



HOW A  
**BOOK**  
IS MADE

Wm. B. Eerdmans Publishing Co.



A  
PICTORIAL  
FEATURE



**A**ll that mankind has done, thought, gained, or been: it is lying as in magic preservation in the pages of books. They are the chosen possession of men . . . whatever be the outward form of the thing (bits of paper . . . and black ink), is it not verily, at bottom, the highest act of man's faculty that produces a book?"—Thomas Carlyle

An author, besieged by characters his mind creates, may peck furiously at his typewriter, sit distractedly biding inspiration (*left*), scrawl spasmodically with a heron quill. Whatever his mood or method, he probably strains. Writing is hard work, and results unpredictable; but he has a message, and won't achieve mental rest till his thoughts become "bits of paper and black ink." From typewrite to book shelf is an involved, multi-stepped process.

Ruby Evans Grimes, a Californian, has finished her first manuscript, *I Shall Dwell*. Between typewriter and mailbox were various tedious steps: thinking, working, sleeping her characters; outlining thoroughly people, plot, climax and culmination; drafting the original of the historical novel—first in a trilogy on the Biblical David; revising the manuscript; rewriting; typing in finished form; copy reading for final revisions; and at last, packaging the precious bundle and trudging to the mail box (*above*).



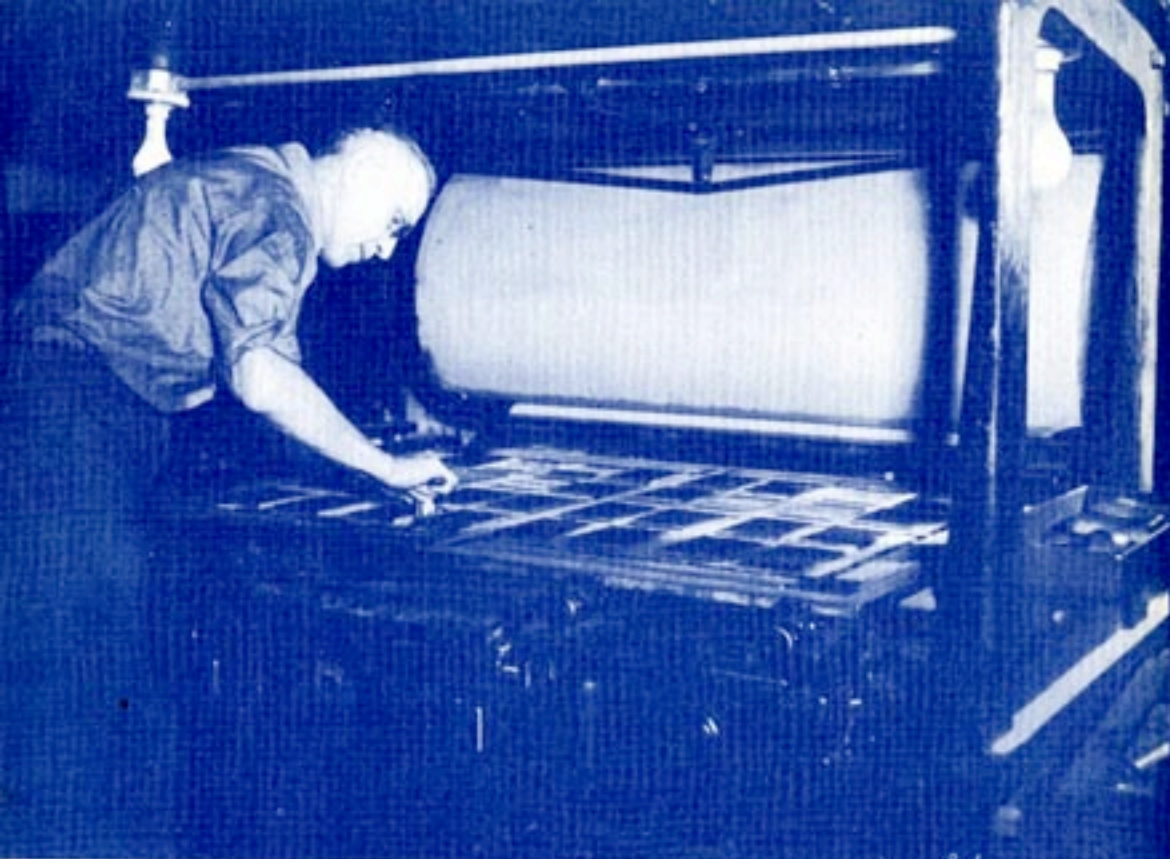
**W**hen the postal truck delivers mail to Wm. B. Eerdmans Publishing Co., Grand Rapids, Michigan, it often leaves a package 8½" x 11" x 2". Instinctively, General Manager Don Norman (*left*), braces for another manuscript. For final decisions, Norman confers with William B. Eerdmans Sr., publisher (*right*), who has supplied Christian literature around the globe for 35 years. Literary merit, plot delineation, character portrayal, and theological soundness are all check points for final selection. Having reviewed the manuscript and reached a decision, Mr. Eerdmans calls his stenographer to his handsomely appointed office for dictation of the verdict.



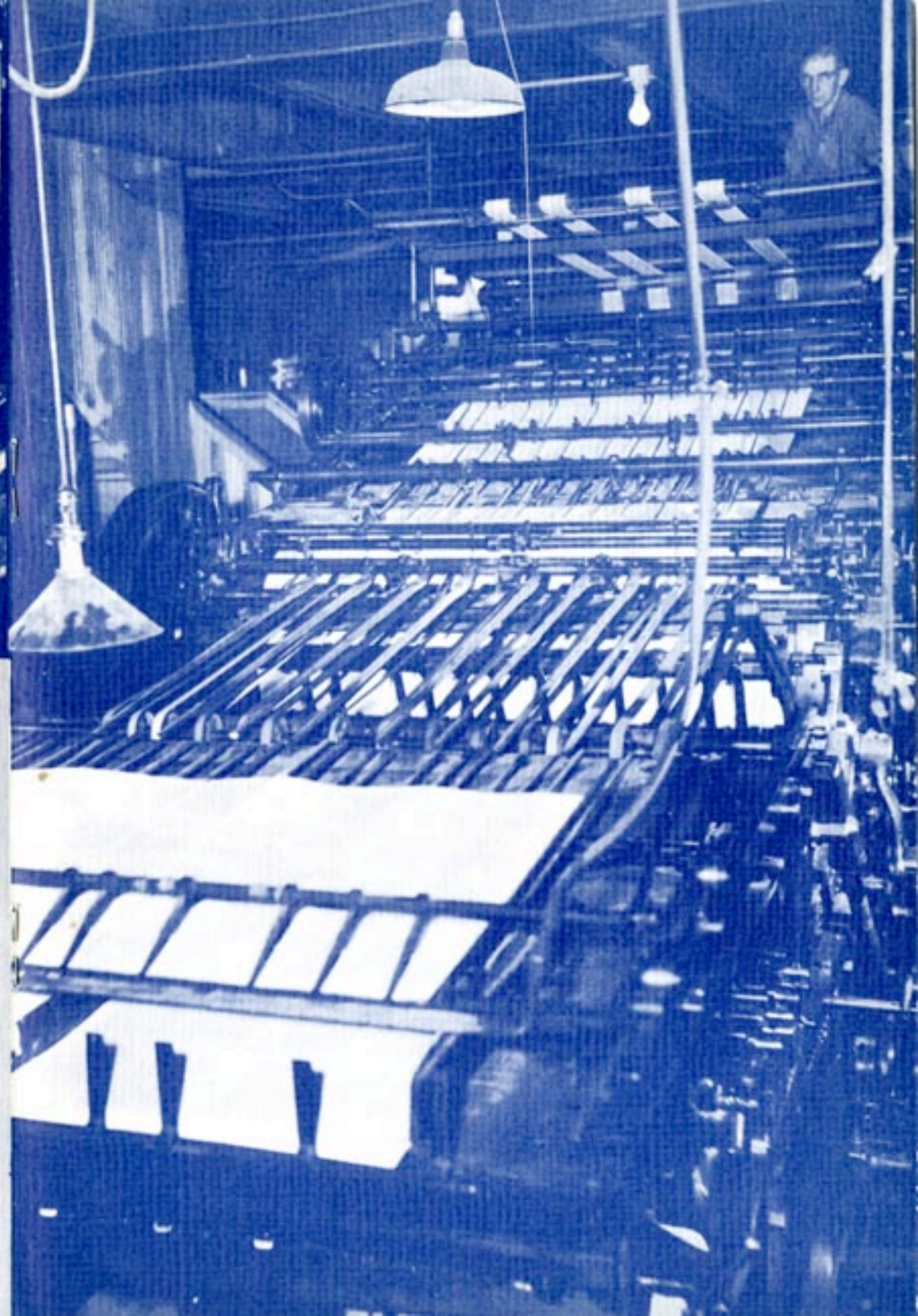
**S**crutiny by the printing plant manager, who determines type style and size, and page size, precedes the first mechanical step—setting the copy in lead type, duty of the operator at the electrically-powered linotype machine. The heavy “magazine” of letter forms is inserted in the machine, and the operator’s sensitive fingers glide lightly over the typewriter-like keyboard (top, left), to average eight galley (or one line 960 feet long) of cast lead sentences in an eight-hour day.

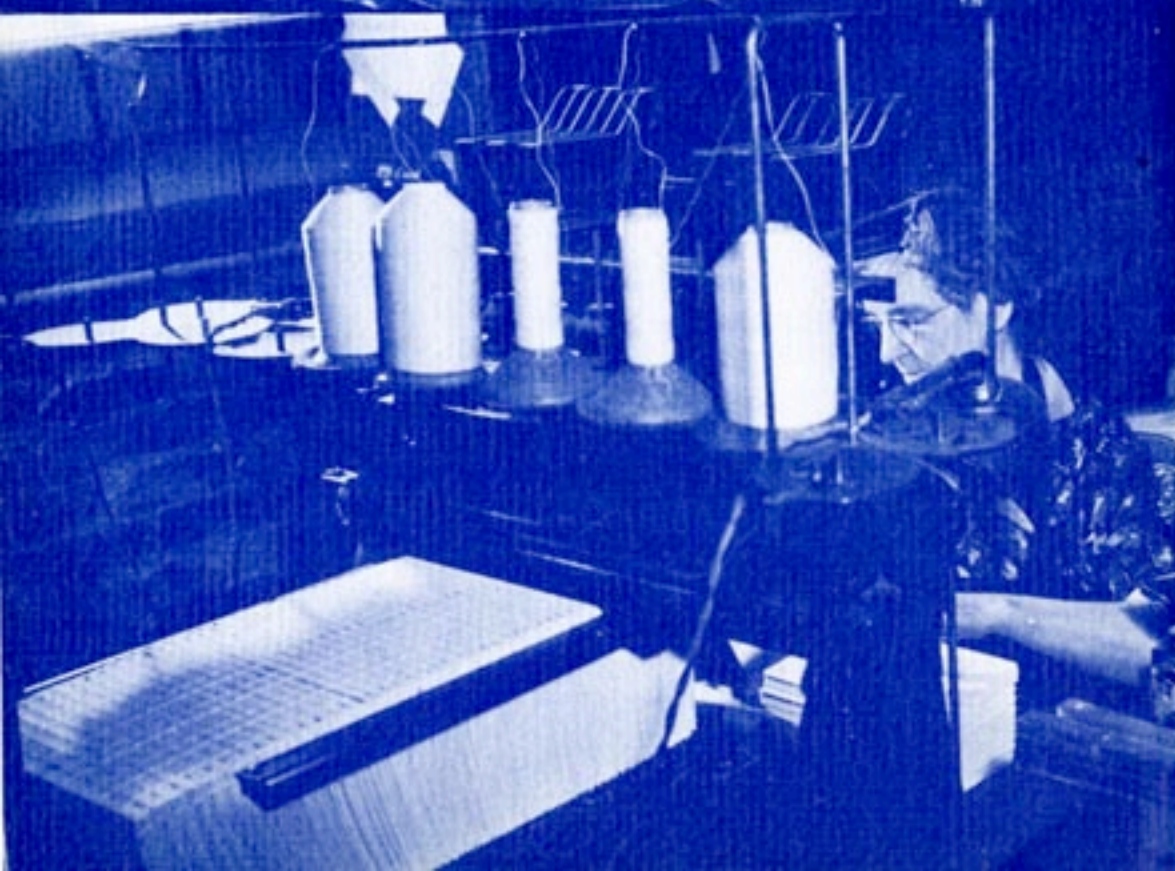
After a galley of type is set, the lead is inked and a “proof” taken for the girl (bottom, left) who reads in search of mistakes till she can’t even read for fun. She has a language of her own, which the layman sees only as “doodles.” Her work-a-day world is made up of transposed letters, jumbled lines, inserted commas and misspelled words. Under her selective eye, each line of lead type containing an error is returned to the linotype for an accurate slug.

All corrected galley goes to compositors (above) who measure the type into pages, lock each series of thirty-two into a steel frame and load the entire 175 pounds onto a portable table-truck for transport to the press room on the ground floor.



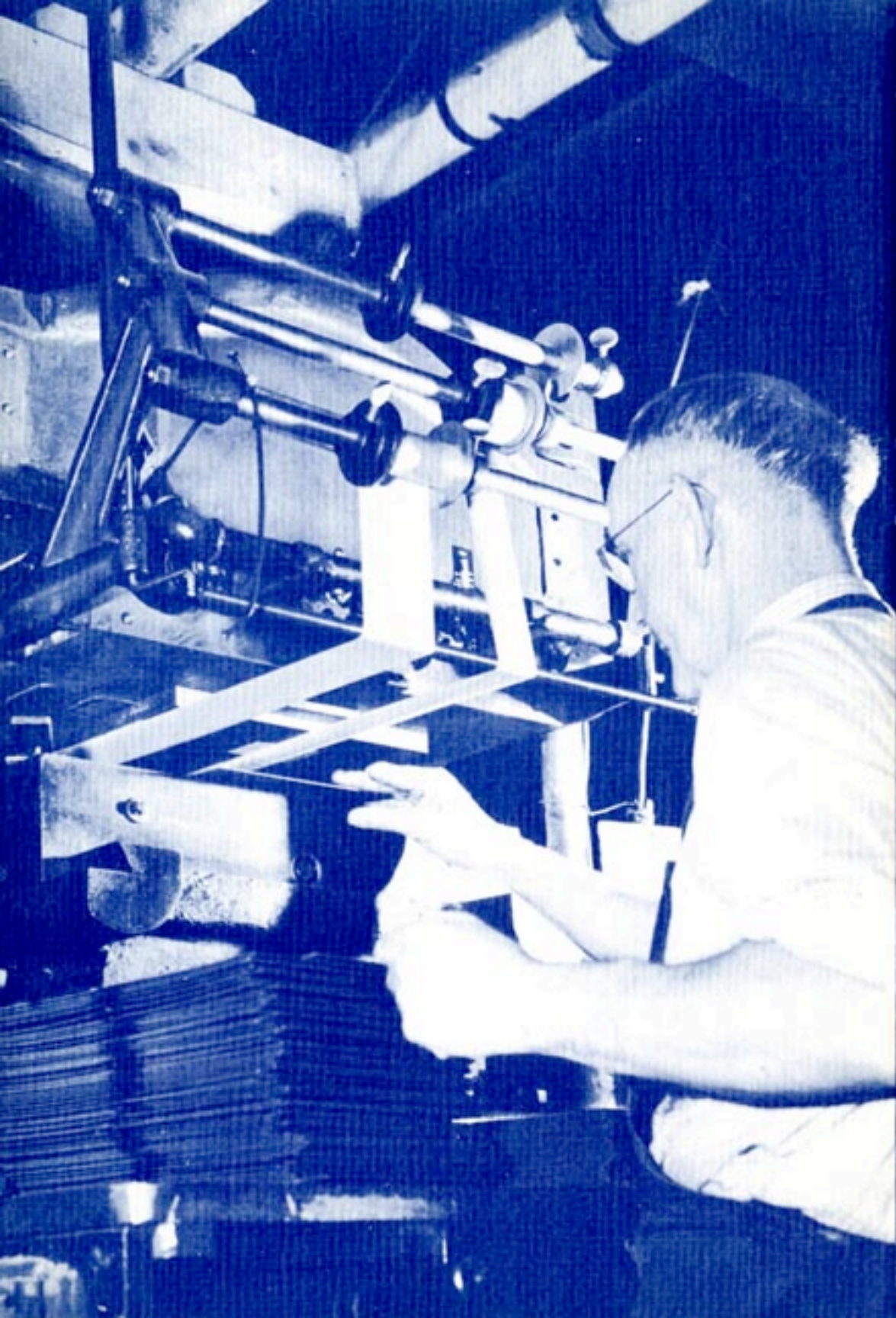
Slid from the portable truck onto the horizontal press "bed," the type forms become the pressman's responsibility for a short two or three days or an extended fortnight, relevant to the length of the book. *I Shall Dwell*, with its four-hundred pages, remained in the pressroom 12 days under a premier requisition for 5,000 copies. The pressman's duty is a two-fold process, known to the trade as "lock-up" and "make-ready." These may take as little as half an hour, or as much as three hours for each form. In a large 400-page book, lock-up and make-ready occur thirteen times. Attention to these processes determines printing quality, and most printers claim that the clear, even appearance of the printed page is worth three hours of screwing and tightening the type forms (above), and leveling "low spots" on the tympan (large cylinder at rear). Once satisfied, the pressman hoists bulky paper bundles onto the high platform at the back of the press and pushes a button to start the automatic Miehle on its 1,500 sheets per hour assignment (right). In addition each day the press must be washed with solvent, and the type scrubbed for storage in event of a reprint.





During the second press run each 64-page sheet (a 32-page form printed on each side) was slit automatically in half. A later cut enables the folding machine to create a neater, three-way fold of only 16 pages (top, left). Turning out 2,700 of these "signatures" in every hour, the folding department keeps busy numerous employees who "gather" the signatures into a complete, orderly book. If the book is illustrated with any full-page plates, these must be "tipped" in by hand during gathering process. To hold the signatures firmly in place, they are stitched on a specially constructed sewing machine (bottom, left) with sturdy curved needles. Then to add endurance to the volume the front section is glued to the second section; and the newly formed book is subjected to tremendous pressure, embedding the stitching and "smashing" out air.

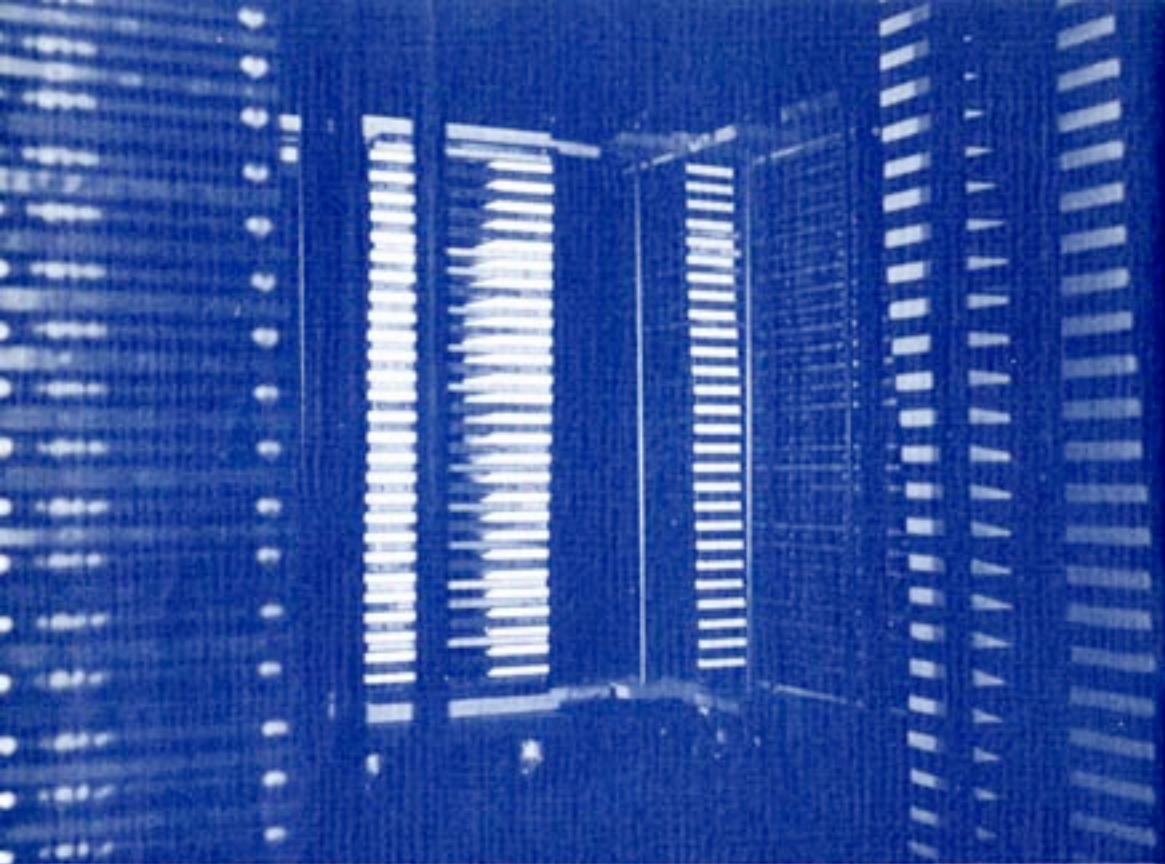
The cutting machine (above) is a merciless tyrant that guillotines in efficient decision, while the operator shoves stack after stack of coverless books into the path of the razor-edged knives. In the case of *I Shall Dwell*, the semi-automatic machine managed four books at one time with a regular rhythmic swipe, flinging away three edges simultaneously.



**N**ow starts the binding, a series of processes distinctive to book publishers. When the heavy cardboard backs are cut to precise measurements, they are tightly stuck with flexible glue to fabric (or fabricoid paper), and the "super," a narrow length of stiffened cheesecloth material, is inserted along the back of the book cover to create a strong hinge. The cover is then ready to go to the stamping machine (*left*) for titling. Here rolls of gold foil wind through the machine, until twenty tons stamping pressure brings cover and foil together.

In the meantime, the book itself has been removed from the "smasher" and trucked to another machine to be "rounded and backed": "rounding" gives a concave appearance to the book's front edge, and a convex appearance to the back edge. "Backing" occurs when a small pushing anvil slightly fans the back edge of the gathered folios, forming a hinge basis necessary to faciliate opening and closing of a book.

The cover and book finally come together at the "hanging-in" (or casing-in) machine (*above*), where the end sheets pass against gluey rollers, the cover slides out from a hopper, and the book reappears firmly encased.



**B**ook presses (top, left) stand around a bindery an easy six feet high, their brass ferrules exerting a great pressure to crush the freshly encased books into trim, compact volumes, well-hinged.

Some short time before, the artist has gotten his assignment to design a jacket for the book soon to hit the market. Imagination, knowledge of public demand, and adequate equipment are supplements to the artist's talent. Jack Wells, Eerdmans' designer, frequently uses his air brush (bottom, left) to complete the desired effect on a jacket lay-out. From his drawing, color-registered engravings are made, and the jackets are printed on a small automatic press, and dried quickly by a powerful squirt of non-offset wax from a spray gun.

Jacketed by hand, the books are ready for shipping room procedures, which include wrapping for immediate mail, or for storage. Stored in boldly identified blocks on the third floor, the books await orders from retail stores all over the country. To facilitate removal from this third floor location Eerdmans have contrived an unusually spacious and powerful elevator (above) which opens at the back on the driveway to admit postal or delivery trucks. These trucks are hoisted from ground level to third floor to facilitate pickup.



Thrilled with her own "bits of paper and black ink" Mrs. Grimes (above), author of the currently marketed *I Shall Dwell*, caresses with fingers and eyes her first manuscript in authentic book form.

"On all sides, are we not driven to the conclusion that, of the things which man can do or make here below, by far the most momentous, wonderful and worthy are the things we call books! . . . They are the chosen possession of men. . . ."—Thomas Carlyle.

Pictures and story by John and Charlotte Meredith