

The Rotary Press

Even as the iron press was introduced, Koenig was working on the rotary press. The principle is to use a cylinder to roll over the printing surface, rather than pressing two flat surfaces together.

The Times of London started using his presses in 1814, and the engineering advantage of the process assured its ascendancy over platens, other than for small sheet work, by the end of the century. The key point is that the area of contact at any one time is limited to a small strip the length of the cylinder. This much smaller area (than the full sheet being printed), means that the forces required are far smaller than for the platen presses before, and while the iron platen press seldom prints much beyond an A2 sheet (twice this one), cylinder presses were printing sheet sizes limited more by the difficulties of handling them, than by the presses.

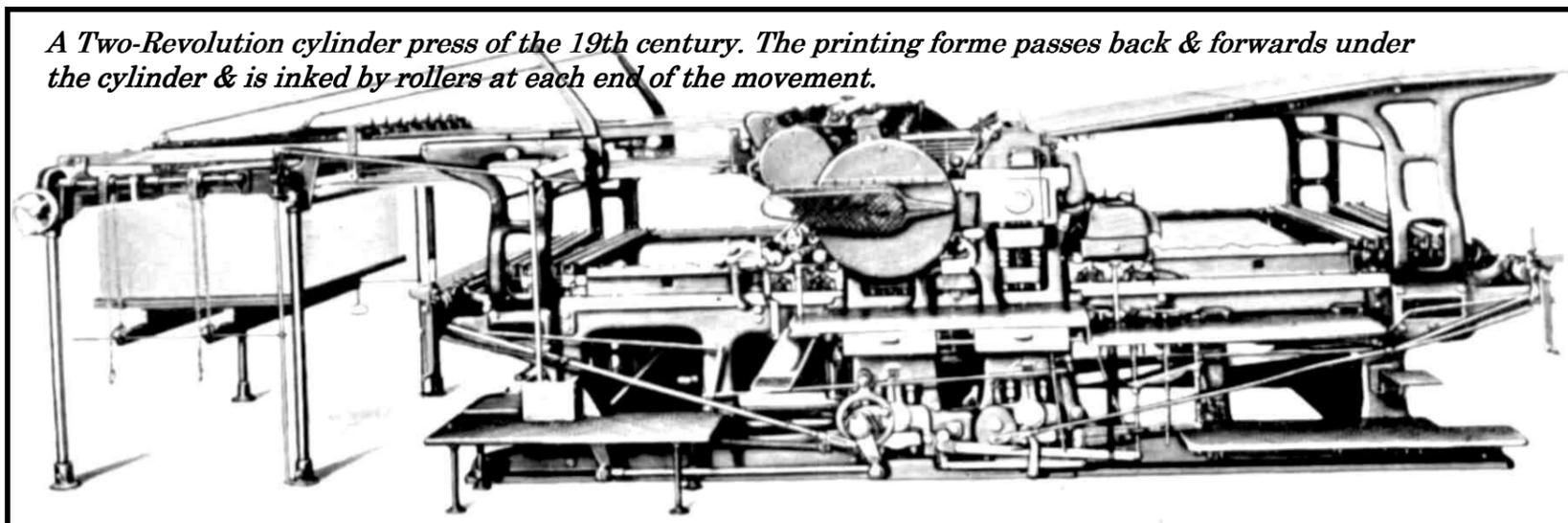
The most popular design of cylinder press

eventually was the “Two-rev”: the cylinder made two revolutions for each sheet printed, one to print, and one to release the sheet while the forme was running under the inking rollers. In some machines the cylinder moved, in others the printing surface.

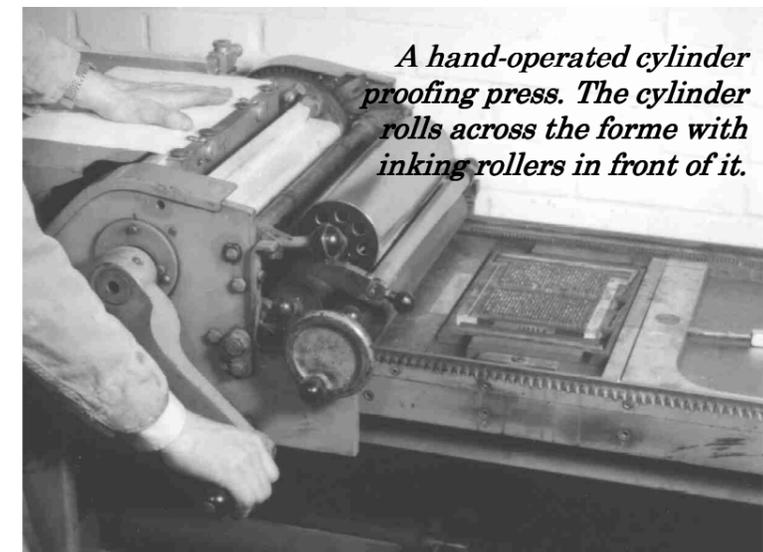
Cylinder presses became established as power was being applied to industrial machinery, and they were power-operated from the start. However, using conventional type in a flat forme limited the speed of operation: the forme or cylinder, or both, had to reciprocate, mechanically inefficient compared to continuous rotation. Stereotyping allowed the printing surface to be made as a cylinder, and thus permitted the rotary press, with the paper running between two cylinders, one the printing image, the other taking the pressure. This led (with advances in papermaking) to feeding the paper through as a continuous strip (a “web”), and today’s mass-production presses are all of this design, web-fed rotary. An added ad-

vantage was that the web could be fed directly to another similar press, printing a second colour. Here the letterpress machine merges with other printing processes, for a lithographic, photogravure, or flexographic machine uses the same principles, though different printing surfaces and inking methods.

By early in the twentieth century, the web-fed letterpress machine, sometimes the size of a small house, made possible the rise of mass circulation newspapers & magazines, and the paperback book. Where the wooden press spread literacy and ideas; the iron press gave the middle classes affordable books, the poor cheap pamphlets, and fuelled the nineteenth century scientific, technical & educational revolutions in Europe; the web presses provided mass literacy, mass entertainment, mass marketing, & the rise of consumerism.



A Two-Revolution cylinder press of the 19th century. The printing forme passes back & forwards under the cylinder & is inked by rollers at each end of the movement.



A hand-operated cylinder proofing press. The cylinder rolls across the forme with inking rollers in front of it.