

No. 712,969.

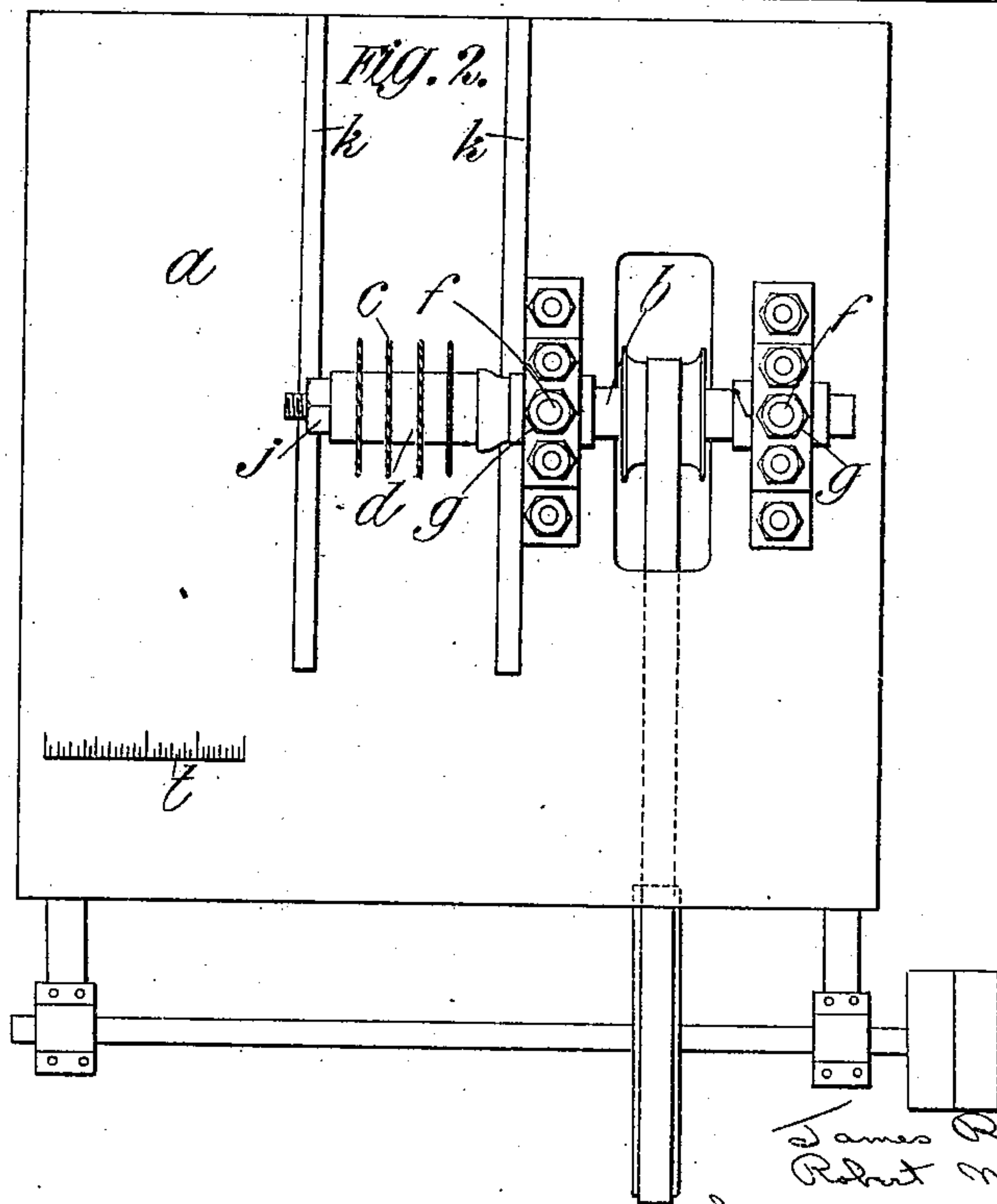
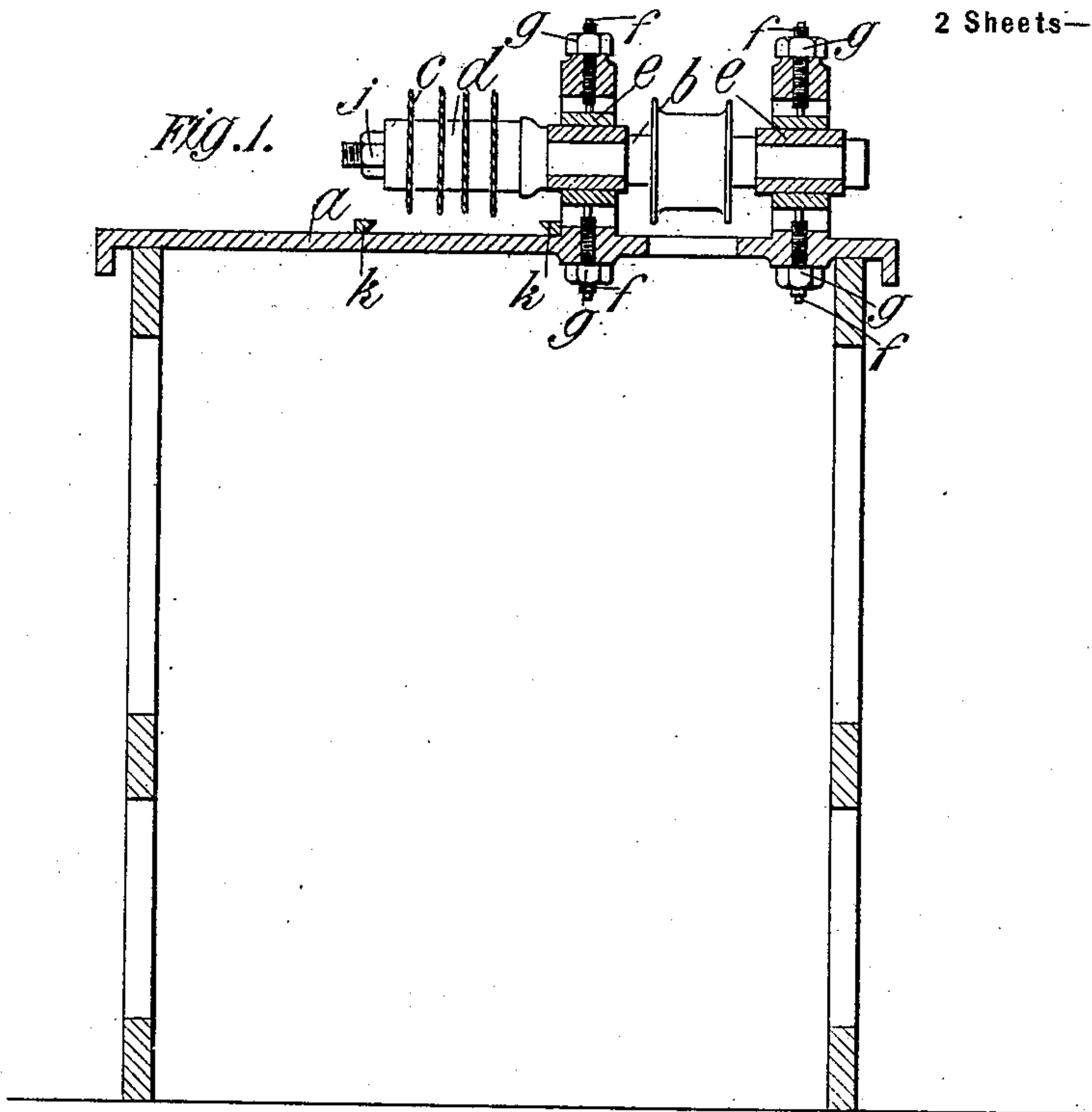
Patented Nov. 4, 1902.

J. ROXBURGH & R. McCLEAN.  
APPARATUS FOR SLOTTING LINOTYPE SLUGS.

(Application filed Oct. 5, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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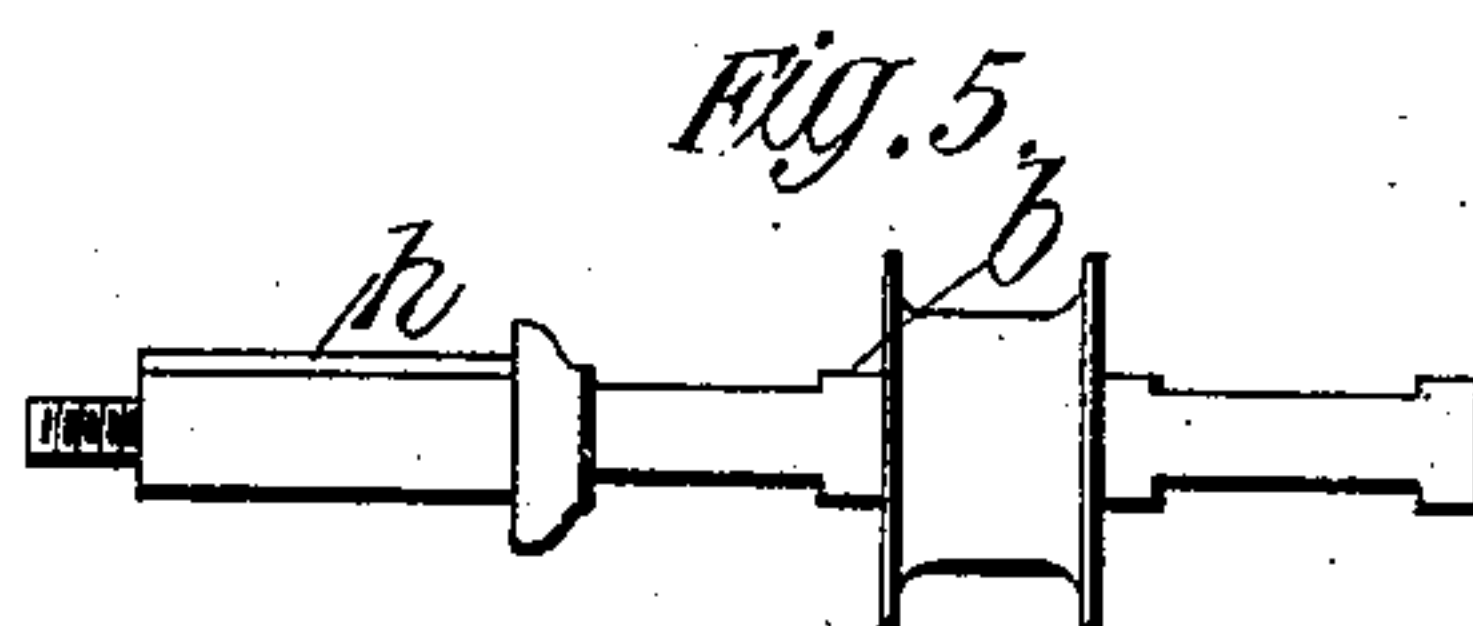
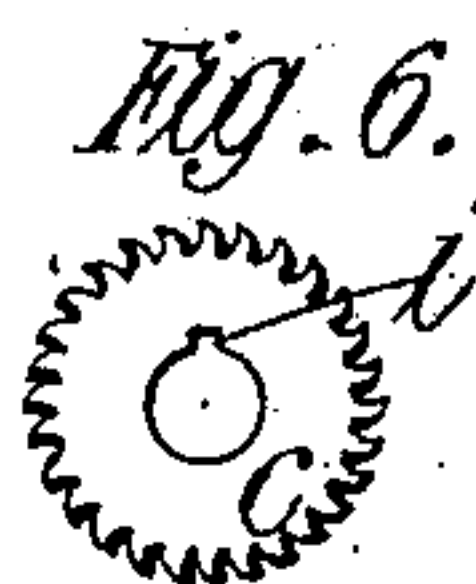
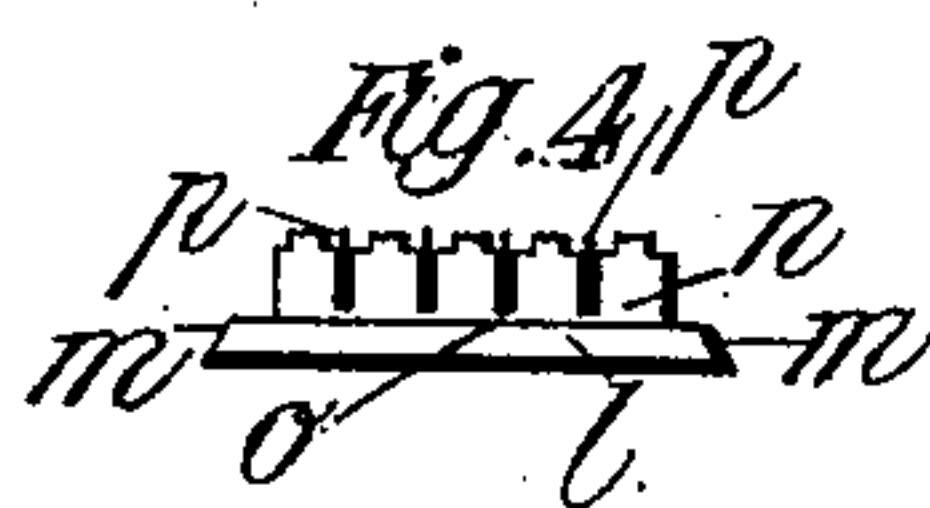
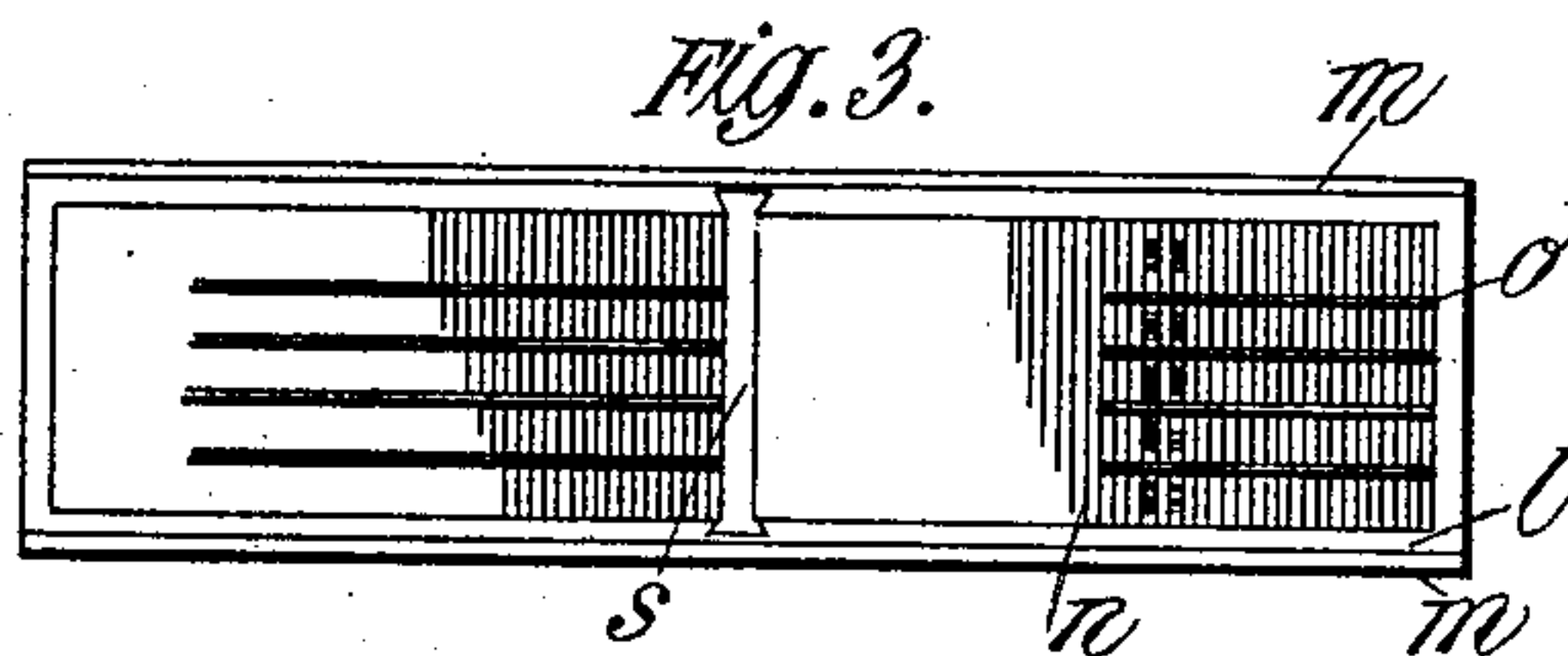
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(No Model.)

2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

JAMES ROXBURGH AND ROBERT McCLEAN, OF DUBLIN, IRELAND.

## APPARATUS FOR SLOTTING LINOTYPE-SLUGS.

SPECIFICATION forming part of Letters Patent No. 712,969, dated November 4, 1902.

Application filed October 5, 1901. Serial No. 77,677. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES ROXBURGH, manager of printing-works, residing at 10 Philipsburgh avenue, Dublin, and ROBERT McCLEAN, master printer, residing at 35, 36, and 37 Great Strand street, Dublin, Ireland, subjects of the King of Great Britain, have invented certain new and useful Improvements in Apparatus for Slotting Linotype-Slugs, of which the following is a specification.

This invention relates to the utilization of "linotype-slugs" or lines of type for printing tabular work, and has for its object to facilitate and expedite the formation of transverse slots in the slugs or lines of type for receiving the metal "rules" or strips for printing the lines between adjacent columns of the tabular work and to feed the "forms" or frames containing the linotype-slugs or lines of type regularly and easily to the aforesaid means for forming the transverse slots in the slugs or lines of type.

According to our invention we mount a number or series of circular saws adjustably on a rotary shaft or spindle carried by a saw-table, spacing-disks or type-measures of any required typographical width being also mounted on said spindle in intermediate positions between the saws and arranged so as to adjust the spaces between the saws in accordance with the required spaces between the columns of the tabular work.

The "chases" or frames in which the slugs or lines of type and the rules are "imposed" or arranged have their side members adapted to engage with fixed guides on the saw-table, whereby the said slugs are fed regularly and rapidly to the circular saws.

Referring to the drawings, Figure 1 is an elevation, partly in section, of a saw-table constructed according to this invention. Fig. 2 is a plan of said table. Fig. 3 is a plan, and Fig. 4 is an end elevation of a chase or frame containing the imposed lines of type and rules. Fig. 5 shows the spindle detached from the saw-table. Fig. 6 is a side view of one of the circular saws. Fig. 7 is a side view of a spacing-disk or type-measure.

*a* is the saw-table, which carries a spindle *b*, on which are mounted saws *c c* and spacing-disks or type-measures *d d* of the required typographical width. The spindle *b*

is mounted in bearings *e e*, which may be vertically adjusted by means of screws *f f* and nuts *g g*, so as to regulate the height of the cutting edges of the saws *c* above the table *a*. The spindle *b* is provided with a key or rib *h*, Fig. 5, which engages with corresponding keyways or grooves *i*, Figs. 6 and 7, in the saws *c* and disks or type-measures *d*, thereby preventing the said saws and disks from moving angularly about the spindle. The saws *c* and disks *d* are adapted to slide longitudinally on the spindle *b* and are retained in position by a nut *j*, which engages with the screw-threaded end of the spindle.

The saw-table *a* is provided with undercut guides *k*, between which a chase or frame *l*, having correspondingly beveled or inclined side members *m*, is adapted to slide. The linotype-slugs or lines of type *n*, Figs. 3 and 4, are imposed or arranged in said chase or frame, and the chase or frame containing the slugs *n* is then passed along between the guides *k*, while the spindle *b* is rotated by any convenient means, such as the band and pulley gear. (Shown in Fig. 2.) Transverse slots *o*, Figs. 3 and 4, are thus cut in the slugs *n*. In these slots *o* brass strips or rules *p* are inserted for printing the lines between the columns of the tabular printed work.

If required, the chase or frame may be supported by one or more cross-bars, such as *s*, Fig. 3.

The disks or type-measures vary in width from the lowest or less than the lowest up to any recognized or convenient typographical measure. By arranging disks of the required width between the saws on the spindle any required typographical space can be obtained between adjacent saws, and as the saws cut the transverse grooves to receive the rules in the slugs or lines of type it follows that by a suitable arrangement of spacing-disks and saws upon the spindle-spaces of any required typographical measure may readily be obtained between adjacent rules.

A type-gage *t* may, if desired, be provided on the saw-table and graduated in accordance with the usual typographical measures to aid the operator in arranging the saws *c* and spacing-disks *d* on the spindle.

What we claim, and desire to secure by Letters Patent of the United States, is—



1. In apparatus for preparing linotype-slugs or similar cast lines of type for printing tabular matter, the combination of a saw-table, a rotary shaft carried by said table, saws  
5 for cutting transverse slots in the slugs, carried by and longitudinally adjustable on said shaft, vertically-adjustable bearings for said shaft to regulate the depth of the transverse slots in the slugs, interchangeable spacing-  
10 disks of any required typographical measure mounted alternately with the saws on said shaft in accordance with the spaces required between the columns of tabular matter, guides on the saw-table and a chase or frame having  
15 its side members adapted to engage with said guides, substantially as and for the purpose specified.

2. In apparatus for preparing linotype-slugs or similar cast lines of type for printing  
20 tabular matter, the combination of a saw-table, a rotary shaft carried by said table, saws for cutting transverse slots in the slugs, car-

ried by and longitudinally adjustable on said shaft, vertically-adjustable bearings for said shaft to regulate the depth of the transverse  
25 slots in the slugs, interchangeable spacing-disks of any required typographical measure mounted alternately with the saws on said shaft in accordance with the spaces required between the columns of tabular matter, un-  
30 dercut guides carried by the saw-table and running at right angles beneath the rotary shaft, and a chase or frame having beveled side members adapted to engage with said guides, substantially as and for the purpose  
35 specified.

In testimony whereof we have hereunto set our hands, in presence of two subscribing witnesses, this 19th day of August, 1901.

JAMES ROXBURGH.  
ROBERT McCLEAN.

Witnesses:

I. B. BROWNE,  
JAMES FAY.