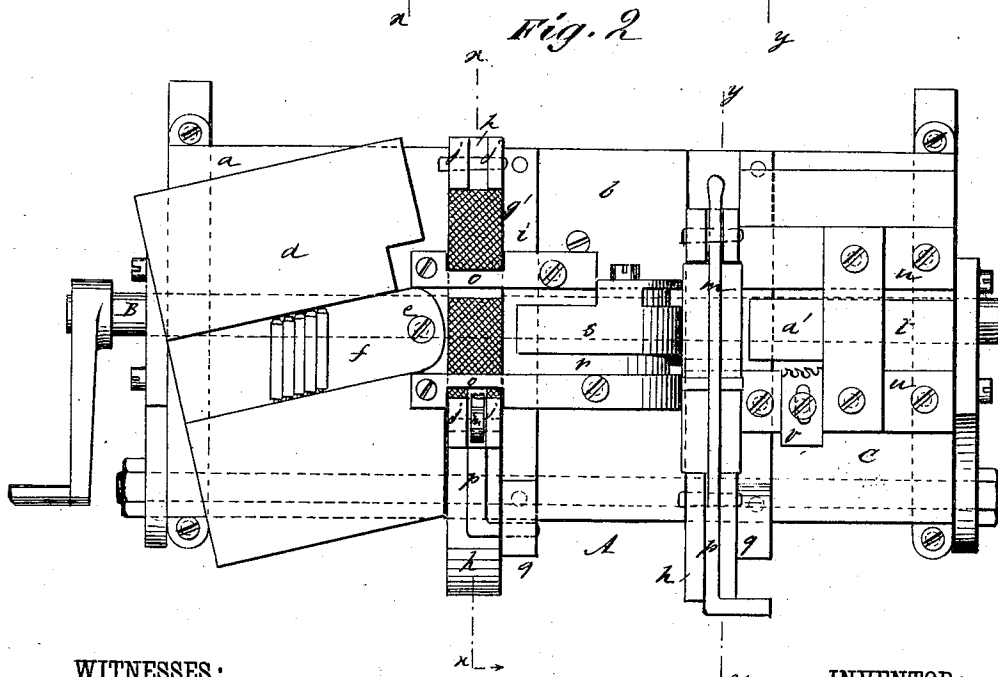
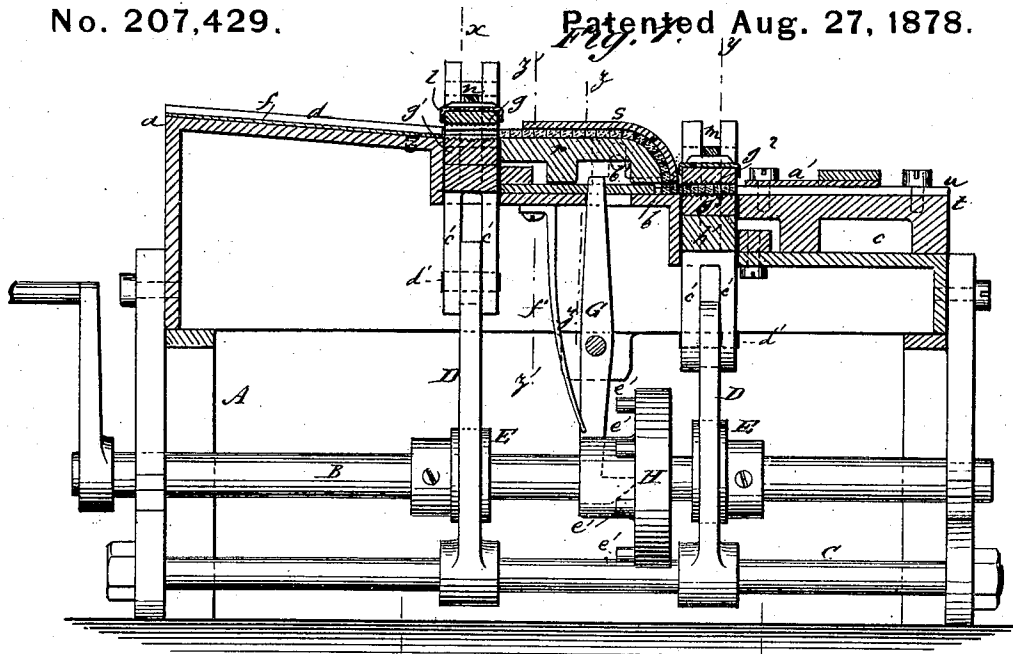


T. MASON.  
Machine for Dressing Printing-Types.

No. 207,429.

Patented Aug. 27, 1878.



WITNESSES:  
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*C. Sedgwick*

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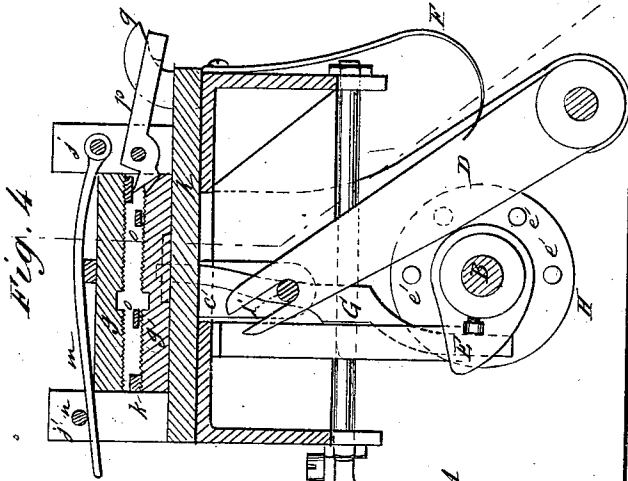


Fig. 4

Fig. 6

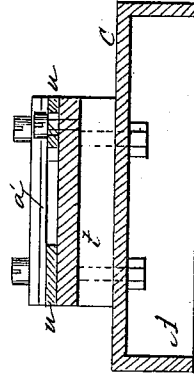


Fig. 3

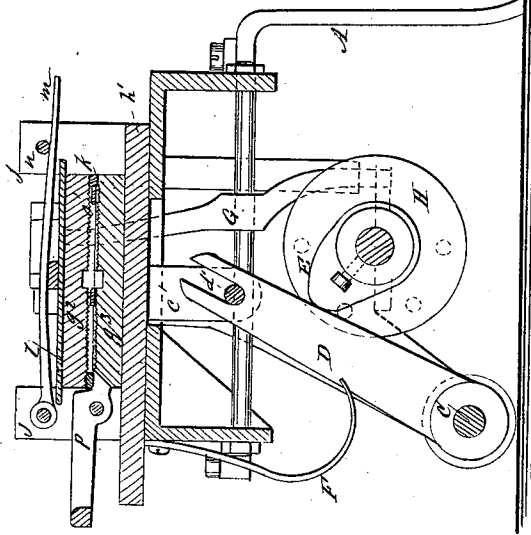
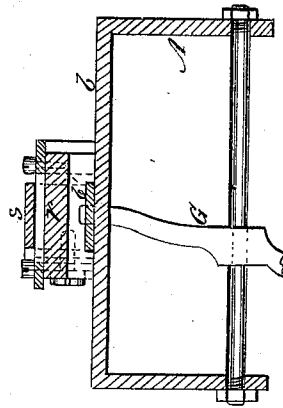


Fig. 5



WITNESSES:

*C. Newell*  
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# UNITED STATES PATENT OFFICE.

THOMAS MASON, OF 14 CROSS STREET, ISLINGTON, GREAT BRITAIN.

## IMPROVEMENT IN MACHINES FOR DRESSING PRINTING-TYPES.

Specification forming part of Letters Patent No. 207,429, dated August 27, 1878; application filed April 2, 1878; patented in England, August 4, 1877.

*To all whom it may concern:*

Be it known that I, THOMAS MASON, of 14 Cross street, Islington, in the county of Middlesex, Great Britain, have invented a new and Improved Machine for Dressing Printing-Types, of which the following is a specification:

Figure 1 is a side elevation, partly in section, of my improved machine. Fig. 2 is a plan view. Fig. 3 is a vertical transverse section taken on line *xx* in Figs. 1 and 2. Fig. 4 is a vertical transverse section taken on line *yy* in Figs. 1 and 2. Fig. 5 is a detail sectional view taken on line *zz* in Fig. 1. Fig. 6 is a detail sectional view taken on line *z'z'* in Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide a machine for dressing printing-type and truing their sides and edges, so that they may be set up in a solid form.

My invention consists in a machine having reciprocating files, which dress the sides and edges of the type. It also consists in a device for feeding the type from one set of reciprocating files to another, and also in a device for nicking the bottom end of the type.

Referring to the drawing, A is a frame, which supports all of the working parts of the machine; and B is the driving-shaft, which is journaled in the said frame, and carries the actuating-cams. A rod, C, is secured in the lower portion of the frame, to receive levers which are driven by the cams on the shaft B. The top of the frame or table is divided into three sections, *a b c*, which are arranged in three different planes. The section *a* is the highest, and is slightly inclined downward toward the section *b*, and the section *c* is lowest. Upon the section *a* is placed a table, *d*, which is pivoted at *e* to the section *a*, and is cut away or beveled at one side of its pivot, to admit of swinging it on its pivot. A shallow groove, *f*, is formed in the pivot-table *d* to receive the type to be operated upon by the machine. The groove *f* is equal in width to the length of the type, and leads to the rubbing-files *g g'*, carried by the reciprocating bar *h*. The reciprocating bar *h* is placed

in guides *i*, formed on the section *b*, below the lower end of the table-section *a*, and is provided with two pairs of ears, *jj*, between which the files *g g'* are placed. These files are arranged with their cut faces toward each other, and they are separated at the ends by gage-type *k*. The upper file is provided with a sheet-metal cap, *l*, having projecting ends, that enter between the ears *jj'*, and prevent the file from moving laterally. The upper file, *g*, is pressed downward upon the gage-type by a spring-tongue, *m*, which is pivoted at one end between the ears *j*, and is held down at the other end by a pin, *n*, that passes through the ears *j'*. Between the ears *j* is pivoted a lever, *p*, whose shorter arm engages one end of the file *g*, while the longer arm is bent at a right angle, and is engaged at every stroke of the reciprocating bar *h* by an inclined arm or cam, *q*, which is secured to the guide of the bar *h*. Guide-strips *o* are secured to the table-sections *a*, and pass through the space between the files *g g'*, and are secured to the curved guide *r*, which is attached to the table-section *b*.

The curved guide *r* is of the same height as the lower file, *g'*, so that the type may pass directly from the files to the guide.

Above the top of the guide *r* there is a curved plate, *s*, which holds the type down to the face of the guide, so that the type, in following the face of the guide, are turned through a quarter of a revolution, and are delivered to the surface of the section *b* at or near the edge which adjoins the section *c*.

Upon the table-section *c*, adjacent to the section *b*, a reciprocating bar, *h'*, is placed. This bar carries two dressing-files, *g<sup>2</sup> g<sup>3</sup>*, and is in all respects like the bar *h*, having gage-types *k*, the spring-tongue *m*, the cap, and fastening-pin *n*.

Between the files *g<sup>2</sup> g<sup>3</sup>* there are guide-strips *o'*, which form a continuation of the strips *o*. Beyond the files there is a table, *t*, upon which there are guides *u*, which lead to the delivery end of the machine. In one of the guides *u* a slot is cut to receive the tool *v*, which forms the nick in the bottom of the type, and above the channel formed by the guides a spring, *a'*, is supported, which confines the

type to the table *t* as they are moved forward along the edge of the nicking-tool. The nicking-tool is provided with several cutting-edges, arranged one slightly in advance of the other, so that each cutter removes a small portion of the metal.

Below the curved guide there is a follower, *b*<sup>1</sup>, which pushes the type between the files *g*<sup>2</sup> *g*<sup>3</sup> as they are delivered by the curved guide *r*. The bars *h h'* are each provided with downwardly-projecting ears *c'*, which carry a pin, *d'*, that is engaged by the slotted end of a lever, *D*, that is fulcrumed on the rod *C*. There is one lever for each bar, and upon the shaft *B* there is a cam, *E*, for each lever, and each lever is pressed forward against the periphery of its operating-cam by a spring, *F*.

The two reciprocating bars *h h'* and their operating cams and levers are alike; but they are timed so that the first set of files will deliver type to the curved guide so that they will be delivered to the second set of files when the latter are opened by the engagement of the lever *p* with the cam *g*.

A lever, *G*, is pivoted in the frame *A*, and is provided with a beveled nib at its lower end, which is engaged by pins *e'*, projecting from the side of a wheel, *H*, on the shaft *B*. The lower end of the lever is pressed into engagement with the pins *e'* by a spring, *f'*. The upper end of the lever *G* projects through a hole in the follower *b*<sup>1</sup>, and as the shaft *B* is rotated the follower is made to reciprocate as many times as there are pins *e'* in the wheel *H*, and the number of these pins is equivalent to the number of type acted upon at one time by the files.

To accommodate the stroke of the follower to the different sizes of type, I may have several concentric rows of pins in the face of the wheel *H* for engaging the lever *G*.

A rotary cutter may be substituted for the fixed cutter, and may take motion from the shaft through suitable gearing.

The operation of my improved type-finishing machine is as follows: The type is laid flatwise in the channel *f* in the table *d*, and if the type consists of such letters as *a c e o r s*, having no knot or projection, the table *d* is arranged so that the channel *f* is parallel with the sides of the frame *A*; but when the type consists of such letters as *b d f h i k l*, having knots or projections, the table *d* is turned on its pivot so that the channel *f* forms an angle with the files. By means of this arrangement the type may be arranged diagonally, so that the knots of one type may overlap the face of the adjoining type. In either case the type are moved forward parallel to the files, and are made to enter between the files when they are separated by the lever *p*.

The type enter between the guide-strips *o*, and are by them prevented from end motion while the files are reciprocated. The files are moved by the cams *E* and levers *D*, as already described, and the cams are of such form as to afford a period of rest to the files while the type is fed in. One double movement of the first pair of files is sufficient to complete the rubbing, and as a new set of rough type is fed between the files the type already rubbed are pushed out into the curved guide *r*, and are turned on edge as they are moved forward toward the second pair of files, *g*<sup>2</sup> *g*<sup>3</sup>.

The follower *b*<sup>2</sup> makes as many strokes as are required to push as many of the type between the second set of files as were treated by one operation of the first pair of files. The edges of the type are now dressed in the same manner as the sides were dressed in the first pair of files, and they are pushed out between the spring *a'* and table *t* as a new set of type is delivered to the files.

As the type move forward on the table *t* their heels or lower ends are nicked by the cutter *v*. The type, in passing between the files, are reduced to the width and thickness of the gage-type, and as they are discharged from the table *t* they are set up ready for inspection.

Having thus described the nature and object of my invention, and the manner in which the same is or may be carried into effect, I observe that I do not confine myself to the precise details herein given, as I may modify the same without departing from the principle of my invention.

By my peculiar combination I am enabled to perform in one operation the rubbing, setting up, and dressing of the type; but I may in some cases perform one or more of these operations separately.

The invention above described is the subject of English Patent No. 2,985 of 1877.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The inclined and pivoted table *d*, having the channel *f*, in combination with the type-filing mechanism, substantially as shown and described.
2. The combination of the curved guide *r*, having the curved cover *s*, with the two pairs of reciprocating files, substantially as shown and described.
3. The cutter *v* and spring *a'*, in combination with the table *t*, substantially as shown and described.

THOMAS MASON.

Witnesses:

E. VINSON,  
A. ROBINSON.