

J. SLOPER & Co. MANUFACTURING MACHINES

James Norris

I was one of several Society members lucky enough to visit Sloper's Blackburn Road factory in West Hampstead, North London, prior to the closure in 1991. It felt as though the factory had changed little since it relocated to this site in 1872, like stepping back in time.

Prior to the visit, I had for several years in my possession a 'Model 1' Sloper Perforating Machine, details of which appeared in Bulletin 356 in 2008. The Perforator was old and neglected and did not function. I had a suspicion that it had been produced by Sloper's, as the single head die initials were 'JS/Co'.

I took it with me to the factory and our host, Bill Cokayne, kindly arranged for one of the toolmakers to restore it for me to working condition. He confirmed that it was indeed a machine they used for producing sample perfin labels which would have been affixed to sales leaflets. This was the start of my fascination for the mechanics of our hobby, and the curiosity developed within me to know how the machines were constructed and their function.

During the visit I asked about other machines Sloper's had produced, and they gave me the sales portfolio containing data sheets on ten different machines which they manufactured until the 1980's. Although not all were used for perforating postage stamps, their use on receipts, contact notes and bills often provides an interesting subject cross over with our hobby.

During a recent 'lockdown sort out' I came across a box folder labelled "stamps miscellaneous". At the bottom of the box, I found the Sloper Machines leaflets, which I had put there for safe keeping years previously, and consequently I had entirely forgotten about them!

As the use of security endorsement became more widely used, the range of machines Sloper's offered were refined to cater for different functions and to diversify into different markets.

They eventually had a portfolio of machines which were individually detailed on leaflets in A4 format. These were sent to prospective clients with data sheets which were often physically perforated or had labels affixed. These sales leaflets are detailed below;

Model 2 Perforating Machine

PERFORATING MACHINES

WITH PERMANENT UNALTERABLE CHARACTERS
 For marking practically all non-metallic materials, such as, paper, cardboard, films, fabrics, skins, hides and plastics as well as for certain metals e.g. lead and thin alloys.



MODEL 2
 Base 7½" x 3"
 Net Weight 10 lbs
 Max. die area
 2¾" across x 2¾" deep

EXAMPLES OF TYPICAL PERFORATIONS



These machines are of robust construction with few moving parts, and will give many years of dependable, trouble-free service. They are suitable for a variety of applications such as,

- * Receipting and protecting cash bills,
- * Cancelling documents, vouchers, coupons,
- * Validating orders, requisitions,
- * Marking library books, drawings, blue prints,

OR ANY OTHER PURPOSE WHERE PERMANENT AND POSITIVE MARKING IS REQUIRED.

Model 2 illustrates a 'STOP' die to perforate at a limited distance from the edge.
 Model 40 shows a 'SUSPENDED' type die without any restriction as to position or depth of insertion of the paper.

Both models, in addition to the normal spring, are fitted with a positive release action which ensures the return of the lever and perforating pins to the 'UP' position. Locking devices can be supplied to prevent unauthorised use of machines.

Treadle and Electric models also available.

When enquiring or ordering, please send sketch, or specimen of the material to be perforated showing the position where the marking is required.



MODEL 40
 Base 10" x 4½" Nett weight 20 lbs
 Max. die area 3" across x 4" deep

J. SLOPER & CO. LTD.
 THE ORIGINAL PERFORATING MACHINE MANUFACTURERS ESTABLISHED 1850
 BLACKBURN RD. WEST HAMPSTEAD, LONDON, NW6 1RZ TEL: 071-624 8633/4

REPRESENTED BY:

Typical applications included receipting and protecting cash bills, cancellation of documents, vouchers and coupons, validating orders and requisitions as well as marking drawings, blueprints and even library books.

The Model 2 is illustrated with a 'stop die' to perforate at a limited distance from the document edge.

The hand lever machines represent the most basic form of perforator with robust casting construction using very few moving parts. The design provided a permanent unalterable set of characters for marking materials such as paper, cardboard, plastic films, and fabrics, and even certain metals such as foils and thin alloys, by utilising a single die to perforate a single stamp or edge of a document in a single stroke. The handle had a return spring providing a positive release action which ensured the return of the handle to the 'UP' position ensuring the material being perforated was clear of the pins before removal of the material.

The sales leaflet showing perfin labels top right of the sheet demonstrating how the stamps would have looked to a prospective client. The top label would have been produced on the JS/Co Perforator. These labels were predominantly green or sometimes yellow.

Model 40 Perforating Machine

Model 40 is illustrated with a 'suspended' type die and was a scaled-up version of the Model 2 machine which worked on a slightly different principle. It still used the general assembly of the die-set, but the square U-shaped clearing plate was not screwed to the steel but was attached to "ears" on the main body casting. It had a greater throat depth and there was no fixed separator, which allowed the perforating of a sheet of paper or stack of papers, with greater input force from the operator allowing thicker materials or multiple sheets to be perforated in one operation. It was also able to offer more complex styles of script, logos, and ciphers due to the fixed die-set arrangement.

The perforating mechanism used vee-headed hardened pins that were fitted into a brass plate called the "undertop". A corresponding steel plate known as the "top" was screwed to the undertop, thereby holding the pins in place. The top was thick enough to have a lever operated spring-loaded plunger screwed into it.

The die-set plate incorporated a "clearing plate". The perforating pins would slide up and down through the clearing plate so that the paper was not picked up by the pins. The thickness of this was specified by

the customer depending on how many sheets of paper, or typically cheques, were to be perforated in one operation.

The steel base plate was drilled very closely to the size of the pins so as to achieve a fine burr free puncture. The other parts, (clearing plate and undertop) were drilled with a less precise fit to allow the pins to achieve a sliding fit without binding in the hole, acting rather like a guide. The steel, clearing plate and separator were screwed together to form one unit. The undertop and top were also screwed together to form the rising and falling part of the unit.

The die-sets could be arranged in landscape or portrait orientation so the initials or character format would perforate the holes in a corresponding manner on the work piece. The separator would provide a “distance on” (how far in from the edge of the paper the perforation would be), specified by the customer.

Hand Model 35 Perforator

HAND MODEL 35 PERFORATOR
with rotating selector rings for dating or numbering
"MANY PAPERS MARKED AT ONE OPERATION"

TO ALTER DATE OR CODE
SIMPLY TURN THE WHEEL
(a matter of a few seconds)

SOME EXAMPLES OF STANDARD PERFORATIONS

A.	PAGADO 30.12.58
B.	123456
C.	123456
D.	123456
E.	123456
F.	PAID 24.10.58

SPECIFICATION

Standard machines are supplied with six selector rings to perforate a plain figure date (day-month-year) or numbers ranging from 1 - 999999.

Standard machines perforate in from the R.H. edge of paper up to a maximum of 3 1/2".

Initials, name or other lettering can be added above or below the variable date or number.

Base 11" x 5 1/2" Height 17"
Nett weight 32 lbs Gross weight 50 lbs.
Size of case 17" x 7" x 19"

APPLICATION

WHERE A PERMANENTLY UNALTERABLE MARKING IS DESIRED OR ESSENTIAL FOR :-

- Dating.
- Coding.
- Cancelling.
- Numerating.
- Receipting.
- Identifying, etc.

Films, Labels, Tickets, Cheques, Invoices, Documents, etc.

OR ANY OTHER PURPOSE WHERE A PERMANENT AND POSITIVE MARKING IS REQUIRED.

J. SLOPER & CO. LTD
THE ORIGINAL PERFORATING MACHINE MANUFACTURERS ESTABLISHED 1858
BLACKBURN RD. WEST HAMPSTEAD. LONDON. N.W.6. Tel: 01-624 8633/4

REPRESENTED BY:

The feature of this machine was to allow multiple papers to be perforated in a single operation by insertion of papers over a base plate before actuating the cranked handle.

An arrangement of rotating selector rings enabled a date, code, or series of up to 6 characters to be altered by the simple turn of a wheel within a matter of a few seconds. The machine was typically used for dating receipts and invoices, cancelling tickets and cheques, coding, and

identification of film, documents, and labels.

It was designed for desk or workstation use, measuring 17” high with a base size of 11” x 5¼”. A very similar earlier example of this machine is detailed by Maurice Harp in Bulletin 429 on page 16.

The Model 35 could also be modified for treadle operation and was the only linear bed variable date machine manufactured by Sloper’s. It was also the only machine to have chromed pegs to locate the date rings in place rather than spring loaded keys. The date rings were produced from brass tubing approximately 4 inches in diameter with an inside bore of approximately 2½ inch and consequently extremely robust.

The Model 35 machine was the most basic of the variable date perforators and had a steel ring boss which was slotted 1/8 inch along its length, the rings were drilled for pegs to line up with the slot, this located the rings for punch drilling and variable user date change. The die-set was built into the castings of the machine and was not removable.

A variation on this ring type design used slots milled across the set of rings approximately 1/16th inch wide by 1/8th inch deep. Spring-loaded keys located the rings for punch drilling and user variable date change.

Treadle operated machines were mounted on a painted angle iron frame with a wooden desk top fitted with a foot operated pedal.

Many of our older members will be familiar with general banking procedures during the turn of the 20th century up to the introduction of electronic banking whereby a bank would return your used cheques with the word ‘Paid’, ‘Unpaid’ or ‘Cancelled’ perforated through them. Banks that used this method were National Provincial, Westminster (now known as NatWest), Lloyds, Midland, Barclays and Coutts. It is almost certain that the machine used to achieve this would have been a Model 35 manufactured by J. Sloper & Co.

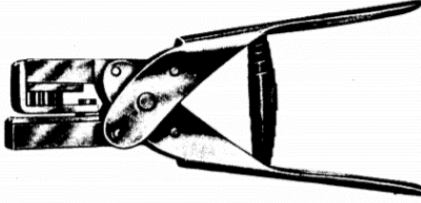
Sloper Hand Perforating Punch Model HP1

This compact Perforating Punch is perforation in the most basic form. The punch was intended for one handed operation and was 6.5” long. It was intended for ‘handy’ tasks such as initialling papers, tickets,

and documents where the throat depth allows easy accessibility for use on materials and garments, truth marking cloth, silk material, and thicker materials, such as hide, skins, and leather. It was manufactured to be cost effective from pressed steel jaws and sprung steel handles. It was capable of producing perforations of 1, 2 or 3 characters.

S L O P E R
H A N D P E R F O R A T I N G P U N C H

Approx. weight :
14½ ozs.
Length :
6½ Ins.
PLATED FINISH



MODEL HPI

A very handy and useful perforating punch for—

Truth marking silks, cloth, etc.
Identity marking skins, hides, etc.
Initialling papers, tickets, documents, etc.

Pressed Steel Handles
Steel jaws with
parallel action
Capable of perforating
1, 2 or 3 figures or
letters

Manufactured by **J. SLOPER & CO. LTD. BLACKBURN ROAD, LONDON, N.W.6**
Perforating Machine Specialists since 1858

This device was also known as the ‘Hand Clip’. The majority of users were hospitals and medical institutions and frequently used to perforate ‘L’ or ‘R’ on X-ray films. The appearance is reminiscent of a pair of pliers or gardening secateurs with spring but arranged to have parallel closing jaws and fully chrome plated. Special one-off die-sets were made to cater the needs of each client.

Model 49 Perforator

The ‘special new features’ of this machine detailed in the leaflet promote a removeable die block unit, and ‘quick set’ wheels. These features allowed the operator to alter the date or code with a simple turn of each wheel within a matter of a few seconds.

All die plates and punches are contained in an easily removeable die block unit and are interchangeable. The machine in standard form was

MODEL 49 PERFORATOR



Standard machines are supplied with six metal wheels to perforate a plain figure date (day-month-year) to numbers ranging from 1-999999

Standard machines perforate at the top of the paper with a margin of 2 1/2"

Initials, name or other lettering can be added above and/or below the variable date in numbers.

BASE	9 1/2" x 5"	GROSS WEIGHT	50 lbs
HEIGHT	6"	SIZE OF CASE	18" x 11" x 13"
NET WEIGHT	38 lbs	OUTPUT	

MACHINES FOR SPECIAL PURPOSES, WITH LESS OR MORE WHEELS THAN SIX, OR TO PERFORATE LETTERS, MADE TO ORDER TO SUIT ALL REQUIREMENTS.

SPECIAL NEW FEATURES —
REMOVABLE DIE BLOCK UNIT — QUICK SET WHEELS

TO ALTER DATE OR CODE —
SIMPLY TURN THE WHEELS (A matter of a few seconds)



All die plates and punches are contained in an easily removable die block unit (illustrated above). All standard die block units of this model are interchangeable.

Model 49 is available for flexible operation which minimizes noise to the operator (see block design top) in distribution the power.

J. SLOPER & CO. LTD.
THE INTERNATIONAL PERFORATING MACHINE MANUFACTURERS
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Represented by:

supplied with six matrix wheels to perforate a plain figure date or numbers ranging from 1-999999. It could perforate at the top of the paper with a margin of 2 - 3/8"; initials, name, or other lettering could be added above and / or below the variable date or number. Operated by a 'one armed bandit' lever it measured 8" high with a base size of 9½" x 6".

The date rings were a sprung key location design, an internal parallelogram mechanism allowed the ring assembly to rise and fall in a straight action rather than in a slight arc. It was also available in a treadle option.

Model 50 Heavy Duty Electric Perforator



This was an industrial duty machine designed to be located in a fixed position.

A flywheel driven by an electric motor linked the press with the perforating mechanism, operated by a foot treadle enabling the operator more versatility with both hands available for manipulation of papers creating a faster through put of work.

Dimensions and specific data are not provided on the sales leaflet. It is likely that this was not a fast seller due to complexity and high manufacturing costs.

Portable Electric Perforator Model 60

The Model 60 was essentially a powered version of the Model 49 with a similar sized die-block.

The design was based on a ring assembly mounted on the forward end of side arms approximately 12 inches long which pivoted within the main frame casting, therefore the whole ring assembly described a small arc unlike the Model 49's parallelogram mounted ring assembly.

The resultant arc had a slight disadvantage, as it required larger lettering on the rings. The drive mechanism featured a worm gear and worm-wheel arrangement housed in an aluminium gearbox. This was attached directly to the motor via a rubber star block linkage to provide noise reduction. To save weight the casting was produced from aluminium. To give an indication of size the base of the machine measured 330mm x 200mm and the overall height was 275mm weighing 35kg and worked on a single phase 240v electrical supply.

This was undoubtedly a state-of-the-art machine for its day and one of Sloper's best sellers, although was not without direct competition from America, an almost identical machine was manufactured by the 'Cummings Company'.

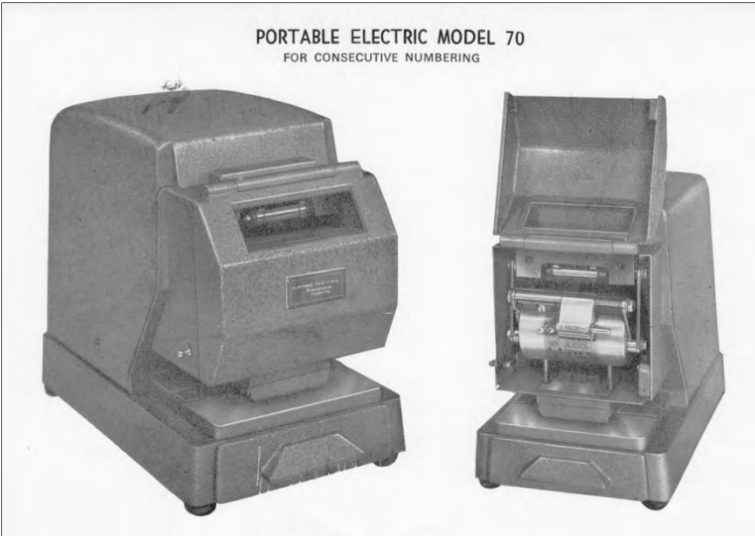


The Model 60 provided instant and automatic perforation of documents. As the paper was inserted it made contact with a microswitch, which in turn activated a motor to power the perforating mechanism. There was also an auxiliary option using a finger trip button. The sales features stated that no pedal or lever was necessary to actuate the process, thus eliminating operator fatigue with the use of a single hand. Additionally, it provided increased productivity and being

table mounted would only occupy the space of a typewriter and easily moved to the workplace. A removable and interchangeable die block arrangement could perforate up to six characters in a single line.

Interestingly the motor used to power these units was a cylinder vacuum cleaner motor supplied by Hoover Ltd of Perivale, West London. This design was superseded in the 1970's to a 'Parvalux' motor when Hoover ceased production of the cylinder motor. This brought about a design change to accommodate the different mounting brackets and was a much more modern design of motor which resulted

in the machine upgrade to Model 70 pictured below. A variation of this machine was developed for Kodak, it had the same mechanics and electrical operation, but was supplied specifically for use on 35mm film stock. It was called the model PE70.



Worth mentioning, was another upgrade to this machine, this time for use by the De La Rue Company. This machine was created at the infancy of ATM cash machine technology and was called the PE90. A number of these machines were built,

tested, and delivered by J. Sloper & Co., but the technology was eventually superseded by computers and more advanced electronics.

The PE90 shared many of the common parts and design with the Models 60 & 70 but was a much wider machine to accommodate the De La Rue die-block requirement.

Model 66 Embossing Machine

Whilst not a perforating process, the embossing method of security endorsement has played an important part of identification, marking of documents and sheet materials, for many years longer than the perforation method. Embossing, although not as visual as perforation, had a place in the market and Sloper’s must have recognised this and so offered a machine to provide this service. The Banking sector and Government institutions were prolific users of the seal embossing method or security endorsement.

PORTABLE ELECTRIC EMBOSSEING MACHINE MODEL 66
THE MODERN SEAL PRESS

INSTANT OPERATION BY INSERTION OF DOCUMENT

SPLIT SECOND ACTION WITH MINIMUM EFFORT

SECURITY ASSURED BY IMMOBILISING LOCK(S)

GUIDES FOR CORRECT POSITIONING TO SUIT INDIVIDUAL REQUIREMENTS

ALTERNATIVE OPERATION BY FOOT CONTROLLED MICRO SWITCH AVAILABLE IF REQUIRED

SPECIFICATION

BASE MEASUREMENT:	ONLY	13" X 8"
HEIGHT:		10"
NETT WEIGHT		58 lbs.
GROSS WEIGHT		74 lbs.
SIZE OF CASE		20" X 11" X 15"
ELECTRICITY SUPPLY		Single Phase 50 Cycles A.C. Standard Voltage

J. SLOPER & CO. LTD
THE ORIGINAL PERFORATING MACHINE MANUFACTURERS • ESTABLISHED 1856
BLACKBURN RD. WEST HAMPSTEAD. LONDON. N.W.6. Tel: Maida Vale 8633-4

REPRESENTED BY

Election Press or Ballot Press Perforator



ELECTION PRESS

PERFORATED PLATE

SPECIMEN DESIGN

Base measurement 5" x 2½"
127 x 63.5 mm.

Nett weight 16 ozs.
.45 kg.

PLATED FINISH OF PRESS & LEVER

Press supplied in cardboard container suitable for storage.

TO ALTER THE DESIGN - Remove brass slotted screw (using any coin) from underside of metal base and withdraw die as illustration.

NO SCREWDRIVER NECESSARY DESIGNS ALTERABLE IN SECONDS

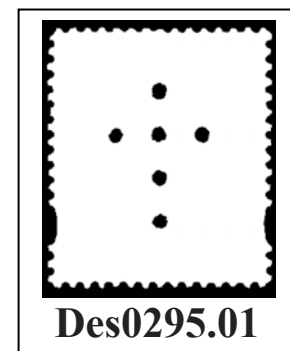
SPARE PINS AVAILABLE

Before and after use the perforating pins should be cleaned by perforating a piece of paper smeared with a little oil.

36,000 SUPPLIED TO ONE GOVERNMENT DEPARTMENT

J. SLOPER & CO. LTD
THE ORIGINAL PERFORATING MACHINE MANUFACTURERS ESTABLISHED 1858
BLACKBURN RD. WEST HAMPSTEAD, LONDON, N.W.6. Tel: 01-624 0633

REPRESENTED BY:



The Ballot Press was a small, mass-produced hand perforator used in polling booths during general and local elections. Over 36,000 of these machines were supplied to one government department alone! The design was compact and suited to desk top use, and so less robust than its forebears, with a base size of 5" x 2½", and the weight was a mere 16 ounces. [Ed:- This machine is used by Rosemary Smith to produce her personal perfin Des0295.01]

The die-sets had removable sets of pins to form a code that was perforated through the ballot papers. The mechanical principles were similar to the standard lever press, but these were a lighter duty version manufactured with pressed steel body with a plated finish.

For speed and convenience, a key feature enabled the pin configuration to be altered by means of a brass slotted screw, which could be removed from the underside of the metal base using a coin. This enabled the die to be withdrawn easily by unskilled operators within a few seconds. The instruction stated that before and after use the perforating pins should be cleaned by perforating a piece of paper

smearred with a little oil. This was presumably to eliminate rust, as presses would be put in storage for periods between election campaigns.

Model V2 Validating Machine

VALIDATING MACHINE

SELF INKING WITH REMOVABLE DIE PLATE

UP TO EIGHT COPIES OF CARBON BACKED PAPER STAMPED AT ONE TIME

EXTENSIVELY USED BY AIR LINE COMPANIES AND TRAVEL AGENTS

MODEL V2

FOR IMPRESSIONS TO I.A.T.A. REQUIREMENTS

FEATURES

- CLEAR LEGIBLE IMPRESSIONS
- AUTOMATIC RIBBON FEED
- REVERSIBLE RIBBON
- RUBBER STRIKING PAD
- RUBBER BASE PADS
- INTERCHANGEABLE DIE PLATE
- PERPETUAL DATER

SPECIMEN IMPRESSION

FAC-SIMILE IMPRESSIONS	
British airways I.A.T.A. CODE 24 AUG 77 VICTORIA TERMINAL LONDON	BRITISH CALEDONIAN I.A.T.A. CODE 24 AUG 77 95, 97 REGENT STREET LONDON U.K.
KLM I.A.T.A. CODE 24 AUG 77 ROTTERDAM AIRPORT	LUFTHANSA I.A.T.A. CODE 24 AUG 77 KARACHI
TIDE CODE & SON LTD. I.A.T.A. CODE 24 AUG 77 MINT & BAY BRIDGE LONDON U.K.	FRANCOISE TRAVEL LTD. I.A.T.A. CODE 24 AUG 77 LONDON S.W.1. ENGLAND
CANADIAN NATIONAL RAILWAYS 24 AUG 77 LONDON ENG.	B. W. I. A. PORT-OF-SPAIN 24 AUG 77 CODE 93/01

SPECIFICATION

- Base 8" x 3" 210 mm x 76 mm
- Height 5 1/2" 140 mm
- Net Weight 6 lbs 12 lbs
- Area of die plate 1" x 1 1/2" 30 mm x 38 mm
- Finish Hammer Grey

J. SLOPER & CO. LTD.

THE ORIGINAL PERFORATING MACHINE MANUFACTURERS ESTABLISHED 1859

BLACKBURN RD. WEST HAMPSTEAD. LONDON. NW6 1RZ Tel: 01-824 8832/4

The validator was all together a more modern venture with a self-inking removable die plate producing an ‘impression’ rather than a perforation.

It boasted the ability to mark up to eight copies of carbon backed paper in one operation and was extensively used by Air Line Companies and Travel Agents.

Typical configurations of impression included the company name and address, date, and flight identification code. The features

included an automatic ribbon feed with a rubber striking pad, interchangeable die plate and perpetual dater. It measured 8” x 3” at the base and weighed six pounds. These machines would have been mass produced. There is no mention of a V1 model, which was possibly a prototype device.

Special Purpose Machines

According to an account in Graces Guide, many other quite different types of machines were designed, developed, and sold by Sloper’s to cater for customers specific requirements. These often were not allocated model numbers but were instead identified by the relevant customer’s name.

Several unique machines were provided to the GPO, with a requirement to be mounted on angled worktops and with a wider than the standard layout, and were subjected to stringent inspection procedures.

It was evident that Sloper's were able to respond well to the market with special purpose machines, not just to the UK but worldwide, which must have given them an edge over competitors.

Some interesting 'specials' included the 'Railway Machine' which operated on a pendulum action, to perforate tickets with the date, mostly supplied to the Sudan Railway, as well as the UK rail network.

Bespoke to the hat making industry was the 'Hatband Machine' which could perforate the name of the customer on the inner hatband, the machine was hand operated. The construction used a cast iron drum approximately six inches in diameter with a sequence of numbers and letters with a punch die around the edge. This worked on the same principle as the date perforators creating a small dimple to push the punch down through the integral die block. Only one set of punches was required due to the single letter produced with one stroke.

From the range of machines produced, and the diversity of the client base, it provides an indication of just how successful J. Sloper & Co. had become in their heyday.

Ultimately, with the progression of new automated methods, as was the case for so many mechanical devices at that time, progression and continuous development within commerce appears to have hailed the start of the decline of hand operated machinery, as automation took over thereby eliminating the need for personnel to operate these machines. It is easy to see how demand dwindled, and Sloper's sales must have fallen into rapid decline in the 1980's.

Sources:

- 1 Graces guide to British Industrial History - An account of machines manufactured by J. Sloper & Co by ex-employee Peter Lewin
2. Bulletin 255 article by John Nelson
3. Bulletin 322 article by Dave Hill
4. Bulletin 429 article by Maurice Harp
5. History of Sloper's Tower Royal Works by John Matthews