New Vandercook Offset Presses—Page 18

1909

The Vandercook Story

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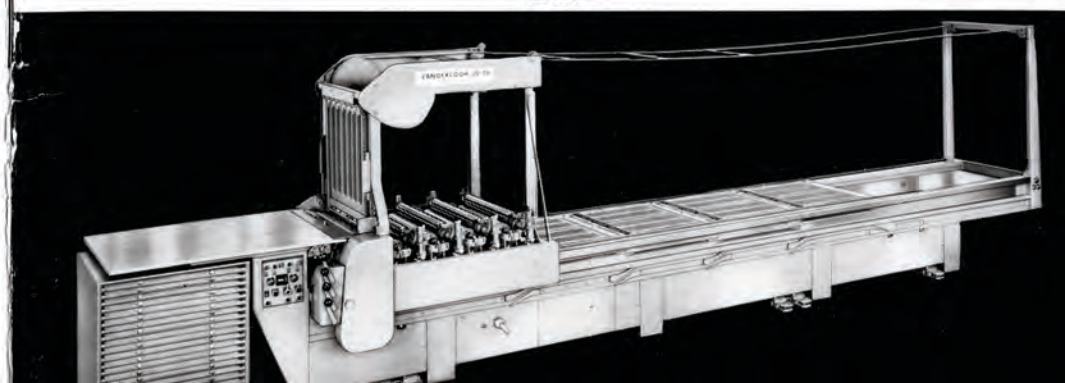


The Vandercook Story

The modern Vandercook Plant in Chicago

It was fortunate for the graphic arts industry when, some fifty-five years ago, the founder of Vandercook & Sons, Inc. became aware of the absence of equipment for obtaining satisfactory proofs from type forms and printing plates and decided that something should be done about it. To fully understand the significance of this, one need only to remember that proof presses of that era were crude in design, construction and operation and, basically, not greatly improved over the presses used by Gutenberg and his successors. That there should be so little improvement in proof presses during the 450 years after Gutenberg is difficult to understand when one considers the tremendous growth of printing during those years and the importance we place on proof presses today in the production of printing.

In reviewing the history of the Vandercook organization, one can see that several factors contributed to and encouraged them in the development of more efficient proofing equipment. One of these undoubtedly was the serious lack of necessary craftsmen to produce acceptable proofs with the crude hand presses then available. Another factor was the increased use of photoengravings, coupled with the increasing growth of advertising as a sales tool,

Early Vandercook Galley Proof Press

including not only publication space but the greater use of printed promotional literature. These developments, in turn, resulted in printers and buyers of printing demanding equipment capable of producing more faithful reproduction than the old Washington hand press could produce.

Looking back over the years, it is conceivable that even the far-sighted founder of the Vandercook organization did not fully realize the eventual importance of proof presses to the Graphic Arts Industry. A deeper understanding of this was to come years after R. O. Vandercook designed and built his first simple hand machine, known as a "rocker" type proof press.

The Vandercook organization was founded in 1909 by R. O. Vandercook who, for fifteen years prior to that time, owned and operated a weekly newspaper in a suburb of Chicago. In 1918, the sons of the founder came into the business and the firm of Vandercook & Sons, Inc. was born. One of these sons, E. O. Vandercook, has been president of the firm for the past forty years, as well as research director in charge of engineering and new developments. His brother, F. R. Vandercook, is vice president in charge of production.

Not only the simple "rocker" type proof press but other equally simple hand operated machines were designed during the formative years of the Vandercook organization. Gradually, however, with the rapid increase in the use of color, coupled with the insistent demand from publishers, photoengravers, advertisers and their agencies for better proofs of printing plates—especially process color plates—the Vandercook brothers realized that a great need existed for presses capable of coping with every critical proofing task, especially the faithful reproduction of color plates. And, with this realization, came an entirely new conception of a proof press—one that distinguished between a machine capable of producing ordinary proofs of type and plates, and a machine that would serve as a testing instrument for accurately checking the printability of type and plates. In other words, this new conception established this difference—that a machine for ordinary proofs should be designated as a proof press, while a machine capable of critically evaluating printing plates and type forms should be regarded as a test press.

As a direct result of this new approach, the Vandercook organization produced their first engravers test press—a hand operated model with power driven ink distribution, and designed in every detail as a precision tool for test proving both single color and multi-color plates. The year was 1925, and it must be regarded as an important milestone in the history of the Vandercook company, for not only did the new machine prove successful, but it firmly established the basic design on which all Vandercook machines have since been built. Instead of a reciprocating bed combined with a stationary cylinder, as were the presses of competing manufacturers, the Vandercook test press was designed with a rigid, stationary bed and a movable cylinder carriage.

The soundness of Vandercook's "rigid bed" theory was soon recognized by the industry—especially the photoengravers, whose

Early model Vandercook "Proving Machine" — the well known "219"

need for precision proofing equipment was, as it is today, more critical than other branches of the Graphic Arts Industry. And, with the momentum gained from the success of their first precision test press, the Vandercook organization embarked on an aggressive design program which, within the next ten years, witnessed the introduction of a number of new test presses, each differing in design, but all contributing to the advancement and the technique of proofing. This progress was climaxed in 1937 when Vandercook introduced their famous two-color and completely power operated test press—the Vandercook 232P—which for more than a decade was used by photoengravers the world over for proving the bulk of process color plates appearing in leading publications throughout the United States and other parts of the world.

Some time before America's entry in World War II, the Vandercook company was commissioned by the Curtis Publishing Company of Philadelphia (well known publishers of the Saturday Evening Post and Ladies Home Journal) to design and produce a four-color high speed test press that would be capable of delivering a finished four-color **wet** proof in the shortest practical period of time. Development work on this new press was promptly undertaken, but due to America's entry into World War II, all engineering work was suspended and the project held in abeyance until the conclusion of the war with Germany and Japan.

The war years were eventful ones for the Vandercook organization. With the production of their own equipment completely stopped, the entire company rapidly assumed full-scale production of equipment for meeting the needs of the armed services. One phase of this war production dealt with the building of complete machine tools, including milling machines, hydraulic slotters and internal grinders. The second phase of Vandercook's war production centered around precision parts for 90 mm anti-aircraft gun carriages, the all-important Norden bombsight, and critically precise radar equipment. This intensive production of war materials extended from some time during 1943 to early in 1946 when hostilities with Germany and Japan came to an end and production of Vandercook equipment again got under way.

The immediate problem confronting the Vandercook organization, once production of their own equipment was resumed, was to produce and ship the tremendous backlog of orders that had accumulated during the war years. And yet, despite this huge

task and the many problems of restoring full peacetime production, Vandercook was soon able to resume their task of developing the numerous new machines which the war effort had interrupted and delayed so long. Included in this was the four-color high speed test press for the Curtis Publishing Company.

It was in connection with this four-color Vandercook press that an interesting situation had developed during the war years. While this multi-color press was originally undertaken as a special assignment for Curtis, the interest in and need for a machine capable of producing finished four-color wet proofs had become so intensified among photoengravers and publishers during the war years that interest in the completion of the four-color press was no longer confined to the Curtis company but had become a matter of considerable interest to the entire industry. Evidence of this is perhaps best shown by the fact that since the first four-color Vandercook press was delivered to the Curtis Publishing Company in 1946, the acceptance of their multi-color test press for proofing color plates to be printed wet on high speed production presses has become so firmly established that now there are over 250 four-color Vandercook presses in use throughout the world in photoengraving and publishing plants. Of this total, it should probably be mentioned that six are installed in Canada, one in Paris, two in Vienna, and two in Tokyo.

Of special interest in connection with the four-color Vandercook press is that after 159 of the original machines were built and installed the Vandercook company discontinued the production of this model and introduced a new, larger and more automatic four-color press—known as the Vandercook 30-26—in order to again meet the needs of the Photoengraving Industry.

During the period from 1951 to 1954, Vandercook's production was again partially interrupted by the Korean conflict which, once more, placed their production on a wartime status. This time their over-all experience and plant facilities for producing precision equipment was called upon by the United States Government to produce a complicated, electronic, remote fire-control unit for the Navy.

Perhaps the most interesting phase in the growth of the Vandercook organization during their more than fifty years history, and very possibly the reason for their steady growth, is the continuous effort they have devoted to research—not only for the

The Vandercook Technical Center. Visitors are welcome by appointment

development of new equipment, but toward more efficient proofing methods.

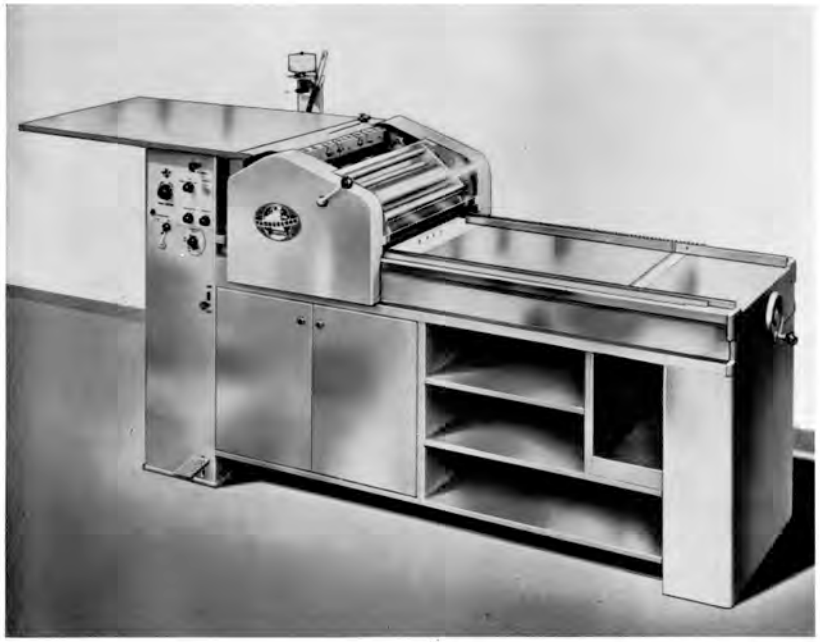
One of the research projects to which Vandercook devoted considerable time and effort is the problem that has plagued every letterpress printer since Gutenberg—makeready. As a partial solution to the problem, they developed what has become known as the Vandercook Minimum Makeready System. The basic principle of this system is that the finest letterpress printing can be produced with practically a level impression and with very little building up of solids or relieving of highlights.

According to the Vandercook theory, a large percentage of makeready in letterpress is the direct result of dimensional inaccuracies, compression of plate mounts and press bear-off. To help correct these conditions, Vandercook developed (1) a cored base cast from type metal—which can be planed to exact height and remain stable—for mounting plates, (2) gauges for checking the height of plates, type and slugs, and a makeup gauge to insure

Latest model Vandercook Electric Galley Proof Press

properly justified and registered pages of the correct size, (3) test presses for locating imperfections in printing surfaces and correcting register and position, and (4) a carbon impression overlay method which shows impression variations as minute as .001".

The numerous letterpress plants in the United States who have adopted the Vandercook Minimum Makeready System have found that it reduces makeready and the standing time of production presses—greatly improves quality—results in more printed sheets per minute—and enables their letterpress operation to compete more successfully with other printing processes.



One of the latest model Vandercook Test Presses — the Universal III

One of the most interesting phases of the Vandercook story is the redesigning program they launched about five years ago. Now, there is nothing unusual about a manufacturer discontinuing production on one or two machines when they are no longer in demand and replacing them with new or improved models. But, it is most unusual when a manufacturer decides to discontinue and replace practically every model — especially when there is still a steady demand for the machines and every evidence they will continue to sell successfully. And yet, that is exactly the program Vandercook launched about five years ago, with the result that, today, nearly all of the test presses and proof presses in production five years ago have been replaced with improved models.

Why, one might ask, would Vandercook discontinue such a great number of machines for which there was still a steady demand and undertake the tremendous task of replacing them? The answer to this question, in the words of E. O. Vandercook, president, is simply this: "The purpose of our redesigning program was

Interior of Vandercook Plant

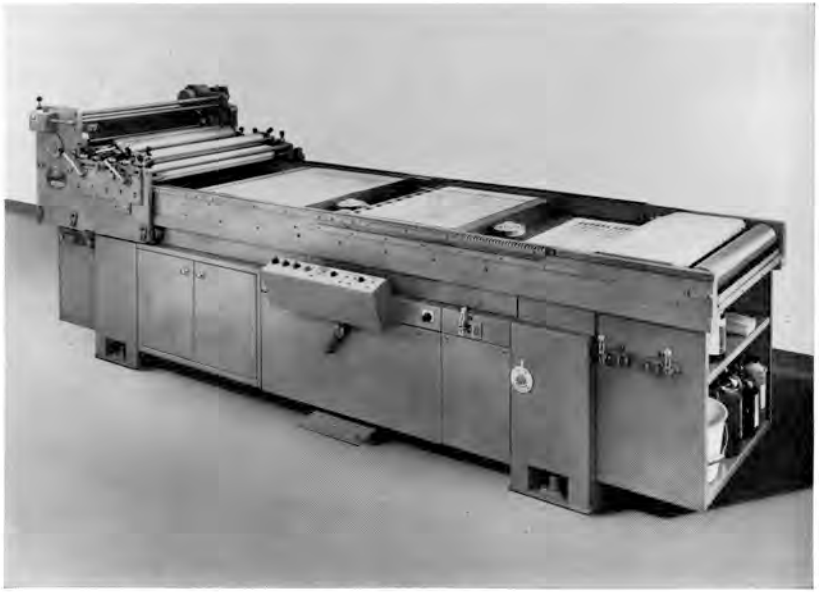
to bring our equipment not only abreast, but ahead of changing conditions — the same as any progressive manufacturer must constantly strive for in today's competitive market. Keeping in mind today's high cost of labor, we designed our new equipment to be more versatile, more automatic in operation, and more economical to operate from the standpoint of an operator's time and labor."

As a result of this ambitious redesign program, the Vandercook test presses and proof presses being built today have many advantages over the discontinued older models. Included in the improvements are advanced types of power drives, adjustable beds, automatic washup, vacuum plate bases, ink fountains, and automatic sheet deliveries which, combined with the speed of various machines, produce up to as many as 1200 proofs per hour.

"Another important point in connection with our entire redesign program," Mr. Vandercook pointed out, "is that in spite of the great number of improvements we made, the price level of all our new machines averages lower today than the prices in effect five years ago. One explanation for this is our advanced manufacturing facilities which involve the extensive use of fabricated steel and production economies afforded by modern machine tools, such as tape automation."

And so, through the years, Vandercook equipment has gone through various transitional stages of development — from redesigning of existing equipment to the introduction of brand new machines to meet new conditions and problems. The Vandercook engineering staff is now in the midst of a number of interesting new developments — including flat bed single color offset presses, a simplified four-color offset press, and an ink monitoring system that allows the operator to maintain color exactly to standard by observing dials.

As one reflects on the history of the Vandercook company, there emerges a pattern which might well be the key to their success. From almost their very beginning, the Vandercook goal seems to have been directed toward this one single purpose — that whenever a need for something new in proofing equipment developed, they were ready to assume the responsibility of producing it. For example, it was Vandercook who developed the equipment and technique for pulling sharp, opaque proofs on acetate and transparent materials when that need arose some twenty-five or more years ago. When the need arose in newspaper composing rooms



Vandercook Flat Bed Offset Proof Press built on a new principle. Vandercook has under way a simplified four-color rotary offset press that uses some of the basic principles of their four-color letterpress machines.

for a high speed galley proof press with a foolproof safety device, Vandercook built one. For years, plate makers wasted valuable hours changing plate bases to prove plates of different thicknesses — and operators spent valuable time underlaying or overlaying plates and forms to get exactly the right impression — until Vandercook engineers designed a test press with an adjustable bed.

Certainly it seems reasonable to assume that it was this untiring willingness to provide the needs of the industry and their continuous endeavor to improve their equipment which has enabled Vandercook to raise the status of proof presses from the crude machines of half a century ago to the precision machines they manufacture today.

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