A. C. Sine,

Paging Machine.

No. 112232. Patented Feb 28 1871.

Fig. 1.

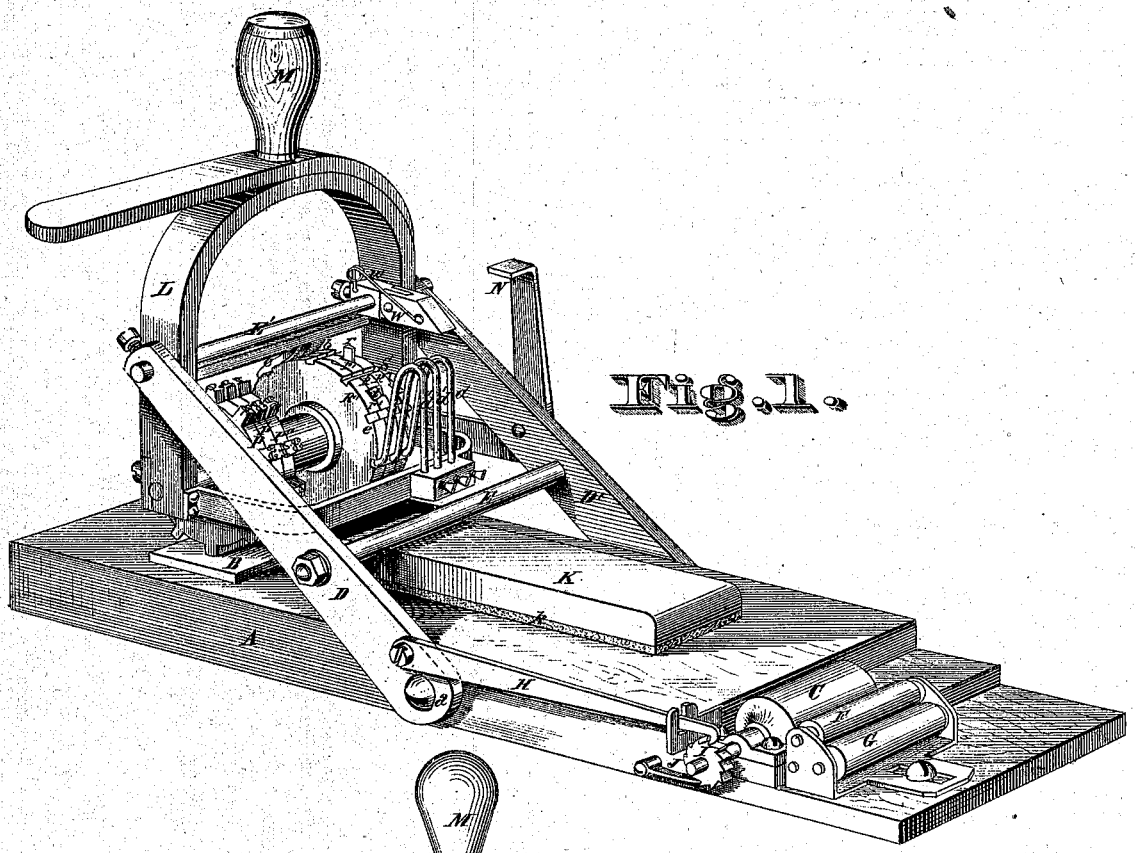


Fig. 2.

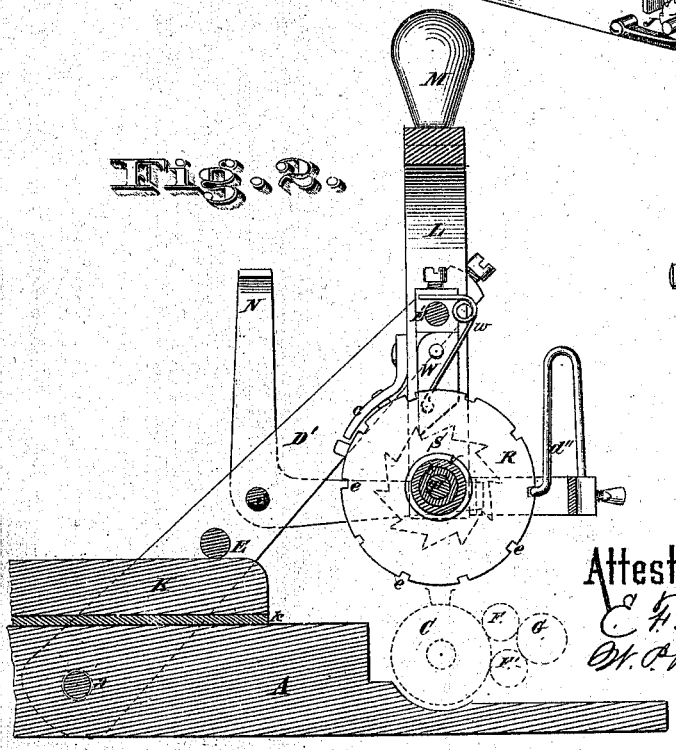
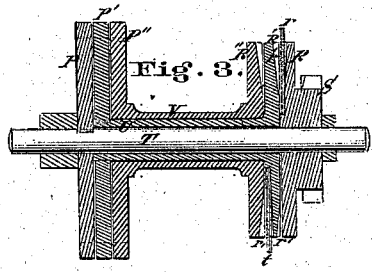


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALPHEUS C. SINE, OF CINCINNATI, OHIO, ASSIGNOR TO LORENZO D. SINE, OF SAME PLACE.

IMPROVEMENT IN NUMBERING AND PAGING MACHINES.

Specification forming part of Letters Patent No. **112,292**, dated February 28, 1871.

To all whom it may concern:

Be it known that I, ALPHEUS C. SINE, of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Consecutive Numbering and Paging Machines; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawing, making part of this specification.

Nature and Objects of Invention.

My invention consists of certain peculiar devices by which the figure-disks are revolved by the motion necessary for inking the figures, and further consists in the peculiar construction of the operating parts of the figure-disks.

Description of Accompanying Drawing.

Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is a longitudinal section. Fig. 3 is an axial section of the figure-disks, shafts, and operating-disks.

General Description.

The machine selected for illustration is one designed to be operated by hand.

A is the base-plate or stand; B, the pad, upon which impressions are received; and C, the composition inking-roller, from which the figures on the figure-disks receive the ink. D D′ are swinging arms, which carry the revolving figure-disks. These arms are pivoted to the stand A at *a*, which is exactly midway between the center of the receiving-pad B and the center of the inking-roller C.

The arms D D′ are connected together for simultaneous action by means of bars E E′, and they serve to carry the figure-disks from the roller to the pad and return, each movement toward the inking-roller serving, by devices hereinafter explained, to adjust the figures, and each movement toward the pad to revolve the inking and distributing rollers.

F F′ G are the distributing-rollers. These are revolved by contact with the inking-roller, and the latter is revolved by the pawl H and ratchet-wheel I. The pawl J prevents these rollers being turned in the wrong direction.

The pad K, which rests upon rubber *k*, limits the play of the arms in either direction by contact with bar E, and prevents the figures striking the pad B or roller C too hard. The bar E′ is rigidly secured to the arms D D′, and forms a journal, upon which the swinging frame L (in which the figure-disks are journaled) is hung.

The whole machine is operated by means of the handle M, attached to the frame or yoke L, the movement of the hand serving to swing the arms to and fro, and also to preserve the frame L in the vertical position.

To enable the operator to strike the same point exactly at each end of the stroke the gages or stops N are provided, against which the frame L rests.

P P′ P″ are the figure-disks, each having ten figures upon the periphery, and R R′ R″ are the disks which retain the disks P P′ P″ in position, and also serve, in connection with the ratchet-wheel S, to operate them.

The disks P P′ P″ and R R′ R″ are connected by spindle T and hollow shafts U V, in the manner shown, the spindle carrying disks P R, the shaft U the disks P′ R′, and the shaft V the disks P″ R″.

The ratchet-wheel S, which operates the disks, is revolved by means of the pawl W, which is rigidly secured to the bar E′, and is jointed and provided with a spring, *w*, to enable it to move over the teeth of the ratchet and regain its position. The wheel S has ten teeth, and serves to revolve the disks P R a tenth part of a revolution at each motion of the arms D D′ toward the inking-roller C.

Disk P carries the unit-figures, disk P′ the tens, and disk P″ the hundreds, and so on for any number of disks necessary. Upon each complete revolution of the disks R P the spring *r* is forced, by the inclined guide *b*, into one of the notches *r′*, and two disks then move together. When the disks P′ R′ have made a complete revolution, the spring *t* is forced by guide *c* into one of the notches *r′* of the disk R″, and the spring *r* acts as before, when all the disks move together, and so on if more than hundreds are used. The disks are retained in the exact position for each figure by means of adjustable spring-pawls *d d′ d″* and notches *e*.

This machine can be operated by treadle or power, by any approved connection, attached to the arms D D′, it being in these cases simply necessary to permit the top of the frame L at each end of the stroke to strike against a spring-pad attached to something stationary, in order that the frame may be forced against the stops N.

Claims.

I claim—

1. In connection with the pad or table B and inking-roller C, the swinging-arms D D′, when the arms are provided with swinging frame L, and revolving figure-disks P, as and for the purpose specified.

2. In connection with the swinging frame D D′ E′, frame L, and revolving figure-disks P, the pawl W, wheel S, disks R, springs *r t*, and retaining-pawls *d*, constructed and operating substantially in the manner and for the purpose specified.

In testimony of which invention I hereunto set my hand.

ALPHEUS C. SINE.

Witnesses:

FRANK MILLWARD,

J. L. WARTMANN.