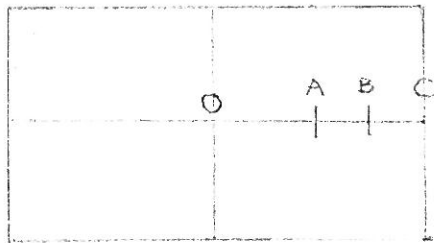


BEHAVIOR OF THE SSC PRINTER

An investigation of the effect of an oscillating lens, designed to give A_2 correction, incorporated into a CC printer was performed. It was desired to see whether the varied positioning of the printer lens would alter the A_1 correction and if so, to what degree and in what manner.

It has previously been determined that good A_1 correction is afforded by the use of a 35 m/m lens used at equal conjugates in conjunction with cylindrical gates of 60 m/m diameter. A test was made using these same gates in conjunction with a 50 m/m and a 35 m/m lens whose conjugate distances were varied to afford A_2 rectification for the half-way back position of a theater with a 140° throw from projector to screen.

Three positions of the film were tested in this manner. These positions are indicated below:



O - Center Position

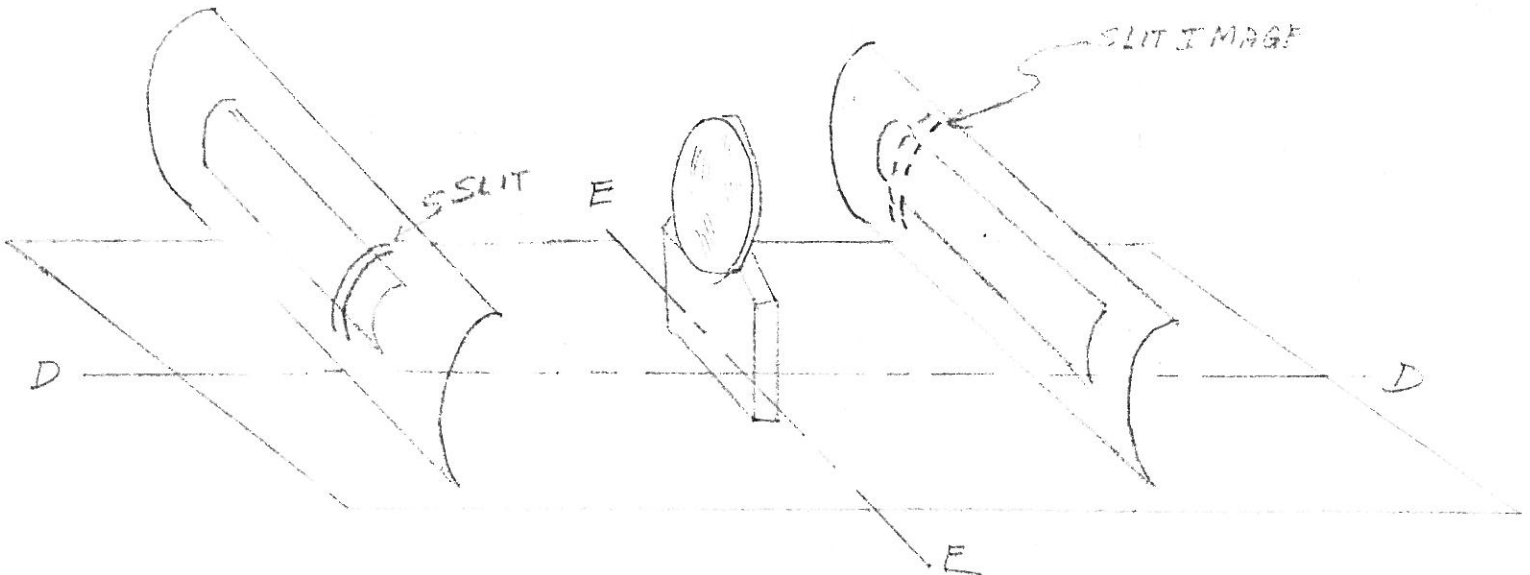
A - 50% of half-width

B - 75%

C - 100%

Negative

Positive



As the lens was moved along axis DD to give proper magnification for A2 rectification, it was also moved along axis EE so that the image would not be magnified laterally so as to give a true picture of the results of the SSC printer.

In reality a slit was not used but both negative and positive print were indexed at the theoretical slit position for the various lens positions. Prints were thus made of the center position and positions A, B, and C using both the 35 m/m and the 50 m/m lenses.

Results:

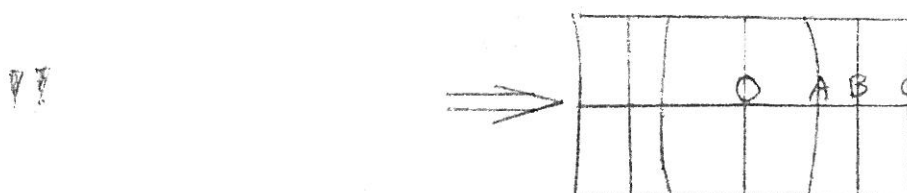
The original CC printer was designed to straighten edge lines. Other "vertical" lines were not completely rectified but were bowed to an extent which is quite tolerable.



Using the 50 m/m lens, as described above, under corrected all "vertical" lines. Those at positions A and B were not tolerable.



Using the 35 m/m lens, as described above, under corrected position A, corrected position B, and over corrected position C. Positions A and C however were bowed to approximately the same magnitude as the bowed lines in the original CC printer and are deemed quite acceptable.



Conclusions:

It is felt that a CC printer designed for use with a 35 m/m lens can have A_2 correcting action introduced in its operation to any varied amount without appreciably affecting the A_1 correction.

GRSimpson/bmu

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