(No Model.)

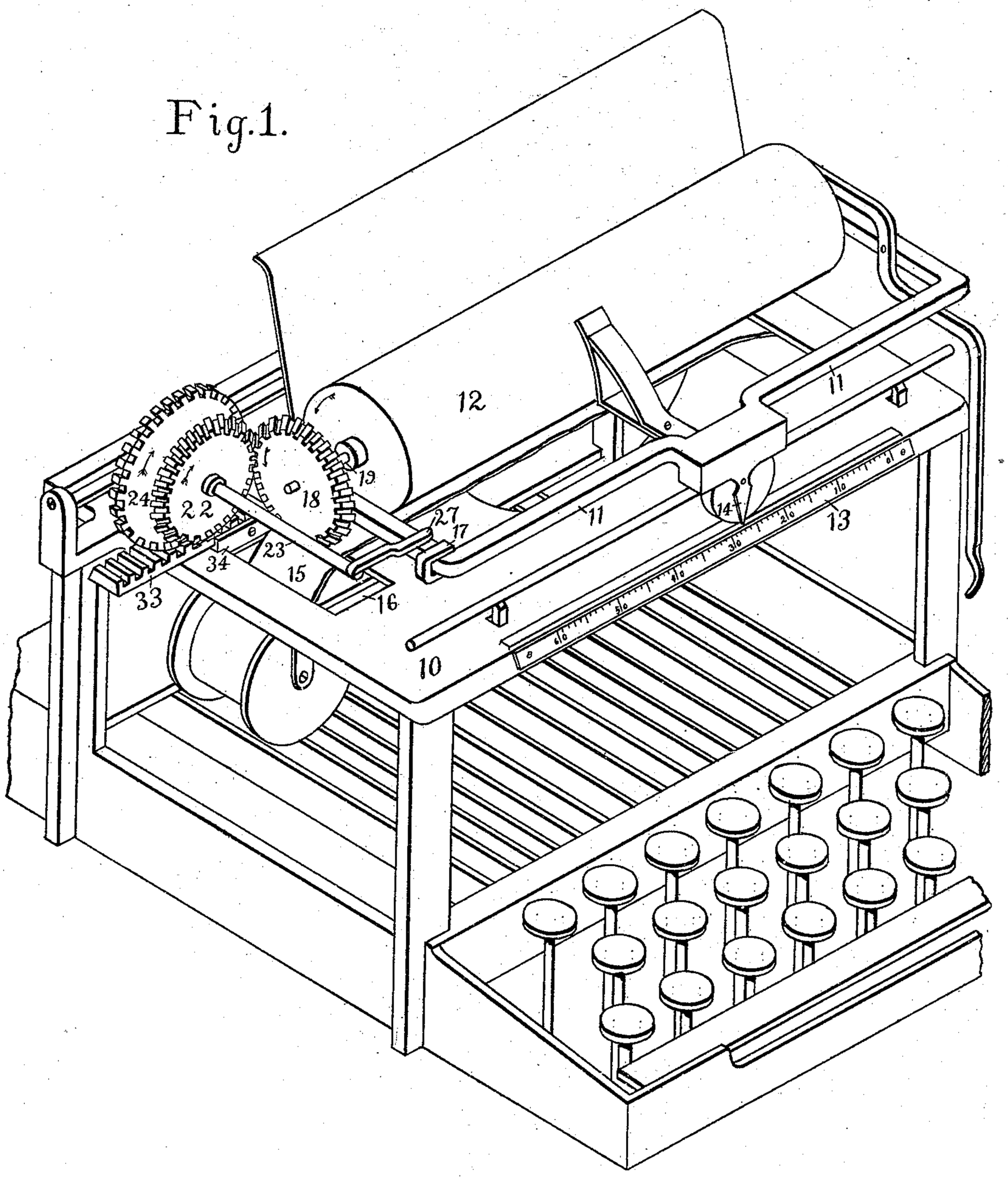
2 Sheets—Sheet 1.

W. BOHANNON.

PAPER FEEDING ATTACHMENT FOR TYPE WRITERS.

No. 547,324. Patented Oct. 1, 1895.

Fig. 1.



Witnesses
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E. E. Vernell.

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(No Model.) 2 Sheets—Sheet 2.

W. BOHANNON.

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Fig. 2.

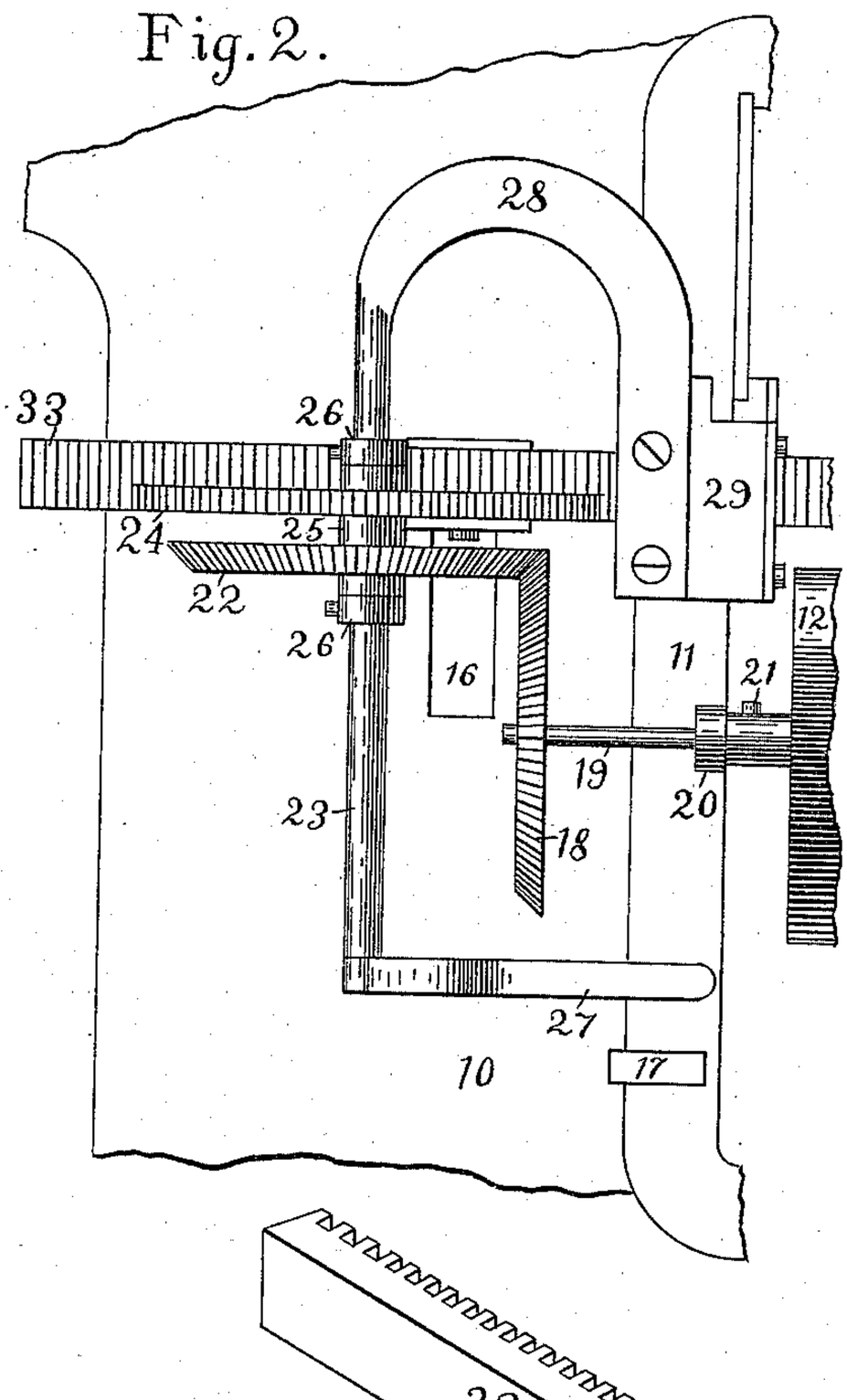

Fig. 3.

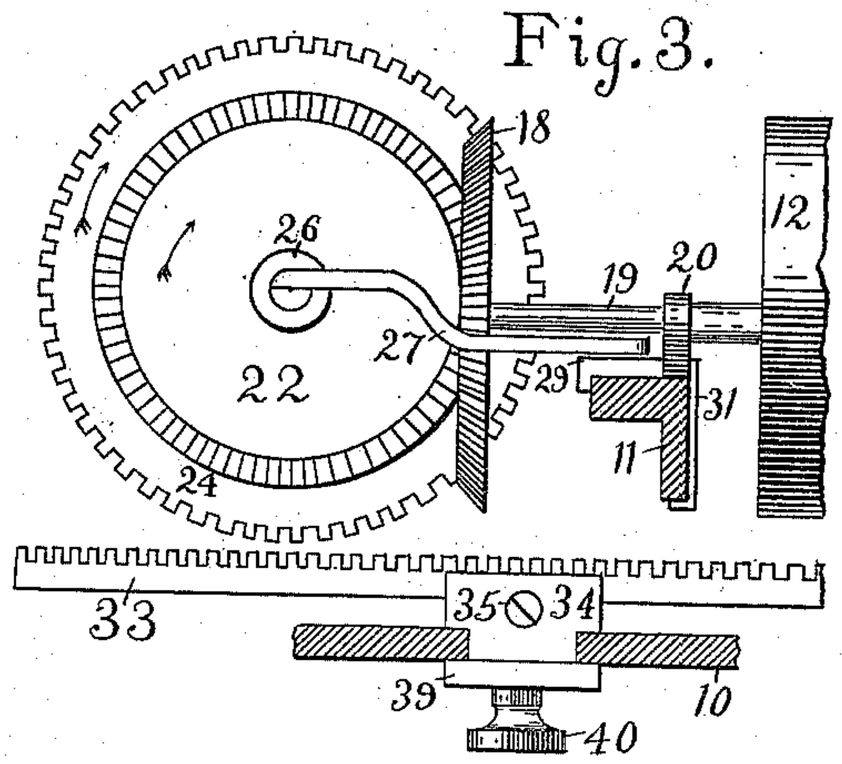

Fig. 4.

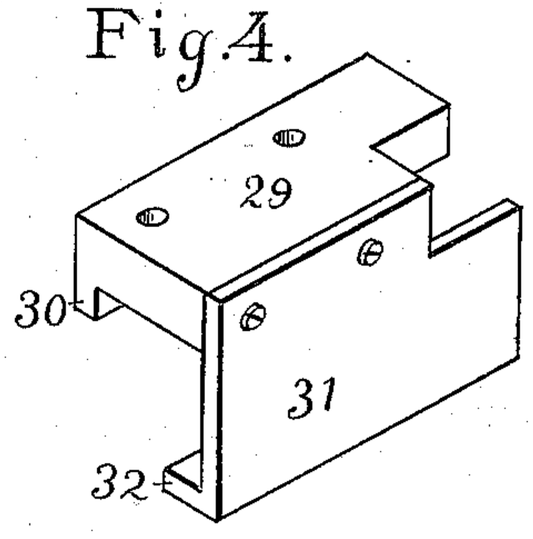

Fig. 5.

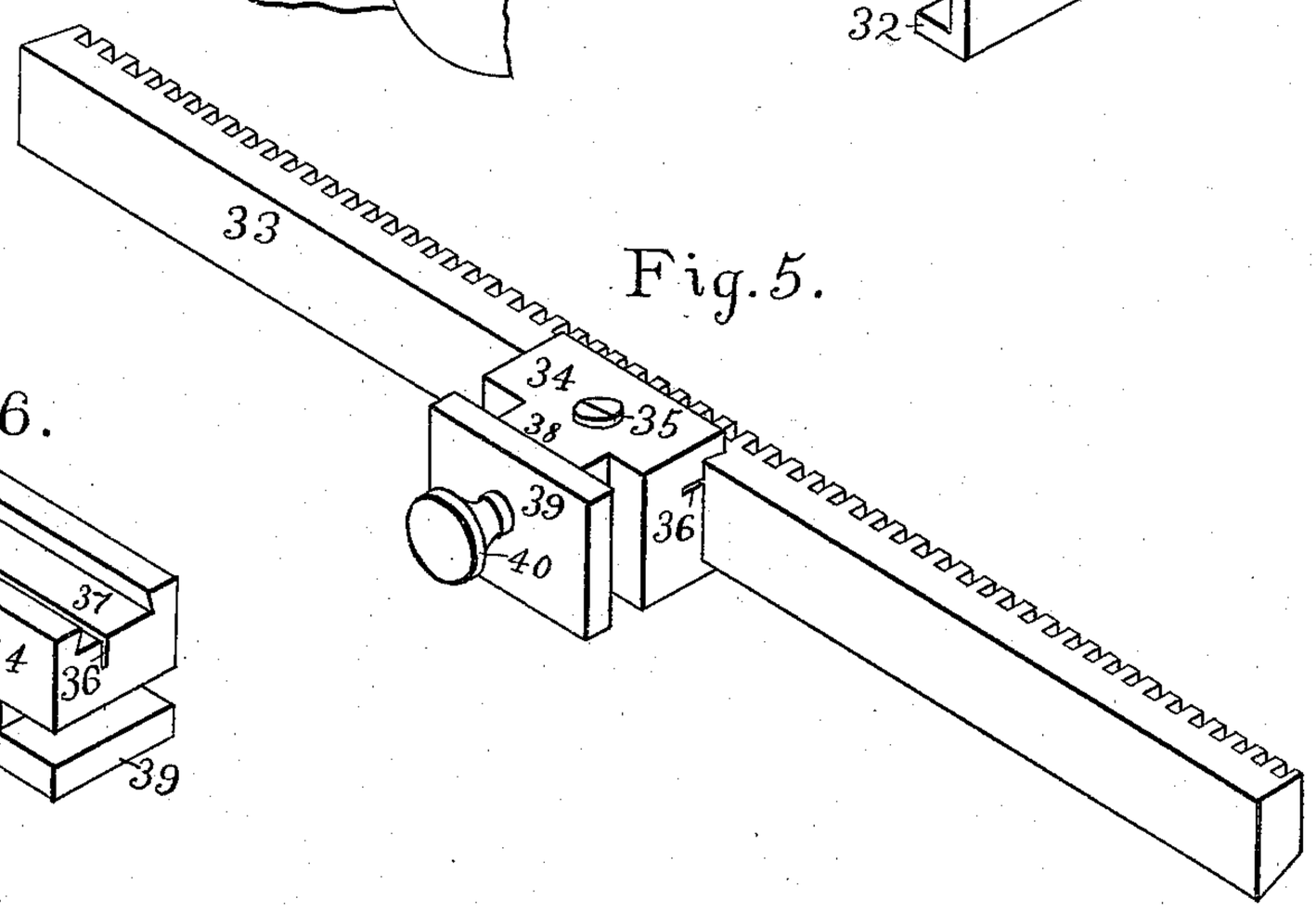

Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM BOHANNON, OF ST. LOUIS, MISSOURI.

PAPER-FEEDING ATTACHMENT FOR TYPE-WRITERS.

SPECIFICATION forming part of Letters Patent No. 547,324, dated October 1, 1895.

Application filed February 25, 1895. Serial No. 539,558. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BOHANNON, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have invented a new and useful Paper-Feeding Attachment for Type-Writers, of which the following is such a full, clear, and exact description, as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a new and useful paper-feeding attachment for type-writers, and more especially to a paper-introducing attachment. It is adapted to be used with any type-writer whose carriage has a lateral motion.

The object of my invention is to construct an attachment for type-writers by means of which the sheet of paper upon which the writing is to be done may be automatically fed by the return movement of the carriage to the proper position for starting a new line.

In the accompanying drawings, which illustrate one form of my invention, Figure 1 is an isometric projection of a type-writer of the ordinary construction with one form of my invention attached. Fig. 2 is a top plan view of the same, showing parts of the top of the type-writer and carriage-frame. Fig. 3 is a front elevation showing the carriage-frame and machine-top in section. Fig. 4 is an enlarged isometric projection of the clamp by means of which the main part of my attachment is secured to the carriage-frame. Fig. 5 is an enlarged isometric projection of the toothed rack which is attached to the machine-top. Fig. 6 is an enlarged isometric projection of the clamp, by means of which the toothed rack is secured to the machine-top.

Like marks of reference refer to the same parts in all the views of the drawings.

10 is the top of a type-writer; 11, the carriage-frame; 12, the roller for the paper; 13, the scale; 14, the pointer; 15, the ink-ribbon; 16, the opening in the machine-top through which the ink-ribbon passes, and 17 the lever by means of which the carriage is disengaged from the feed-rack. As these parts are very similar in all machines of this class, my invention may be attached to any of them with little or no change.

Referring to my attachment proper, 18 is a bevel-gear wheel, keyed or otherwise suitably secured to the shaft 19, which passes through the lug 20 into the roller 12 and is secured to it by the set-screw 21. 22 is a similar bevel-gear wheel adapted to rotate on the shaft 23 and to operate said gear-wheel 18. 24 is a toothed wheel also adapted to rotate on the shaft 23. Said wheels 22 and 24 are keyed or otherwise suitably secured to a common hub 25, which is held in position on the shaft 23 by the two collars 26. The front end of the shaft 23 is provided with a lateral extension 27 for convenience in applying pressure to the said shaft, while the rear end is flattened and curved to form a spring 28, and also to give means for securing said shaft to the clamp 29. (Best shown in Fig. 4.) Said clamp 29 is provided with a downward extension 30 and a removable part 31, which is provided with a lateral extension 32. By removing the part 31 the clamp can readily be secured around the carriage-frame 11.

33 is a toothed rack, slightly wedge-shaped in cross-section, as best shown in Fig. 5, which is adapted to be secured to the machine-top 10 by means of the clamp 34. Said clamp 34 is provided with a screw 35, and has formed in it the groove 36. By means of this groove and screw the toothed rack 33 may be firmly held or allowed to slide in the dove-tailed groove 37 adapted to receive it. Said clamp 34 is also provided with a projection 38, adapted to pass through the opening 16 in the machine-top, and a plate 39, which is secured to it by a thumb-screw 40.

To attach my invention to a type-writer, the screw which passes through the lug 20 and holds the roller 12 in place is removed and replaced by the shaft 19, carrying the wheel 18. The clamp 29, carrying the spring 28 and shaft 23, upon which are the wheels 22 and 24, is then placed around the carriage-frame 17, moved along the same until the wheel 22 is in gear with the wheel 18, and then firmly fastened. The plate 39 is removed from the clamp 34, carrying the toothed rack 33 by removing the thumb-screw 40, the projection 38 placed in the opening 16, and the plate 39 replaced. The clamp and rack are then moved

along said opening 16 until the rack is in the position shown in Fig. 2, the front edge of said rack being flush with the front edge of the wheel 24, and securely fastened in this position by means of the thumb-screw 40. The rack 33 is made broader than the wheel 24, as shown in the drawings, so that they will not be thrown out of alignment by the shifting of the carriage, which is necessary in many machines of this class, to print upper-case letters.

The operation of the attachment described is as follows: The sheet of paper to be used is placed against the paper-rack. If the carriage has not moved far enough along for the wheel 24 to be past the end of the toothed rack 33, it is released by pressure upon the finger-piece 17 and allowed to move to the left until the wheel is even with or slightly past the end of the rack. The arm 27 is then pressed down, so that the wheel 24 engages with the toothed rack 33 and the carriage then returned until it is in position to begin a new line. The wheel 24, by reason of its engagement with the rack 33, will be caused to rotate in the direction shown by the arrows, Figs. 1 and 3. This wheel being connected by means of a common hub to the wheel 22, will cause said wheel to rotate in the same direction, which will impart a rotary motion, in the direction shown by the arrows, Fig. 1, to the wheel 18 and roller 12, and will then feed the paper into the machine the proper distance for beginning a new sheet.

In practice it will be found that on finishing a sheet of paper the pointer 14, Fig. 1, will usually be past the mark 40 upon the scale 13 and consequently the wheel 24 will be past the end of the rack 33, as it will usually be set. So it will be unnecessary to release the carriage and move it farther to the left, and consequently no motion will be necessary which does not have to be made without the use of the attachment, except pressing down the arm 27, which is done at the same time the finger-piece 17 is actuated. The rack 33 may be moved in the clamp 34, so as to accommodate any depth of printed letter-head when one style of head is used exclusively. When different depths of letter-heads are used, the rack may be extended to its greatest distance and the distance to which the paper is fed into the machine regulated by not pressing down the arm 27 until the pointer 14 has reached the desired point on the scale 13.

It is obvious that different methods of attaching the invention to the machine may be used; also, that other forms of gearing may be used, such as substituting friction or other gearing for the toothed wheel 24 and racks 33. Therefore I do not wish to limit my invention to the exact construction shown in the drawings and described.

Having fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A paper-feeding mechanism for typewriters within the control of the operator and actuated at will by the lateral motion of the carriage at various points along its travel.

2. A paper-feeding mechanism for typewriters consisting of suitable gearing geared to the paper-feeding roller, and actuating means operating said gearing and roller by the lateral motion of the carriage at various points along its travel, said means being normally out of gear and within the control of the operator.

3. A paper-feeding mechanism for typewriters consisting of a bevel gearing connected with the paper-feeding roller, and actuating means within the control of the operator, at various points along the travel of the carriage whereby said gearing and roller may be operated by the motion of the carriage.

4. A paper-feeding mechanism for typewriters consisting of suitable gearing connected with the paper-feeding roller, a wheel connected with said gearing, a rack with which said wheel is adapted to engage, and means within the control of the operator, whereby said wheel may be caused to engage with said rack.

5. A paper-feeding mechanism for typewriters consisting of suitable gearing connected with the paper-feeding roller, a toothed wheel connected with said gearing, suitable means for securing said wheel and gearing to the carriage of the machine, and a toothed rack with which said toothed wheel is adapted to engage.

6. A paper-feeding mechanism for typewriters comprising suitable gearing connected to the paper-feeding roller actuated by the lateral motion of the carriage, and connections for bringing said mechanism into requisition at the will of the operator, said connections terminating adjacent to the finger piece which controls the carriage-feeding pawl.

7. A paper-feeding mechanism for typewriters consisting of suitable gearing connected with a paper-feeding roller, a wheel connected with said gearing, a rack with which said wheel is adapted to engage, and suitable means for securing said wheel and gearing to the carriage of the machine, said means consisting of a curved spring arm and a shaft carried by said spring arm.

8. A paper-feeding mechanism for typewriters consisting of a suitable gearing connected to the paper-feeding roller, a wheel connected with said gearing, a rack with which said wheel is adapted to engage, and suitable means for securing said wheel and gearing to the carriage of the machine, said means consisting of a curved spring arm and a shaft carried by said spring arm, said shaft having a lateral extension terminating adjacent to the finger piece controlling the carriage-feeding pawl.

9. A paper-feeding mechanism for typewriters consisting of suitable gearing con-

nected with the paper-feeding roller, a toothed wheel connected with said gearing, a toothed rack with which said toothed wheel is adapted to engage, at the will of the operator and suitable means for securing said rack to the machine top.

10. A paper-feeding mechanism for typewriters consisting of suitable gearing connected with the paper-feeding roller, a wheel connected with said gearing, and an adjustable rack with which said wheel is adapted to engage.

In testimony whereof I have hereunto set my hand and affixed my seal, this 12th day of February, 1895, in the presence of the two subscribing witnesses.

WILLIAM BOHANNON. [L. S.]

Witnesses:
A. C. FOWLER,
E. E. VERNELLI.