

# What are Those Extra Lines on your Gravure-printed Stamp?

Is it a Plate Scratch or Cracked  
Plate? No, blame the Doctor Blade.

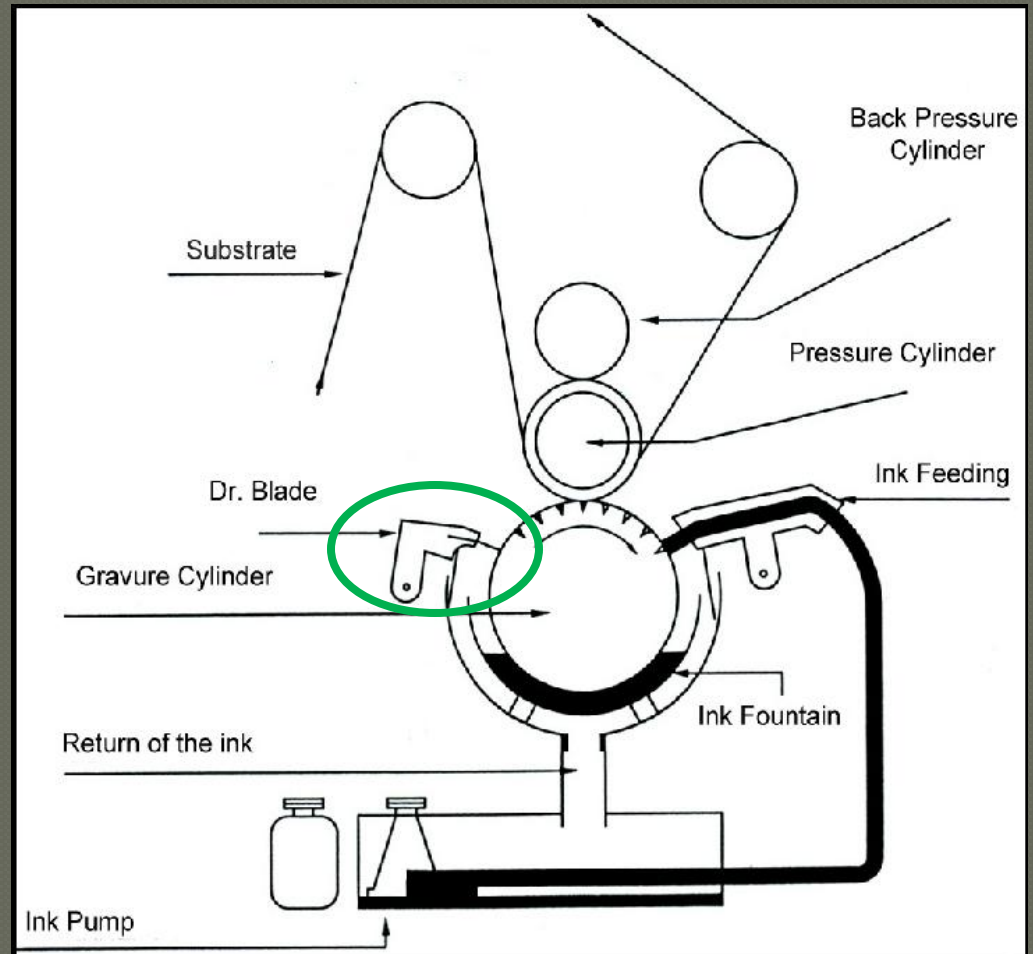
Charles J. DiComo, PhD

Philatelic Society of Lancaster County  
Bi-monthly Meeting  
August 26, 2020

*charlesdicomo@gmail.com*

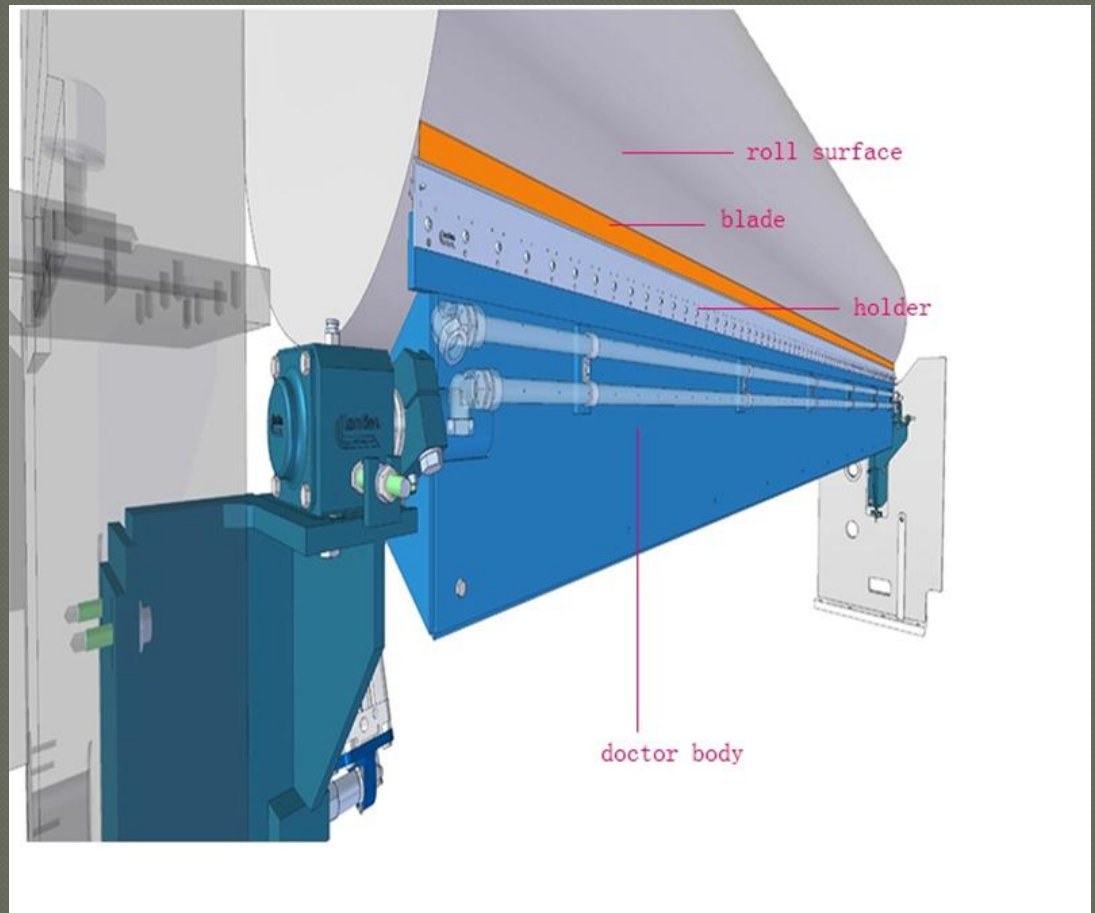
# Gravure Printing System

- **Gravure printing** (also called **intaglio**) uses an indented area of the plate (or cylinder) from which to **print**.
- Excess fluid (ink) is applied to the plate (cylinder).
- Excess ink is removed by the Doctor Blade.
- This leaves the raised areas free of ink.
- The ink is transferred from the depressed areas under pressure to the substrate (paper).



# The Doctor Blade

- The Doctor Blade (doctor blade) is a 0.004 to 0.015 inch thick high precision steel strip.
- It scrapes (or meters) away the excess ink from the roll surface.
- It then coats a precise film of ink into the recesses on the printing plate (or cylinder).
- The amount of ink reaching the plate (or cylinder) determines the accuracy of the printed image on the substrate (paper).



# Example of a Doctor Blade Flaw:

- U.S. #2346 25¢ Ratification of the Constitution Bicentennial, New York.
- Issued July 26, 1988, Tagged, Perforated 11.
- Printed by the Bureau of Engraving and Printing (BEP).
- Photogravure process.
- Plates of 200 in four panes of 50.
- Left: Typical example.
- Right: Atypical example with thin horizontal red line, edge to edge, through "New York" and "25"



Reference: "Blame the doctor blade for those streaks,"  
by John M. Hotchner, *Linn's Stamp News*, August 25, 1997



# Close-up of Doctor Blade Flaw: Due to Nick or Defective Edge

- Thin horizontal red line through “New York” and “25”
- Aligns with the direction of the paper going through the press.
- Not a scratch (curved) or cracked plate (irregular & branched)



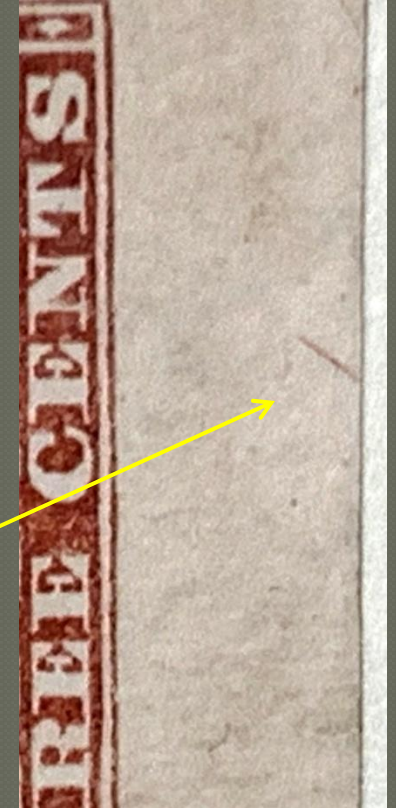
# Plate Cracks and Scratches



- The Big Crack
- #26 - 71L18
- Extended to 72L & 62L
- Expanded over time



- Plate Scratch
- #11 - 100L2L
- Visible in the margin
- Irregular, short, curved



# Thank you!

---

I would like to thank John Hotchner  
for his insights on gravure printing.  
Any error and/or omission is the author's  
responsibility.

*Prepared by  
Charles J. DiComo, PhD, ©2020*

*[charlesdicomo@gmail.com](mailto:charlesdicomo@gmail.com)*