

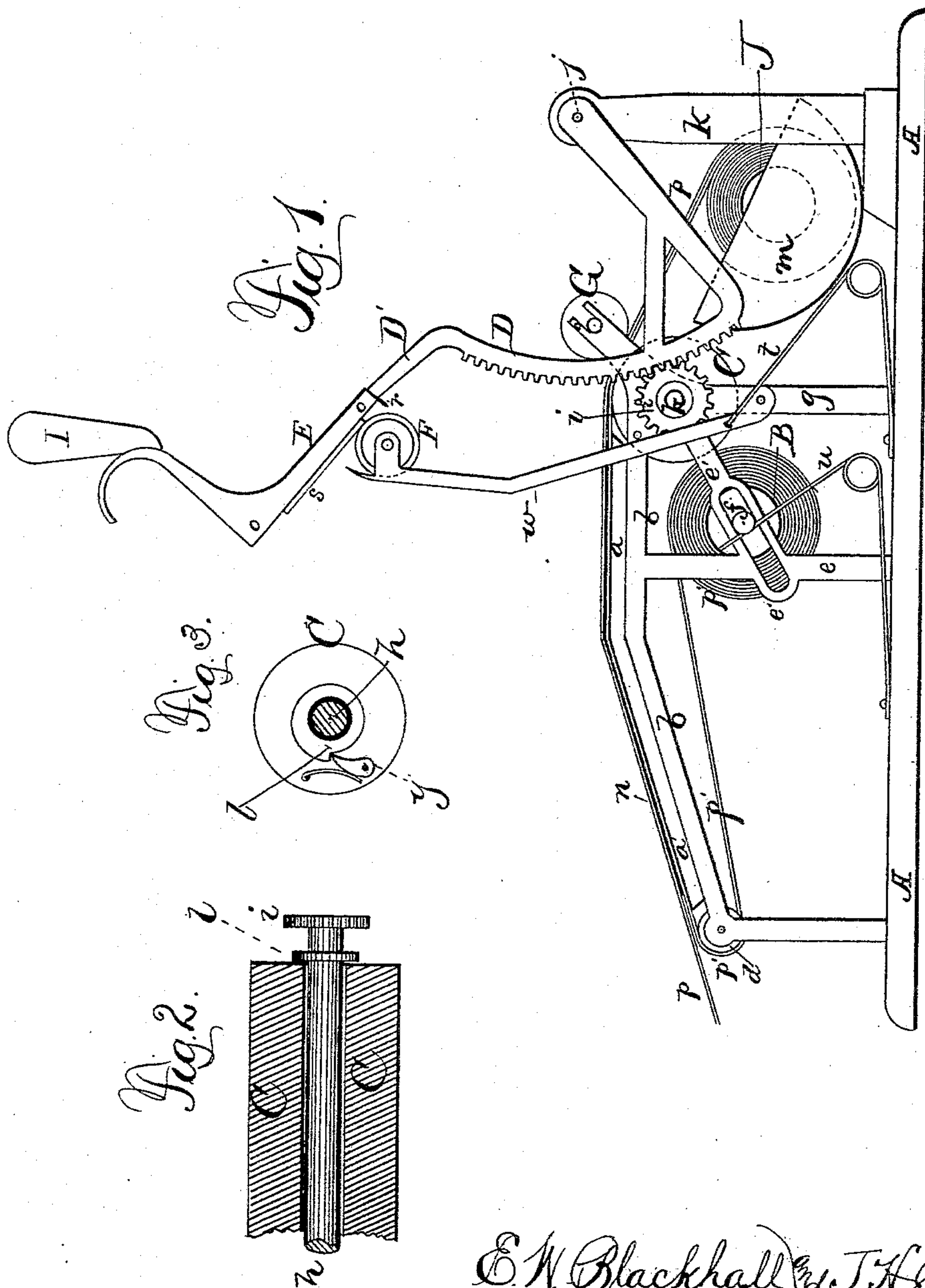
(No Model.)

J. H. SMITH & E. W. BLACKHALL.

BILL HEAD PRINTING DEVICE.

No. 339,339.

Patented Apr. 6, 1886.



E. W. Blackhall & J. H. Smith

Inventors by
J. R. Drake,
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Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN H. SMITH, OF BUFFALO, NEW YORK, AND EDWARD W. BLACKHALL,
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BILL-HEAD-PRINTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 339,339, dated April 6, 1886.

Application filed December 30, 1884. Serial No. 151,590. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. SMITH, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, and EDWARD W. BLACKHALL, a subject of the Queen of Great Britain, residing at Toronto, county of York, Province of Ontario, and Dominion of Canada, have invented certain new and useful Improvements in Bill-Head-Printing Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of this invention is to furnish a machine of simple construction for cash transactions or other business purposes that will print headings for bills, memoranda, &c., on a continuous strip of paper, with another similar strip underneath, both strips running from a single reel, and with a transfer medium between, so that at every action of the printing-stamp the two paper strips are automatically moved forward just so far on the writing-desk and the under or recording strip wound up on a roller underneath, thus preserving a continuous record of all that has been written or marked on the upper strip, which is torn off and given to the customer, or for other purposes.

This invention as constructed and applied will be understood by reference to the following specification and drawings, in which—

Figure 1 is a side elevation of the whole device, the case only being removed. Fig. 2 is a detail of part of pressure-roller, &c. Fig. 3 is also a detail view, being an end view of roller, eccentric, and spring-ratchet.

A is the base, to which the upright parts are fastened. Above is a table, *a*, the front *a'* slanting down a little. This table is fastened on two counterpart metal side frames, *b b*, having two legs or supports at the front end, and in the top of which is journaled a loose roller, *d*, to aid in carrying off the recording-strip, as hereinafter explained. Two uprights, *e*, aid in supporting the table, and each has an elongated bearing, *e'*, in its side for a journal, *f*, of the reel B, which winds up or stores thereon the fac-simile strip. The elongated bearing *e'* slants up a little and joins an upright, *g*, and in the latter is journaled the loose shaft *h* of a pressure-roller, C. A cog-wheel, *i*, is

fast on the end of this shaft *h*, and is operated by a segmental rack, D, in connection therewith. At the lower end of this rack where the teeth end it is bent sharply upward at an angle, and is journaled to a shaft, *j*, in an upright post, *k*, attached to the base. The other end of the rack-frame is curved forward and attached to the sides of a printing bed or stamp, E, having a handle, I, and rubber type or a plate, *s*, in the bed. It will be understood that this description of one side of the device is the exact counterpart of the other, with the single exception that a ratchet, *l*, is fast on the loose shaft *h* of the pressure-roller C, (see Figs. 2 and 3,) and a spring-pawl, *y*, is fastened to the side of the roller.

J is a reel or spool, on which are wound together two strips of paper—one, *p*, suitable for writing and the other, *p'*, for recording thereon. This double strip passes up over the pressure-roller C, and is kept in place by a heavy roller, G. It runs on the table *a a'*, and here is inserted a carbon sheet, *n*. The under strip, *p'*, now passes over end roller, *d*, and over and around the receiving-roller B underneath. The shaft *f* of this roller has springs *u* in contact therewith, and by these and the elongated bearing *e'* the surface of this roller is always kept pressed forward against the surface of the pressure or operating roller C, no matter whether a small or large circumference of paper is presented.

We do not confine ourselves to the springs described, as any may be used. The top strip, *p*, is perforated by a perforating-plate, *r*, on the end of the printing-bed E at every downward action of the bed, thus marking off equal lengths on the strip, and which are thus readily torn off in uniform pieces. This is a great advantage; but we claim nothing in its construction, only its combination with this apparatus.

A description of the printing device is here given to show its connection with and application to an autographic recording device, as it is our intention to make the printing-stamp, irrespective of any other parts, the subject of a future application for a patent. The bed E of the stamp is as wide as the table *a*. F is an inking-roller, held in side arms, *w*, and which is operated by the downward

pressure of the bed E, and thrown up by springs *t* acting on the side arms.

The operation of the whole is as follows: As stated, the loose reel in the open box is wound with two (or more) lengths of paper, which go over the pressure-roller C and onto the table. The end of the under strip is then carried over the end roller, *d*, and fastened on the storing-reel B, and carbon paper *n* put between the upper and lower strips, *p p'*, on the table *a a'*. (Any transfer medium may be employed.) On this the invoice or memorandum is made. The hand printing-stamp, which stands up, as in Fig. 1, is now brought down smartly by the handle I onto the paper, and prints a heading to the bill, &c. Then, as it is thrown up, the segment D and cog-wheel *i* connect the ratchet *l* and spring-pawl *y* and operate the pressure-roller C, which makes one complete revolution, and, by frictional contact against the storing-reel, winds up the under paper strip and draws both strips just so far forward together, the distance corresponding exactly to the circumference of the operating pressure-roller C, which on an ordinary-sized machine will conform exactly to a roller six and one-half inches round, giving each blank on the table six and one-half inches from perforation to perforation, including the printed heading. Thus the action of the simple printing-stamp in a single downward and upward movement prints a heading, perforates the sheet, unwinds two strips from a single reel, throws them forward just so far on the table, winds the recording-strip on the storage-reel, and presents a new surface on the desk for the next memorandum. This saves in printing, as any separately-printed strips would be ex-

pensive, and it would be difficult to unwind such to bring the blanks exactly right for writing on. The fact of the two strips of paper being wound together on a single reel or spool is a very strong point, as both strips—the upper one, on which the memoranda are made, and the under one, which gives the record—are unwound exactly together, thus making it impossible to use or detach any portion of the upper strip unless for legitimate purposes without causing a blank place on the under strip, and which must be explained by the operator. This does away with numbering the bills, as any blank space on the record for which a corresponding piece is not shown indicates fraud or tampering with the apparatus. The upper strip is torn off as fast as used by the perforations. Like other registering devices, it gives a fac-simile, which is preserved on the storing-reel until wanted, and thus keeps exact copies of all transactions noted on the upper strip.

We claim—

In a combined bill-head-printing and automatic registering apparatus, the combination of a paper-dispensing reel, a storing-reel caused to impinge against the roller C by a spring, a printing-stamp mounted on a lever provided with a segment, D, cog *i*, ratchet *l*, spring-pawl *y*, loose shaft *h*, pressure-roller C, and roller G, all substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN H. SMITH.

EDWARD W. BLACKHALL.

Witnesses:

J. R. DRAKE,

T. H. PARSONS.