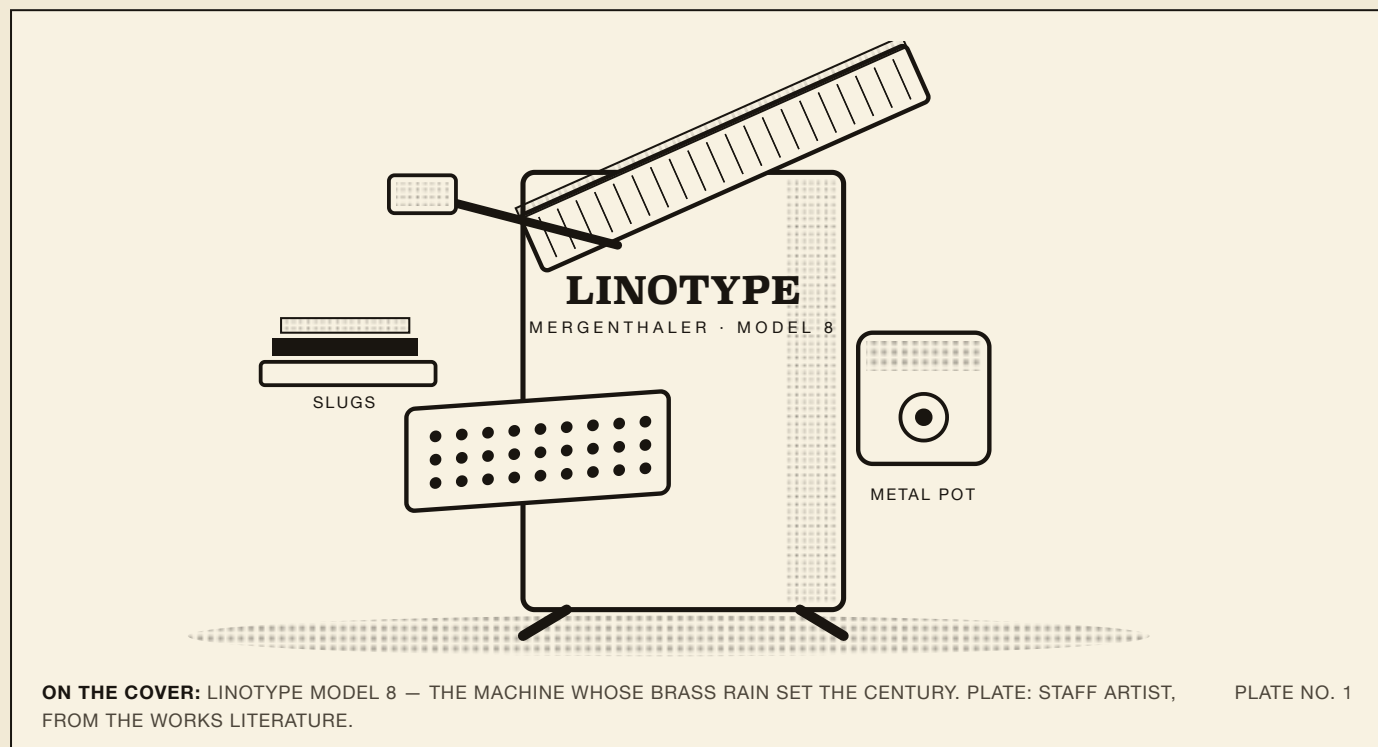


TYPE

THE COMPOSITOR'S EDITION · 1890-1970



ON THE COVER: LINOTYPE MODEL 8 — THE MACHINE WHOSE BRASS RAIN SET THE CENTURY. PLATE: STAFF ARTIST, FROM THE WORKS LITERATURE. PLATE NO. 1

THE WHOLE WORKS — composing, casting, printing, finishing:
filed as the job travelled

THE REGISTER: 136 machines of the hot-metal century, sourced or
honestly unverified

SPECIAL FEATURE: The Song of the Machine — what a
composing room sounded like

**THE PILGRIMAGE ENDS HAPPY: the machines still run on
Sundays** — \$5 at the door

Plus: The chapel & the piece rate · Lorem Ipsum, the sacred nonsense · Ink runs in the family

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Filed by function — the pages travel the way a job travelled through the works.

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7	DEPT II · LINOTYPE	The machine that set the century, both model lines
11	The Song of the Machine	What a composing room sounded like — the sound record
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THE MASTHEAD	
Editor	The same one as the red and blue editions; conflicts of interest as previously confessed, now with ancestry
Research Department	Sourced or honestly unverified; firm on this point
Family Memory Desk	Four returns on file; set between double rules, never blended
Compositor, founding	J.W.H., Dordrecht & Rotterdam & Florida Lake & Sydney — posthumous, with the house's respect
Correspondence	To the usual address; Sunday lunches preferred for family submissions

THE LEGACY SERIES · VOLUME THE FIRST IN TIME, THE THIRD IN PRINT · SET IN BLACK INK ON CREAM, BECAUSE THE INK IS THE SUBJECT

Ink runs in the family.

The red edition said so in print. This volume is the evidence.

Readers of our previous numbers will recall a line in the red edition's letter to the effect that ink runs in this family. It was offered at the time as colour. It turns out to have been reporting.

The man in question was **Johannes Wilhelmus Hillege** — born in Dordrecht on the first of November, 1921; trained to the trade in Rotterdam; emigrated in 1953 to a suburb on Johannesburg's West Rand, where he opened a shop beside the water and named it for the lake: **Floraprint**. For thirty-two years he set the type and ran the presses himself, his wife Maria keeping the books, his sons in and out of the works. He reached Sydney in 1985 and died on the 31st of October, 1986 — the night before his sixty-fifth birthday. He was this editor's grandfather.

The trade did not stop with him. His son ran a Heidelberg at a shop in Gordon whose telephone number this editor can still produce on demand, forty years on, which tells you something about the filing systems of childhood. And in that shop, after school and on weekends, the editor himself set type and ran the copiers and did the finishing — on a Mita DC-6500, a machine readers of the red edition will recognise and may suspect of receiving favourable coverage. The suspicion is noted for the record.

So this volume completes a set backwards. The red one catalogued the machines of the editor's boyhood; the blue one,

the survivors of today; this one belongs to the man who came first, and to a trade that had five hundred good years and then, inside a single working lifetime — his — came to an end. He watched hot metal give way to film, and film begin giving way to the machines in the other two volumes. He would, we suspect, have found the whole shelf funny.

A word on method, because he would have insisted. Where this magazine states a fact, it has a source; where it cannot find one, it says *unverified* and moves on; and where the source is the family's own memory, it is labelled as such, set off by double rules, and never blended into the record. Memory put a birthday one year wrong before it put it right. The register was built for exactly this.

He was a patient man. He invited the Jehovah's Witnesses in, purely to argue with them, and both parties seemed to enjoy it. He loved a pipe, which in retrospect the research department cannot endorse. He taught this editor chess — not well, but the deficiency was never in the teaching. There were simply not enough Sundays.

The machines of his trade, unlike those of ours, still run. The back pages tell you where. Take a child; five dollars at the door.

— *The Editor*

SOURCE TIER: FAMILY MEMORY · FOUR RETURNS, JULY 2026 · CORROBORATION PENDING AT THE USUAL REGISTRIES

This page states personal facts on the authority of the family record alone, and is set apart accordingly. The composing room would have understood: some copy you set with a source pinned to the galley, and some you set because your mother told you, and a careful house never confuses the two trays.

COMPOSING

The case, the stick, and the stone — furniture with no serial numbers, and no end date on the argument over which lay the ancestor actually stood at.

Before any linecaster earned its keep there was the case: two wooden trays of hand-set sorts, a compositor’s stick, and a trade vocabulary that walked into the twentieth century almost unchanged. This department opens where the trade itself did — at the frame.

Upper case, lower case. Before type went into a single tray, capitals and small letters lived in two separate wooden cases, worked as a pair on a sloped frame: the case holding capitals sat above and behind, the case holding minuscules sat in front and below, closer to the compositor’s hands. Lowercase letters see far more use, so keeping them low and near cut down on arm travel. The names outlived the furniture — “uppercase” and “lowercase” are a fossil of shelf position, not letter size.

The California job case. By the 1830s founders sold more caps-and-lowercase in a single fount, and from around 1836 American printers began combining the two cases into one job case. The 89-box layout that became “the” California pattern was documented by J. L. Ringwalt in 1871 as the San Francisco trade’s own arrangement, and it took its name from the West Coast foundries that sold it — not, this department is obliged to note, from any printer who supposedly carried type on horseback through the Gold Rush. The trade’s own historians trace the real lineage to a Scottish firm, McCorquodale & Company, reaching San

Francisco via journeyman printer Octavius Dearing. File the saddlebag story under folklore, not history.

Box size is a frequency map, not decoration: “e” gets the case’s biggest compartment; j, k, q, x, z get the smallest. English rooms, meanwhile, kept the paired cases going long after the Americans consolidated into one tray — Joseph Moxon’s *Mechanick Exercises* (1683) already shows cases in pairs, and the lower-case arrangement he records is recognisably the standard English lay two and a half centuries later. British houses called their combined tray a “double case,” distinct from the California pattern.

Which lay Australia used is the one place this department has to shrug honestly. The colonial and state typographical unions were built on the British model, which points toward the double case as the room’s default. But practice was already a hybrid: American Linotypes ran Australian newspaper rooms from 1895, and Australian type was cast to the American point system by 1939. No source turned up here states definitively which case layout hand compositors actually stood at. Call “the British double case” the better-supported guess — not a documented fact.

THE CALIFORNIA JOB CASE — THE LAY

SCHEMATIC, AFTER THE STANDARD 89-BOX PATTERN

t	a	o	i	n	s	h	r	d	l	c	u
m	w	f	g	y	e		p	b	v	k	j
x	q	z	EM	EN			3-EM	4-EM	THIN	HAIR	COPPER
,	.	;	:	'	!	?	&	(	)	—	*
QUADS, SPACES & SORTS											

A	B	C	D	E	
F	G	H	I	K	
L	M	N	O	P	
Q	R	S	T	V	
W	X	Y	Z	J	U

LOWER CASE — SIZED BY FREQUENCY

UPPER CASE — ALPHABETICAL, J & U APPENDED

PLATE No. 2

THE LAY, SCHEMATIC: SIZED BY FREQUENCY; J/U APPENDED AFTER Z, NOT INSERTED.

The stick, read backwards

The composing stick is a hand-held metal tray, adjustable at one end, held in the left hand — curled fingers, thumb pinning the last piece of type set — while the right hand picks sorts from the case, nick-up, and sets them left to right. Before the composing rule was standardised in 1886, sticks were set to whatever measure the foundry used, because every foundry’s “pica” could differ slightly from its neighbour’s. One method still taught today: set the stick to the measure plus two em quads, and open each line with a lead cut just fractionally short of that width, so the line does not collapse before it reaches the galley.

Type carries a nick — a groove cast into the body so the compositor can tell by feel, without looking, which way a letter faces. Set correctly, nick-up, a line reads normally to the hand that set it, even though every piece is upside down and mirror-reversed left to right. Checking a set line, or reading a forme on the stone, meant reading upside-down and backwards fluently — a skill every apprentice had to build, and one an experienced hand did without noticing it was a skill at all.

The stone

Imposition — arranging composed pages into the sequence and orientation that folds correctly once the sheet is printed — happened on the stone, historically an actual slab of marble, later machine-ground steel: the composing room’s largest single piece of furniture. The imposed pages sit inside a chase, a rigid steel frame; everything inside that isn’t type is filled with furniture — wood or metal blocking cut to standard pica widths — plus narrower wooden reglets for spacing around wood type.

Before final tightening, a block of smooth hardwood — the planer — wrapped in paper, is tapped evenly over the assembled type with a mallet, seating every sort to exactly the same height. Heavy-handed use of mallet and planer could crack a sort or drive the whole form out of true; it reportedly earned a ham-fisted printer the trade nickname “blacksmith.” Only once the form is planed level are the quoins tightened — loosely at first, then evenly around the chase, checked again, then fully. That last step is the lock-up.

Mind your p’s and q’s

The trade likes to claim this phrase as its own: lowercase p and q, mirror images of each other, sat in adjacent compartments — an easy mix-up for an apprentice reading upside-down and backwards, at a time when a mis-set forme cost real money. Plausible, popular, and not settled: rival theories point to pub-tally slates (pints v. quarts), a French dance term (*pieds/queues*), and a wig-and-coat story that runs into its own chronology problem. Sources cannot even agree on the earliest citation — 1602 or 1756. This department’s honest position: printing is the best-evidenced of several competing folk etymologies. Not a proven one.

QUOINS, COMPARED

QUOIN	MECHANISM	NOTE
Wood	mallet + shooting stick	standard through the 19th c.
Hempel	two steel wedges, centre bar, toothed key	“probably the most widely used quoin ever developed”
Wickersham	internal cam, top key, spring-held	1923 patent; a full turn silently un-clamps the form
Notting	screw-lifted wedge	1917/23; marketed as free of the Wickersham slip-back

“Reading upside-down and backwards, fluently — a skill every apprentice built, and an experienced hand did without noticing.”

SPACING MATERIAL, BY THE EM		
TERM	SIZE (REL. TO EM)	USE
Em quad	1 em	word space at line ends, paragraph indents
En quad	½ em	half-width spacing, en dash width
3-to-em space	⅓ em	standard word space
4-to-em space	¼ em	tighter word space
Thin space	~⅓–⅙ em (metal era: 1/10 em)	fine word spacing, nested punctuation
Hair space	narrowest cut	final fine justification
Copper	0.5 pt	fine justification shim
Brass	1 pt	fine justification shim
Lead	1–3 pt (commonly 2)	space between lines
Slug	6 or 12 pt	heavier interline spacing

Justifying by hand meant “every line snug, with equal tension” — standard spaces first, coppers and brasses only for the final adjustment. Bending a thin space to force a fit was considered bad practice.

The point system

For roughly four centuries movable type had no shared measurement system at all — every foundry cut to its own “pica,” so type from different foundries in the same forme did not reliably align. Pierre Fournier proposed a point system in the 1730s–40s; the Didot family’s refinement became the continental standard, still called the Didot point (about 0.376mm; 12 Didot points = 1 cicero). English-speaking printing went its own way: American foundries agreed the Anglo-American point — 0.013837in, 12 points to a pica, 6 picas to the inch — in 1886. Britain adopted the same standard in 1898. The two systems differ by about 7%; Didot- and Anglo-American-cast type of the “same” nominal size are visibly different sizes and cannot share a forme.

What Australia used. Two questions, two different answers. On point size, Australia followed the American figure, not the British “old English” measures and not Didot: F.T. Wimble & Co., the major Sydney type supplier, published *Specimens: Australian type & borders cast on American point lining system* in 1939, and Australian founders had been rebadging American Type Founders de-

signs under local names since at least 1908. On trade structure and apprenticeship, Australia stayed British. An American-metric room run on British-apprenticeship lines — a very Australian combination.

Type metal

Type is cast from a lead alloy hardened with antimony and toughened with tin — never pure lead, which is too soft to hold a printing edge. General foundry sorts ran roughly 54–86% lead, 11–28% antimony, 3–18% tin, the hottest, highest-pressure casting taking the richest mix. Standard Linotype metal sits close to the ternary eutectic, about 84/12/4, chosen because non-water-cooled linecasters run at comparatively low pot temperatures; Monotype composition-caster metal ran a little richer again, around 79/15/6.

Names before numbers

Before the point system, and long alongside it, sizes had names, not numbers — nonpareil (6pt), brevier, bourgeois, pica itself. Only one survives in ordinary use: “agate,” still the US newspaper trade’s word for classified and sports-agate type, at roughly 5½ points.

LINOTYPE

The Baltimore clockmaker who made setting type and casting it the same motion — and the arithmetic that followed him into every composing room in the English-speaking world.

Four centuries after Gutenberg, two operations that had always been separate — assembling letters, and casting them — became one machine, one keyboard, one operator. This department opens with the man, not the myth.

Ottmar Mergenthaler emigrated from Württemberg to Baltimore in 1872, aged eighteen, and went to work at a precision-instrument bench — clocks and scientific apparatus, not printing. It is the kind of close mechanical patience that has nothing obviously to do with a composing room, until it does. By 1884 that patience had produced a working idea, tried and discarded in several earlier forms by other inventors: matrices, not type, should do the travelling. A keyboard would release brass letter-moulds from a magazine, assemble them into a line, cast that line as one solid slug of type-high metal, and send every matrix straight back home to be used again. Composition and casting, unified.

The first commercially used Linotype went to work at the *New York Tribune* in July 1886, composing the daily paper and, as a side commission, the first book ever set by the new method — *The Tribune Book of Open-Air Sports*. Thomas Edison is credited, on seeing a demonstration, with calling it “the eighth wonder of the world”; the credit may be generous, but the ninth wonder — arithmetic — backed him without qualification. An 1889 trade notice in

Manufacturer and Builder did the sum a Tribune book-keeper had likely already run twice: the work of thirty-three men operating the new machines matched what ninety compositors, setting by hand, had previously supplied. Near enough three-for-one that other period accounts simply rounded it to one operator for six hand compositors. Whichever figure a foreman preferred to believe, the payroll effect was identical, and it arrived inside a decade.

Mergenthaler's own backers were not always generous with him in return. When the newly capitalised Mergenthaler Linotype Company — \$5 million, 333 investors, 1895 — entertained the idea of stripping his name from the machine he had built them, he wrote back with the dry dignity of a man who knew precisely what he had made: “Hoping to be spared the intended humiliation, I am, Yours Truly, Ott. Mergenthaler.” His name stayed on it. He died in 1899, having lived just long enough to see the trade press begin cataloguing the more than 1,500 patents laid on his design. Composing-room veterans would later give the machine's own noise a chapter of its own; this department confines itself to the metal.

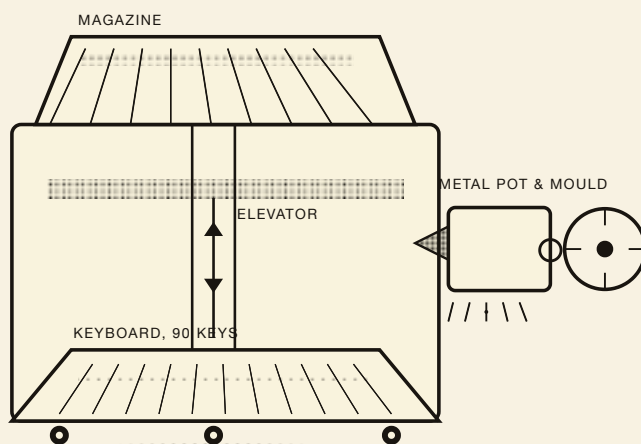


PLATE No. 3

ONE MACHINE, FOUR OPERATIONS: MATRICES DROP FROM THE INCLINED MAGAZINE, ARE ASSEMBLED AND JUSTIFIED BY THE KEYBOARD BELOW, RIDE THE ELEVATOR TO THE MOULD, AND ARE CAST IN ONE MOTION AS A SINGLE SLUG — THEN RETURN TO THE MAGAZINE TO DO IT AGAIN.

The American line: a naming lineage, not a straight road

The model numbers that followed Mergenthaler's first machine do not run tidily, and no trade paper should pretend otherwise. The “Blower” (1886–1890, ~212 built) took its name from the compressed-air system that moved its matrices; it gave way in 1890 to the “Square Base” (~366 built), the first “modern-form” Linotype, whose inclined constant-length-channel magazine set a compatibility standard every later model would inherit. Model 1 (1892) was, in the trade's own words, “the first really successful Linotype” — some 6,000 sold at \$3,150 apiece, narrow magazine, 11-point ceiling. From there the numbers fan out fast: mixers carrying two, three, four magazines for a compositor who needed to change type family without leaving the keyboard; wide-measure variants pushing from 30 to 36 ems; a cut-down “Junior” for small jobbing offices that never needed a newspaper's reach.

The 1936 “Blue Streak” series — Models 29 through 36, with the Model 31 as its “Master Model” — was the definitive mid-century redesign: four-magazine mixing, a “Two-in-One” 72/90-channel variant, and a cruising speed, manual or on Teletypesetter tape, of roughly ten lines a minute. The compact two-magazine “Comet” of around 1950, marketed on its “Mat-Glide System,” served book and jobbing shops that would never run a newspaper-scale machine. The evolutionary chart the trade itself kept ends at “Electron” — listed as the terminal US model line, with no further specification this department's researchers could stand behind.

THE AMERICAN RANGE — SELECTED MODELS				
MODEL	YEARS	MAGS. SPEED		NOTABLE FOR
Blower	1886–1890	unv.	unverified	First commercially used Linotype; ~212 built
Square Base	1890–1892	1	unverified	First “modern-form” machine; set the matrix standard; ~366 built
Model 1	1892–1902 (to order, 1916)	1	unverified	“First really successful Linotype”; ~6,000 sold at \$3,150
Model 2 Mixer	1903–1906	2	unverified	First two-magazine mixer, quickly superseded
Model 3	1902–1906	1	unverified	First magazine wide enough for 12pt and up
Junior	1902–c. WWI	1	2,000–4,000 ems/hr	Cut-down jobbing machine, 6/8/10pt only
Model 4 Mixer	1906–	2	unverified	First quick-change double magazine
Model 5	1906–	1	unverified	First quick-change single magazine; swap under 60s
Model 8	1911–c. 1950s	3	unverified	Newspaper workhorse; hand-wheel magazine select
Model 14	1914– (rev. 1930)	3+aux	unverified	3 magazines plus 28-channel auxiliary, 5–36pt
Model 29 (Blue Streak)	Nov 1936–	4	unverified	Opened the Blue Streak series, 72/90-channel
Model 31 (Blue Streak Master)	1936–	1–4	~10 lines/min	Flagship “Master Model”; Two-in-One variant
Comet	c. 1950–	2	unverified	Compact book/job machine, “Mat-Glide System”
Electron	unverified	unv.	unverified	Terminal US model in the evolutionary chart

Models 6, 7, 9–13, 15–28, 30, 32–36 are also on the American register with years and magazine counts but no sourced speed or measure figures — full roster in the archive data file.

The English line: Altrincham, and a factory fed by canal

The British trade ran its own parallel numbering under **Linotype & Machinery Ltd**, formed in 1903 from the merger of the original Linotype Company Ltd — established 1889 as a British offshoot by Joseph Lawrence — and the Machinery Trust Ltd. Manufacturing moved in 1899 to a purpose-built works at Broadheath, Altrincham, sited deliberately on the Bridgewater Canal, so that coal barges out of the Worsley mines could feed its furnaces directly from the water rather than by cart. It is the kind of infrastructure decision a trade paper appreciates: the factory was built around the fuel it would need to keep the metal molten, not the other way round. By 1914 the Altrincham works employed 1,550 people, and L&M ran branches from Calcutta and Bombay to Hong Kong, Singapore, South Africa, Nigeria and Egypt — building script variants for Tamil, Arabic and Sanskrit composition alongside the standard Roman-alphabet machines.

The English model line ran its own numbers throughout: a Square Base of 1892 (the first British-built Linotype, installed at the *Newcastle Evening Chronicle*), Models 1 through 6, and then the long-serving interwar workhorses — the Model 48 / 48 S.M. (1935) and Model 50 / 50 S.M. (1936), standard and mixer multi-magazine machines that held the line through the Depression and into the war. The Teletypesetter-oriented Model 54 (1954) answered the same tape-driven speed pressure the American Blue Streak answered; the “Seventy Series” (Models 70–79, 1959) was the last pre-Elektron English family; and the Elektron (1962) closed the English hot-metal line by moving the escapement mechanism into the machine body itself, out of the magazine — the final redesign before photocomposition arrived to make the whole argument academic.

THE ENGLISH RANGE — LINOTYPE & MACHINERY LTD, ALTRINCHAM				
MODEL	YEAR	MAGS.	SPEED	NOTABLE FOR
Square Base (English)	1892	1	<i>unverified</i>	First British-built Linotype, <i>Newcastle Evening Chronicle</i>
Model 1 (English)	1895	1	<i>unverified</i>	Four variants: Old Style single/double-letter, Pica, Reconstructed
Model 3 (English)	1907	2	<i>unverified</i>	Two-magazine mixer; 180-key Arabic version offered
Model 4 / 4 S.M.	1908 (<i>S.M. 1923</i>)	3	<i>unverified</i>	Three-magazine nonmixer, 30 picas (36 to order)
Model 48 / 48 S.M.	1935	3–4	<i>unverified</i>	Standard multi-magazine nonmixer of the interwar line
Model 50 / 50 S.M.	1936	4	<i>unverified</i>	Four-magazine mixer, wider magazines than the 48
Model 53	1953	1	<i>unverified</i>	One magazine, two-pocket mould wheel
Model 54	1954	<i>unv.</i>	<i>unverified</i>	High-speed machine built for Teletypesetter tape
Seventy Series (70–79)	1959	<i>unv.</i>	<i>unverified</i>	Last pre-Elektron English family, five model numbers
Elektron	1962	<i>unv.</i>	<i>unverified</i>	Escapements built into the machine, not the magazine

Models 2, 6 / 6 S.M. and 65 are also on the English register — full roster in the archive data file.

Australia: a depression, an arithmetic, a country paper

Australia's adoption tracked the Commonwealth pattern closely, and arrived on the back of a depression. A. H. Massina & Co installed Victoria's first Linotype in December 1894; the Melbourne *Herald* followed in 1895, and the rest of the city's newspapers by 1896. The machine's economics were exactly as advertised, and exactly as brutal: one Linotype could do the work of five or six hand-compositors, and at the *Age* and the *Argus* composing-room staff numbers fell by more than two-thirds inside a few years. The operators who kept their jobs did well out of the trade-off — Melbourne *Herald* Linotype men were earning £12–14 a week in 1926, against a £4/4s basic wage — but the craft unions that controlled entry to the trade kept the keyboard a male, apprenticed, daylight-and-night-shift preserve throughout the machine's Australian working life.

One machine. One newspaper, continuously published since 1863. Ninety-one years — nearly the entire arc this catalogue covers.

A Mergenthaler Model 8, serial 18787, built around 1914, spent its working life at the *Bombala Times*, a New South Wales country paper, and kept setting it — continuously — until 14 February 1985, when the paper finally moved its production to photo-offset in Cooma. The machine now sits in the Powerhouse Museum's Sydney collection, three interchangeable superimposed magazines and all, a working link from the trade's high-water mark almost to its Australian close. No single object in this department's research earns its plate more honestly.

The end, everywhere

The end was photocomposition — machines that set type photographically onto film rather than casting it in lead — followed by digital typesetting once a computer could drive an imagesetter directly. Newspapers held onto their hot-metal Linotypes longest of any part of the trade, because a newspaper's economics reward the last possible day of amortised machinery over the first possible day of a new one. The *New York Times* ran its last hot-metal edition on Sunday 2 July 1978, scuttling the final machines from a composing room that had once held sixty of them; the last known Linotype-set US newspaper, the *Saguache Crescent* in Colorado, was reportedly still setting hot metal as recently as 2023. Ninety-two years, one keyboard, one idea: matrices go out, and matrices come home.



THE SONG OF THE MACHINE

A title no period source ever used — it's the editor's, offered honestly, for a sound every veteran of the floor still swears he can hear.

This feature is not reconstructed from imagination. It draws only on people who were actually there — reporters who worked the composing-room floor, retrospectives filed once the machines fell quiet, and a documentary crew who filmed the night it ended, on purpose. Nobody in these pages called it a song. They didn't need to.

A composing room running its full complement of Linotypes was loud in a specific, describable way — not white noise but a layered mechanical rhythm, and everyone who worked near it reached for much the same handful of words. A 2004 *Baltimore Sun* retrospective put it plainest: “the noisy clackety-clack of the Linotype machine, once a staple of print shops and newspaper composing rooms everywhere, is an industrial sound that has practically vanished.” Clackety-clack is doing real work in that sentence — it is the two-beat pattern of a matrix leaving its channel and, a line later, a used one returning to it, repeating at whatever pace an operator's fingers set.

Not everyone heard drudgery in it. One reporter who worked the era later remembered the sound of matrices sliding down from the magazine toward the assembling elevator as “melodious” — the “clink-clink” of brass finding

brass on its way to the mould. That affection is worth taking at face value: it describes a machine doing a genuinely intricate job, something like 3,000 moving parts to a single Linotype, and doing it well enough, apparently, that people who spent decades beside it missed the racket once it stopped.

Multiply one machine's rhythm across a full composing-room floor and the period record reaches for choreography rather than complaint — a giant clockwork ballet, dozens of machines running slightly out of phase with one another, none of them silent for longer than the length of a line. For the better part of a century that was simply what a newspaper's backshop sounded like while it built tomorrow's edition — background noise so constant that almost nobody thought to record it before it stopped, overleaf, for good.

“An industrial sound that has practically vanished.” — *Baltimore Sun*, 2004

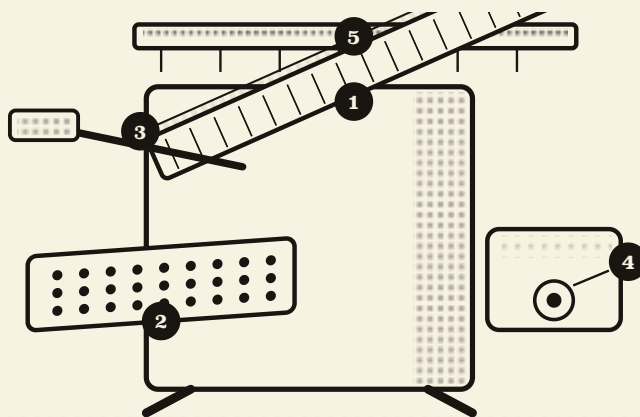


PLATE No. 2

ANATOMY OF THE SOUND: 1 MAGAZINE (MATRIX RELEASE) · 2 ASSEMBLER (KEYS CLACKING A LINE TOGETHER) · 3 ELEVATOR (THE ASSEMBLED LINE RISING TO THE MOULD) · 4 CASTER WHEEL (THE SLUG CAST IN SECONDS) · 5 DISTRIBUTOR (MATRICES CARRIED HOME OVERHEAD). PLATE: STAFF ARTIST, FROM THE WORKS LITERATURE.

THE SCORE — A COMPOSING-ROOM PROGRAMME

MOVEMENT	THE SOUND	ATTESTED
I. Magazine	“clink-clink” of matrix release, called “melodious”	Reporter’s recollection, 2023
II. Keyboard & assembler	keys clacking, a line taking shape	<i>unv. (mechanical, general)</i>
III. Elevator	the assembled line rising to the mould	<i>unv. (mechanical, general)</i>
IV. The pot	a slug cast in seconds, then released	<i>unv. (mechanical, general)</i>
V. Distributor	matrices carried home overhead	<i>unv. (mechanical, general)</i>
VI. Full floor, together	“clackety-clack” — an industrial sound “that has practically vanished”	<i>Baltimore Sun</i> , 2004

Farewell, Etaoin Shrdlu

On Sunday 2 July 1978 the *New York Times* set its last hot-metal edition, scuttling some sixty Linotypes from a room that had once run all of them at once. Proofreader David Loeb Weiss and operator Carl Schlesinger filmed the last working night and named their half-hour film after the trade’s own nonsense phrase — see the sidebar. One retrospective described “the furious energy and the cacophony of clinks and clanks of the composing room” on that final shift: the sound this feature has been chasing, captured on purpose for once instead of merely remembered. The *Times* was one ending among several — Fleet Street’s came in 1986, Australia’s across the 1960s–80s — but this is the one somebody thought to film.

What the film actually preserved was an ending, not a eulogy staged for effect. One operator, on camera, gave his own verdict on forty years of hand-and-eye skill folding itself into a keyboard: “All the knowledge I’ve acquired over my 26 years is all locked up in a little box now called a computer.” Someone chalked the room’s own epitaph on a board before the lights went out: “The end of an era. Good while it lasted. Crying won’t help.” Coverage of the film puts a number on the trade-off — flagged here as reported rather than independently checked against the footage — an experienced operator, flat out, could set about 14 lines a minute; the system running the paper the next morning managed roughly 1,000.

“All the knowledge I’ve acquired over my 26 years is all locked up in a little box now called a computer.” — an NYT Linotype operator, 2 July 1978

■ Etaoin Shrdlu

The Linotype keyboard carried 90 keys arranged not alphabetically but by letter frequency — its leftmost two columns running **E T A O I N** and **S H R D L U**. When an operator caught an error mid-line, correcting an already-cast slug by hand was too slow to bother with; the fast fix was to run a finger straight down those two columns, filling out the ruined line so it could be pulled and thrown away before the metal cooled. It was never meant to be read.

It escaped into print often enough — a discarded slug mis-set into a page by a tired stonehand at the end of a long shift — that “etaoin shrdlu” became newsroom folklore in its own right. It turns up in Fredric Brown’s 1942 short story about a sentient Linotype, and lent its name, three decades on, to Terry Winograd’s 1972 natural-language AI program, SHRDLU — a nonsense correction-line, twice promoted to fiction.

WHAT WENT QUIET

No trade paper wrote the machine’s obituary as sound design. What survives is scattered testimony — a reporter’s “melodious,” a retrospective’s “clackety-clack,” a chalked line on a board nobody thought to photograph properly. This magazine has assembled it honestly, and called it a song only in the title.

INTERTYPE

Born the moment Ottmar Mergenthaler's patents expired — and still building linecasters when every other maker had gone home.

Patents expire. Mergenthaler's core Linotype patents began doing so around 1911, and New York newspaperman Hermann Ridder had \$4,000,000 raised before the ink was dry. Intertype spent the next six decades as Linotype's legal, licensed, interchangeable-parts twin — then, in 1946, built the camera that started killing them both.

Ridder organised the International Typesetting Machine Company within months of the patent lapse, and poached Linotype engineers — Wilbur Scudder among them — to do the job properly. A syndicate bought the company outright in 1916, for \$1,650,000, and renamed it Intertype Corporation. The pitch was refreshingly honest: the same mechanism Linotype had spent thirty years refining, now legally free to copy, plus at least 51 of Intertype's own improvement patents, sold on a promise Linotype itself never quite made — standardisation. Magazines, matrices and mechanisms moved between models without a rebuild.

Early Intertypes were, structurally, Linotypes: the company's own literature calls the Model X and Z “factory rebuilds”, a field-collected Linotype base wearing an Intertype motor, pot and magazines. By 1917 the company was casting its own machines outright — Models A, B and C, one, two and three magazines respectively, all sharing a 5–42pt range and all field-convertible into one another, the interchangeable-parts pitch made literal. The line grew through the 1920s–40s into mixer machines (Models E, F,

G and their four-magazine variants) and wide-magazine machines for the advertising trade (Model H). At least fifteen model designations exist; one, the Model S, is documented nowhere beyond a name in a parts catalogue.

Intertype followed its rival almost exactly to the end of the hot-metal era, and then a little past it. Its final and fastest design, the Intertype Monarch, built at Harris-Intertype Ltd's Slough works in the 1960s, cast up to fifteen newspaper-column lines a minute, and could be ordered with no keyboard at all — driven entirely from Teletypesetter tape.

None of which explains the joke Intertype told on itself in 1946. **The Intertype Fotosetter** kept the standard slug-machine's circulating matrices and its assembling-and-distributing mechanism — and replaced the metal pot with a camera, the brass matrices with photographic glass ones. It shot the first commercially filmset publication, a sixteen-page National Gallery of Art pamphlet produced at the US Government Printing Office. The company built entirely on the fact that Linotype's patents ran out had just shipped the machine that started running out every hot-metal caster's clock — its own included.

■ The last linecaster ever built

Two rival lineages — Linotype's original patents, and Intertype's exploitation of their expiry — run out at the same machine, in the same newsroom. A Harris-Intertype Model C4, built 1976, went into *The Guardian's* Farringdon Road offices. It cast its last line in 1987, by which time neither company's name had appeared on anything newly built for over a decade.

“The prototype got such bad reviews that it was never officially marketed.”

— Frank Romano, President, Museum of Printing, on Intertype's Desk Model Fotosetter, the hand-set-matrix display-type photocomposition machine Intertype tried and failed to build

LUDLOW & ELROD

The hand-set caster every newspaper kept, and the strip-caster nobody thought to mention.

Ludlow: the hand-set caster every newspaper kept

William I. Ludlow had an idea for a wedge-matrix typesetter — drawing, not without irony, on Ottmar Mergenthaler’s own 1885 Linotype patent — that turned out not to be buildable at a profit. He partnered with machine-tool man William A. Reade in 1906; it was Reade who redesigned the concept into the machine that actually shipped, perfected by 1909 and sold to its first customer in 1913, out of Chicago.

The method: a compositor hand-sets brass matrices, one per character exactly like foundry type, into a composing stick, in whatever mixture of faces and sizes the job needs. The loaded stick locks face-down into the machine; a motor-driven pot, pump and plunger injects molten metal into a mould beneath it, and a single cast slug is trimmed and delivered. It casts single point sizes from 4 to 96 — whole alphabets — and up to 144pt by setting letters vertically. A standard slug runs about 22.5 picas; a “Long Stick” attachment could set 120 picas as one justified unit.

That hand-assembly step is exactly why every newspaper had one. A Linotype or Intertype casts a full line automatically, but only from whatever faces happen to live in its magazine that shift — mixing a 36pt bold headline with 8pt caption type meant a magazine change, or didn’t happen.

The Ludlow didn’t care: the compositor simply picked whatever matrices the line needed. By 1919 over 350 printing offices ran one; by the early 1980s the figure stood at 16,000 worldwide, kept alive well past newspapers’ own retirement of the machine by rubber-stamp makers, foil printers and private presses.

Elrod: the unglamorous essential

Benjamin S. Elrod, a Linotype operator, spent from 1917 developing a machine to cast strip material continuously — leads, rules, slugs, the metal bases used to mount photoengraved plates — rather than one line at a time. He sold the design to Ludlow in June 1920; Ludlow manufactured and improved it, adding electrical heating by 1929.

An Elrod has no matrix and no keyboard: it is an extrusion machine. Molten type metal enters a mould, cools against a water-cooled surface, and emerges as an unbroken strip, drawn out continuously and cut to length. Because it never touches a letterform it can’t cast a decorative border — that job stayed with Monotype’s separate, fusion-based Material Making Machine — but for the leads, slugs and rule a composing room burned through daily, up to 36pt, the Elrod was the quiet machine everything else in the building depended on. Larger sizes were cast “cored”, hollowed through the middle to save metal and weight; oil carried in the molten metal rose to the mould surface on cooling, self-lubricating the next casting.

THE RIVALS — COMPACT REGISTER				
MAKER	MODEL	YEARS	POINT RANGE	NOTABLE
Intertype	Model C3	by 1917	5–42pt	3 magazines, no speed penalty; survivors still casting into the 1930s
Intertype	Model C4	1943–1976	5–42pt (unv.)	4 magazines; the 1976 Guardian machine — the last linecaster ever built
Intertype	Fotosetter	1946–	n/a (photo.)	First commercial photocomposition machine
Intertype	Desk Model Fotosetter	unverified	n/a	Display-type prototype; “never officially marketed”
Intertype	Monarch	1960s	unverified	Up to 15 lines/min; keyboard optional, TTS-driven
Ludlow	Typograph (standard)	1909–1913 on	4–96pt (144pt vert.)	Hand-set matrices, motor-cast slug; the headline machine
Ludlow	Model L	unverified	4–96pt	Water-cooled mould, up to 9 lines/min
Ludlow	Model M Typecaster	1970 (ex.)	unverified	Late-era example, Whittaker Collection
Elrod	Model E / F	doc. to 1962	up to 36pt	Strip caster; cored moulds above 12pt
Elrod	Model K	unverified	up to 18pt	Lighter machine, common lead/slug sizes

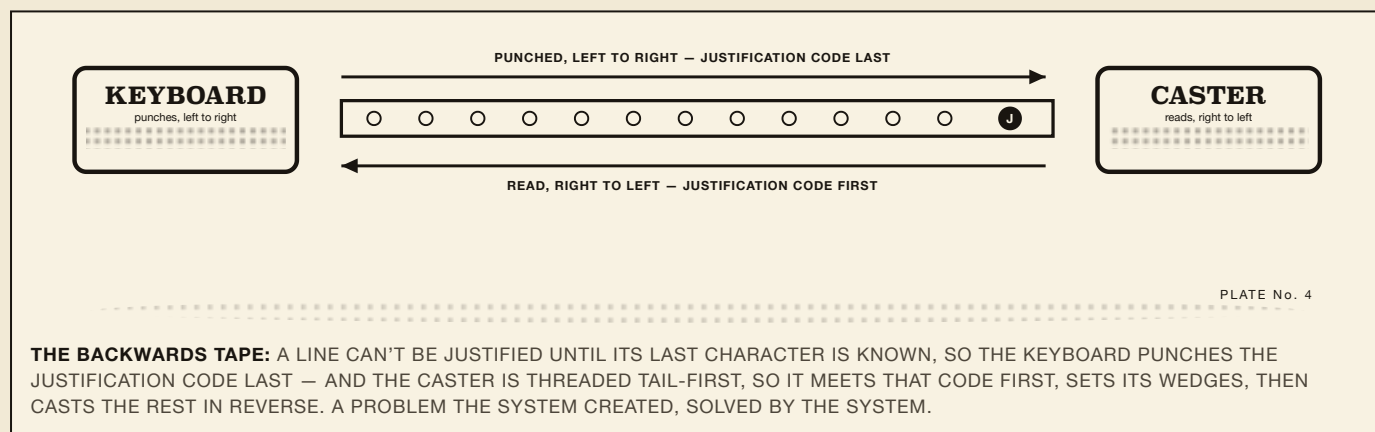
MONOTYPE

The book trade's answer — a keyboard that punches a paper ribbon, and a caster that reads it backwards on purpose.

Where the Linotype cast a whole line as one throwaway slug, Monotype cast every letter as its own separate sort — correctable with tweezers, for the price of a second machine. Book printers thought that a fair trade. Newspapers, on a deadline, did not.

Tolbert Lanston, a US patent examiner, filed his master patent on 7 June 1887 and had a working prototype that year — a keyboard punching a paper spool as a player-piano roll is punched, driving a second machine that stamped letters into cold metal from 196 matrices. It did not sell well enough. In 1890 Lanston dropped cold-stamping for casting, and by 1896 had the hot-metal version patented; the engineer who made it work, John Sellers Bancroft, also enlarged the matrix case from 196 positions to 225, and later 255 and 272. What resulted was not one machine but two, joined only by a length of tape.

The keyboard is compressed-air operated, over 300 keys across two banks — roman and italic, upper and lower, small caps, figures — each stroke punching a code into a 31-channel ribbon. Lanston's other invention is built into the mechanism: every character carries a unit value from 4 to 18, narrow for a lowercase *i*, wide for a cap *W*, and the keyboard totals the line as it goes, telling the operator by dial how many units remain. The justification sum is solved before the tape is torn off; the caster is never asked to calculate anything.



Single types, sold twice

Each caster character is a complete, separate sort, not a slug welded whole as on a Linotype: recast the whole line for one typo, or pick out one bad piece with tweezers and drop in the right one. For book work — tables, footnotes, the proof-and-correct cycle a novel goes through — that was worth the second machine. For a newspaper on deadline it wasn't: speed of first cast was everything, and a Linotype's one-operator simplicity won. Monotype owned trade books and quality faces; Linotype owned the newsroom — and Monotype men rather enjoyed being the trade's aristocracy, the outfit a publisher asked for by name.

The US/UK split

Lanston's company was American, Philadelphia-based; from 1897 a London branch raised capital and sold into Britain, with a Salfords factory from 1899. The UK arm dropped "Lanston" from its name in 1931, and by the 1920s the two were solving problems independently — the US built the Giant Caster in 1923, the UK the Super Caster in 1928. The US company closed by 1970; the Corporation outlasted it, building its last hot-metal caster at Salfords in 1987, a century almost to the year after the original patent.

MONOTYPE — THE MACHINES, 1897–1987

MODEL	MAKER	YEARS	SPEED	NOTABLE
Standard Keyboard ("Model D")	Lanston / Monotype UK	1907/09–1987	<i>op.-paced</i>	300+ keys; punches 31-ch. tape
Duplex Keyboard	Monotype UK	<i>unverified</i>	<i>unverified</i>	twin towers, doubled output/pair
"Monomatic" Keyboard	Monotype UK	<i>unverified</i>	<i>unverified</i>	1940s/80s sources; kind unresolved
Composition Caster (standard)	Lanston / Monotype UK	c. 1900–1987	140–180 rpm	reads tape backwards; 42-pica measure
Composition Caster "Size A"	Lanston (Washington, DC)	1897	<i>unverified</i>	serial no. 44, sole survivor
Type-and-Rule ("Orphan Annie")	Lanston US	c. 1903/04–1970	<i>unverified</i>	no tape tower; US typefounding mainstay
Giant Caster	Lanston US	1923–1970	<i>unverified</i>	14–72pt; US-only, past 36pt ceiling
Super Caster	Monotype UK	1928–c. 1970s	44–144 rpm	UK-only; replaced Giant + Material Machine
Monotype-Thompson Type Caster	Thompson (Chicago)→Lanston	1907/08–1967	<i>unverified</i>	5–48pt; copied in Shanghai & Japan
Material Making Machine	Lanston US	1923–unv.	<i>unverified</i>	strip material only, no type casting

SUPER CASTER — THE MANUAL'S OWN NUMBERS

44–144 rpm across 18 gear settings, 144 the rated top speed. Range 4½–72pt type, plus leads/rule 1–18pt, furniture to 72pt.

Moulds, per the manual: composition · type 14–36pt · type 42–72pt · 1–3pt lead/rule · 4–18pt lead/rule · furniture oiler.

■ One ceiling, two answers

Both base casters stopped at 36pt. The US fix, 1923, was the Giant Caster — a different machine, not an attachment, reaching 72pt on dedicated matrices. The unrelated British company solved it independently five years later with the Super Caster: speed and pressure control, a wider range. Lanston never built one. The Thompson caster ran a quieter parallel life — bought from Chicago in 1929, copied without licence in Shanghai from 1913 and Japan from 1918.

The workhorses

The Standard Keyboard and the standard Composition Caster filled composing rooms: a fast shop ran three or four casters off one keyboard's tape, since casting was always the slower half. The keyboard ran essentially unchanged 1907/09–1987, wartime gaps aside. The caster cast 140–180 sorts a minute from an 85 lb pot, on a 42-pica measure attachments could stretch to 60 or 84.

Serial No. 44

The earliest surviving Monotype caster is the 1897 "Size A," built in Washington, DC before the UK company or the Salfords factory existed. Patent filed 31 December 1897, granted as US 633,088 in 1899. One machine, one survivor, serial 44, now in the Science Museum Group — a decade before the Model D keyboard it was eventually paired with settled into its final form.

Monotype's other business, separate from the iron but the reason its face library outlived the caster it was cut for, was type design. Stanley Morison joined as typographical adviser in 1923 and ran a revival programme — Bembo (1929), Baskerville, Eric Gill's Perpetua and Gill Sans (both 1929). The best-known commission followed a complaint: Morison wrote that *The Times* was badly and old-fashionedly printed, so *The Times* asked him to fix it. Drawn by Victor Lardent, based on Plantin, Times New Roman debuted 3 October 1932 — arguably the century's most widely used typeface, and not a bad answer to a letter of complaint.

THE PRESS

Hand power to foot power to electric power, and finally the machine starts feeding itself — ninety years of the trade's real argument, fought one clamping platen at a time.

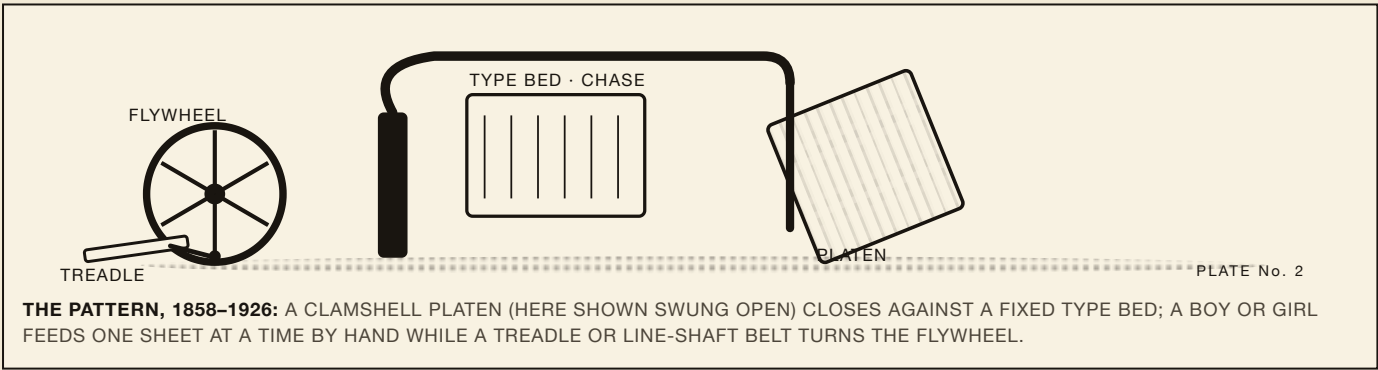
Everything upstream of the press — the linecaster, the case lay, the stone — exists to build a forme. The press is where the forme becomes product, and the story runs the same shape three times over.

The hand press was already old news by 1890 — the Albion's iron frame and lever go back to the 1820s — but it never really left the composing room. Proofing needed control, not speed, and an Albion sat in the corner of shops running Wharfedales and windmills well into the twentieth century for exactly that reason. Penrith Museum of Printing still keeps two, dated 1860 and 1864, beside its powered fleet.

The treadle platen is where the trade's real workhorse begins. Stephen Ruggles built the first practical job-and-card press in Boston in the 1830s; his upside-down 1840 patent hit 1,500–2,000 impressions an hour against roughly 250 for a hand press. George Phineas Gordon's 1858 Franklin Jobber — which Gordon, a spiritualist, claimed Benjamin Franklin described to him in a dream — became the most

copied press design of the century, spawning some seventy unlicensed American imitators; Chandler & Price bought Gordon's own factory in 1901 and by the 1930s built over ninety per cent of America's jobbing platens. Britain answered with the Arab, patented by Halifax's Josiah Wade in 1872 off Gordon's own patents — roughly 40,000 built to the 1980s, and a fixture of Australian shops, including the Powerhouse's Sydney-run Chandler & Price “Gordon type” (800 iph treadle, 1,800 belt-driven, donated 1970).

The powered platen changed almost nothing about the process and everything about the effort: same clamshell, same hand-fed sheets, a motor instead of a foot or a shaft. It took one further mechanism — an automatic feed — to end hand-feeding altogether. That mechanism belongs to the press overleaf.



THE PATTERN, 1858–1926: A CLAMSHELL PLATEN (HERE SHOWN SWUNG OPEN) CLOSES AGAINST A FIXED TYPE BED; A BOY OR GIRL FEEDS ONE SHEET AT A TIME BY HAND WHILE A TREADLE OR LINE-SHAFT BELT TURNS THE FLYWHEEL.

PLATEN PRESSES — SELECTED MODELS			
MODEL	YEARS	SPEED (IPH)	NOTABLE
Gordon Franklin Jobber	1858–1909	unv.	Gordon's “dream” press; ~70 US copies spawned
C&P Old Style	1884–1911	unv.	Wavy-spoke flywheel; 90%+ of US platens by the 1930s
C&P New Style	1911–1964	2,600 (8×12in)	Plain-spoke; practical hand-fed rate closer to 1,000–1,200
C&P Craftsman	1921–1964	unv.	Solid-flywheel, factory-motorised generation
C&P Pilot	c. 1886–1970s	unv.	Tabletop hand-lever press built for schools
Golding Pearl No. 1	1871–c. 1890s	unv.	Popular small-office and amateur jobber
Golding Jobber No. 7	1880 onward	unv.	Golding's heavy-duty trade press
Arab platen (Wade)	1872–1959 (+)	1,200 (final ‘A’)	~40,000 built; common in Australian jobbing shops

THE WINDMILL

1926 — the clamshell press that finally learned to feed itself, one gripper arm at a time.

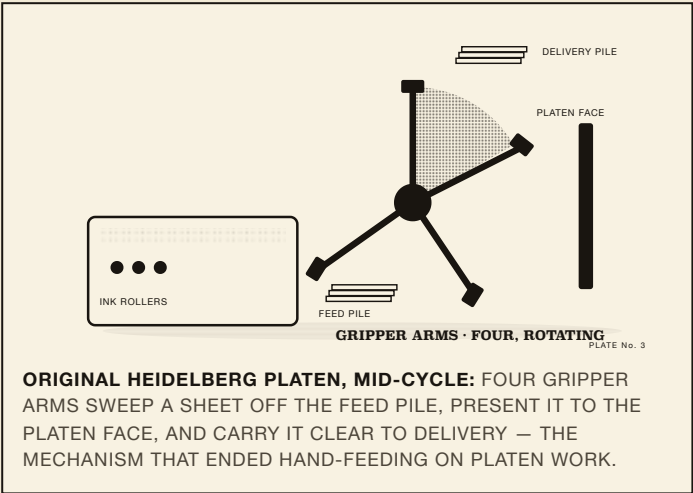
Officially the Original Heidelberg Platen — “Tiegel” in the works literature — but nobody in the trade ever called it that twice. Four rotating gripper arms, a stack of sheets, and the end of hand-feeding on platen work: 175,000 sold, one leaving the works floor every fourteen minutes for four decades straight.

The mechanism is the whole story: four gripper arms swing round the platen in sequence, lifting a sheet off the feed pile, presenting it square to the platen for the impression, and swinging it clear to the delivery pile — round and round, looking for all the world like a windmill’s sails, which is exactly where the nickname came from. Heidelberg went into series production in 1921 and moved the Windmill onto an assembly line in 1926; the works are credited with building it over 175,000 times by 1967, or one finished press rolling out the door every fourteen minutes across four full decades.

It came in two sizes and, true to the trade’s habit of confounding common sense, the smaller one is the faster one. The 10×15in “T” tops out around 5,500 sheets an hour; the larger 13×18in “GT” manages 4,000. A third variant, the GTP, dropped the ink unit altogether and was cast heavier to carry a dedicated creasing and die-cutting head — a Windmill that never printed a sheet in its working life, and a fair number of them are still creasing and cutting in trophy shops and bookbinderies today.

Why does the trade still run it, decades past its working life on any rational schedule? Because Heidelberg overbuilt it comprehensively. A Windmill from any decade between the 1930s and the 1980s gets rebuilt as a matter of routine, re-gear-ed for foil stamping or embossing, and put straight back to work — it is, by a wide margin, the platen press museums and small production shops actually operate rather than merely dust.

THE WINDMILL FAMILY			
MODEL	SHEET	SPEED (IPH)	NOTABLE
T	254×381mm (10×15in)	up to 5,500	The small one; oddly, the faster one
GT	330×457mm (13×18in)	up to 4,000	Large-format sibling, slower than the T
GTP	330×457mm	unv.	No ink unit — dedicated creaser / die-cutter



THE VERDICT — THE WINDMILL

AUTOMATION OVER THE TREADLE ERA	★★★★★
SPEED (BUY THE T, NOT THE GT)	★★★★☆
REBUILDABILITY, DECADE ON DECADE	★★★★★
AVAILABILITY TODAY	★★★★★

Buy the smaller one. It's faster, and 175,000 predecessors mean the parts bin never actually closes.

CYLINDERS: FORCE WITHOUT BREAKING THE TYPE

A platen can only strike so hard before the type gives way, because the whole sheet lands at once. A cylinder rolls the impression across the sheet in a moving line, so far greater force can be applied with far less strain — the simple physics that let cylinder presses print larger formes at higher volumes than any platen could match.

Britain's version has a river's name. The Wharfedale, developed from 1858 by David Payne and William Dawson at Otley in Yorkshire, was built for decades by the valley's own trade — Dawson, Payne & Elliott among half a dozen others. By 1911 an estimated 2,000–3,000 men were employed building Wharfedales and their derivatives at seven works strung along the Wharfe. The makers claimed 2,000–3,000 impressions an hour; printers who actually ran them called 1,500 the honest ceiling. Either number kept it the workhorse of the British and colonial trade for the better part of a century, in sizes from Double Crown up to Double Royal.

America's cylinder story is Miehle's. Robert Miehle patented a two-revolution flatbed cylinder press in 1884 — the cylinder lifts clear on the return stroke so the bed can reset without smearing the last impression — and it became the most-copied cylinder design in the US trade. In 1921

Miehle bought the Milwaukee Automatic Press Company and rebadged its vertical-bed design as the Miehle Vertical: stand a flatbed cylinder press on its end, feeder and delivery both working from the top, and floor space, vibration and access all improve at once. It sold well enough to stay in production until 1974 — the last of the flatbed lineage standing — and by some estimates 88 per cent of every Vertical ever built is still working somewhere.

Heidelberg's cylinder press is the Windmill's bigger, harder-hitting sibling: the Original Heidelberg Cylinder, introduced as an automatic cylinder press in 1935 and nicknamed, without much argument from anyone, “the Prince of Presses”. It scaled the Windmill's rotating gripper feed up to full cylinder impression — 5,000 sheets an hour standard, 10,000 with the double-feeder attachment — in sizes from the postwar 15×20.5in KS up to the 21×28in S.

■ The Penrith fleet

Penrith Museum of Printing's working collection is the clearest evidence of what actually ran in Australian composing rooms: Chandler & Price, Arab and Pearl treadle platens; a Wharfedale stop-cylinder press from around 1880; Heidelberg platens from 1935 and 1966; a Miehle Vertical from 1966 — and a 1936 Heidelberg cylinder that has done real production work in its retirement, reproducing the last letterpress front pages of the Dorrigo Gazette and, reportedly, the Sydney Morning Herald and the Age.

CYLINDER PRESSES — SELECTED MODELS			
MODEL	YEARS	SPEED (IPH)	NOTABLE
Wharfedale Stop-Cylinder	c. 1858–early 1900s	2,000–3,000 claimed; ~1,500 practical	Yorkshire's signature press; ~2,000–3,000 men building them by 1911
Miehle Two-Revolution	1884 onward	unv.	Most-copied US flatbed cylinder design
Miehle Pony	ex. 1898, 1912	unv.	Weekly-newspaper and job-printing cylinder press
Miehle Vertical V-36	1921–1974	up to 3,600	Bed-on-end orientation; floor-space and vibration savings
Miehle Vertical V-50	1921–1974	3,000–5,000	Top of the line; ~88% reportedly still in use
Heidelberg Cylinder KS	1935 onward	5,000 (10,000 w/ double feeder)	“The Prince of Presses” — Windmill feed at cylinder force
Heidelberg Cylinder S	postwar	unv.	Larger-format postwar pairing to the KS

THE PROOF PRESS: PAID TO FIND THE MISTAKE

A different animal again — not a production machine but a diagnostic one, built to pull a single accurate impression from standing type so a compositor could check it before the forme went anywhere near a production press. Vandercook is the family that matters here.

Robert O. Vandercook, who owned a Chicago suburban weekly, built his first press in 1909 — “the Rocker” — because nothing on the market could pull a fast, reliable proof; his geared cylinder gave a controlled, repeatable impression that a gravity-drop galley press simply couldn't match. Over the next fifty-nine years the company introduced something like ninety distinct models and built somewhere between 30,000 and 38,000 presses before selling to Illinois Tool Works in 1968.

Built to catch mistakes, not to make money — which is exactly why, forty years later, everybody wanted one.

Almost none of that production went into actual printing, which is precisely why the letterpress revival adopted the

Vandercook as its house press from the 1960s onward: when offset eclipsed letterpress and shops gave equipment away rather than scrap it, Vandercooks were light enough, precise enough and plentiful enough for artists and small studios to take on. The ongoing worldwide census at vandercookpress.info has logged more than 1,800 surviving machines across forty-plus models — the No. 4 and 4T alone account for 300-plus of them, the SP15 nearly 350.

Germany's F.A.G. of Singen built proof presses collectors rate among the best ever made — the Standard 510, the large-format Control 835, the Swiss Proof 40 — and that is very nearly the whole of what the record currently says: makers, model names and reputations, with years and specifications the trade literature hasn't yet been generous enough to give up. General gravity-drop galley presses fare worse still; they were the tool every composing room owned and precisely nobody wrote down.

VANDERCOOK — SELECTED MODELS			
MODEL	YEARS	FEED / DRIVE	NOTABLE
Trip Action (“the Rocker”)	1909	hand / treadle	The founding product
No. 1	1915–1966	hand / treadle	Long-lived basic hand galley press
No. 4	1935–1960	hand / electric	300+ in the census; the revival-studio staple
No. 4T	1938–1957	hand / electric	Transparency-proofing variant of the No. 4
SP15	1960–1976	hand / electric	~350 in the census — the most common survivor
No. 425 Short Run	1958–1974	automatic / electric	Crossover attempt into short-run production

■ A paragraph on where this ends

The trade's real endpoint wasn't the cylinder press, it was the rotary — a curved stereotype plate wrapped around a cylinder, reel-fed and self-folding, printing, cutting and delivering a finished newspaper without a human hand touching a single sheet. Yorkshire's own Cossar flatbed-web press, patented 1899 out of the same Otley works that built the Wharfedale, sat right on that boundary: reel-fed at 4,000–5,000 sheets an hour, but still printing off a flat bed rather than a curved plate — a genuine missing link. True web-fed rotary presses are the trade's technological destination, and its social one too, but they're a different scale of machine entirely, and this catalogue's register ends at the door.

THE FINISHING BENCH

One page. The register is honest about the size of its file — and declares an interest, because the editor worked this department.

Everything the other departments made was flat, printed, and useless. Finishing made it a thing you could hand to a customer: cut square, folded true, gathered in order, stitched, numbered, padded. It is the department this volume's research is thinnest on — the literature romanticises casters, not guillotines — and the only one its editor can describe from the working side of the bench.

The furniture of the department barely changed in a century, which is why one page can hold it. The **guillotine** ruled the room and everyone's respect: a powered blade through a clamped ream, with a two-hand interlock on later machines precisely because of what earlier machines had done to earlier tradesmen. The **folder** turned flat sheets into sections; where there was no folder there was a bone folder and an afternoon. **Gathering** and **collating** put the sections in order — work counted in thousands, done to the rhythm of conversation. The **stitcher** put wire through the spine; the **numbering box** ticked invoices and raffle books along one impression at a time; **padding compound**, brushed on a clamped stack, made the humble notepad, the jobbing shop's bread and

butter. None of it glamorous. All of it the difference between printing and a job delivered.

Two notes from the register's own files. First: the Heidelberg platen of Department III moonlighted here constantly — ink rollers off, it creased, perforated and die-cut, which is why so many survived in bindery corners long after the type went. Second: the trade's finishing instincts outlived the trade. The red edition of this series documents a teenager laminating a magazine cover in thick plastic in 1990s Sydney, an act this department recognises immediately as its own: if a thing matters, you seal it, square it, and make it survive handling. The instinct, like the ink, appears to be hereditary.

FAMILY MEMORY · THE WORKING EDITOR

At Gordon Businessprint the finishing was, in the family's own assessment, "more manual in our case" — collation by walking the bench, folding by hand where the run was short, the guillotine treated with the respect described above. The editor's qualifications for this page were earned at that bench, after school, at award-adjacent casual rates.

THE TRADE

Seven years bound, five years bound, or four — however long it took to make a journeyman, the making was the same.

Every other page in this volume is about a machine. This one is about the person who stood in front of it — indentured as a boy, examined as a young man, and governed for the rest of his working life by a set of customs that no other industrial trade quite matched for scope, or for teeth.

Apprenticeship length varied by country and era, but the shape held: a long, formal, indentured term served to a master printer, ending in qualification as a journeyman. Britain's classic term was seven years — sometimes stretched to seven-to-ten in earlier periods — with boys typically bound around fourteen; Scotland had shortened this to four years by the mid-twentieth century as the craft consolidated and formal college training absorbed part of what used to be learned purely at the frame. Australian practice could run shorter again: Neil Gay began a five-year compositor's apprenticeship at the Victorian Government Printing Office — “the Gov” — in Melbourne in 1958. Indentures were real legal documents, not custom dressed up as paperwork: one 1960s British compositor recalled that his required the master's permission even to marry during its term.

The youngest apprentice on the floor was the **printer's devil**, a title probably earned from ink-blackened hands and clothes — though the etymology is genuinely contested rather than settled. Joseph Moxon, writing in 1683, recorded that print-shop hands “jocosely call them devils, and sometimes spirits, and sometimes flies”; other theories reach for the demon Titivillus, blamed for centuries for scribal and then printers' errors (including the 1631 “Wicked Bible,” which dropped “not” from the seventh commandment), for lingering medieval suspicion of the press itself as a species of black art, or for a mangled mem-

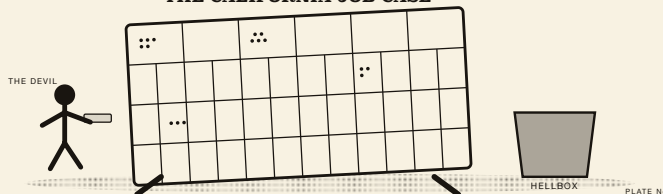
ory of Johann Fust folded into the Faust legend. None of these is proven; all of them circulated in the trade. The devil's actual work was menial — fetching type, mixing ink, carrying broken or “pied” type to the melting pot, which is where the trade got the word **hellbox**: the receptacle for metal waiting to be recast.

The years that followed ran to a rough script. Early ones were devil's work and learning “the boxes” — memorising the physical layout of type in the upper and lower cases so thoroughly that “knowing your boxes” became trade slang for competence in general. Later years moved onto the frame proper, setting simple matter and then harder work under a journeyman's eye, usually alongside evening or block-release classes at a technical college — Scotland ran evening printing classes in Glasgow and Edinburgh from 1914, and by the 1920s Stow College, Heriot-Watt and Dundee Technical College all offered dedicated courses. Neil Gay's Melbourne apprenticeship mixed real production — feeding some thirty to forty Wharfedale and Miehle platen and cylinder presses, many by hand — with the apprentices' own subculture: a type-storage basement known as “the dungeon” doubled as a card-game hideout for boys dodging work, and during one clear-out nobody thought twice about binning a genuine Ned Kelly reward poster, set in wood type. A qualifying journeyman was sometimes expected to produce a “masterpiece” piece of work before being accepted as fully trade-qualified.

TERMS OF INDENTURE

WHERE	TERM	NOTE
Britain, classic	7 yrs	7–10 earlier; bound c. age 14
Scotland, by mid-20th c.	4 yrs	College training absorbed part of the term
Vic. Government Printing Office	5 yrs	Neil Gay, Melbourne, from 1958

THE CALIFORNIA JOB CASE



KNOWING YOUR BOXES: THE TYPE CASE AN APPRENTICE LEARNED BLIND BEFORE HE WAS TRUSTED WITH A STICK. PIED TYPE WENT RIGHT, TO THE HELLBOX — THE DEVIL'S ERRAND, SEVERAL TIMES A DAY.

The chapel

The **chapel** was the composing room’s own union branch — every workplace with organised composers had one, and its elected head was the **Father of the Chapel (FoC)**, assisted by a Clerk of the Chapel who took minutes, collected dues and kept quarterly accounts for the wider trade society. The Father’s job was to see that trade customs, agreed scales and working conditions were followed, and disputes settled without management interference: no other chapel member was allowed to interview the printer or management unless accompanied by him. In daily-paper composing rooms he ran the working day almost literally — at mealtimes he called “Cut the line, gentlemen” and everyone stopped, resuming on “Line on, gentlemen”; when piece work began, copy was handed out by chapel rota in a “simultaneous lift,” so every piece hand had an equal chance at it.

A word without a settled home

The word’s origin is genuinely disputed, and it is worth stating honestly rather than settling it. The most repeated story ties it to the early English printing trade being carried out, or first organised, inside a church setting — one strand naming Westminster Abbey specifically, where Caxton’s press is traditionally associated with a chapel building. A second, sharper version holds that nonconformist chapels sheltered early trade-union organising when unions were illegal or suspect, and the printing “chapel” borrowed the name in solidarity. The National Union of Journalists states plainly that the precise origin is unclear — and that is the honest place to leave it.

Fines, whacks and solace

Chapel discipline ran on custom and small fines rather than formal process. Infractions — boasting, whistling in the presence of a lady, an unattended candle — earned a “solace,” a penalty paid into the chapel’s social fund, which financed the trade’s annual holiday (glossary, overleaf). Collective disapproval of a tall story or a doubted claim was expressed by drumming composing sticks on the frame — “a whack” — solidarity enforced through ritual and small humiliation rather than statute, and a genuinely effective way of holding a semi-skilled, mobile, piece-paid workforce together without much paperwork.

CHAPEL OFFICES

OFFICE	DUTIES
Father of the Chapel	Elected head; enforced customs and scales; sole contact with management on chapel business
Mother of the Chapel	Equivalent title where membership included women (UK & Australasian usage)
Clerk of the Chapel	Minutes, dues, quarterly accounts to the wider trade society

■ The Spirit of the Chapel

Benjamin Franklin served his own printing apprenticeship in London, and left an account of chapel justice from the receiving end. Having declined, on arrival, to pay the customary second initiation fee expected of a newcomer already sworn in at another house, he found his set matter mysteriously transposed and broken up — over and over, until, persuaded there was no fighting a chapel that blamed the damage on an invisible “Spirit of the Chapel,” he paid up. The sabotage stopped at once. Franklin credited the custom, sardonically, with keeping a print shop’s peace rather better than any foreman could have managed alone.

ON THE WALL

“No other member of the Chapel is allowed to interview the Printer or management unless accompanied by the Father.” — the standing rule, quoted from a Fleet Street composing-room glossary, and about as close as the trade came to a written constitution.

‘Stab or piece

Two pay systems ran side by side in most composing rooms. **‘Stab work** — short for “establishment” — was ordinary weekly wage employment: a fixed rate for a fixed working week. **Piece work** paid by output, measured in **ems** — a unit originally the width of a capital M in the type size being set, later standardised to the point-body of the type — at rates laid down in a published trade scale, most famously the London Scale of Prices for compositors’ work, which by the later nineteenth century effectively set the London trade’s piece rates and became a model other cities’ scales referenced.

A piece hand’s unit of work was a **take** — a lump of copy handed out and set at the piece rate. Running out of copy, he wrote his name on the office slate and called “slate up,” waiting his turn for the next take in the order names appeared on the board. The very last take remaining in the

copy box was **the swinger** — and grabbing it meant beating your rivals to the last paying work available before your own name went up instead, and you sat idle until it came round again.

Not all copy paid the same for the same effort. **“Fat”** matter — plain, roomy, well-spaced setting, quick to compose for the money — was prized by piece hands; its opposite, dense “lean” copy (small type, heavy correction, tabular or foreign-language matter, “bogus” filler set and then discarded to fill idle standing time) paid the same nominal rate for far more labour. Some union scales specifically graded pay upward for the worst of it — intricate copy, excess capitals, foreign sorts — precisely because fat was so much more profitable per hour. “Ratting,” working under the recognised rate, was one of the chapel’s cardinal sins.

“Grabbing the swinger” — beating the room to the last paying take before your own name went up on the slate.

Who could touch the type

The trade drew hard lines around who could set it. A hand compositor worked letter by letter from a case; a **machine compositor** — qualified additionally on the Linotype, Intertype, Monotype or Ludlow — was usually called an **operator**, a distinct and better-paid grade within the same chapel. The Linotype’s arrival in the 1890s threatened the old hand piece-workers (“pica-thumpers”) outright; some employers did use it to cut loose unionised hand compositors, but cheaper composition also drove a publishing boom, and union membership in some trades grew rather than shrank through the transition. Union rule, not just habit, restricted composing-room work to journeymen and supervised apprentices — there was, in the strict sense, no side door in. A journeyman between jobs travelled through **tramping**: a card or “blank” from his home society, presented at a house of call — commonly a pub serving as the trade’s informal labour exchange — bought food, lodging and help finding a berth. Between 1872 and 1876, by one estimate, as many as one in four organised British printers was tramping at any given time; Eric Hobsbawm called it “the artisan’s equivalent of the Grand Tour.”

Women were, for most of the trade’s organised history, deliberately kept out. Composing was touted in the mid-nineteenth century as suitable work for women — precise, sedentary, needing “delicacy of touch” — and some employers wanted to hire them, not least because they could be paid less; but “because of the continued hostility of the men very few women entered the trade” in Britain, and the London Society of Compositors, founded 1848, was central to keeping the composing room a closed shop against them. Australia followed the same pattern with its own colour: the New South Wales Typographical Association, founded 1882, boycotted the feminist magazine *The Dawn* for employing non-union — meaning female — labour, though its own secretary later helped the women shut out of the men’s union form the separate Printing Trade Women and Girls’ Union, which won its first industrial award in 1912. Inclusion, when it came, happened mostly around the edges of the craft — folding, binding, “dressing” type — rather than at the frame itself, for most of the period this magazine covers.

THE TRADE'S OWN TONGUE

TERM	MEANING
Dis	To distribute: returning used type to its case after printing, letter by letter — the reverse of composing it.
Pie / pied	Type spilled or jumbled out of order, needing re-sorting — or the hellbox, if past saving.
Clean proof	A proof pulled with no errors marked: the target, and on piece work, the fastest route to the next take.
Quads	Blank spacing material cast to the body size, the largest routinely used being the em quad.
Sorts	Individual pieces of type of a given letter, sorted by character in the case.
“Out of sorts”	Now a general idiom for feeling off-colour, popularly but wrongly explained as running short of a letter mid-job. The figurative phrase predates the trade's own use by two centuries (1562 vs. Franklin's 1784) — printers borrowed it, rather than coined it. The likelier root: a Latin word for a lot drawn by chance, hence one's fortune generally.
Widow / orphan	A short line stranded alone at the top or bottom of a column or page — which word names which end was never standardised, and sources still disagree.
Wayzgoose	The trade's annual holiday, timed to late August when candlelight became necessary for evening work, funded from the chapel's fines; before WWII, commonly a seaside outing to Margate or Blackpool.
Banging-out	The send-off ritual for a new journeyman or a retiring hand: a slow beat on metal furniture and racking as the person walked the room, then drinks. By the 1970s the apprentice version had escalated to stripping, ink, glue and a print trolley.

The ending

Metal type's replacement began earlier than most assume and finished with startling speed. The **Intertype Fotosetter**, introduced in 1946, was a direct adaptation of the standard Intertype linecasting machine: it kept the familiar circulating-matrix keyboard but replaced the metal casting pot with a camera, photographing each matrix character onto film instead of casting it in lead — one of the first true phototypesetting machines in commercial use, installed at the US Government Printing Office and used that same year to set a sixteen-page National Gallery of Art pamphlet, arguably the first publication ever filmset.

1946	Fotosetter. Camera replaces casting pot on a standard Intertype; first commercial phototypesetting, US Government Printing Office.
1970s	Australia, terminals. AAP installs the first computer terminals; word-processing networks let journalists set their own copy by decade's end.
1978	New York Times, last hot metal. Final edition set 2 July; some sixty Linotypes retired for computer photocomposition.
1980	Australian strike, wrong solidarity. Journalists strike over the new screens; the printers whose jobs the same technology was erasing got none of it — “they drank at other pubs, belonged to another union.”
1986	Wapping. News International moves overnight to a new plant in east London and sacks some 6,000 striking staff; the year-long dispute ends Fleet Street's print unions as a postwar power.

What happened to the tradesmen varied by employer and country — some retrained onto the new systems, where a house still needed their knowledge of style, correction and make-up; many more took redundancy outright, as at Wapping and at the Australian government printing offices Jesse Adams Stein's *Hot Metal* documents, cost measured there not just in jobs but in the “collective practices, craft traditions and camaraderie” a century of composing-room culture had run on.

A craft that had organised itself with apprenticeships, chapels, piece scales and its own private language for four centuries was, within a single working career, functionally gone.

THE SYDNEY TRADE

Three tiers, one city — the mastheads, the Government Printer, and the jobbing shops that filled in the rest.

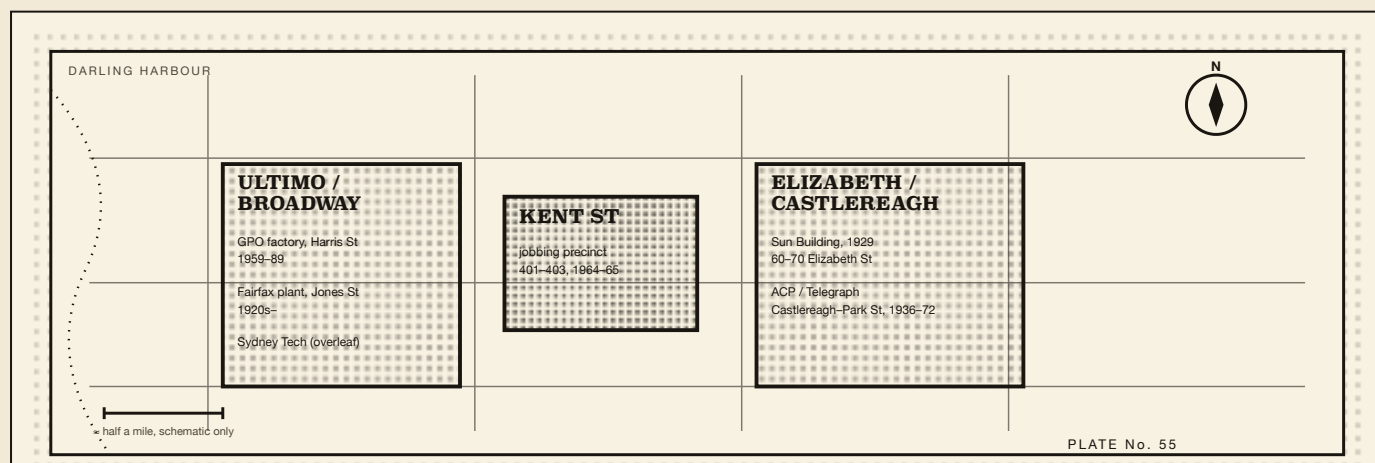
Sydney's compositors worked to a clear pecking order, and every apprentice learned it before he learned his case: the newspaper houses at the top, the Government Printing Office beneath them in prestige but far ahead of them in raw numbers, and a scattered jobbing sector filling in everything else. Here is the trade's shape, block by block.

The newspaper houses were the trade's aristocracy — better pay, more prestige, and a “chapel,” the printers' own workplace body, with real bargaining weight behind it. *The Sydney Morning Herald*, under the Fairfax family from 1841, ran its composing and press rooms out of its Hunter/Pitt/O'Connell Street building until a new plant facing Broadway at Jones Street, Ultimo, went up in stages through the 1920s — the “Fairfax Building,” now absorbed into the UTS campus. The Herald's own chapel, founded in 1846, is credited with organising Sydney's first typographical union in 1854. Chapel and union were never quite the same body, but the Herald's composing room was there at the start of both, which is as good a claim to seniority as this trade offers.

Rival tabloid *The Sun* built a dedicated newspaper building at 60–70 Elizabeth Street, opened 15 October 1929, later extending back to Castlereagh Street as it grew, before ceasing publication in March 1988. Sir Frank Packer's Australian Consolidated Press, formed 1936, took over that same building from the Sun's former publisher and added adjoining Elizabeth and Park Street property — this was the *Daily Telegraph's* home before the paper, and its new owner from 1972, moved to Surry Hills and eventually to Chullora.

The Government Printing Office deserves its own paragraph, and not out of sentiment. Established 14 December 1840 under Governor Gipps, with Government Printer John Kitchen, two assistants and twenty convict men and boys, it grew into one of the colony's — and later the state's — largest single employers of printing trades. By 1891–92 the composing room alone sat inside an operation with something like 600 people entering and leaving the site daily. The office worked from the corner of Phillip and Bent Streets from 1841 (with a stint at Hyde Park Barracks, 1848–56); a purpose-built factory at Harris Street, Ultimo, opened in 1959 and ran until the Greiner government closed it in 1989. Whatever else it printed — gazettes, stamps, railway tickets — it also trained generations of apprentice compositors and pressmen, and was arguably the single biggest formal entry point into the NSW trade across this whole period.

The jobbing and trade-shop sector — small commercial printerries turning out stationery, tickets and handbills rather than daily papers — is real but thinner in the record. What survives is enough to place it: Kent Street stayed a working printing address across the whole period, a four-storey purpose-built printing building going up at 401–403 Kent Street in 1964–65.



THE TRADE'S SYDNEY: THREE BLOCKS THAT DID THE WORK — ULTIMO/BROADWAY (THE GPO'S HARRIS STREET FACTORY, FAIRFAX'S JONES STREET PLANT, SYDNEY TECH), ELIZABETH/CASTLEREAGH (THE SUN BUILDING, ACP'S TELEGRAPH), AND KENT STREET'S JOBBING PRECINCT. SCHEMATIC MAP, NOT TO SCALE.

The union lineage: NSWTA to AMWU

The line runs cleanly from colonial trade society to national super-union, and it tracks almost exactly onto the trade's own lifespan — four names for one continuous card of membership.

1880s

New South Wales Typographical Association formed after meetings in early 1880, registered under the NSW Trade Union Act on 15 June 1882, representing compositors specifically.

Refused membership to women compositors in 1890 — a stance a splinter Printing Trade Women and Girls' Union was formed in 1911–12 partly to answer.

1916

Printing Industry Employees' Union of Australia formed 6 December 1916, merging the NSWTA with the Queensland, West Australian and South Australian Typographical Associations/Unions — the prize was a federal arbitration award, won the following year.

The Printing Trade Women and Girls' Union was absorbed into PIEUA in NSW in May 1917.

1966

Printing & Kindred Industries Union — PIEUA's new name after merging with the Amalgamated Printing Trades Employees' Union of Australia.

PKIU went on to absorb the Federated Photo Engravers, Photo-Lithographers & Photogravure Employees' Association (1986) and the Victorian Printers' Operatives' Union (1992).

1995

Australian Manufacturing Workers' Union — PKIU's final amalgamation, with the Automotive, Food, Metals and Engineering Union, produced the mouthful "Automotive Food Metals Engineering Printing & Kindred Industries Union," universally known as the AMWU.

The seven-year lead-up was contentious inside PKIU, whose federal executive had concluded as early as 1987 that membership decline left no real alternative to finding a bigger partner.

Training: Sydney Technical College, Ultimo

Sydney Technical College grew out of the Sydney Mechanics' School of Arts' 1878 "Working Men's College," with purpose-built premises at Ultimo completed in 1891 and most classes transferred there by the end of 1892; by the early 1900s it was training tradespeople across mining, agriculture, engineering and trades including printing, and grew into the largest single educational institution in New South Wales. A "Higher Trades" printing course existed there at least by the late 1930s — a 1939 printed booklet records the "Higher Trades Printing Students, Sydney Technical College" holding their sixth annual dinner that year, which puts an organised printing-trades course at Ultimo from at least the early-to-mid 1930s.

This is exactly where an NSW compositor apprentice of that generation would have done his theory nights, a short walk from both the GPO's eventual Harris Street home and Fairfax's Jones Street plant — three institutions, trade school, government printer and masthead, sitting on the same few Ultimo blocks. A boy could walk from case to classroom to composing room without once leaving Broadway's shadow.

■ A thin patch, flagged not padded

The unions plainly policed entry — the NSWTA/PIEUA's compositor-only membership was explicitly about protecting a skilled "aristocracy of labour" inside printing — but a clean, sourced account of Sydney's own apprenticeship ratios, or a 44-hour-week dispute specific to NSW compositors, hasn't surfaced yet. The nearest documented cousin is a 1920 Western Australian jobbing award, cited here only because it is the closest sourced record found, not because it happened in Sydney. This one is a job for Trove, not for this page.

The ending, and what it left behind

Fairfax’s move from hot metal to cold type is dated, with unusual precision, by a very good story rather than a press release. In 1984, when production staff at the *Herald* were ordered to clear their lockers during the changeover, one locker that hadn’t been opened in years was forced — and turned out to hold the Herald Chapel’s own records, some dating to 1847: minute books, rule books, membership lists, the paperwork of its mutual benefit and pension funds. The find is now held by the State Library of NSW, and it does something no annual report could: it dates the *Herald*’s hot-metal-to-cold-type changeover to the exact year, and it does it by way of the union remembering itself just as the trade that built it was ending.

A locker nobody had opened in years, forced during the 1984 clear-out, held the Chapel’s own memory back to 1847 — found by the very changeover that ended it.

Fairfax’s daily print run then moved to a purpose-built plant at Chullora, first sod turned 15 December 1993, which ran until it was decommissioned in June 2014 alongside the *Herald*’s shift from broadsheet to compact format. On the News Limited side, the *Daily Telegraph*’s presses moved to their own Chullora site, on the Hume Highway, by 1994. By 2018 Fairfax and News Corp Australia were sharing print capacity and closing further plants — Beresfield, NSW, and Ormiston, Queensland — a coda the AMWU’s Printing Division says left it “blindsided,” and a reminder that the trade’s contraction was still active a full generation after hot metal itself had gone.

Where the machines went

Not every machine went to scrap, and one story here is a genuine good-news item. The **Penrith Museum of Printing** began with Alan Connell (1922–2020), a retired Nepean Times employee who found the paper’s letterpress equipment still sitting in its old building twenty-five years after the *Times* closed in 1962, and started rescuing it from 1987. The museum opened 2 June 2001, closed in September 2017 for a \$130,000 renovation, and reopened in November 2018 on Ransley Street, Penrith. It runs entirely on volunteers who are themselves former printing tradesmen — one account names a former Fairfax group director of print and distribution among them — and it keeps its collection in working order rather than under glass. Honesty requires one more line: as of July 2022 the museum was publicly searching for a new site, its Penrith Paceway home slated for a stadium redevelopment, so its current address should be checked before any pilgrimage is planned.

SURVIVORS, ON DISPLAY AND IN STORAGE		
INSTITUTION	ON DISPLAY	IN STORAGE
Powerhouse Museum / MAAS	Albion hand presses, Chandler & Price treadle platen, Miehle flatbed	Intertype, Ludlow and two Linotype linecasters; a Monotype caster, keyboard and air receiver; a Nebotype linecaster; two Typograph linecasters; a Stanhope hand press
Penrith Museum of Printing	22 pieces of working letterpress machinery, composing-room type	<i>collection kept running, not archived</i>

The **Melbourne Museum of Printing** is the cautionary tale, and it deserves the honest version rather than a tidy one. Founder Michael Isaachsen spent over forty years and more than \$3 million of his own money building one of Australia’s largest vintage-printing collections — an 1849 Albion press, Monotype hot-metal systems, a Mergenthaler Linotype, a Ludlow Typograph and more — at West Footscray, eventually leaving his career and selling his home to keep it running. Unpaid rent led to the landlord barring him from the premises and an auction in late November 2019 that, per trade press, dispersed the collection for good. The museum’s own site separately recalls an earlier, roughly early-2000s near-closure and volunteer revival — a different, older crisis in the same institution’s long precarious history, not evidence the 2019 dispersal was reversed. Current status: treat as closed unless a fresher source says otherwise.

THE FLORAPRINT PAPERS

Two shops, three countries, one trade — the family firm, reconstructed from memory and honestly labelled as such.

The public record of a small suburban print shop is close to nothing: no catalogue, no company history, no heritage plaque. What survives is what the family kept and what the family remembers. This magazine prints the second kind of source the only defensible way — between double rules, marked for what it is.

Florida, on Johannesburg's West Rand, was a commuter suburb built for mine officials and railwaymen, and its lake was the closest thing the district had to a public square: regattas, picnics, promenades along the water. When a Rotterdam-trained printer arrived in 1953 and opened his shop there, he named it the obvious, right thing. Flora, for the lake. **Floraprint.**

The shop ran for thirty-two years — which is to say, it ran across the entire technological ending of the trade this volume catalogues. A jobbing printer who opened in 1953 set his first jobs in metal because there was no other way; by the time Floraprint closed in 1985, the industry around it had gone to offset and film, and the machines of Departments I through III were leaving through workshop doors all over the world. Whether Floraprint's own iron followed that arc — what stood on its floor, and when it

changed — is a question the record cannot yet answer and two living witnesses can. The research department has learned patience on this point, and the classified notice below is not decorative.

What the trade context supplies is the frame. A European tradesman arriving in 1953 entered a printing industry whose craft union, one of South Africa's oldest, kept its ranks white by rule until 1980 — a legally protected labour position, stated here plainly because this magazine's register does not do euphemism. Within that frame, the shape of the shop is the classic one this volume documents everywhere: master at the stone and the press, the business run from the front office — in this case by **Maria**, who kept the books for three decades and outlived the printer by forty years — and the next generation in and out of the works until one of them caught the trade for good.

FAMILY MEMORY · THE FLORAPRINT FILE

Proprietor: Johannes Wilhelmus Hillege (Dordrecht 1921 – Sydney 1986), set the type and ran the presses himself. **Office:** Maria (Riet) Hillege, admin and business, 1953–85. **Works, various:** son Andre (later of Gordon, NSW, see opposite); son Frans, in his twenties. **Plant:** possibly a Heidelberg “similar, maybe smaller” than the Gordon machine — unconfirmed. **Site visits:** one grandchild, aged four or five, retained impressions of the premises now catalogued under *sensory, fragmentary*.

INFORMATION WANTED ¶

The proprietors of this register seek particulars of FLORAPRINT, printers, of Florida Lake, Transvaal, 1953–85: the street address; the machine roster and dates of any change from letterpress to offset; the nature of the jobbing work and its customers; and the disposition of the plant on closure. First-hand accounts preferred. Apply, at any Sunday lunch, to the editor.

GORDON BUSINESSPRINT

The second act: a shop above a video store, a Heidelberg, and a teenager on the finishing bench.

The trade came to Australia with the family. In Gordon, on Sydney's North Shore, Andre ran a business-printing shop where the family record places a **Heidelberg** — which model, the register's presses department would very much like to know — and a **Mita DC-6500**, a machine that readers of the red edition will recognise as one of that volume's great enthusiasms. The connection is not a coincidence. It is an employment record.

Because this is where the editor of these magazines enters the story: after school and on weekends, typesetting, running the copiers, and working the finishing bench — collating, folding, guillotining, stapling. Department IV of this volume is one page long and the register regrets it, but its author can at least claim the rare distinction, among trade-press editors, of having actually done the work.

The shop's ending was gentler than the trade's. When the pace stopped being worth it, Andre and Jayne sold the printing business, went downstairs — literally — and bought the CIVIC Video store below, which they ran for many years. A family that had spent a century putting ink on paper spent the next era renting out magnetic tape, one staircase down. The volume declines to labour the metaphor, on the grounds that it labours itself.

One further particular survives, and the research department records it with professional admiration: the shop's telephone number, produced from memory intact after some thirty years. Childhood filing systems, as the red edition established at length, are not to be underestimated.

FAMILY MEMORY · THE GORDON FILE

Premises: 9 St John's Ave, Gordon (believed) · **Tel:** 9498 4464 · **Plant:** one Heidelberg (model unconfirmed); Mita DC-6500; finishing equipment, operated manually · **Staff, casual:** one editor, after school · **Disposition:** sold; proprietors thereafter of the CIVIC Video, downstairs.

A family that spent a century putting ink on paper spent the next era renting out tape — one staircase down.

Corroboration of the family record is in progress at the usual registries on three continents; the finding aid runs to two pages and is filed with the catalogue. Where a document contradicts a memory, the document will win, and the memory will be kept anyway — filed, as ever, in its own tray.

THE PILGRIMAGE

The companion volume went looking for anywhere the public could still watch its machines run, and came home mostly empty-handed. This trade never had that problem. Nobody ever let it stop.

Full Tilt, the photocopier register’s own closing feature, spent three weeks trying to find a working xerographic machine the public could stand next to. It found four museums, a handful of trade floors, and an honest, slightly mournful conclusion. This magazine inherits the same search with the opposite ending — because the trade this book is about is the one the museums actually kept alive.

The finding, stated plainly by the sister volume: every institution that preserves working print machinery preserves the wrong machine, if the machine you wanted was a photocopier. The Smithsonian’s Xerox 914 — unit 517 off the original assembly line, donated in 1985 — has not turned over since. No museum anywhere runs a vintage xerographic copier as a working demonstration piece. That absence was that book’s honest disappointment, and it earned it fairly.

Read from this side of the ledger, though, the same sentence says something else. Hand composition, hot-metal

casting and cylinder impression are the one branch of the printing trade that never had to retire into a display case to be preserved. It went into museums and kept working there — on a roster, with a kettle in the back room, on a schedule anyone can simply turn up to.

Four addresses make the itinerary honest and checkable: three abroad, one an hour from where a Sydney apprentice compositor would have caught his tram home. None requires a trade badge, an appointment, or a letter of introduction. All four are staffed — unpaid — by people who once did this for a wage.

THE WORKING ITINERARY			
PLACE	WHERE	WHAT RUNS	WHEN & PRICE
Penrith Museum of Printing	Penrith Showground, NSW	~22–23 working letterpress machines: Vandercook press, 1936 Heidelberg cylinder press, Linotype, Ludlow, hand composing	Every Sunday, 10am–2pm, \$5 adult, no booking needed
Museum of Printing	Haverhill, Massachusetts	Letterpress and Linotype hot-metal casting, demonstrated live by volunteers	Every Saturday year-round, 10am–4pm, plus special demo days
National Print Museum	Beggars Bush, Dublin	Fully operational letterpress shop incl. a Heidelberg platen (“the Windmill”) and Linotype	Tue–Fri 10–4, Sat–Sun 12–4; live demo the last Thursday of the month, till 9pm June–Oct
International Printing Museum	Carson, California	A “living museum” — Linotype, Gutenberg-style and 19th/20th-century letterpress, kept in working order and used in view of visitors	Saturdays 10am–4pm walk-in; Tue–Fri by reservation

“Letterpress ≠ xerographic, and every ‘working print museum’ found here is the former.” — the finding this volume gets to inherit as good news instead.

Penrith is the itinerary’s one Sydney entry, and its story starts with a man checking on a building. Alan Connell (1922–2020), a retired Nepean Times employee, went back to the paper’s old premises twenty-five years after it closed in 1962 and found the letterpress equipment still sitting there, untouched. He began rescuing it in 1987. The museum he built around that rescue opened on 2 June 2001, with Commonwealth Federation Fund support; it closed in September 2017 for a \$130,000 renovation and reopened in November 2018, on Ransley Street, Penrith.

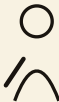
What makes Penrith the itinerary’s best answer isn’t the count, though the count is respectable — upwards of twenty working machines, plus a full composing-room type collec-

tion. It’s who runs it. The museum is entirely volunteer-staffed, by people who did this trade for a living, including, by one account, a former Fairfax group director of print and distribution now minding the Heidelberg on his Sunday off. Nothing in the collection is kept for looking at. It is kept in working order, which is a different and much harder promise — parts sourced, rollers replaced, a Linotype’s pot kept hot enough to pour, because a machine that only stands still has already lost the argument this trade was built on.

That is the inversion this whole book gets to make, and the photocopier register didn’t: the compositor’s tools survived not behind glass but at the controls, under hands that remember exactly what the machine is for.

SMALL PRINT, HONESTLY

As of July 2022 the museum was publicly searching for a new home: its site at Penrith Showground (formerly the Paceway) was slated for stadium redevelopment. The Ransley Street address above is the most recently confirmed one on record. Ring ahead before a Sunday drive — a museum built on rescuing equipment nobody else wanted has, appropriately, had to keep rescuing itself.


VOLUNTEER, EX-TRADE

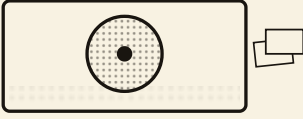

HEIDELBERG CYLINDER, 1936


PLATE No. 60

SUNDAY, PENRITH: THE 1936 CYLINDER PRESS, RUN BY SOMEONE WHO ONCE DID THIS FOR WAGES, FOR WHOEVER PAYS FIVE DOLLARS AT THE DOOR.

None of this asks for a pilgrimage in the grand sense. Penrith Showground is a train and a bus from the city, or a short drive past the M4. Turn up on a Sunday — any Sunday, ten till two. Pay five dollars at the door, no booking required. Somewhere past the Vandercook, a volunteer who once did this for a living will be running the Heidelberg, because that is what a working museum actually means, as opposed to what it says on the brochure.

Nobody switched it off.

THE REGISTER

136 machines of the hot-metal century, filed by family — every one carrying a source, or an honest admission.

Confidence: ● verified (59) · ◐ partial (45) · ○ listed-only (32). A listed-only machine is a name seen in a roster with no specifications recovered — included because the census is the point. Speeds in the maker's own units; *unv.* is not a shortfall, it is the truth.

MODEL	MAKER	YEARS	CLASS	SPEED	NOTABLE FOR	
LINOTYPE — MERGENTHALER & L&M · 54 MACHINES						
Blower Linotype	Mergenthaler	1886–1890	linecaster	<i>unv.</i>	the first commercially used Linotype (New York Tribune, July 1886); nam...	●
Square Base Linotype	Mergenthaler	1890–1892	linecaster	<i>unv.</i>	the first "modern-form" Linotype: inclined magazine with constant-lengt...	●
Linotype Model 1	Mergenthaler	1892–1902 (offere...	linecaster	<i>unv.</i>	"the first really successful Linotype"; ~6,000 sold; single narrow maga...	●
Linotype Model 2 Mixer	Mergenthaler	1903–1906	linecaster	<i>unv.</i>	first two-magazine Linotype mixer; described as a "complicated double m...	◐
Linotype Model 3	Mergenthaler	1902–1906	linecaster	<i>unv.</i>	first Linotype with a magazine wide enough to carry 12-point and larger...	●
Linotype Junior	Mergenthaler	1902–c. WWI	linecaster	<i>unv.</i>	cut-down one/two-letter machine for small jobbing offices; rated 2,000–...	●
Linotype Model 4 Mixer	Mergenthaler	1906–	linecaster	<i>unv.</i>	first quick-change double-magazine machine	◐
Linotype Model 5	Mergenthaler	February 1906–	linecaster	<i>unv.</i>	the Linotype Company's first "quick-change" single-magazine model; maga...	●
Linotype Model 6	Mergenthaler	January 1908–	linecaster	<i>unv.</i>	wide-measure version of the Model 5, up to 36 ems	◐
Linotype Model 7 Mixer	Mergenthaler	October 1907–	linecaster	<i>unv.</i>	wide-measure version of the Model 4, up to 36 ems	◐
Linotype Model 8	Mergenthaler	1911–c. 1950s	linecaster	<i>unv.</i>	three interchangeable superimposed magazines selected by a hand wheel;...	●
Linotype Model 9 Mixer	Mergenthaler	May 1911–	linecaster	<i>unv.</i>	four-magazine mixer with 90 connecting rods and a complex distributor	◐
Linotype Model 10	Mergenthaler	1911–1913	linecaster	<i>unv.</i>	small machine, 14 matrices per channel; superseded by Model 15	◐
Linotype Model 11	Mergenthaler	1911–	linecaster	<i>unv.</i>	wide-measure version of the Model 8, up to 36 ems	◐
Linotype Model 12 Mixer	Mergenthaler	1913–	linecaster	<i>unv.</i>	wide-measure version of the Model 9 mixer	◐
Linotype Model K	Mergenthaler	February 1913–	linecaster	<i>unv.</i>	two-magazine rebuild variant, limited point range	○
Linotype Model 14	Mergenthaler	1914– (revised fr...	linecaster	<i>unv.</i>	one, two or three full-size magazines plus a 28-channel auxiliary side...	●
Linotype Model 15	Mergenthaler	October 1913–	linecaster	<i>unv.</i>	superseded the Model 10; 14 matrices per channel standard	◐
Linotype Model 16 Mixer	Mergenthaler	April 1916–	linecaster	<i>unv.</i>	two wider-than-standard magazines	○
Linotype Model 17 Mixer	Mergenthaler	April 1916–	linecaster	<i>unv.</i>	two magazines plus an auxiliary side magazine	○
Linotype Model 18	Mergenthaler	April 1916–	linecaster	<i>unv.</i>	two-magazine version of the Model 5	○
Linotype Model 19	Mergenthaler	April 1916–	linecaster	<i>unv.</i>	Model 18 with side-magazine attachment	○
Linotype Model 20	Mergenthaler	April 1917–	linecaster	<i>unv.</i>	single display machine, 72 channels	◐

MODEL	MAKER	YEARS	CLASS	SPEED	NOTABLE FOR	
Linotype Model 21	Mergenthaler	April 1921–	linecaster	unv.	72-channel single magazine, up to 36pt with lever shift	●
Linotype Model 22	Mergenthaler	November 1920–	linecaster	unv.	Model 21 plus a side magazine	○
Linotype Model 24 Mixer	Mergenthaler	1920–	linecaster	unv.	four main and four side magazines; described in the trade literature as...	●
Linotype Model 25 Mixer	Mergenthaler	April 1924–	linecaster	unv.	two-magazine mixer using Model 5-type magazines	●
Linotype Model 26 Mixer	Mergenthaler	April 1924–	linecaster	unv.	two main plus two side magazines	●
Linotype Model 27	Mergenthaler	April 1935–	linecaster	unv.	one to three magazines, extra-wide 72-channel split magazines, up to 60...	●
Linotype Model 28	Mergenthaler	1935–	linecaster	unv.	Model 27 with one to three wide side magazines	●
Linotype Model 29 (Blue Streak)	Mergenthaler	November 1936–	linecaster	unv.	four-main-magazine mixer, 72/90-channel combinations; part of the redes...	●
Linotype Model 30 (Blue Streak)	Mergenthaler	1936–	linecaster	unv.	Model 29 with two to four side magazines	●
Linotype Model 31 (Blue Streak, M...	Mergenthaler	1936–	linecaster	10 lines/min (cruising, manual or tape/TTS operation)	the "Master Model" of the Blue Streak line, one to four split or full m...	●
Linotype Model 32	Mergenthaler	1936–	linecaster	unv.	Model 31 with one to four side magazines added	●
Linotype Model 33 Non-Mixer (Two-...	Mergenthaler	unverified	linecaster	unv.	extra-wide 72/90-channel magazines, non-mixer configuration	○
Linotype Model 34 Non-Mixer	Mergenthaler	unverified	linecaster	unv.	Model 33 with side magazine added	○
Linotype Model 35 Mixer	Mergenthaler	unverified	linecaster	unv.	Model 33 configured as a mixer, two to four main magazines only	○
Linotype Model 36 Mixer	Mergenthaler	unverified	linecaster	unv.	Model 35 with matching auxiliary magazines	○
Linotype Comet (Blue Streak Comet)	Mergenthaler	c. 1950–	linecaster	unv.	compact two-magazine "fast straight matter machine" for book/stationery...	●
Linotype Electron	Mergenthaler	unverified	linecaster	unv.	listed as the terminal US model line in the Mergenthaler evolutionary c...	○
Linotype Model 13 (German market,...	Mergenthaler	unverified	linecaster	unv.	two-magazine Ideal variant for the German market, 15 characters per cha...	○
Linotype Square Base (English)	L&M	1892	linecaster	unv.	first British-built Linotype, installed at the Newcastle Evening Chroni...	●
Linotype Model 1 (English)	L&M	1895	linecaster	unv.	four variants recorded: Old Style single-letter, double-letter, Pica Ma...	●
Linotype Model 2 (English)	L&M	1906	linecaster	unv.	"one magazine, front-change" — a single-magazine machine, unlike the Am...	●
Linotype Model 3 (English)	L&M	1907	linecaster	unv.	two-magazine mixer; a 180-key Arabic-script version was offered	●
Linotype Model 4 / 4 S.M. (Englis...	L&M	1908 (4 S.M. from...	linecaster	unv.	three-magazine nonmixer; 30-pica measure standard, 36-pica by special o...	●
Linotype Model 65 (English)	L&M	1913	linecaster	unv.	four-magazine mixer in fixed pairs	●
Linotype Model 6 / 6 S.M. (Englis...	L&M	1916 (6 S.M. from...	linecaster	unv.	four-magazine mixer in adjacent pairs; a three-way quadder was added in...	●
Linotype Model 48 / 48 S.M. (Engl...	L&M	1935	linecaster	unv.	standard multi-magazine nonmixer, three then four main/side magazines	●
Linotype Model 50 / 50 S.M. (Engl...	L&M	1936	linecaster	unv.	four-magazine mixer with wider magazines than the Model 48	●
Linotype Model 53 (English)	L&M	1953	linecaster	unv.	one magazine, two-pocket mould wheel	●
Linotype Model 54 (English)	L&M	1954	linecaster	unv.	high-speed machine built for Teletypesetter (TTS) tape operation	○
Linotype Seventy Series (Models 7...	L&M	1959	linecaster	unv.	the last pre-Elektron English model family; five sub-model numbers list...	○
Linotype Elektron (English)	L&M	1962	linecaster	unv.	escapements built integral with the machine rather than with the magazi...	●

MODEL	MAKER	YEARS	CLASS	SPEED	NOTABLE FOR	
THE RIVALS — INTERTYPE · LUDLOW · ELROD · 25 MACHINES						
Intertype Model A	Intertype	by 1917	linecaster	<i>unv.</i>	single-magazine machine, described by Intertype as "the highest develop...	•
Intertype Model B	Intertype	by 1917	linecaster	<i>unv.</i>	two-magazine machine; magazine changes made in 2–3 seconds via keyboard...	•
Intertype Model C (C3)	Intertype	by 1917	linecaster	<i>unv.</i>	three-magazine single-distributor machine; same assembling/distributing...	•
Intertype Model C4	Intertype	documented by 194...	linecaster	<i>unv.</i>	"Universal Straight" single-distributor machine; the standard "C" type...	•
Intertype Model D	Intertype	—	linecaster	<i>unv.</i>	non-mixer, single-distributor, 90-channel three-magazine machine; disti...	●
Intertype Model E	Intertype	documented to 196...	linecaster	<i>unv.</i>	mixer machine (double distributor), two 90-channel main magazines; supe...	●
Intertype Model F	Intertype	documented to 196...	linecaster	<i>unv.</i>	mixer machine (double distributor), two 90-channel main magazines, lowe...	•
Intertype Model F4	Intertype	documented by 1943	linecaster	<i>unv.</i>	double-distributor mixer machine, four 90-channel main magazines, front...	•
Intertype Model G	Intertype	documented by 1943	linecaster	<i>unv.</i>	double-distributor mixer machine with two main magazines: one wide 72-c...	•
Intertype Model G4 (G4-4SM)	Intertype	documented by 1943	linecaster	<i>unv.</i>	double-distributor mixer machine, four main magazines in any combinatio...	•
Intertype Model H	Intertype	—	linecaster	<i>unv.</i>	non-mixer, single-distributor, three wide 72-channel magazines; pitched...	●
Intertype Model H4	Intertype	—	linecaster	<i>unv.</i>	four-magazine extension of the Model H, wide 72-channel magazines throu...	○
Intertype Model X	Intertype	—	linecaster	<i>unv.</i>	a factory rebuild: a field-collected Linotype re-equipped with Intertyp...	○
Intertype Model Z	Intertype	—	linecaster	<i>unv.</i>	a factory rebuild, like the Model X: a field-collected Linotype upgrade...	○
Intertype Model S	Intertype	—	linecaster	<i>unv.</i>	appears in Intertype parts catalogues alongside the rebuild Models X, W...	○
Intertype Monarch	Harris-Intertype	1960s (Science Mu...	linecaster	15 lines/min (newspaper column width)	the final generation of hot-metal Intertype linecasting technology, str...	•
Intertype Fotosetter	Intertype	1946–	linecaster	<i>unv.</i>	the first commercial photocomposition machine: built on a standard Inte...	•
Intertype Desk Model Fotosetter	Intertype	—	linecaster	<i>unv.</i>	a prototype only: a Ludlow-style hand-assembled-matrix Fotosetter meant...	○
Ludlow Typograph (standard machin...	Ludlow	perfected 1909; f...	linecaster	<i>unv.</i>	not a keyboard linecaster — casts a single slug from a line of individu...	•
Ludlow Model L	Ludlow	—	linecaster	9 lines/min	a late-production refinement of the standard Typograph — described in t...	●
Ludlow Model M Typecaster	Ludlow	1970 (Science Mus...	linecaster	<i>unv.</i>	Science Museum Group holds a Model M built in Chicago in 1970, part of...	●
Elrod Model DS	Ludlow	—	linecaster	<i>unv.</i>	not a keyboard linecaster — a strip caster: continuously casts an unbro...	○
Elrod Model E	Ludlow	documented to 196...	linecaster	<i>unv.</i>	strip caster — casts leads, rules and slug material continuously by ext...	●
Elrod Model F	Ludlow	documented to 196...	linecaster	<i>unv.</i>	strip caster, same family as Model E; its 36pt mould was the largest El...	●
Elrod Model K	Ludlow	—	linecaster	<i>unv.</i>	smaller-capacity Elrod strip caster, maximum 18pt — a lighter machine t...	●
MONOTYPE — KEYBOARDS & CASTERS · 13 MACHINES						
Monotype Standard Keyboard ("Mode...	Lanston	1907/1909–1987	monotype-keyboa...	<i>unv.</i>	over 300 keys in two banks (upper/lower roman, upper/lower italic, smal...	•
Monotype Duplex Keyboard	Monotype Corp.	—	monotype-keyboa...	<i>unv.</i>	two full keyboards side by side, each with its own paper tower, able to...	●
"Monomatic" Keyboard	Monotype Corp.	—	monotype-keyboa...	<i>unv.</i>	named in a Monotype parts price list alongside 1941/1942 keyboard docum...	○
Monotype Composition Caster (stan...	Lanston	c. 1900–1987	monotype-caster	140–180 rpm (approx. sorts/min; varies with body size cast)	reads the keyboard's paper tape in reverse so justification wedges are...	•

MODEL	MAKER	YEARS	CLASS	SPEED	NOTABLE FOR	
Monotype Composition Caster, "Siz...	Lanston	1897	monotype-caster	<i>unv.</i>	serial no. 44; the only known surviving example of this earliest limite...	•
Monotype Type-and-Rule Caster ("O...	Lanston	c. 1903/1904–1970	monotype-caster	<i>unv.</i>	shares its base with the Composition Caster but has no paper tower — it...	•
Monotype Giant Caster	Lanston	1923–1970	monotype-caster	<i>unv.</i>	US-only; built to get past the 36pt ceiling of the standard and Type-an...	●
Monotype Super Caster	Monotype Corp.	1928–c. 1970s (Br...	monotype-caster	44–144 rpm across 18 gear settings (top speed 144 rpm, per the machine's own speed-change table)	built exclusively by the UK Monotype Corporation — Lanston (US) never m...	•
Monotype-Thompson Type Caster	Lanston	1907/1908–1967	monotype-caster	<i>unv.</i>	originally an independent design, not built for Monotype-style matrices...	•
Monotype Material Making Machine	Lanston	1923–unverified	monotype-caster	<i>unv.</i>	dedicated fusion-caster for leads, rule and furniture with no character...	●
Monotype Junior Material Making M...	Lanston	—	monotype-caster	<i>unv.</i>	listed only; a brief production run with no surviving example known to...	○
Monotype single keyboard (Victori...	Lanston	early 1900s	monotype-keyboa...	<i>unv.</i>	possibly the first Monotype keyboard used at the Victorian Government P...	○
Monotype double keyboard (Railway...	Monotype Corp.	mid-20th century	monotype-keyboa...	<i>unv.</i>	used in the Victorian Railways Printing Branch before that department w...	○
THE PRESSES — PLATEN · CYLINDER · PROOF · 44 MACHINES						
Ruggles Rotary Job and Card Press	Stephen P. Ruggles	1849–1850s	platen-press	2000 impressions/hr	the direct ancestor of every jobbing platen that followed; Ruggles's 18...	●
Gordon Franklin Jobber	C&P	1858–1909 (Gordon...	platen-press	<i>unv.</i>	the single most influential jobbing press of the 19th century — Gordon,...	•
Chandler & Price Old Style	C&P	1884–1911 (wavy-s...	platen-press	<i>unv.</i>	based on Gordon's old-style Franklin jobber; by the 1930s C&P made over...	•
Chandler & Price New Style	C&P	1911–1964 (plain-...	platen-press	2600 impressions/hr (8 × 12 in size; 10 × 15 in rated 2,300; 12 × 18 in rated 1,800, per 1916 ATF specimen book)	the everyday jobbing platen of the trade for half a century; a 10x15 ne...	•
Chandler & Price Craftsman	C&P	1921–1964 (solid...	platen-press	<i>unv.</i>	the solid-flywheel, factory-motorised generation running alongside New...	●
Chandler & Price Pilot	C&P	c. 1886–1970s	platen-press	<i>unv.</i>	hand-lever tabletop press built mainly for schools; the lever mounts on...	●
Golding Pearl No. 1	Golding & Company (...)	1871 (patent) – c...	platen-press	<i>unv.</i>	one of the most popular presses for amateur and small-office letterpres...	•
Golding Improved Pearl No. 11	Golding & Company,...	after 1895 (Impro...	platen-press	<i>unv.</i>	held by the Smithsonian's National Museum of American History; the Impr...	○
Golding Jobber No. 7	Golding & Company,...	1880 onward	platen-press	<i>unv.</i>	the Jobber family (8x12 in to 15x21 in chase) was Golding's heavy-duty...	•
Arab platen press	Josiah Wade, Halifa...	1872–1959 in Hali...	platen-press	1200 impressions/hr (final motorised Model 'A', 1950s, with inching control; earlier models hand-fed treadle or belt)	Britain's answer to the Gordon jobber — Wade bought Gordon's patents an...	•
Original Heidelberg Platen (T)	Heidelberg	1926 (assembly-li...	platen-press	5500 impressions/hr (max, later production; rated up to 3,000/hr at the 1926 debut)	THE machine — 'the Windmill', named for the rotating gripper arms that...	•
Original Heidelberg Platen (GT)	Heidelberg	later production...	platen-press	4000 impressions/hr (max)	the large-format windmill sibling to the 10x15 T — the smaller T actual...	•
Heidelberg GTP	Heidelberg	unverified	platen-press	<i>unv.</i>	the windmill built as a dedicated creaser/cutter — no inking unit fitte...	●
Wharfedale Stop-Cylinder Press	David Payne and Wil...	c. 1858 (developm...	cylinder-press	3000 impressions/hr (manufacturer's claimed max 2,000–3,000; users report 1,500 iph a practical ceiling)	the Yorkshire trade's signature machine — steam- or line-shaft-driven S...	•
Miehle Two-Revolution Press	Miehle Printing Pre...	1884 (patent) onw...	cylinder-press	<i>unv.</i>	the most popular of the flatbed 'two-revolution' cylinder presses: the...	●
Miehle Pony	Miehle Printing Pre...	examples known fr...	cylinder-press	<i>unv.</i>	turn-of-the-century weekly-newspaper and job-printing cylinder press; a...	○
Miehle Vertical V-36	Miehle Printing Pre...	1921–1974 (Vertic...	cylinder-press	3600 impressions/hr (max; model number is roughly its top iph in hundreds)	the vertical bed-and-cylinder orientation — picture a flatbed cylinder...	•
Miehle Vertical V-50	Miehle Printing Pre...	1921–1974 (Vertic...	cylinder-press	5000 impressions/hr (range 3,000–5,000 depending on job)	the top of the Vertical line — remained in production until 1974, the l...	•
Original Heidelberg Cylinder (KS)	Heidelberg	1935 (Heidelberg...	cylinder-press	5000 impressions/hr (10,000 with the double-feeder attachment)	the windmill's cylinder-press sibling, nicknamed 'the Prince of Presses...	•
Original Heidelberg Cylinder (S)	Heidelberg	postwar production	cylinder-press	<i>unv.</i>	the larger-format postwar Original Heidelberg Cylinder, paired with the...	●
Heidelberg Cylinder KSB	Heidelberg	replaced the KS c...	cylinder-press	<i>unv.</i>	successor generation to the KS; later refined again as the KSBA	○

MODEL	MAKER	YEARS	CLASS	SPEED	NOTABLE FOR	
Heidelberg Cylinder KSBA	Heidelberg	unverified	cylinder-press	<i>unv.</i>	final refinement of the K-range Original Heidelberg Cylinder line	○
Vandercook Trip Action Proof Press...	Vandercook	1909	proof-press	<i>unv.</i>	the company's founding product — Robert Vandercook, who owned a Chicago...	●
Vandercook No. 1 Proof Press	Vandercook	1915–1966	proof-press	<i>unv.</i>	a long-lived, basic hand galley proof press spanning half a century of...	●
Vandercook No. 219 (Old Style)	Vandercook	1927–1958	proof-press	<i>unv.</i>	a long-running mid-size proof press family; the later 'New Style' revis...	●
Vandercook No. 4 Proving Press	Vandercook	1935–1960	proof-press	<i>unv.</i>	power inking and precision register; more than 300 No. 4 and 4T presses...	●
Vandercook No. 4T Proving Press	Vandercook	1938–1957	proof-press	<i>unv.</i>	the No. 4 modified to proof transparencies onto acetate or glassine	●
Vandercook No. 3 Proof Press	Vandercook	1931–1958	proof-press	<i>unv.</i>	a high-speed proofing model rated at 40-plus proofs a minute	●
Vandercook No. 2 Proof Press	Vandercook	1934–1959	proof-press	<i>unv.</i>	a galley-height proof press for longer newspaper/book formes	●
Vandercook No. 14 Proof Press	Vandercook	1928–1960	proof-press	<i>unv.</i>	—	●
Vandercook No. 320G Hand Press	Vandercook	1929–1958	proof-press	<i>unv.</i>	gripper controlled by a foot pedal	●
Vandercook No. 325A/G	Vandercook	1929–1962	proof-press	1000 impressions/hr (Power/G variant)	Hand and Power variants; the Power version added automatic delivery	●
Vandercook No. 232	Vandercook	1937–1949	proof-press	<i>unv.</i>	wide-format sibling of the No. 223, powered ink drum	●
Vandercook No. 604 High-Speed 4-C...	Vandercook	1947–1957	proof-press	<i>unv.</i>	eight form rollers for four-colour wet proofing at production speed — a...	●
Vandercook Universal I	Vandercook Co., Chi...	1958–1976	proof-press	<i>unv.</i>	Hand and Power variants; adjustable bed option — part of the last new V...	●
Vandercook Universal III	Vandercook Co., Chi...	1959–1974	proof-press	<i>unv.</i>	adjustable bed with a 0.240 in range	●
Vandercook SP15	Vandercook Co., Chi...	1960–1976	proof-press	<i>unv.</i>	power inking and automatic wash-up; one of the last Vandercook models i...	●
Vandercook Office Press No. 0	Vandercook Co., Chi...	1929–1957 (ball-b...	proof-press	<i>unv.</i>	part of the ball-bearing Office Press family (0, 01, 03, 099) — 158 exa...	●
Vandercook Office Press No. 099	Vandercook Co., Chi...	1935	proof-press	<i>unv.</i>	the smallest Office Press	●
Vandercook No. 425 Short Run Press	Vandercook Co., Chi...	1958–1974	proof-press	1200 impressions/hr	marketed with a 'newspaper equipment' option — Vandercook's crossover a...	●
FAG Standard 510	F.A.G. (Fritz A. Ge...	unverified (famil...	proof-press	<i>unv.</i>	cylinder proof press from the German firm collectors rate among the bes...	○
FAG Control 835	F.A.G., Singen, Ger...	unverified	proof-press	<i>unv.</i>	a large proof press in the FAG line	○
FAG Swiss Proof 40 (SP40)	F.A.G., Singen, Ger...	unverified	proof-press	<i>unv.</i>	—	○
Albion Press	various British iro...	example held at P...	proof-press	<i>unv.</i>	an iron hand press, mechanically pre-dating the hot-metal era proper bu...	○

THE LEGACY SERIES

THE SHELF, COMPLETE

- | | | |
|------|--|-------------------------|
| I. | TYPE — The Composer's Edition | 1890–1970 · this volume |
| II. | PHOTOCOPIERS — The Special Collected Edition | 1990–2000 · the red one |
| III. | PHOTOCOPIERS — The Modern Register | 2026 · the blue one |

*One family, three volumes. The oldest trade on this shelf is the one they saved;
the youngest is the one that vanished.*

TYPE — THE COMPOSITOR'S EDITION · ISSUE No. 1 · MMXXVI

Composed from the register's catalogue notes; every claim sourced or honestly unverified.

Family memory set between double rules throughout, as the house requires.

Black ink on cream stock. No second colour was budgeted, and none was needed.

IN MEMORIAM · J.W.H. · 1921–1986 · COMPOSITOR & PRINTER

His machines still run on Sundays.