

"One of the principal means of reducing overtime has been the more complete mechanization of mail rooms, particularly the conveyor systems and automatic tying equipment."

— NELSON DODGE,
Assistant Circulation
Manager, South Bend, Ind.,
Tribune

CHAPTER 10

From Press to Loading Dock

TIME-SAVING PROCESSES that will shorten the period between the moment the paper leaves the press and when it reaches the hands of those who read it, are essential in any well-run circulation department. There are three stages in delivering papers where certain details of action must be carried out swiftly: (1) from press to loading station, (2) from station to carrier, and (3) from carrier to subscriber. Publishers or circulation managers constantly strive for improvements in these areas of operation.

METHODS AND EQUIPMENT NEED STUDYING

In moving papers from press to loading station the aggressive newspaper owner, regardless of the size of his newspaper, and whether it is a daily or a weekly, gives careful attention to requirements for speed in:

1. Assembling and stuffing when there are several sections of the paper.
2. Counting papers, and stacking or bundling them for convenient handling.
3. Labeling bundles to be transported to different areas.
4. Wrapping, addressing and reporting weight of papers for mailing.
5. Moving bundled papers out of the plant.

When considering a reorganization in the handling of printed papers ready for delivery, there are three possibilities to consider:

1. Rearrangement of present facilities.
2. Better use of available man power.
3. Addition of labor-saving or time-saving equipment.

It is a generally accepted fact that most men are allergic to moving furniture, and publishers are no exception. However, rearrangement to make more efficient use of available equipment and man power has proven profitable in many newspaper plants and probably could speed up the handling processes in many more.

If no further improvement can be made in use of existing facilities, the publisher or circulation manager will want to examine the possibilities offered by modern machines. When considering the purchase of new equipment, three factors should be studied:

1. Which machine is needed most?
2. Cost — will the machine pay for itself?
3. Is there space available for the machine?

Weekly Publishers Analyze Their Situation

The amount of circulation regulates the need for and operating economy of machinery for handling papers.

"The mechanical operation involved in mailing 1,500 to 5,000 newspaper copies per week is not a complex one," says Bruce R. McCoy, manager of the Louisiana Press Association. "The small publisher who prints not more than one newspaper in a plant and who goes in for conveyor belts, bundle wrappers and the like probably ought to have his head examined. However, the installation of modern addressing equipment, if not overdone on the expense side, does make economic sense."

McCoy further points out that there is a scientific business approach to the problem of efficiently handling, mailing and delivering a small newspaper which does not involve the installation of costly patented equipment. As an example he cites the Thibodaux, La., *LaFourche Comet* (circulation 3,648, population 7,730), which by careful planning for its 3-section weekly issue of 20 or more pages puts the last run on its Goss flatbed press at 9 A.M. on Thursday and has all papers out of the shop by 1 o'clock lunchtime. The process followed in the *LaFourche Comet* plant is described by J. N. Silverberg, publisher, as follows:

Prior to going to press with the first section either on Monday or Tuesday, the pressman is given his weekly breakdown sheet, a form approved by the Audit Bureau of Circulations, which tells him the exact number of half-fold and quarter-fold papers that are needed. The half-fold papers, which are delivered to newsstands, are handled first.

The sections of the paper are stuffed together by the pressman, the cleanup boy and the man who operates the teletypesetter.

The circulation manager — who, by the way, is a young woman — counts out the papers for the newsstands with the help of the delivery-

man. As soon as enough copies are ready for the newsstands in the immediate area of the plant, the deliveryman loads his truck and starts on his rounds. The circulation manager, assisted by the pressman and cleanup boy, continues to count out papers required for other newsstands.

When the half-fold papers are out of the way, the circulation manager begins addressing copies for mail delivery. Papers going to Thibodaux residents and rural and star route patrons are handled first, next those going to other towns in the parish and finally the out-of-town papers. The mailing trays are set in the plate cabinet in that order.

After those papers are out of the way, the circulation manager gets the single wrappers ready. By this time, the deliveryman has completed his newsstand route and immediately takes the Thibodaux city and R.F.D., star route and early-mail papers to the post office. When that is done he loads for his out-of-town newsstand deliveries.

"There really is nothing remarkable about our operation," adds Mr. Silverberg. "We're in business to make money as well as to put out a good newspaper and we know that lost hours cost money."

ADDRESSING EQUIPMENT ESSENTIAL

Most weekly papers find modern means of addressing and tying papers ready for delivery a real economy. To take time away from important work in the weekly newspaper plant, such as typesetting and job printing, to handle the mailing is expensive. Furthermore, new methods get the paper out faster, and readers of weekly papers like to receive their papers promptly the same as readers of dailies. Saving time and reducing expenses are just as important to the small as to the large newspaper.

Many small weeklies formerly using hand-operated, label-pasting machines have changed to modern addressing equipment for three principal reasons:

1. It moves the mailing operation from the back shop to the front office. Instead of a printer or operator taking time away from his machines to produce new slugs for mailing galleys, a girl in the office cuts stencils for the addressing machine. This may not save much time, but the work is done by an employee on less pay, and the regular work of the operator will not be delayed.

2. By using the addressing machine instead of the hand mailer fewer mistakes are made and there is no danger of the address becoming unattached from the paper. Therefore, subscribers are assured of better delivery service.

3. With the addressing machine it is easier to make changes or additions to the mailing list and keep it constantly up to date.

After using a Horton mailer for thirty years, the Geneva, Nebr.,

Signal (circulation 3,617, population 2,031) installed an electrically operated Graphotype and a Model-1700 Addressograph.

"Under the old system we corrected the galleys of type once a week, the job taking several hours," says Tyler Edgecombe, publisher. "Now the bookkeeper keeps the plates corrected each day so when we go to press the list is right up to date. We do not think the new system is any faster in mailing than the old one, but it may be more accurate since the name of the subscriber is stamped on the paper, while under the old system a label would come off occasionally. The Addressograph can be set also to throw out the plates of subscribers whose time has expired."

John G. Sanders, editor and manager of the Auburn, Nebr., *Press-Tribune*, issued on Tuesday, and the *Nemaha County Herald*, published on Friday (combined circulation 6,118, population 3,422), says that he has been saving \$40 a month since he installed an Elliott-600 addressing machine. He formerly used a Wing hand mailer.

"It was not the actual mailing but maintaining the list that was our problem," he says. "Copy was prepared by the office girls, set by the Linotype operators, proofed and made ready for printing. Our schedule called for correcting the list forms once each month, but it seemed we couldn't find time at the right moment to make corrections and additions with the machines. We found ourselves going from three to four months with the girls having to make corrections by hand for each mailing. Furthermore, subscribers often complained that their papers failed to come, and the cause was traced to loss of labels in the mails.

"Then we purchased an Elliott-600 addressing machine and we no longer have complaints about missing labels. Now our two mailing lists are entirely maintained by girls in the office, and our men in the back shop address our lists in practically the same time as previously with the hand mailer. We estimate that with the addressing machine we save ten hours in the back shop that can be used by Linotype operators and floor men in more profitable work. Our investment of \$900 soon will be saved."

NEW METHODS FOR HANDLING SINGLE WRAPS

Publishers often develop ingenuity in improving methods used in their plants. A common way of handling single wraps (copies wrapped individually for mailing) is to spread the paper wrappers with top edges exposed and to smear the edges with paste. W. H. Roberts, former publisher of the Memphis, Mo., *Democrat* (circulation 2,433, population 2,035) invented a piece of equipment which saved an hour of time at each mailing and enabled him to do a better job of preparing singly wrapped papers for the mail (see Fig. 10.1).

This equipment consists of two main parts. First, there is an

aluminum platform large enough to accommodate 500 wrappers, $8\frac{5}{8}$ inches wide. This platform has slotted sides 3 inches high and extending about a third of the way from the end. The second part is an aluminum paste trough, at the bottom of which and extending its full length, is an adjustable narrow opening. Within this opening rests a full-length roller with flange made to fit into the slots in the sides of the platform. The walls of the trough are adjustable so the opening along the bottom may be widened or narrowed to emit as much paste as desired.

The machine operates in this way: Addressed wrappers are placed on the platform and paste is poured into the trough. No paste will

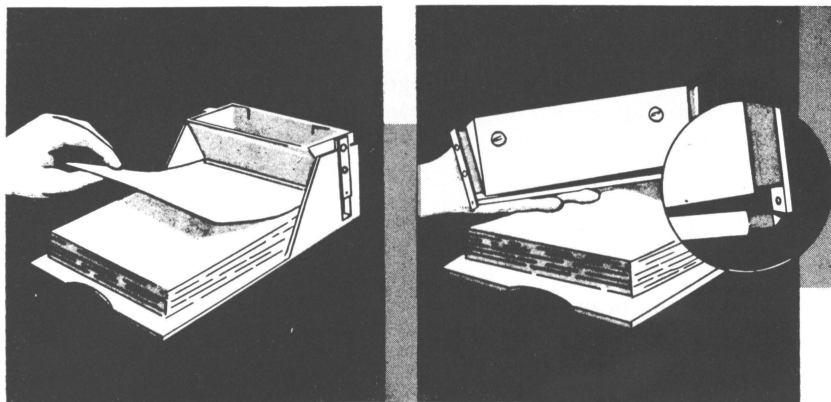


FIG. 10.1 — The SanTom Single Wrap Paster, designed and built by W. H. Roberts of Memphis, Mo., in his own plant to cut down the time-consuming job of spreading out single wraps. (Courtesy of SanTom Paster Company.)

flow until the small roller at the bottom of the trough is made to revolve. The roller rests on one end of the pile of wrappers, and as each sheet is pulled out it turns the roller, which spreads a strip of paste any desired width on the next sheet in the pile. In this way, the person handling single wraps constantly has a wrapper smeared with paste ready for use.

Roberts now is manufacturing this machine in quantities so it is available to other publishers.

TYING MACHINES PROVE USEFUL

Weeklies with many pages have found small tying machines useful in getting papers ready for carriers. If such papers are to be thrown from cars or bicycles, they must be rolled and tied in some manner. A cord tie, made by a tying machine, is placed much more quickly and holds the paper more securely than will a rubber band.

Larger tying machines, made to take care of bundles, also are used

in some weekly newspaper plants. The Iowa Falls, Iowa, *Citizen* (circulation 3,610, population 4,900) purchased one of these machines to handle a large job of commercial printing done on its Duplex press and which required stacking and tying in bundles. But the machine proved to be handy also in preparing bundles of newspapers for mailing.

"All our papers that go to the post office naturally must be collected in bundles of various sizes," says Carl Hamilton, editor. "Where we formerly handled such operations by hand with binder twine, we now slip the bundles through the tying machine, and in the matter of seconds they are tied once or twice or more times as we desire. The bundles stay tied, too. We have less complaints from our carriers that their bundles fall apart before they can pick them up, and we feel that it has cut down our complaints from the post office. Some of our single wraps also are tossed together and run through the tying machine. Whether or not such a tying machine is practical is something each publisher must decide for himself in view of the investment involved and the time that might be spent in tying papers by hand. I know, however, that it has proved to be a nice piece of equipment for us and, like other new things around the plant, it has lots of employee approval."

ONLY LARGE CIRCULATIONS NEED CONVEYORS

Some of the larger weeklies, particularly those which serve suburban areas with carrier delivery, have installed conveyor systems along with bundle-tying apparatus.

The Philadelphia Suburban Newspapers, Inc., publishers of the *Upper Darby News* (circulation 29,875), *Main Line Times* (circulation 15,650) and *Germantown Courier* (circulation 17,072), estimate that they effected a saving of 15 man-hours, or \$15 a week, and at the same time greatly improved service to their readers when they installed an automatic conveyor system (see Fig. 10.2) and a Gerard Steel Model "Q" semiautomatic wire-tying machine (see Fig. 10.3). More than 1600 bundles of papers go out from this plant each week to carriers and news dealers in the Philadelphia area. The *Upper Darby News* has 608 carriers and 90 news dealers, the *Main Line Times*, 201 carriers and 98 news dealers, and the *Germantown Courier*, 406 carriers and 62 news dealers. Bundle labels for carriers and news dealers are prepared in advance of each press run. Each label indicates route number, consecutive corner number for route delivery, and number of papers. Before the bundle-tying machine and conveyor system were installed, three persons did the tying by hand. Now two semiautomatic tyers and the conveyor system are used, requiring one less man for the three runs each week, according to A. E. Hickerson, publisher.

The small-town publisher is using good judgment when he buys



FIG. 10.2 — Conveyor system used in plant of Philadelphia Suburban Newspapers, Inc., to provide prompt handling of three weekly papers for delivery in wide area.



FIG. 10.3 — Bundle-tying equipment used by Philadelphia Suburban Newspapers, Inc., for careful handling of 1600 bundles that go weekly to carriers and news dealers.

only the equipment that will save either time or money in his plant. Automatic conveyor systems cannot be justified as a labor-saving device in small weekly newspaper plants for four reasons:

1. Ordinarily there are not many copies to be handled, and the regular staff of a weekly has more time available for these services than do staffs of dailies. The papers are easily picked up and bundled in the immediate vicinity of the press folder without impeding the printing process.

2. Most weeklies are located in one-story buildings, and cannot utilize one of the prime advantages of conveyor equipment — its ability to transfer newspapers from one floor to another.

3. Automatic conveying equipment is fairly costly and most weekly papers operate with somewhat limited funds as compared to metropolitan daily papers.

4. In smaller communities, publishers are in a position to hire people on a part-time basis for special jobs, at much less cost than would be involved in the purchase and operation of an expensive machine.

William E. Strasburg, publisher of the Ambler, Pa., *Gazette* (circulation 6,483, population 4,565) has a conveyor but is not convinced of its practicality for his situation. Instead of using it, his men take papers off the fly and wrap them by hand.

"The best advice we have is that the less conveyor the better because of chokes in the conveyor," he says. "If we bring our mailing tables in close enough to the press, we obviate the need for a conveyor system."

He says he may soon add a tying machine, because a large percentage of his circulation is by carrier and a substantial number of bundles must be wrapped.

Dailies Operate Large Equipment Economically

On larger newspapers more details must be dealt with. Printed sections as they come from the press must be moved immediately to a convenient point and there inserted in other sections to make the complete newspaper. The completed papers then must be counted, bundled, tied, labeled or addressed and loaded ready for delivery. Some go directly into the hands of carriers to be distributed throughout the city; others into trucks and cars to be transported to post offices, news-stands and other outlets; and still others taken in trucks and motor cars to suburban and rural districts. The hours are few between the time the paper leaves the press and the reader wants it in his home. Both human and mechanical efficiency must be provided to get the papers delivered on time.

Every newspaper publisher should study well his needs for handling papers as they move from the press for delivery handling. To aid in

evaluating mailing room equipment, the Wiretyer Corporation has developed a scoring program covering sixteen items. If the newspaper scores below 50 points, the publisher probably can make a spectacular improvement by adding modern power-driven equipment. If the total is 75 points, the newspaper is believed to have a fairly efficient operation, and if 95 points, the publisher is to be congratulated. The items to be considered in this evaluation and the points credited for each item to make a total score of 100 are as follows:

1. **Direct Flow Arrangement**—If the papers flow in a direct line from the press delivery to the truck, SCORE 5 POINTS.
2. **Cross Feed Facilities**—If the papers can flow to more than one tying location, SCORE 5 POINTS.
3. **Storage and Aisle Arrangement**—If there is adequate storage space, aisle space and safety exits even under the most crowded conditions, SCORE 3 POINTS.
4. **Capacity**—If each processing line is capable of delivering 25 completely prepared and properly tied bundles per minute to the truck, SCORE 10 POINTS.
5. **Stacking Tables**—If work tables are located adjacent to the press delivery to permit the fly-boys to prepare the stack with ease, SCORE 4 POINTS.
6. **Feeder-Conveyors**—If the stack is transported away from the press delivery by power driven feeder-conveyors, SCORE 10 POINTS.
7. **Count and Top-Wrap**—If the route count and positioning of the top wrapper is done while the stack is being conveyed and without stopping the movement of the stack, SCORE 3 POINTS.
8. **Automatic Tying**—If the circulation is above 50,000 daily and an automatic bundle-tying machine is used, SCORE 10 POINTS.
9. **Labor-Saving Automatic Tying**—If the tying machine is operated without the constant attention of an operator to feed bundles or start the machine cycle, SCORE 10 POINTS.
10. **Exit Conveyor System**—If the tied bundles are delivered to conveyor or chute to the truck platform without handling, SCORE 10 POINTS.
11. **Selective Loading**—If it is possible to load any truck station from any processing line, SCORE 5 POINTS.
12. **Automatic Truck Loading**—If the bundles are delivered directly into the truck without manual handling or sorting on the truck platform, SCORE 5 POINTS.
13. **Mail Preparation**—If special men are needed to prepare mail copies, and conveyor equipment is used to move papers to and from these operations, SCORE 3 POINTS.
14. **Inserting**—If inserting of preprinted supplements is required and conveyors are used to carry papers to and from the operation with convenient space and facilities, SCORE 10 POINTS.
15. **Expansion**—If space in the mail room is available to install equipment to process all papers which the press room can deliver at full capacity, SCORE 4 POINTS.
16. **Adequate Equipment**—If adequate equipment can be installed to meet new developments and particular needs without making radical changes in the plant, SCORE 3 POINTS.

With the many automatic conveyors, inserting machines, tying machines and addressing machines now available, any mailing room

can get what is best adapted to its needs. The extensive use of such equipment is revealed in a survey of circulation operation, made by Donald J. Wood, assistant circulation manager of the Oakland, Calif., *Tribune* (circulation 183,583, population 384,575). He received reports from daily newspapers representing a third of the circulation in the United States and found that 74.5 per cent of them use automatic conveyors, 85.1 per cent use wire-tying machines, 74.7 per cent tie bundles in bulk and in separate routes, 20.5 per cent tie all bundles in bulk, 27.7 per cent use ropes for bundling, and 9.6 per cent use inserting machines.

CONVEYOR SYSTEMS FACILITATE WORK

A good example of what an overhead continuous conveyor system can do to facilitate work in the mailing room of a daily newspaper with more than 350,000 circulation is found in the plant of the Des Moines, Iowa, *Register and Tribune* (combined circulation 355,089, population 177,965). This system eliminates floor conveyor side belts, does away with hand trucking of papers and saves valuable floor space. The overhead system conveys papers in 134 bucketlike carriers, spaced 31 inches apart, which move along an elevated chain cable, 340 feet long, which can be tightened with minimum effort when necessary.

Papers are placed on the buckets from an operating press conveyor and continue to ride around until they reach points where they are needed. The speed of the trolley conveyor, which travels via I-beam, is controlled by a Reeves variable speed drive at a rate which enables the mailers to load and unload with facility. Approximately four minutes are required for any bucket to complete one revolution.

By using the overhead system, the output of three or more presses can be routed past two tying machines. This insures a continuous flow of newspapers to waiting trucks at the loading dock. If a paper break occurs, causing temporary faulty printing, the damaged papers on the buckets may be removed as they go past the tying machines without interfering with the tying of papers from the other presses.

Conveyors Save Money

The Times-Mirror Company of Los Angeles, California, which publishes the *Times*, morning, and *Mirror-News*, evening (combined circulation 760,030, population 1,970,358) estimates that it has saved \$4,000 a week in transporting papers since installing an accelerated system of distribution. The device mainly responsible for this substantial saving is a one-speed, reversible and extendable conveyor belt. A horizontal conveyor belt carries bundles to a circular slide that twists down from the mail room to the transportation section, where another conveyor belt receives the bundles. As the papers travel on



FIG. 10.4 — Press with double folder running "split delivery" over two separate Cutler-Hammer Standard Duty Type Conveyors. (Courtesy of Cutler-Hammer, Inc.)

the belt, the drivers remove their respective bundles and place them in the beds of their trucks. To solve the problem of loading heavy trucks, extendable conveyor belts are used. Placed at right angles to the horizontal conveyor belts, the extendable conveyor belts can be pulled out directly into the bed of the truck. With one man on each side of the belt, 30,000 papers can be loaded in a two-ton truck in 15 minutes.

A modern conveyor system for the Fort Wayne, Ind., *News-Sentinel* and *Journal-Gazette* (combined circulation 139,044, population 133,607) saves \$60 a week for those newspapers, according to Ralph E. Heckman, circulation manager. By the use of three units of power

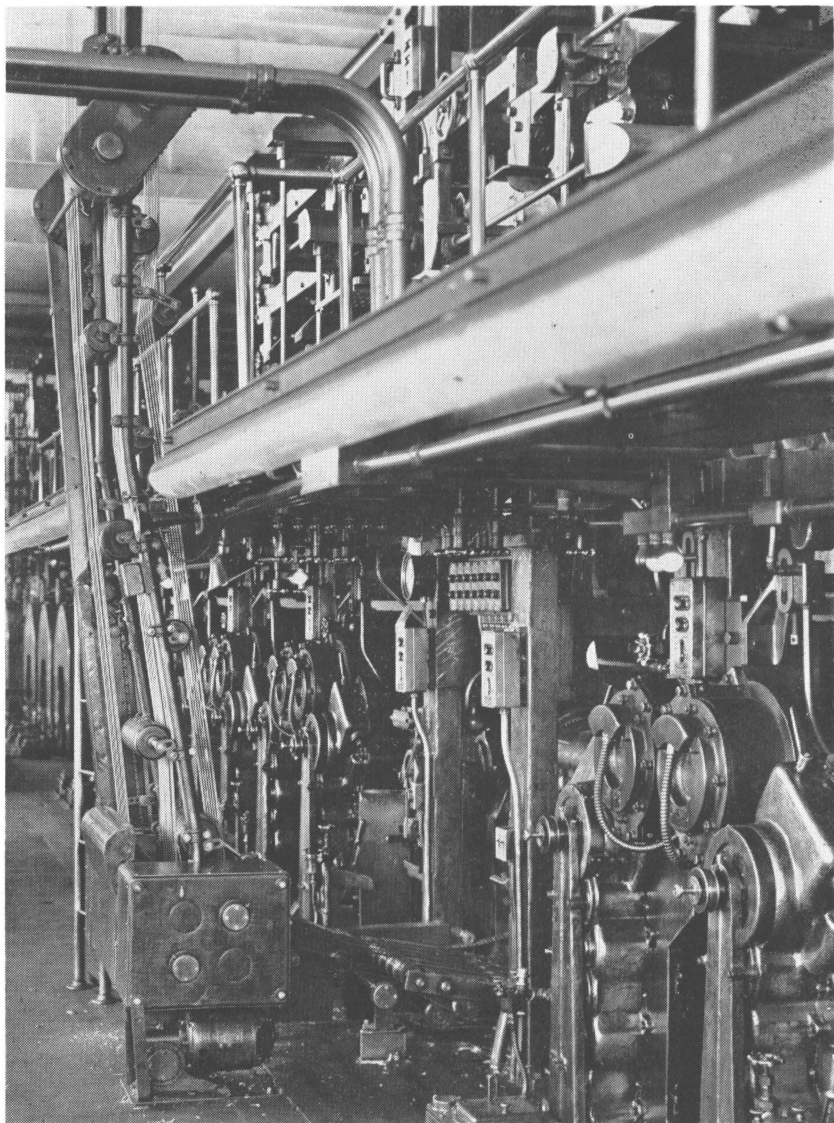


FIG. 10.5 — Cutler-Hammer Heavy Duty, Chain-Drive Type, Newspaper Conveyor, showing the press connection with backward incline in the vertical rise. (Courtesy of Cutler-Hammer, Inc.)

belt conveyors, plus a few units of roller-type gravity conveyors, tied bundles of papers are put on the conveyor system as they are tied and carried through the mail room to the loading platform, and then by gravity conveyors into the trucks and cars. Within a few seconds after

being tied, that bundle is deposited in a truck or car and starts on its outbound trip.

Concerning the time and money saved in this operation, Heckman says: "The conveyor system, which originally cost us \$2,400, saves, during daily press running hours, one man on each run. On the Sunday morning operation it saves a total of three men during running hours. Figuring the cost of these men at a low figure of \$1.00 an hour, the conveyor paid for itself in less than 18 months. Besides, it saves an average elapsed time of six minutes on every truck and car leaving this plant with bundles. Since this equipment needs very little care and not much in the way of replacements, our current savings over the old operation run to approximately \$60 a week. This means, of course, that were we to buy equipment even at present increased prices, it could be paid for in a year's time."

In their Sunday morning operation, when the sections for 95,000 papers must be properly assembled during a period of $3\frac{1}{2}$ hours, the Fort Wayne papers use about 100 feet of skate-wheel conveyors to transport sections of completely supplemented papers from one portion of the mail room to another. These sections are portable and operate on a gravity basis. Heckman estimates that this has resulted in a saving of two part-time men each Sunday morning at a cost of 90 cents an hour, with a definite weekly saving of \$7.20. The cost of the conveyor for this operation was made back in one year.

Cutler-Hammer, Inc., produces a standard duty conveyor (see Fig. 10.4) and a heavy duty, chain-drive conveyor (see Fig. 10.5), each of which virtually gears the mail room to the presses. A steady flow of papers, all but placed in the hands of the mailers, enables them — and at the same time practically compels them — to keep up with press production. In a matter of seconds after press starting time, the mail room receives an orderly stream of papers at table height. At any point where a paper is automatically kicked out of line to indicate that 25, 50, or 100 papers have been printed, the compact stream can be picked off to be bundled or handed loose to carriers.

Choosing a Conveyor

In making a choice between two types of conveyors, consideration should be given to:

1. Maximum number of pages printed on a straight run.
2. Maximum number of pages printed on a collect run.
3. Kind of product to be carried.
4. Amount of room available to install the conveyor.
5. The paper's circulation.
6. The price of the equipment.
7. Preference of publisher.

Generally the number of pages per paper is greater for papers with

large circulations, so conveyors in these plants must be built to carry heavy loads at high speed. The heavy duty, chain-drive conveyor is better designed to meet these service needs than is the standard duty conveyor and can be operated for longer periods of time with less maintenance costs.

Printing speed also must be considered. Although both types of conveyors will handle papers at the rate of 60,000 per hour, less main-

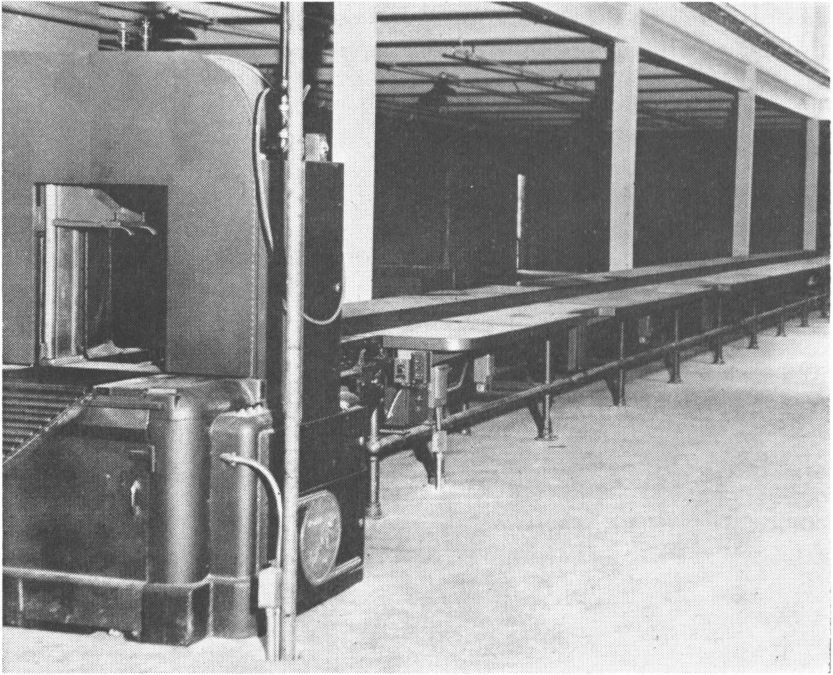


FIG. 10.6 — The Wire-O-Veyor, a mobile press register mailroom feeder conveyor, recently introduced. (Courtesy of Wiretyer Corporation.)

tenance is required for the heavier machine if this printing speed is common and sustained.

Another feeder-conveyor recently introduced in a number of plants is the Wire-O-Veyor, manufactured by the Wiretyer Corporation of Hawthorne, N. J. This uses a woven steel-mesh belt instead of live rollers, which minimizes slippage of the bottom wrapper. The Wire-O-Veyor is available in any combination of straight runs or turns, with or without attached or hinged worktables. It might be adapted to any mail room layout (see Fig. 10.6).

STUFFING MACHINES MORE EFFICIENT

Modern equipment has eliminated many other tasks once troublesome in the mailing room. When the paper is printed in several sec-

tions, the stuffing of these by hand, one within the other, is a long and tedious job. Newspapers of this size find stuffing machines not only save time and labor but do a much better job.

In handling its large Sunday issue, the Des Moines *Register* has found that its Sheridan stuffing machine reduces labor enough to save \$1,000 a week. All Sunday *Registers* are stuffed and ready for delivery when they leave the plant, eliminating errors possible when carriers and dealers put the sections together after receiving them.

About 90 per cent of all inserting for week-day issues is done on the machines. All sections of the Sunday issue printed before Saturday night and 175,000 copies of the Sunday news sections printed on Sat-

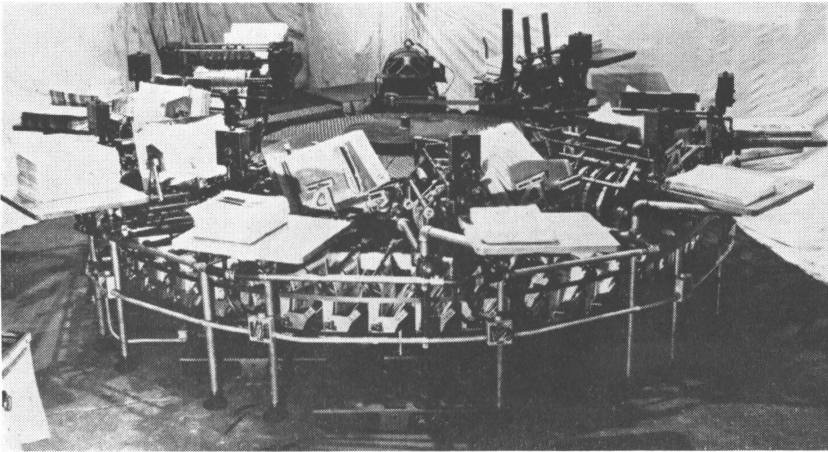


FIG. 10.7 — Sheridan Newspaper Stuffing Machine. (Courtesy of T. W. & C. B. Sheridan Co.)

urday night are inserted on the machines. The rest of the Sunday news sections run on Saturday night are inserted by hand.

The mailing room superintendent estimates that the Sheridan machines have reduced the cost of inserting more than 50 per cent. The amount saved each week, of course, depends on the number of inserts to be made.

The Sheridan stuffer is a circular rotating machine, arranged with eight feeding stations (see Fig. 10.7). Newspaper sections to be stuffed are manually stacked in the hoppers of their respective feeding stations and from there are fed automatically into rotating pockets below. Beneath the eight feeding stations, which remain stationary, a rotor consisting of 48 V-shaped pockets rotates counterclockwise. Each pocket receives the desired number of sections from the various feeding stations to assemble one complete paper. The completely assembled newspapers are conveyed from the machine on a fan-out type of delivery, furnished with an automatic kick-out counting device, which

can be adjusted to count out any predetermined number. Standard equipment includes either a direct or indirect Cutler-Hammer delivery. Each feeding station is equipped with a micrometering device which insures accurately assembled newspapers. If any feeding station misses feeding a section into a pocket, or if two or more sections accidentally are fed into a pocket, the micrometering device detects the error and automatically stops the machine. The operator then makes the necessary correction and restarts the machine.

BUNDLE-TYING EQUIPMENT IS ECONOMICAL

The use of high-speed stacking and bundle-tying equipment has speeded up delivery processes. Even papers of medium-sized circulations use to great advantage the Bunn machine, which ties packages,



FIG. 10.8—The Bunn Newspaper Tying Machine. This is an example of the kind of additional equipment which is needed on newspapers with medium-sized circulations. (Courtesy of the B. H. Bunn Company.)

either rolled or flat, in two seconds (see Fig. 10.8). The Lapeer, Mich., *Lapeer County Press* (circulation 8,886, population 6,143), with an average of 36 pages per issue, would not be without its Bunn machine. "It has contributed happiness to our press days for two years without a hitch," says W. A. Myers, publisher. "We tie bundles of half-folds up to 18 inches thick in just a few seconds. The tyer keeps up with our Duplex Model-E press at a speed of 5,000 papers per hour."

Most newspapers with circulations above 50,000 use automatic bundle-tying equipment. However, the number of bundles to be processed in a limited time, rather than the size of circulation, is the determining factor. Certain costs may be influenced by automation. The principal ones are:

1. Direct labor costs — the number of men and the length of time they are employed per day.
2. Packaging material costs — e.g., the type and size of wire or cord.
3. Equipment cost, including initial capital investment and annual amortization expense on either a lease or purchase basis.
4. Maintenance and power costs.
5. Over-all efficiency, with its effect on edition time, street sales and length of press run.

Secondary, or indirect, costs are influenced by: (1) desired quality of the package, (2) ease and speed of handling the tied package, and (3) degree of compression of the bundle during the packaging operation and its effect on the number of bundles in the truck load.

The Wiretyer, an automatic bundle tyer manufactured by the Wiretyer Corporation, handles as rapidly as a single-tie operation (see Fig. 10.9). The company claims this equipment saves in cost of materials by as much as 60 per cent because it uses ordinary wire and develops a tightly twisted joint of maximum strength. Even reloading is facilitated by an accessory unit on the Wiretyer which butt-welds and anneals the end of an exhausted coil to the beginning of a new one in a matter of seconds. A new development in wire supply is the use of 500-lb. drums, permitting operation for longer periods as well as minimizing damage to wire coils and consequent tying-machine failures.

STACKING MACHINES PROMOTE SPEED

Large newspapers, of course, constantly seek improvements in equipment that will speed up counting, bundling and stacking. The *Milwaukee Journal* (circulation 348,393, population 637,392) is now operating a prototype Cutler-Hammer counter and stacking unit which does automatically what is usually done by "fly boys" at the delivery table. (The boy who takes papers from the press is usually called a "fly boy.")

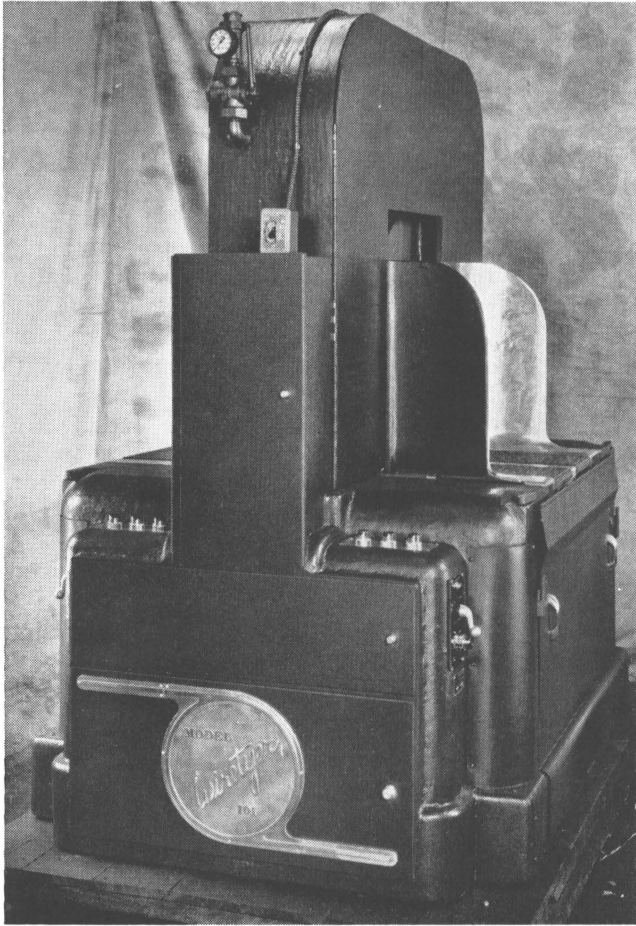


FIG. 10.9 — The Wiretyer, an automatic bundle-tying machine, capable of handling 1,500 bundles per hour. (Courtesy of Wiretyer Corporation.)

The papers are delivered by a spring belt conveyor at ceiling height to the stacker where an electric eye counts the papers and actuates the stacking mechanism. In normal operation, the first batch of papers is caught on a stacking blade, then dropped and rotated 180 degrees. Since the folded edge is thicker than the cut edge, the next batch of papers is dropped on the first batch without rotation and thus gives a neat, square pile. A roller table conveyor then ejects the double bundle to the mail room roller table conveyor where it follows the usual path involving wrapping, tying and delivering (see Fig. 10.10).

This counter and stacker is designed to handle 60,000 ninety-six-

page newspapers per hour. It has a cycle time of $1\frac{1}{2}$ seconds, and thus at top speed, can deliver a bundle of 25 papers every $1\frac{1}{2}$ seconds.

SELF-POWERED WRAPPING UNITS

Other important pieces of equipment now revolutionizing mail room operations are the Wallstar bundling machine and the Star-wrapper, designed by the Toronto, Ont., *Star* (circulation 400,021, population 662,096). The exceptional services provided by these were

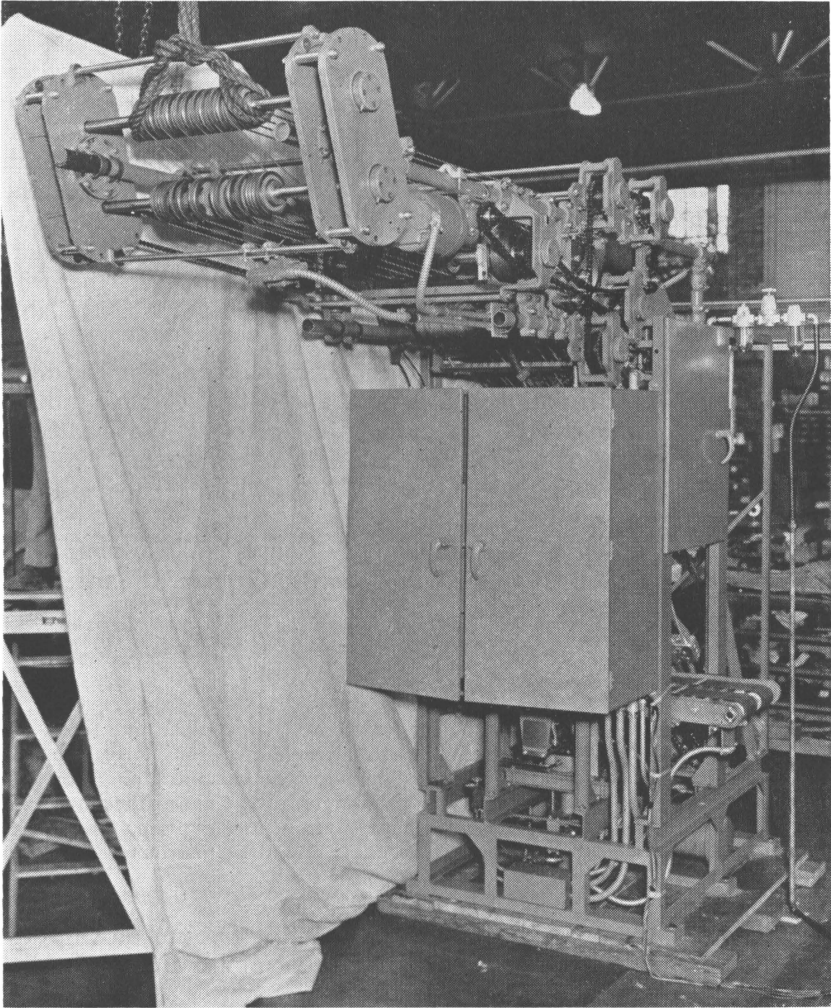


FIG. 10.10 — Left rear side view of Cutler-Hammer Stacker Assembly, like that used by the Milwaukee, Wis., *Journal*. (Courtesy of Cutler-Hammer, Inc.)

described by G. R. Dayton, sales manager of the Cline Electric Manufacturing Company, at a meeting of the Central States Circulation Managers Association:

"The Starwrapper is an automatic, self-powered unit that provides a bottom kraft wrap and then feeds the stacks to the Wallstar for bundling. The paper for the bottom wrapper is fed as needed from one or two rolls located beneath the machine. When a roll runs out, the alternate roll is switched in and the change-over is accomplished in a matter of seconds. When synchronized with the bundler, the Starwrapper produces 24 or more stacks per minute. It saves the time required for manually placing the wrapper in the stack.

"The Wallstar receives loose stacked newspapers from the Starwrapper at speeds of 24 or more stacks per minute. In sequence, the stacks are first jogged for alignment, then compressed under two tons of pressure to remove air, and then either single or double tied with flattened wire. Lap-welding of the wire, another feature with the Wallstar, provides a smooth, strong seal with no loose, ragged ends to tear other bundles or snag workers' hands during handling. The short overlap well provides additional wire saving. Moreover, the wire used by the Wallstar is a mild, basic commercial grade, available anywhere."

Some newspapers prefer a rope tie for their bundles. The Reading, Pa., *Eagle-Times* (circulation 86,530, population 109,320) has a unique machine setup which makes an automatic cross-tie. "We wanted a machine that would cross-tie as well as single-tie with rope," explains Joseph A. Abey, circulation manager. "Ordinarily with rope you can make only one tie and the ends of the paper flare up from the pressure put across the center of the bundle. We consulted two companies and told them we wanted an operation that would make the machines automatic for the first tie and also for the cross-tie. This we obtained." The operation is described in *Circulation Management*¹ as follows:

One man feeds the first bundle and an air release from the machine forces the bundle into the tye. When he feeds the second bundle in, that forces the first bundle into a neutral position. The third bundle feeds in and that forces the first bundle into a position where it hits an air release that moves the bundle in for the cross-tie. The second bundle then moves into neutral position. The fourth bundle follows through the same procedure. This causes the first bundle to go on a conveyor which takes the tied bundle out to the loading ramp.

This improved operation enabled the *Eagle-Times* to pick up approximately half an hour on the dispatching of its daily issue and 1½ hours on its Sunday paper.

¹ *Circulation Management*, Nov., 1955, pp. 16-17.

QUICK LABELING IS REQUIRED

The final important step in the handling of papers in the mailing room is addressing for mail delivery and labeling bundles for truck delivery. A number of practical addressing systems are available. Certain points need to be considered in determining which type is likely to give the best service, such as:

1. Size of newspaper list.
2. How much room the system will occupy.
3. Speed and versatility required in addressing.
4. Degree of selectivity required.
5. Number of changes of addresses, deletions and additions likely to be made over a given period.
6. Cost of equipment and material.
7. Amount of work required at the stencil files to keep the list up to date.

When the Harrisburg, Pa., *Patriot* and *Evening News* (combined circulation 122,466, population 89,544) began planning their new mail-room layout, the publisher and circulation manager made tours of many newspaper plants for ideas which would fit into their operation. They decided on a Cheshire mailer, which weighs about 3,000 pounds and requires approximately 48 square feet of floor space. It is set up beside a Cutler-Hammer conveyor, which takes the papers to a convenient point where they are removed by club bundles. The bundles then are tied with a Gerrard semiautomatic tyer and are ready for the post office (see Figs. 10.11 and 10.12).

The Cheshire labeler is used also by the Louisville, Ky., *Courier-Journal* and *Times* (combined circulation 392,063, population 369,129) and the Syracuse, N. Y., *Post-Standard* (circulation 97,610, population 220,583). According to Fred Varga, circulation director of the *Courier-Journal* and *Times*, this machine will accurately attach previously addressed labels at speeds up to 16,000 per hour. This type of speed will depend, however, on the size of the paper and the number of men assigned to the machine. The machine can be operated effectively with a crew of three or more, depending on the schedule requirements. The Louisville papers use two machines with a crew of five men and increase it one when the paper consists of more than 48 pages.

The Cheshire will operate with roll strip labels produced by Speed-aumat, Addressograph, Pollard-Alling or Elliott, or with continuous pack form labels from International Business machines or Remington Rand master records.

The Flint, Mich., *Journal* (circulation 92,706, population 163,143) makes wide use of addressing and labeling machines in both its mail-

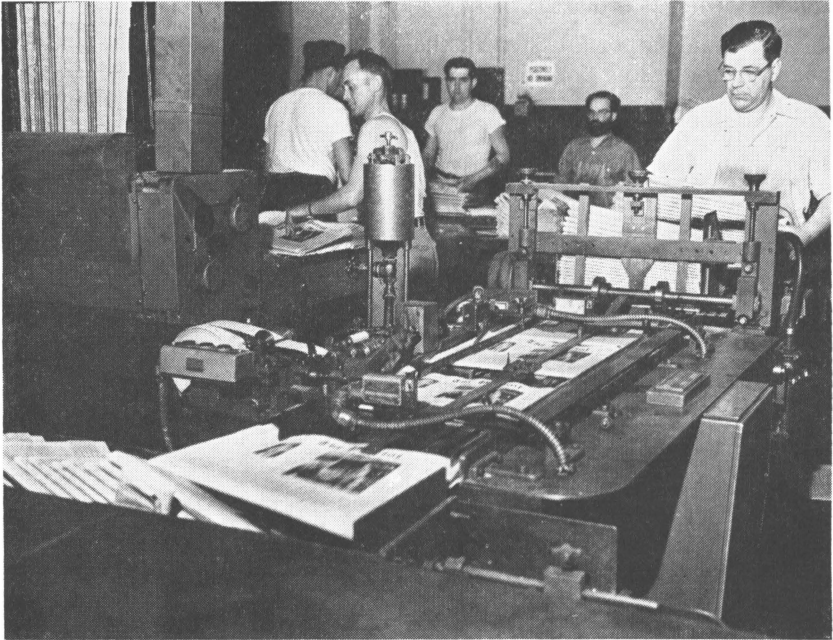


FIG. 10.11 — The mailing machine is set up in the plant of the Harrisburg, Pa., **Patriot and Evening News** beside the conveyor so that there is no lost motion in transferring the papers to the man feeding the machine. Papers are carried through under metal strips. At the left center may be seen that portion of the machine where the strip is cut and the label affixed. To the rear of that is also shown a trip switch or magnet which prevents the machine from stamping if the newspaper does not pass through. (Courtesy of Harrisburg, Pa., **Patriot and Evening News** and **Circulation Management** magazine.)

ing room and bookkeeping department. With its addressing equipment, it performs eleven services:

1. Makes out the bundle labels with names and addresses.
2. Prints the total number of papers to be delivered.
3. Prints the number of bundles needed for various size papers.
4. Prints the number of bundles to go on each load.
5. Numbers each bundle to show the bundle position in the load.
6. Makes out the initial draw on the bookkeeping department draw sheet.
7. Prints the name and address of the carrier, newsstand or agent on the bookkeeping form.
8. Addresses envelopes to carriers.
9. Indicates whether or not the carrier has insurance.
10. Indicates whether or not carrier's bond is paid in full.
11. Prints name and address of carriers' parents.

Because of high labor costs and the demand for speedy delivery, modern, time-saving equipment plays an important role in the handling of papers as they come from the press.

ARRANGEMENT IS IMPORTANT

Each newspaper plant is required to work out its own system of operation in the mailing room, depending on space and equipment provided. At the Fort Wayne, Ind., *News-Sentinel* and *Journal-Gazette*, where space in the mailing room is at a premium, four Gerrard "Q" Model wire-tying heads are built into stationary tables placed at the point where bundles are tied during every run. This has resulted in a slight saving in man power, particularly on the Sunday morning operation, and has gained some added space in the mailing room.

The "Circle Mail Room," so called because of the way the conveyors, tying machines, and loading docks are laid out, is a profitable arrangement for newspapers with circulations of 50,000 to 100,000. The installation consists of bundling machines, one at each end of a series of live roller conveyors which are reversible, allowing worktable space at each side. After bundles are tied and ejected from the wire

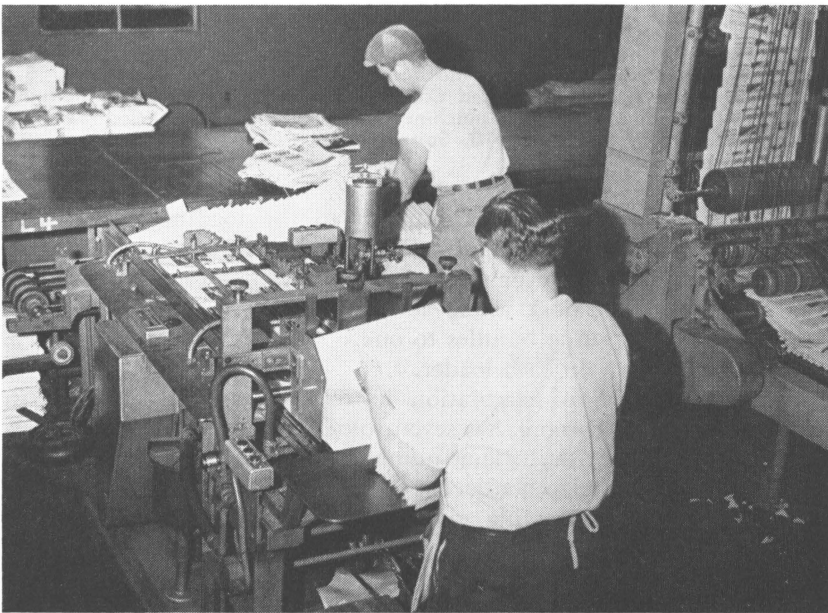


FIG. 10.12 — Operator in foreground feeds mailing machine and in the rear the conveyor takes the papers to the right where they are removed by club bundles. Machines are arranged so motion flows smoothly and swiftly. (Courtesy of Harrisburg, Pa., *Patriot and Evening News* and *Circulation Management* magazine.)

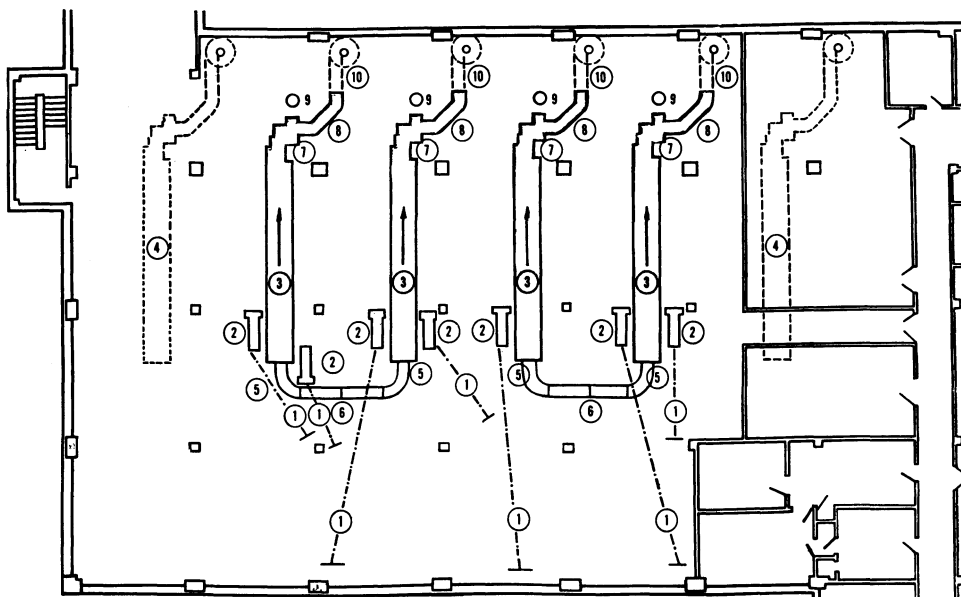


FIG. 10.13 — Floor plan of the Baltimore *Sun*'s mail room: 1. Conveyors from presses below. 2. Conveyor delivery tables. 3. Feeder conveyors. 4. Future feeder conveyor, tying machine and spiral chute equipment. 5. Power curve conveyors. 6. Hinged Conveyor sections. 7. Wire bundle-tying machines. 8. Chute from tying machines to spiral chutes. 9. Wire reel supply racks for tying machines. 10. Spiral chutes to loading dock. (Courtesy of Baltimore *Sun*.)

tyers, a belt conveyor lifts the bundles to the loading dock where another belt runs the full length. These belts also are reversible. A feature of the belt conveyor system is a powered, curved belt leading from the tyer to the dock where another belt conveyor runs the full length. Deflectors guide bundles to one of the gravity loaders with a telescopic extension on each loader.

The Baltimore *Sun* (circulation 407,691, population 949,708), in its well-planned mail room, has seven folders which feed seven Cutler-Hammer conveyors with the same number of deliveries (see Fig. 10.13). These deliveries are placed adjacent to Jampol feeder-conveyors, which feed four Signode wire-tying machines. The Jampol conveyors are arranged in two U-shaped sections, completely reversible for routing of papers in either direction in case of breakdown on a tying machine. Bundles from the tying machines slide down spiral chutes to the truck platform below.

Additional equipment to save time consists of three electric Automatic Transporter lift trucks and sufficient skids to handle all Sunday supplements. A portable welder is also available to keep successive

coils of wire on hand for continuous tying operations. Although not a part of the general equipment, pushers are provided at the tying machines and a series of stuffing machines. Mail and dealer lists are printed in continuous webs, using Pollard-Alling machines. The cutting of webs is accomplished with a Dick Mailer. The entire operation is based on mobility and flexibility.

Through this mail room pass approximately 400,000 newspapers every day. The automatic conveying equipment for bringing together the papers as they come from the press to the equipment for bundling, tying, and distributing to chute and platform, increases rapidity in materials handling without too much physical exercise on the part of the mailing crew. The location and arrangement of this equipment on total floor area of 17,020 square feet provides an interesting study.