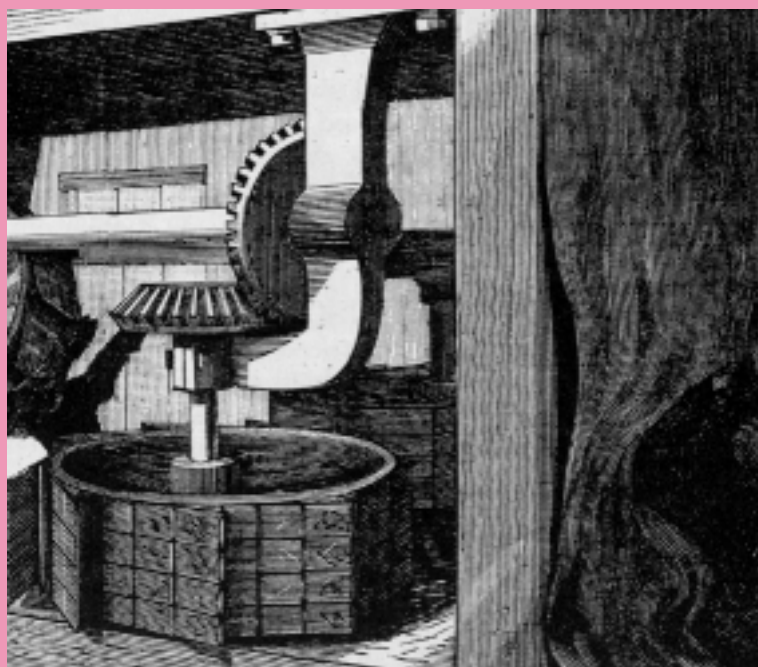
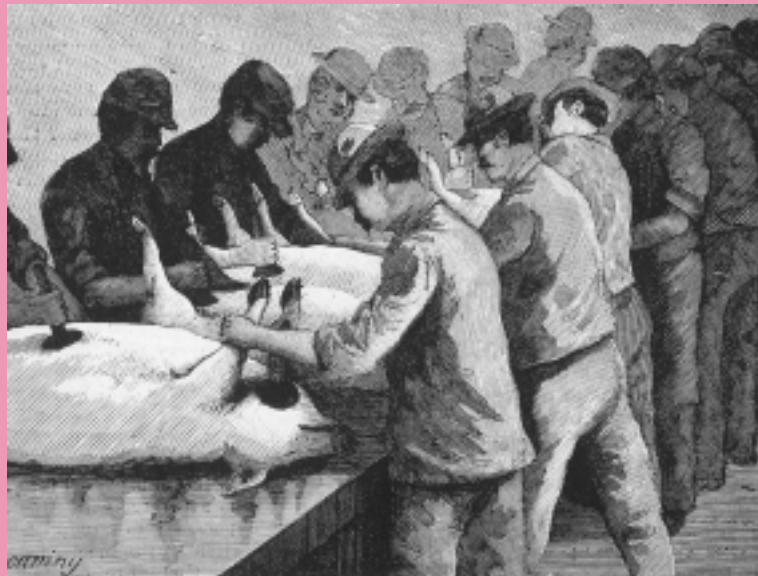




Then to one hind leg is attached a short piece of chain, having a ring at its opposite end, and into this ring the operator passes a hook on the end of a chain lowered from a roller overhead, the latter chain being steadily wound up by power. As the head of the animal is raised, another hook, suspended from a wheel, is fixed into the ring, and the wheel runs on a rail onward through several large rooms, always at an incline, down which the animal is carried by his own gravity.



Und Wort ward Wurst\*



The blood itself flows through an inclined grating into a receptacle below, and of itself is an article of considerable value.

Scientific American 1891  
\*Zitat Robert Gernhardt

# Scanning and Compression of Engravings

These engravings were scanned by HP6100C, 600 dpi, Indexed Color, 256 graylevels.

Increasing the contrast reduces the number of graylevels, but the image cannot be converted to pure black-white without loss of perceptual quality.

The scans were downscaled by factors 0.5, 0.6 and 0.7, using linear interpolation and averaging.

Finally the images were stored again Indexed Color BMP Grayscale. This means 256 graylevels, using a palette with equal entries for R,G and B.

In PageMaker, the images were synchronized for a raster frequency 144 dpi by MagicStretch.

Export to PDF uses the image resolution 72 dpi, newly calculated by interpolation. Compression mode is ZIP(4bit). Thus, 16 graylevels are used and the file size is reasonable - about 370 kBytes.

PageMaker interprets the source images correctly as Indexed Color Grayscale, probably by analyzing the contents of the palette.

Acrobat Distiller interprets these images as Color Bitmap instead of Grayscale Bitmap. Only these parameter settings are valid.

Combining all these techniques, Acrobat Reader doesn't show severe Moiré patterns for zoom = 100%. The esthetical effect of engravings could be preserved.

For a correct reproduction of the engraving quality a very high target resolution would be necessary.

About the previous page:

This is a terrible example of Engineer's Language.

Gernot Hoffmann

December 28, 2000

November 13, 2001

<http://www.fho-emden.de/~hoffmann>