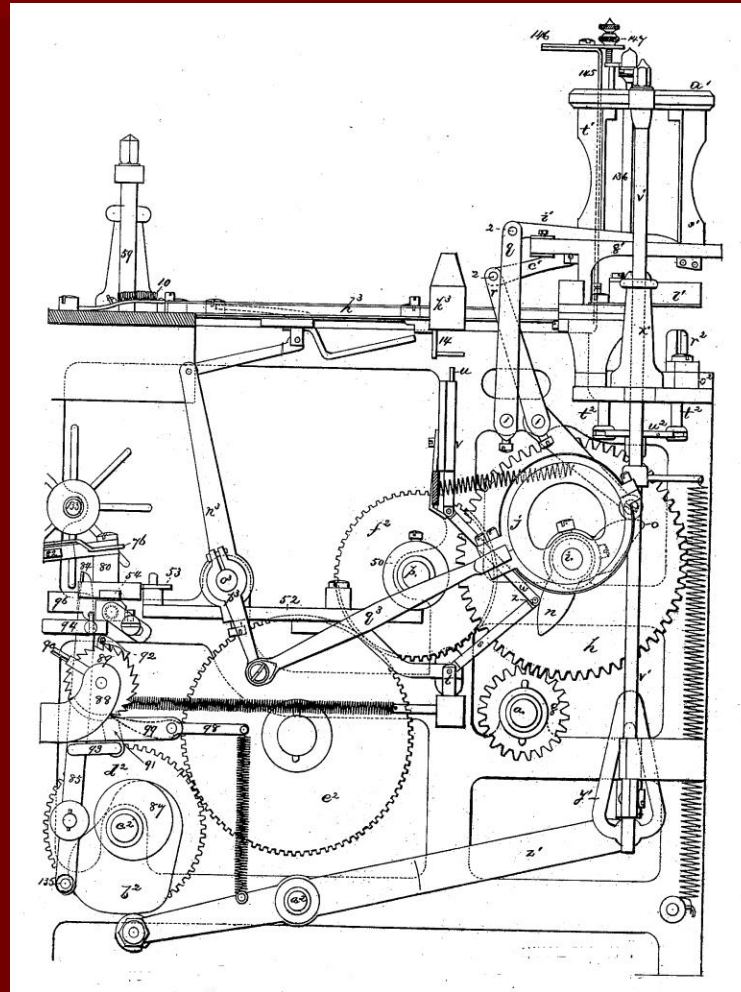
All three companies used the same equipment.

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

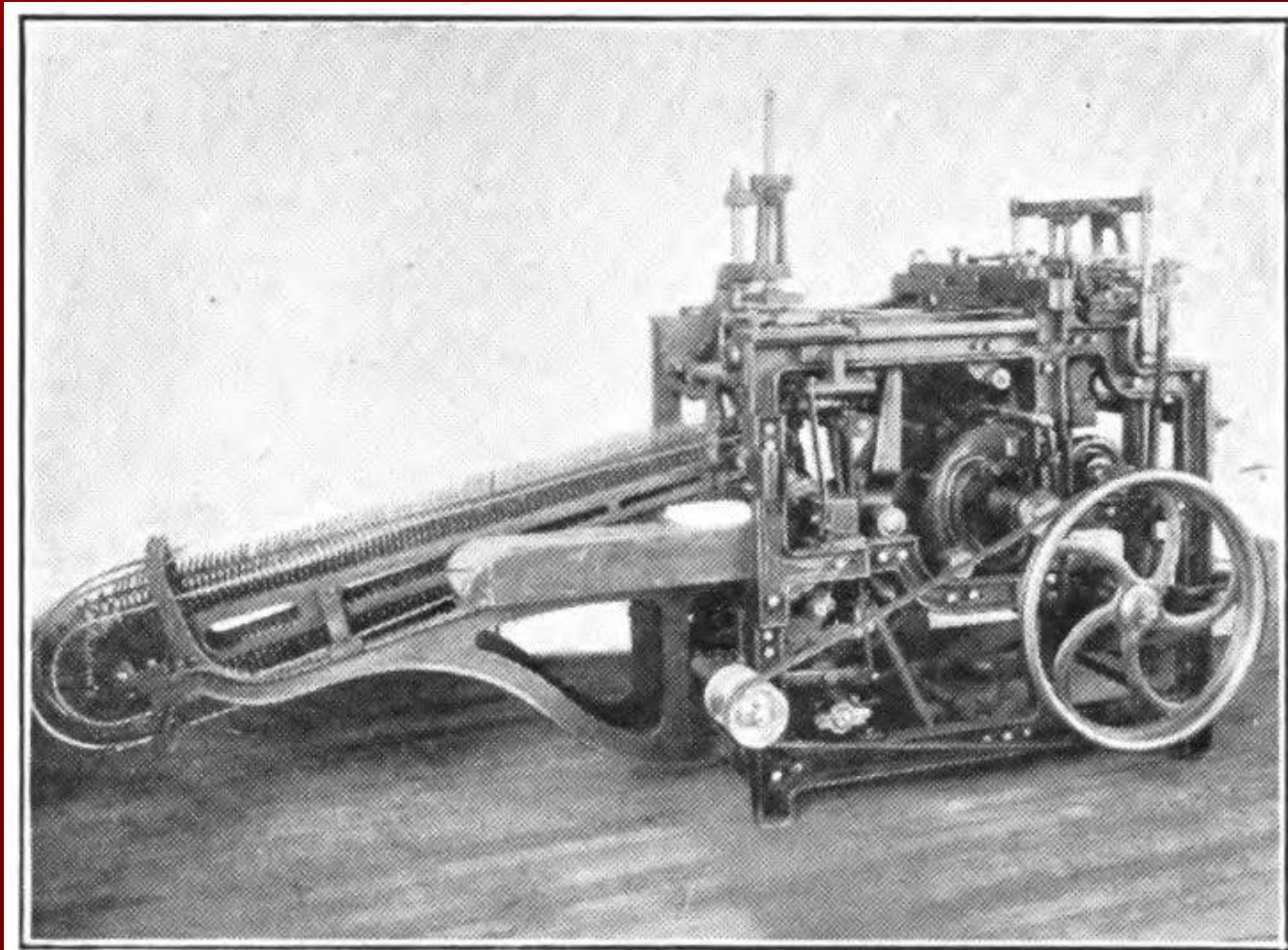
Diagram of "Wickham"

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.

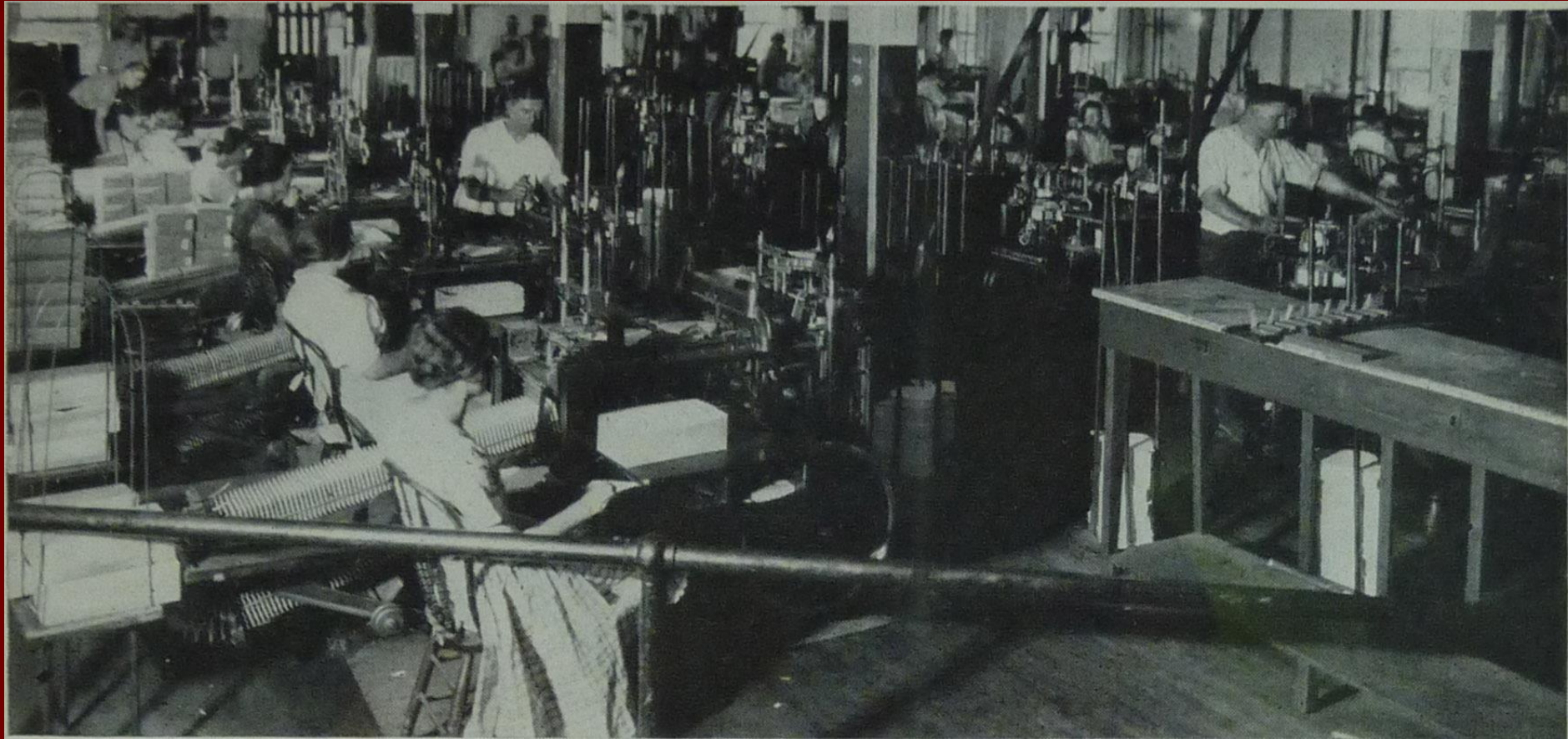


"u"
is
the
die

Wickham machine



Wickham machine in operation



Mercantile Corp. 1907 -1928

Had to start from scratch.

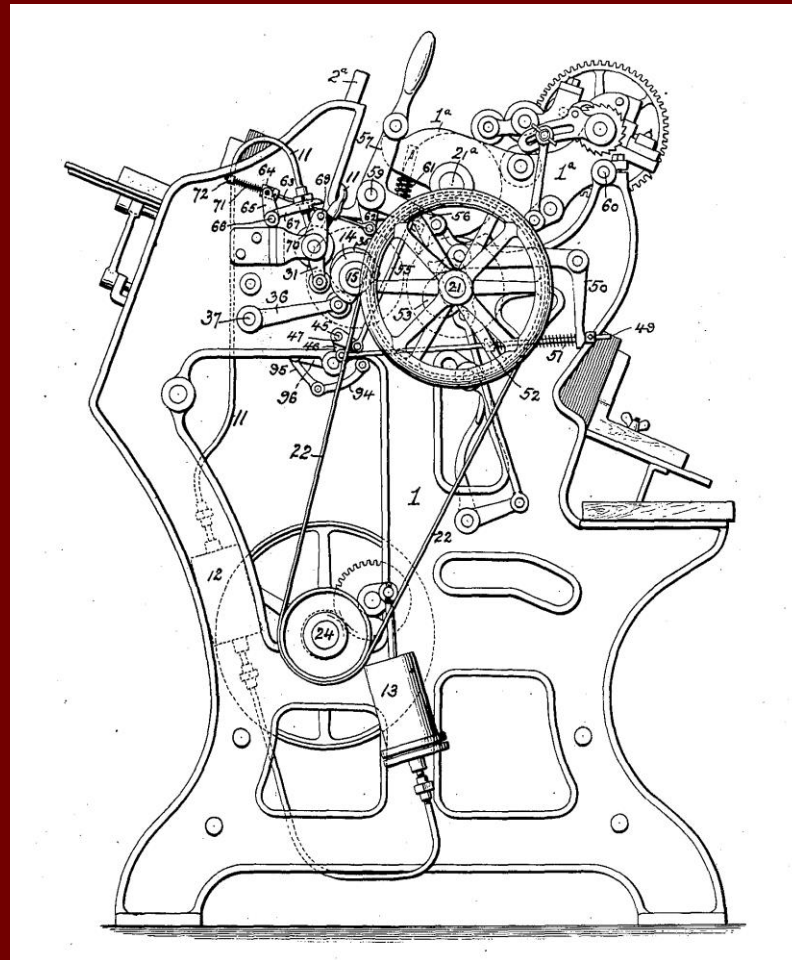
Locates in Dayton, Ohio to
be near paper supplier.

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



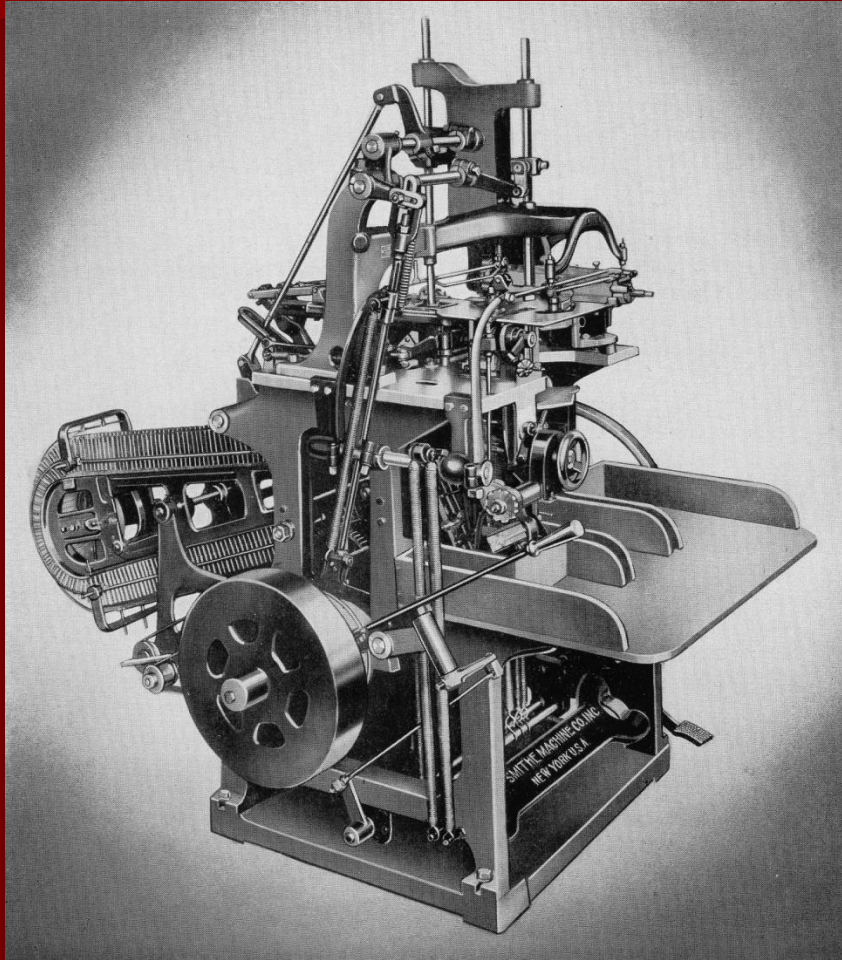
“Huckins” press in operation



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

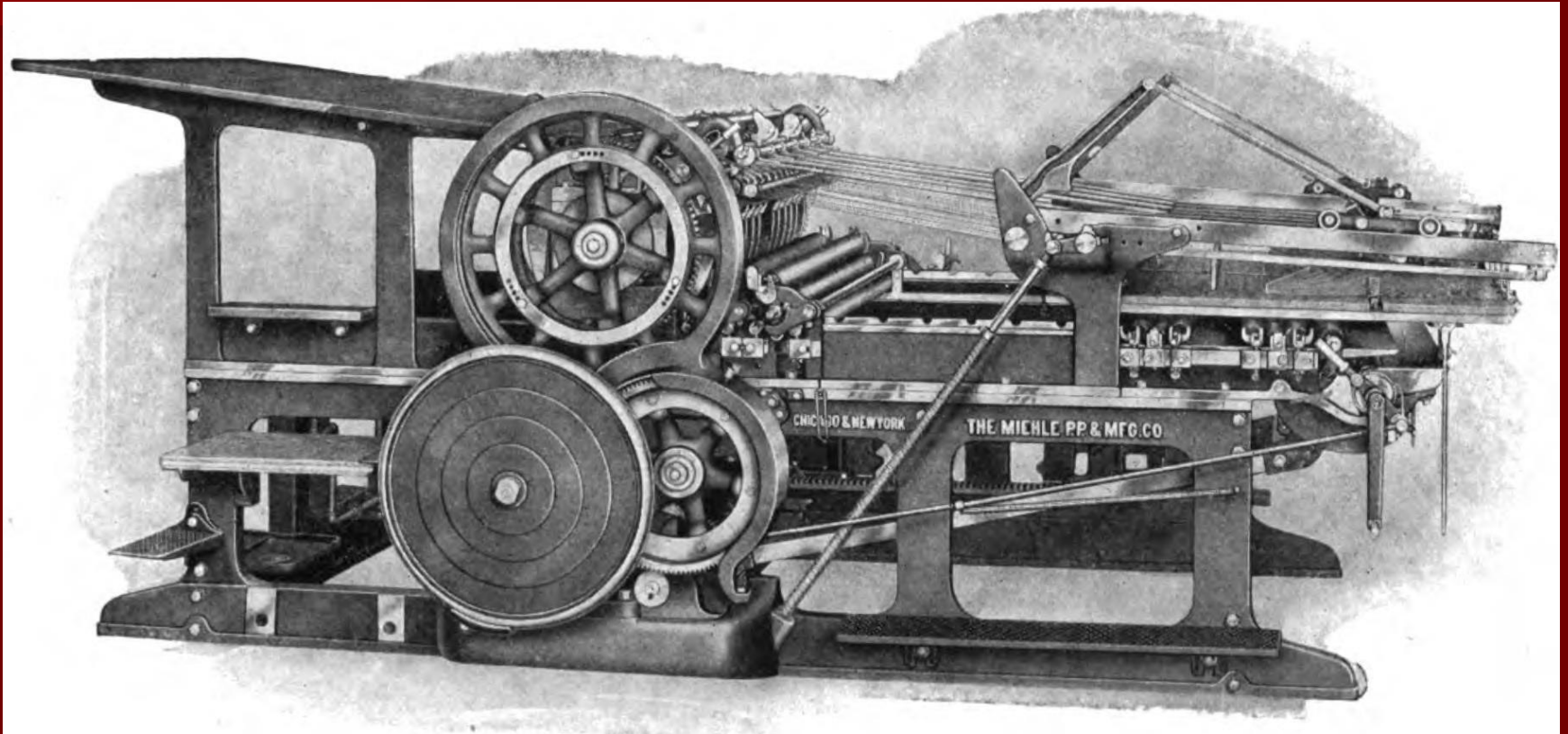
Schmidt Champion Plunger Machine



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”

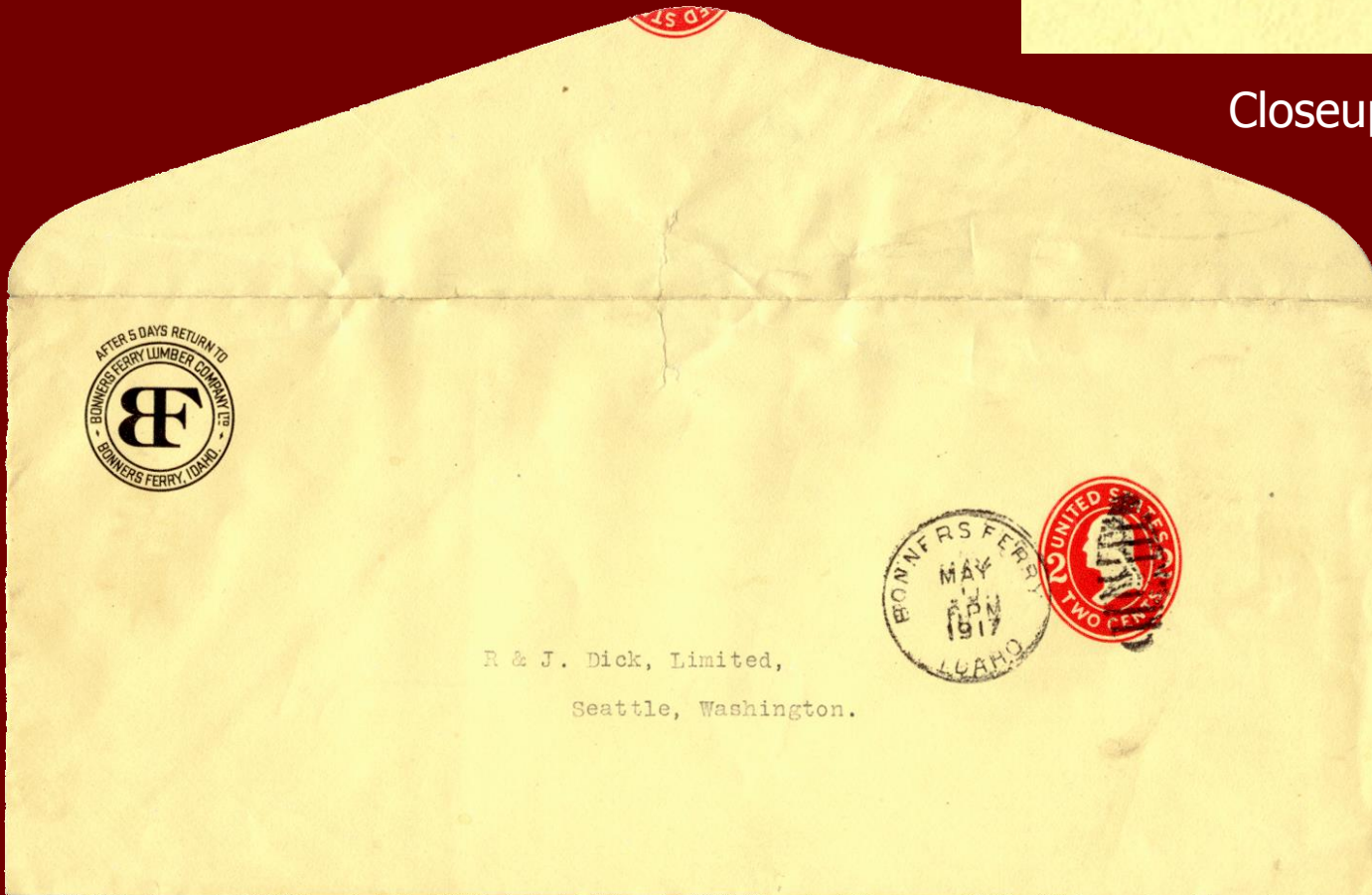


Cast iron behemoth; one version weighed 30 tons
Electric motor the size of a beer keg

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

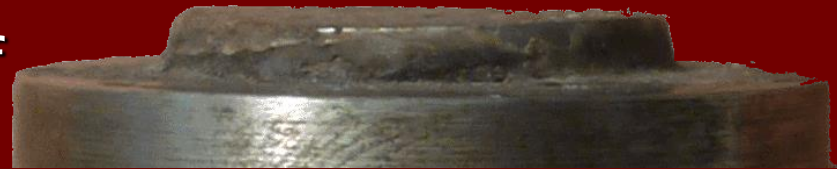
In 1910 Hartford Mfg Co. is bought by American Writing Paper.

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

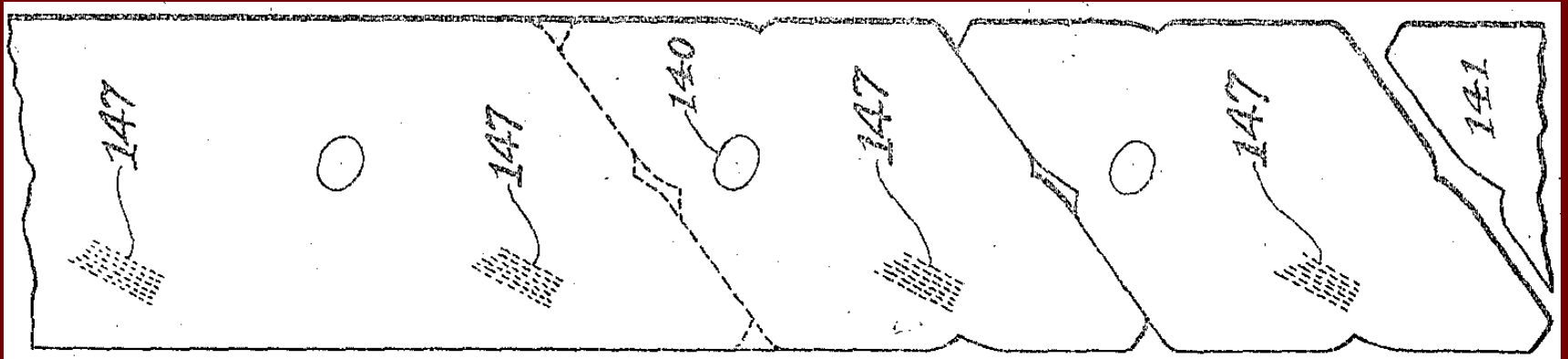
Used 1910 – 1932 (perhaps slightly longer)

Kenny machine

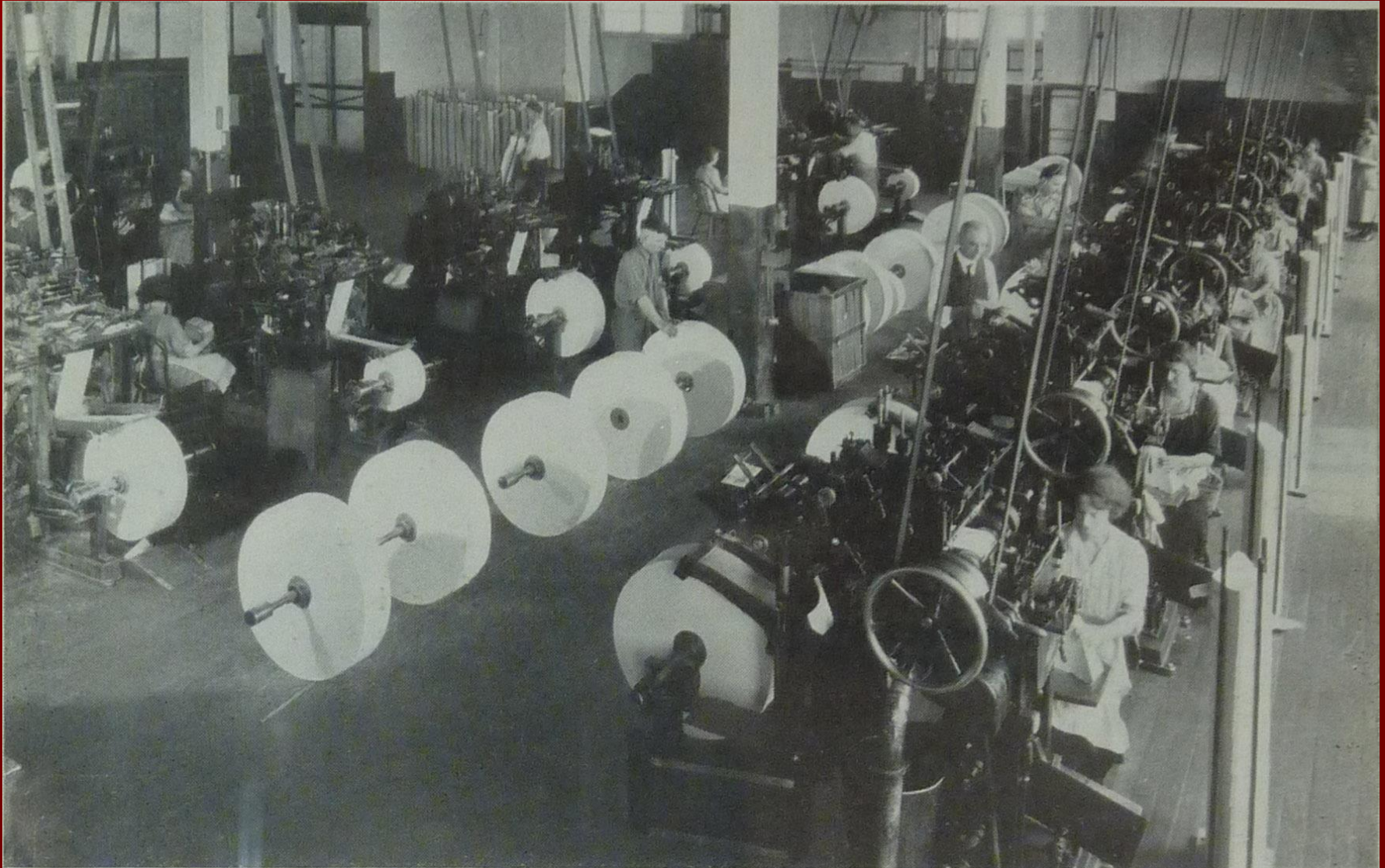
- Edward Kenny – engineer with Mercantile Corp.
- Rotary web press
 - Used 4 “spiral” dies each of
 - indicium and corner card
- Cut out envelope from web in several operations
- Still required another machine to gum/fold
- Needed a different envelope shape – low back
- Used 1912 – perhaps just a year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



How web is cut into envelopes



Kenny machines in operation



Middle West Supply Co.

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

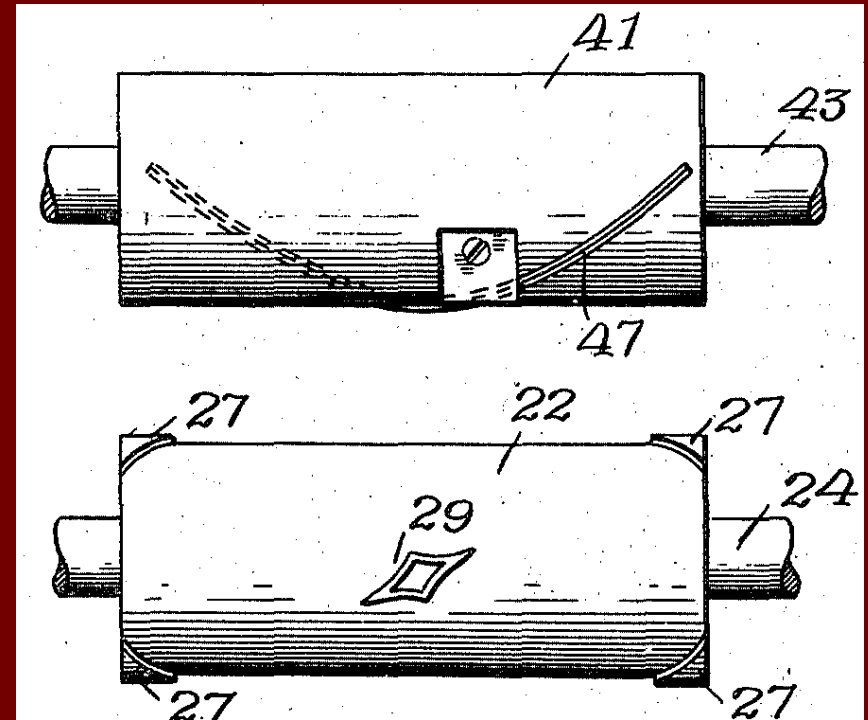
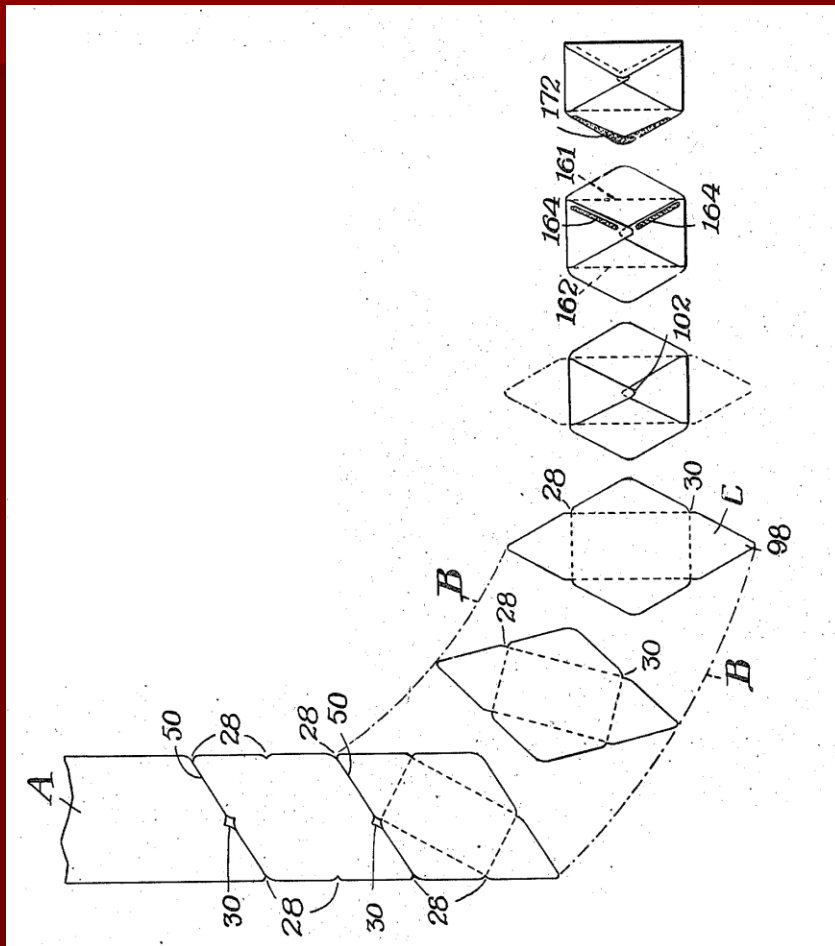
New machine was going to provide reduction in production cost.

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

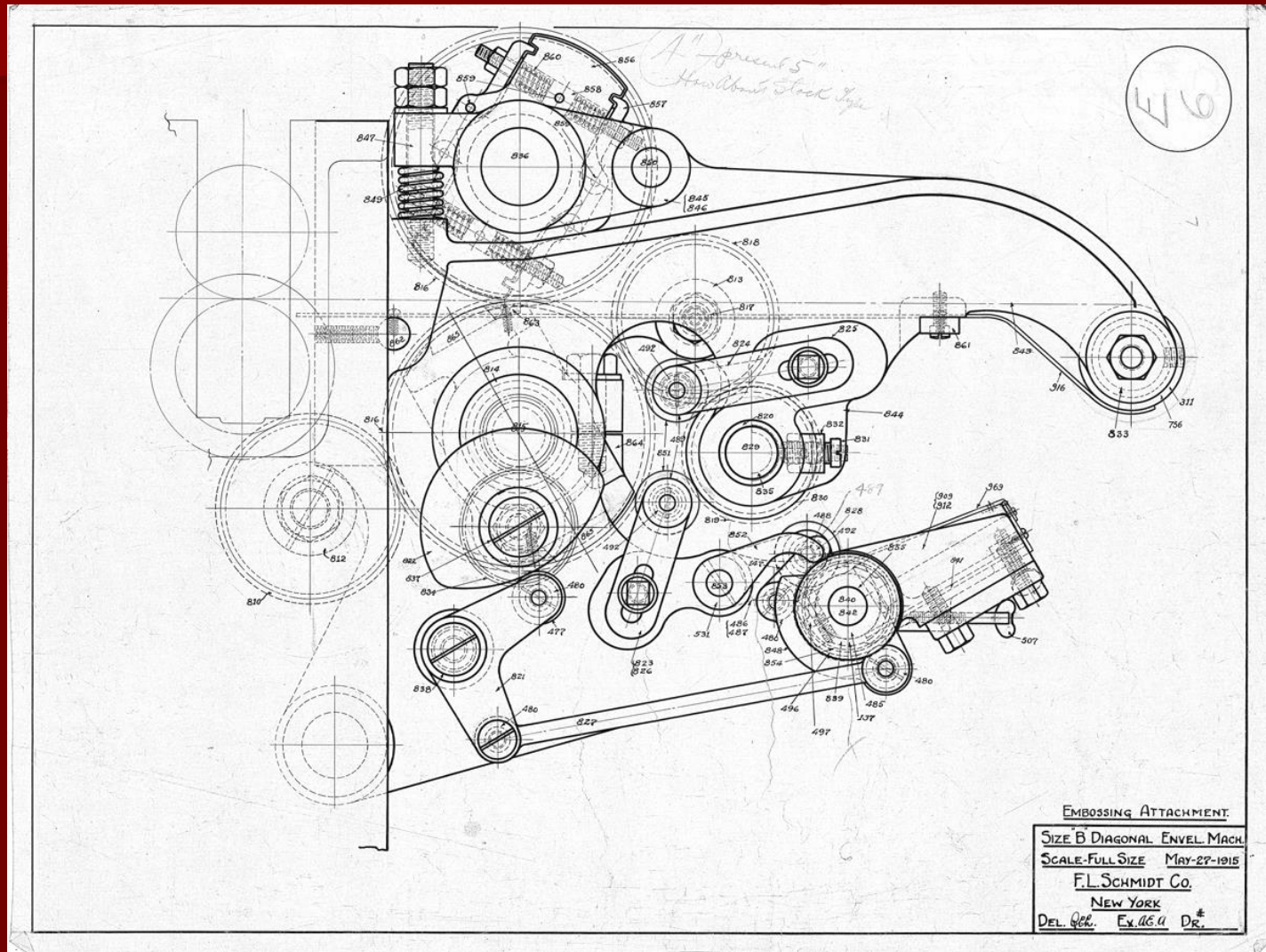


Operation Flow

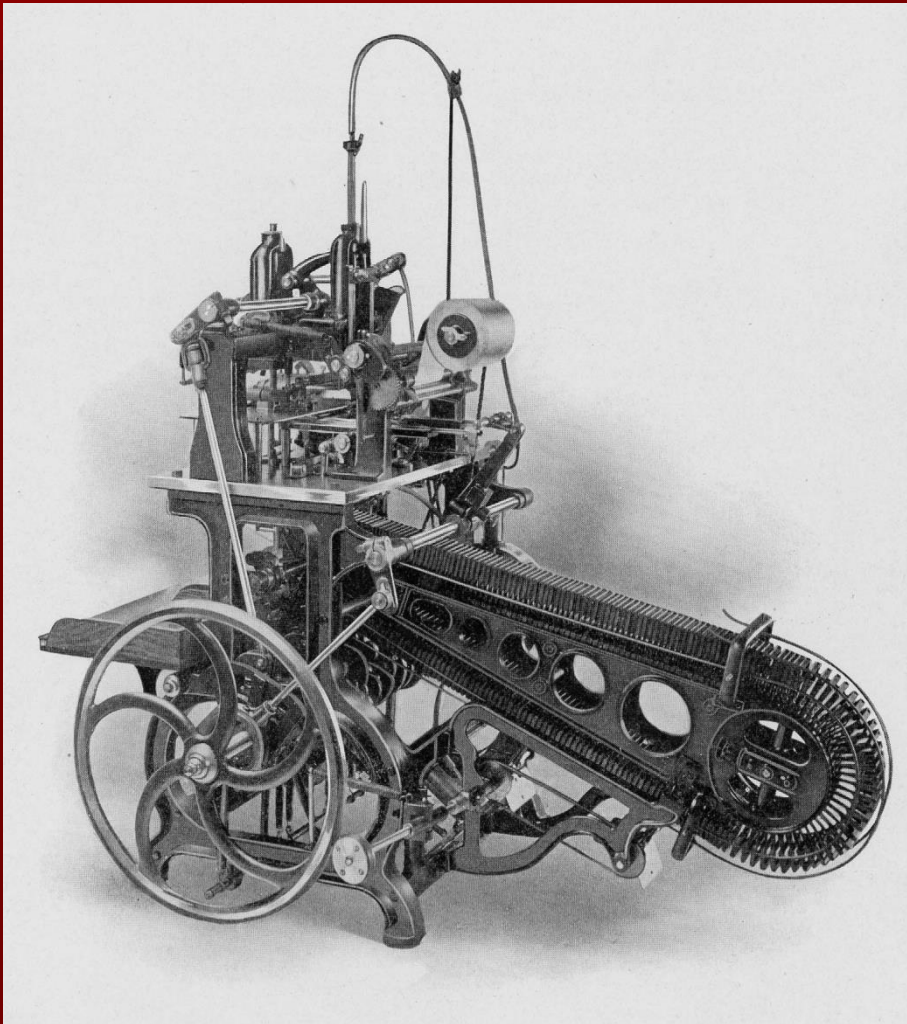


Cutting cylinders

Printing Attachment for "Diagonal"

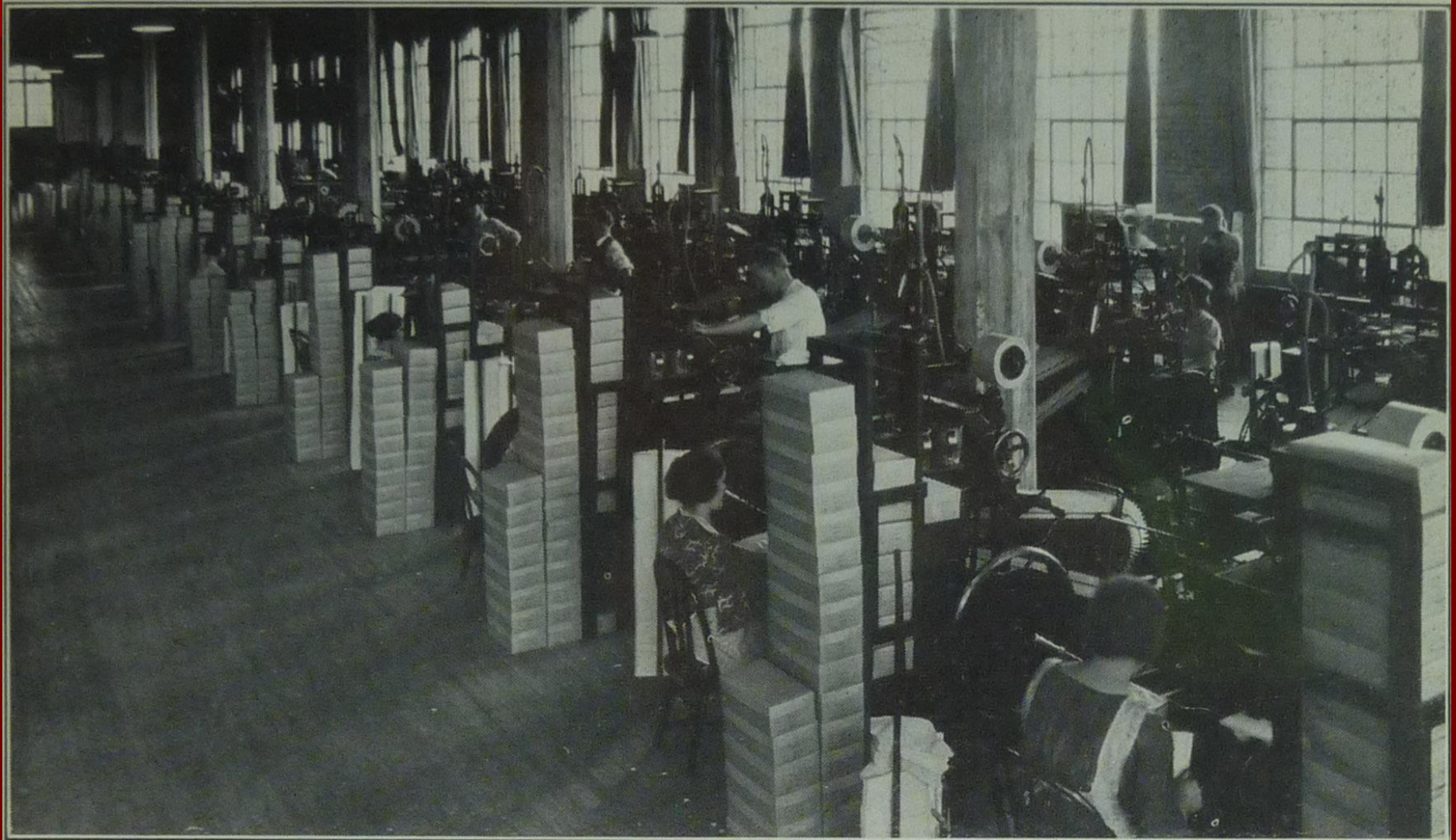


Schmidt Champion Open Window Plunger machine



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

Schmidt Champion Open Window Plunger machine



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

International Envelope

How do you print indicium in one color and precancel over it in another color?

How do you print airmail envelopes which have red and blue lozenges, indicium, and corner card in 2, 3 or 4 colors?

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 1929 - 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

1. Red and blue diamonds printed on a Miehle press (probably not the same as used by Mercantile) and cut into blanks

OR

1. Red and blue diamonds printed on blanks by Harris press
2. On Harris press: 1st cylinder: orange or olive stamp
2nd cylinder: black corner card

Or 2. Print orange/olive stamp and black corner card on Huckins

Airmail Envelope Miscues



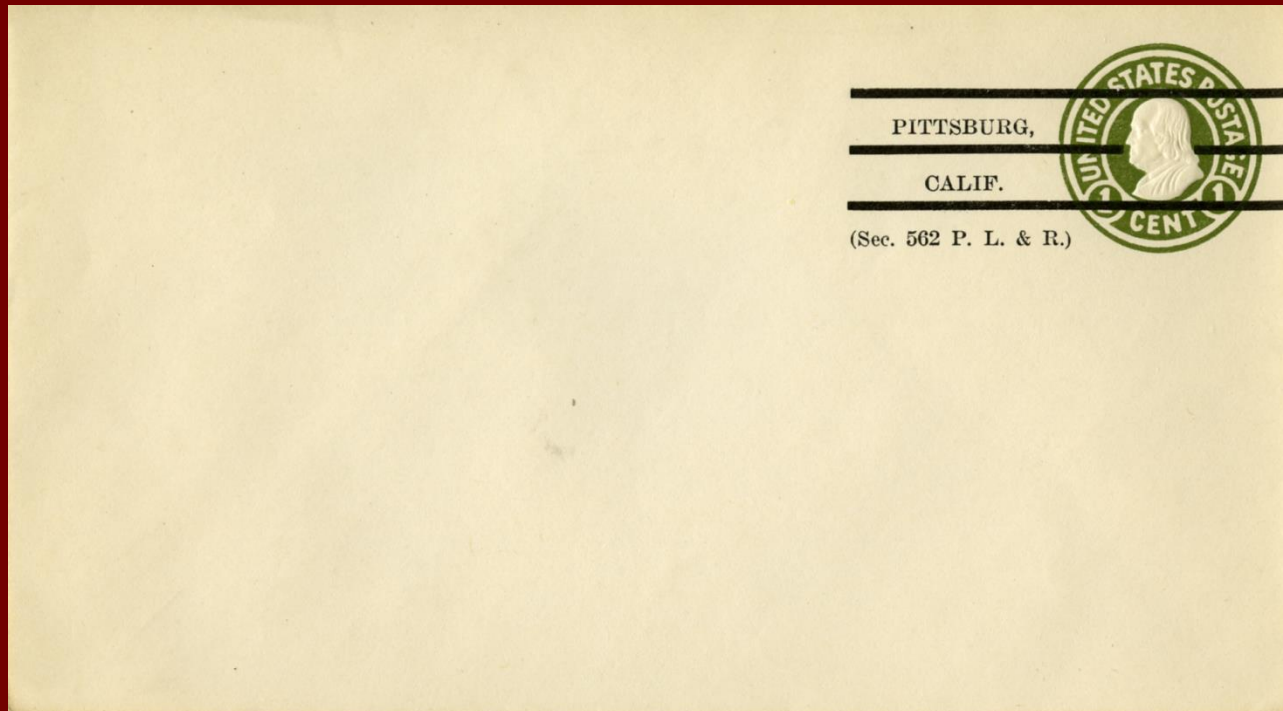
Albino 6c indicium



Lower images from Philatelic Foundation database of certificates

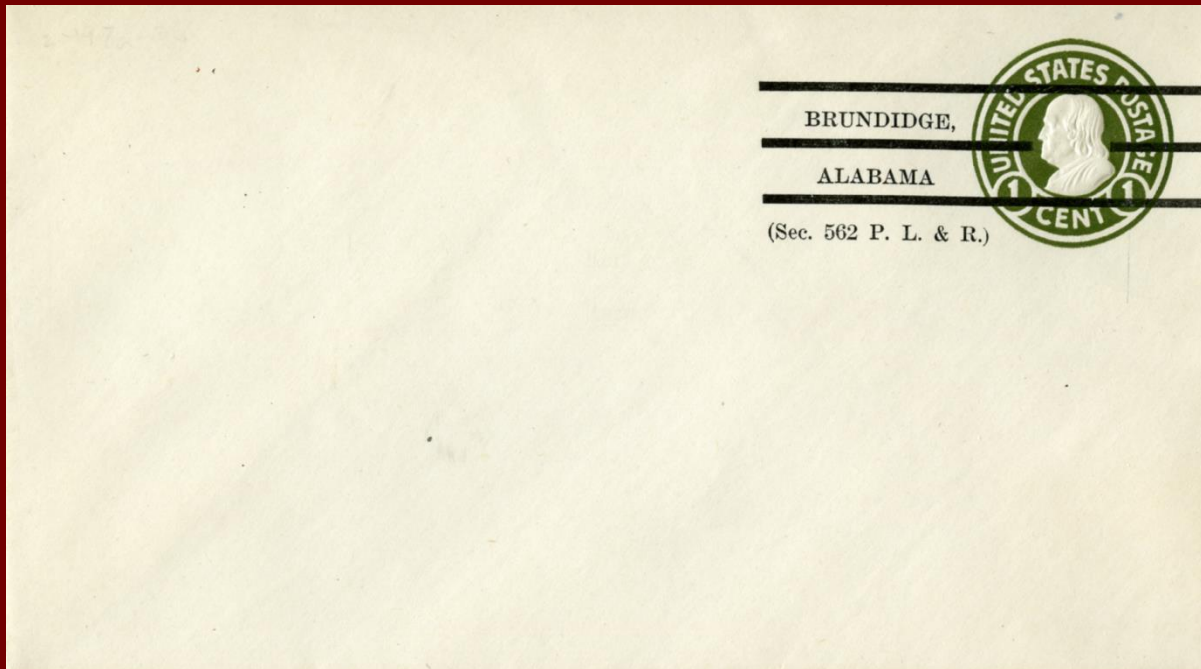
Precancel Envelope Production on Harris

- 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

1965 – End of an era

- As of January 1, 1965 the stamped envelope contract is handled by U. S. Envelope Co.
- New plant built in Williamsburg, PA
- New equipment

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 | 1907-1964 | 1907-1909 Maybe later | 1912-1925 | 1915-? | 1929-1964 | 1932-1964 |

References

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- 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.
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- Master and hub die images courtesy of National Postal Museum, Smithsonian Institution.