No. 733,087. PATENTED JULY 7, 1903.

R. D. STACKPOLE.

TYPE WRITER.

APPLICATION FILED FEB. 25, 1903.

NO MODEL.

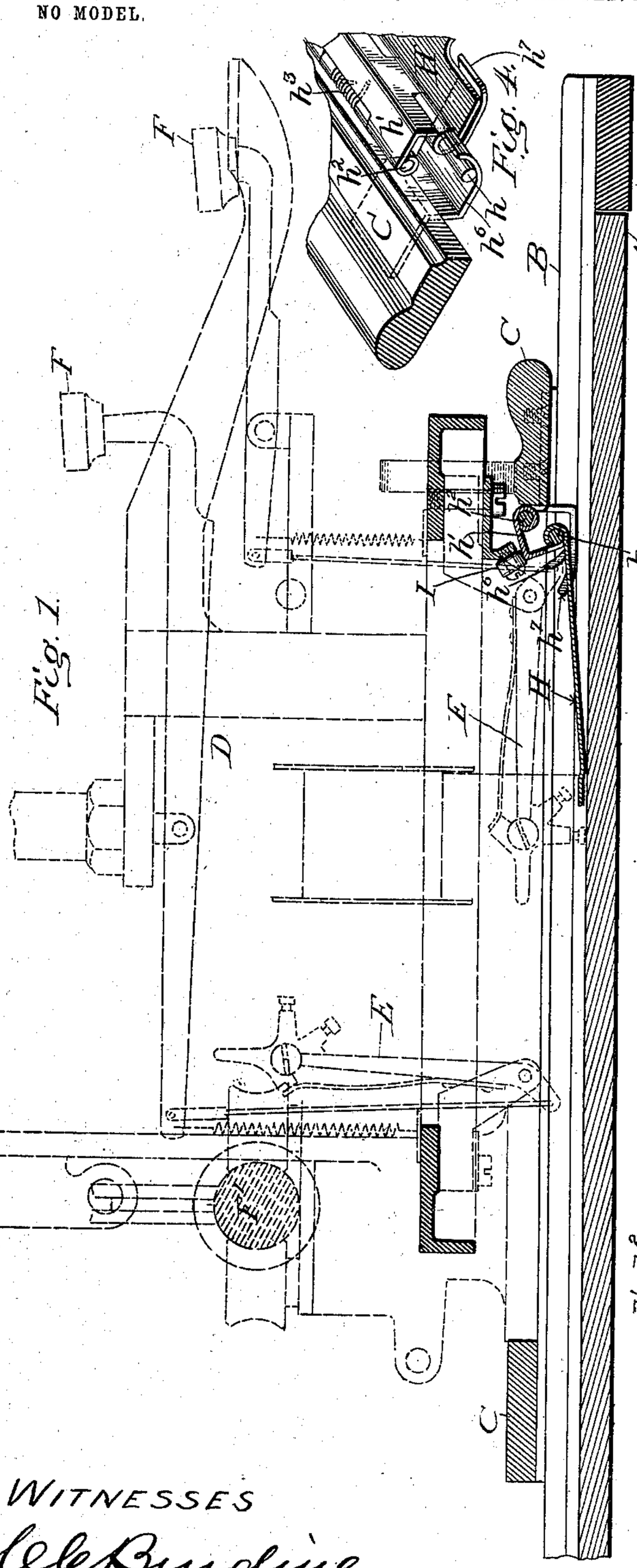

Fig. 1.

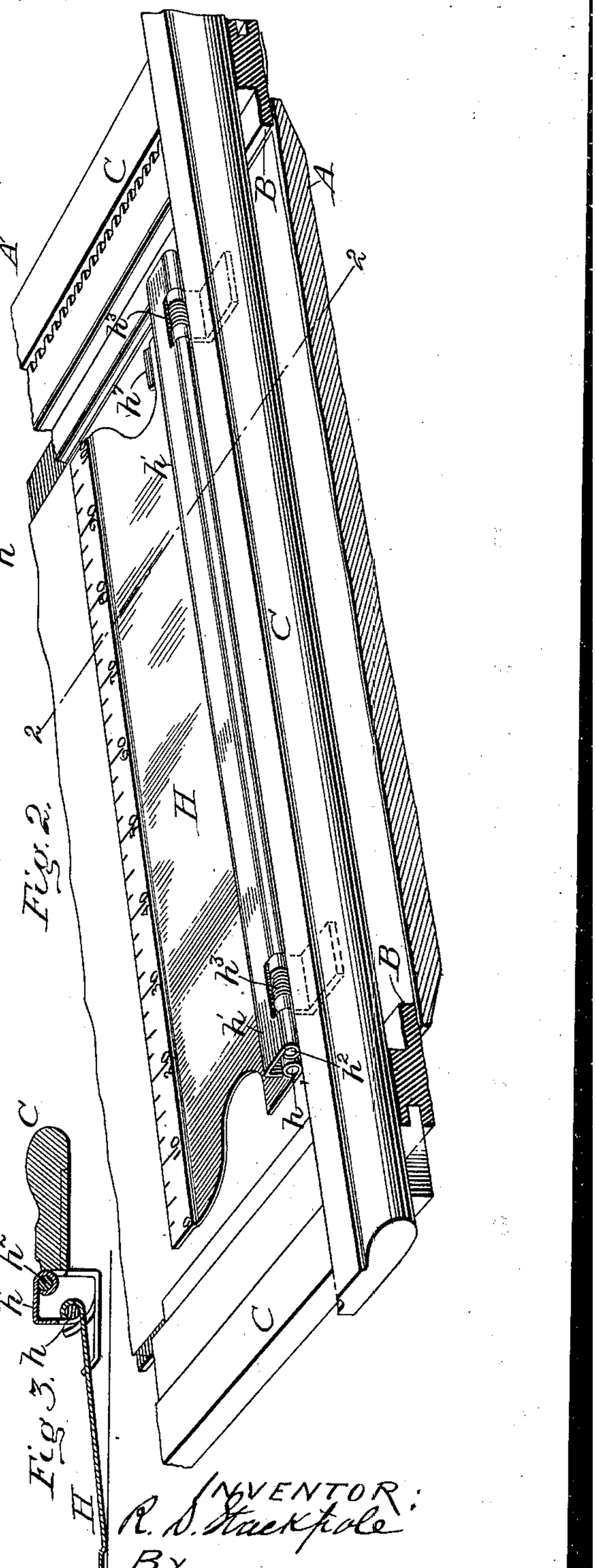

Fig. 2.

Fig. 3.

WITNESSES

C. E. Burdine.

C. F. Johnson.

INVENTOR:

R. D. Stackpole

BY Phe. T. Dodge

ATTY.

No. 733,087. Patented July 7, 1903.

UNITED STATES PATENT OFFICE.

RALPH DOW STACKPOLE, OF HARRISBURG, PENNSYLVANIA, ASSIGNOR TO THE ELLIOTT & HATCH BOOK TYPEWRITER COMPANY, A CORPORATION OF NEW YORK.

TYPE-WRITER.

SPECIFICATION forming part of Letters Patent No. 733,087, dated July 7, 1903.

Application filed February 25, 1903. Serial No. 144,978. (No model.)

To all whom it may concern:

Be it known that I, RALPH DOW STACKPOLE, of Harrisburg, county of Dauphin, and State of Pennsylvania, have invented a new and useful Improvement in Type-Writers, of which the following is a specification.

This invention has reference to machines in which a flat bed or platen is used to sustain the paper beneath a downwardly-acting writing mechanism mounted to shift laterally and longitudinally over the platen for the purpose of letter and line spacing. It has reference more particularly to machines of the familiar Elliott & Hatch type, represented as to their general organization in Letters Patent of the United States No. 620,125. In these machines the frame, mounted to slide lengthwise of the platen for the purpose of line-spacing, gives support to the writing mechanism, which is connected thereto by a horizontal hinge-rod at the rear, so that the writing mechanism may be turned upward to expose the paper beneath. In the use of the machines it is desirable to adjust them quickly that they may write on the variously and irregularly spaced lines of a blank or form.

The aim of the present invention is to facilitate this adjustment of the machine to print the line in the exact position required.

To this end it consists in a movable scale or indicator connected to the sliding frame beneath the writing mechanism and movable forward and backward, so that when the machine is in action it is retracted beyond the path of the type, and when the writing mechanism is lifted to expose the print the scale will move forward to the printing-line. When the scale is in this position, it is only necessary to slide the machine forward or backward until the edge of the scale is at the point at which the printing is to be done.

I have shown my improvement applied to an ordinary Elliott & Hatch machine, which may be in all other respects of ordinary construction.

Referring to the drawings, Figure 1 is a vertical section from front to rear through the platen and adjacent parts of an Elliott & Hatch machine with my improvement applied thereto. Fig. 2 is a perspective view showing the position of the scale or indicator and the manner in which the paper is exposed when the writing mechanism is turned upward. Fig. 3 is a cross-section on the correspondingly-numbered line of Fig. 2. Fig. 4 is a perspective view looking forward against one corner of the scale, showing particularly the hinge connection and stop to limit its motion.

Referring to the drawings, A represents a flat stationary platen; B, an open rectangular frame, the side bars of which overlap the longitudinal edges of the platen for the purpose of confining the paper thereon.

C is a second rectangular frame giving support to the writing mechanism proper and mounted to slide forward and backward on the frame B lengthwise over the platen for the purpose of line-spacing.

D represents the writing mechanism, including the downwardly-striking type-bars E, the finger-keys F for actuating them, and the usual feed mechanism, ink-ribbon, and other parts.

The writing mechanism as a whole is connected to the sliding frame C by the horizontal hinge-rod F′ at the rear side, so that the entire writing mechanism may be turned upward and rearward around this rod to expose the surface of the paper.

The foregoing parts are all constructed and arranged to operate in the usual manner.

H is a scale or indicator forming the subject of my invention. In the preferred form (shown in the drawings) it consists of a flat plate or sheet of metal adapted to lie across the surface of the platen within the frame C, its rear edge being graduated according to the letter-spaces in the line or otherwise graduated as conditions may require.

The forward edge of the scale H is connected by the horizontal hinge-pins h to a second plate h', which is in turn connected at its forward edge by a hinge-pin h^2 to the front bar of the frame C, the arrangement being such that the movement of the intermediate plate h' around the two pivots will permit the rear edge of the scale to slide forward and backward. Springs h^3 are applied around the hinge-pin h^2 with their ends acting, respectively, against the frame C and plate h'. These

pins serve by rocking the plate h' upward to carry the scale H bodily rearward until its rear edge stands exactly on the line on which the printing will occur. Whenever the writing mechanism is raised to expose the paper, the scale automatically assumes the position stated.

On the front of the writing-machine is mounted a roller I in position to bear upon and depress the hinge-plate h'. Whenever the writing mechanism is lowered to its operative position, (shown in Fig. 1,) this roller bears upon and depresses the plate h', the effect of which is to draw the scale H forward, as shown in Fig. 1, so that its rear edge is out of the way of the type as they print their characters on the paper beneath.

The essence of the invention lies in mounting the scale to move forward and backward to and from the printing-line and in combining therewith devices by which its movements are automatically effected.

It will be manifest to the skilled mechanic that the plate may be modified in form at will and that the connections between it and the frame C, as well as the devices for effecting the movement, may also be widely modified without essentially changing the mode of action or passing beyond the limits of my invention.

For the purpose of limiting the advance of the scale and insuring its stoppage in the exact position desired I recommend the use of a stop device, such as shown in Fig. 4, consisting of a lip or plate h^6, fixed to the sliding frame C and adapted to engage the end of the hinge-pin h.

The paper-confining frame B is mounted as usual to swing upward from the platen to permit the insertion and removal of the paper. For the purpose of maintaining the scale when the frame is thus lifted I provide a stop-plate h^6 with a forwardly-extending arm h^7, bearing under the end of the scale-plate to limit its downward movement, as shown in Fig. 4.

Having thus described my invention, what I claim is—

1. In a flat type-writer and in combination with the flat paper-supporting platen, the writing mechanism and its supporting-frame; movable forward and backward over said platen for line-spacing, the transverse scale or indicator jointed to said frame and movable forward and backward in relation to the frame to and from the printing-line.

2. In a flat-bed type-writer, the combination of the platen, a frame C, movable over the platen for line-spacing, a transverse scale or indicator H, and a jointed connection between the scale and frame, whereby the scale is permitted to move forward and backward in relation to the frame and the printing-line.

3. In a type-writer, the flat bed or platen, the overlying frame C, movable forward and backward for line-spacing, the writing mechanism hinged to said frame to turn upward and expose the print, the transverse scale or indicator attached to the frame to move forward and backward in relation thereto, said scale being acted upon and adjusted by the writing mechanism.

4. In a flat-bed type-writer, the platen, the frame C, movable forward and backward for line-spacing, the transverse scale or indicator jointed to said frame to move forward and backward, the spring tending to move the scale rearward, the writing mechanism hinged to the frame to turn upward and downward, and a member carried by the writing mechanism and acting to adjust the scale.

In testimony whereof I hereunto set my hand, this 21st day of February, 1903, in the presence of two attesting witnesses.

RALPH DOW STACKPOLE.

Witnesses:

WM. C. ARMOR,

MARY E. HAUER.