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REPRODUCING DRAWINGS IN BLACK AND WHITE

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THE blueprint has been in common usage in factories and shops for so long that sociologists and planners for the future are now using that name in referring to "blueprints for tomorrow". However, rapidly replacing the blue-printing method of reproducing mechanical drawings is the black-and-white method because of its numerous advantages over the former method. Manufacturing concerns have developed processes by which the black-and-white drawings have been made by far the most practical and useful of the two.

Saving of operations is the first advantage of this new process. While the old blueprint requires five operations, including drying, the black-and-white prints require only two, printing and developing. The prints come from the machine dry and ready for immediate use, thus saving the time and inconvenience of washing and drying blueprints. For developing it is only necessary to pass the exposed sheet through a semi-dry developing machine which merely moistens the sensitized surface of the sheet.

The printer and the developer, or the machine combining the two, take very little space and

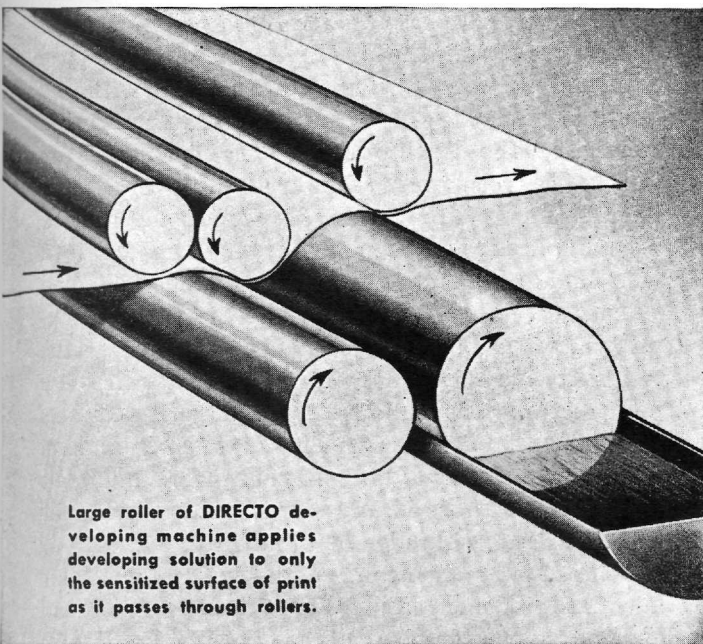
may be installed in an office if necessary. Most models are constructed for use in the darkroom or out, according to convenience. The process is a clean one and the printer and developer require no extra plumbing but only a place to connect them to a voltage supply.

Each print is a clear, accurate reproduction of the original drawing. Because it is a black-and-white print, the corrections to be made show up much more plainly than on the blueprint. It is not difficult to see that the black-and-white prints are very easy to read. Tests have shown that chemistry has made the prints able to stand up under severe trials. The black lines of the black-and-white prints stay black, and are not harmed by sunlight, grime, or oil. After months of rough use the copies are still legible.

As was explained before, the equipment necessary for the process consists of a printer and developer or an apparatus incorporating both operations. These printers and developers may be run by one operator. Very little training is needed to handle the equipment, thus making it possible to employ inexperienced workmen for the job. The process is a speedy one, and one operator can turn out an amazing number of reproductions in one day.

The components of this process are easily understood. The drawing to be copied is placed on top of the specially treated copy paper. When the light rays strike the drawing they cannot penetrate the black lines. Every other part of the paper underneath is exposed and its chemical composition undergoes a change. Thus when the copy reaches the developer, the chemically changed portion of the paper is not affected by the developing solution, but stays white. This gives a clear reproduction of the lines on the original drawing. In this way the printer produces a positive copy and not a negative print.

The equipment is very efficiently built. Various models of the printer and developer have been constructed, all on the relatively same basis. They are easily handled, time saving, space saving devices. It is easy to see why black-and-white prints are gaining in importance. More and more drawing departments and offices are employing this practical device and finding it profitable in many ways.



Large roller of DIRECTO developing machine applies developing solution to only the sensitized surface of print as it passes through rollers.

—Courtesy Eugene Dietzgen Co.

Only the surface of the sensitized paper is moistened in the semi-dry developing process.