

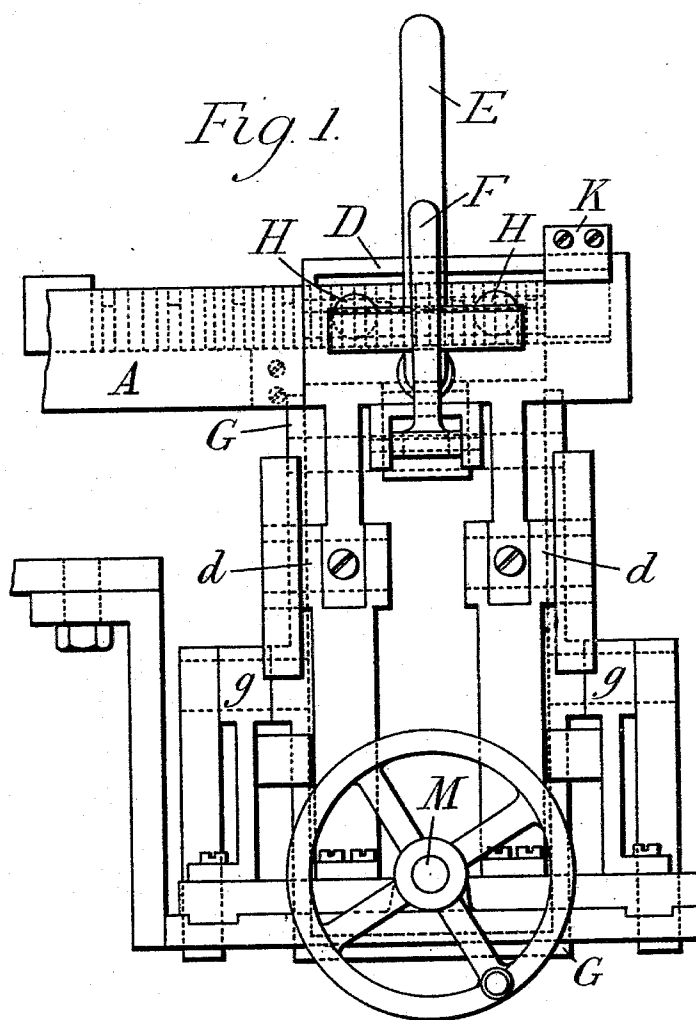
(No Model.)

3 Sheets—Sheet 1.

C. F. HILDER.
TYPE JUSTIFYING MACHINE.

No. 559,707.

Patented May 5, 1896



Witnesses,
Thos. A. Smith
Robert Conitt.

Inventor.
Charles F. Hilder.
By James L. Norris,
Att'y.

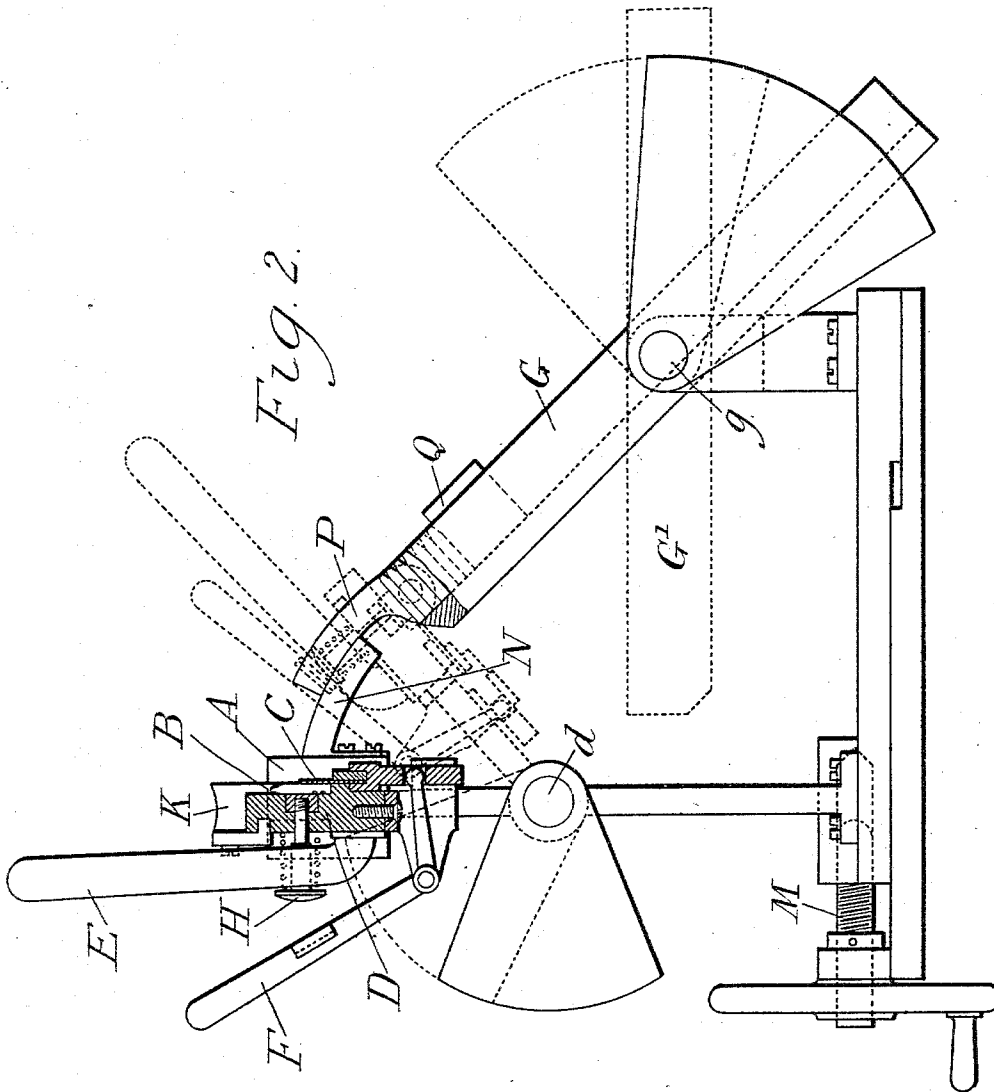
(No Model.)

3 Sheets—Sheet 2.

C. F. HILDER.
TYPE JUSTIFYING MACHINE.

No. 559,707.

Patented May 5, 1896.



Witnesses.

Thos. A. Erwin

Robert G. Smith

Inventor.

Charles F. Hilder.

By James L. Norris

Att'y.

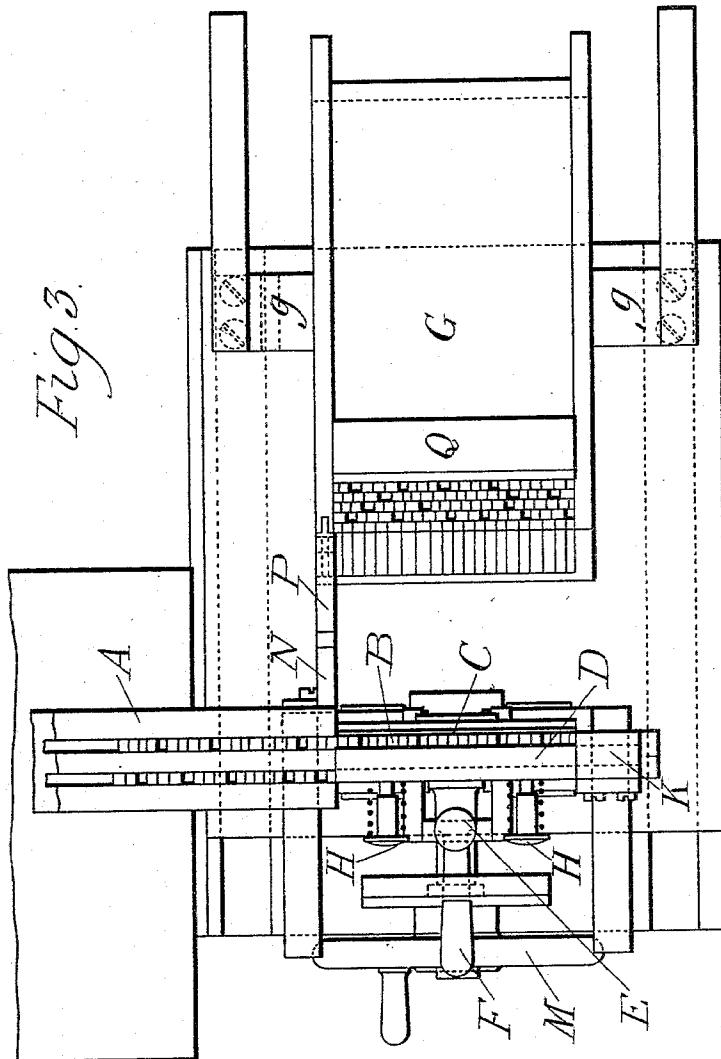
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3 Sheets—Sheet 3.

C. F. HILDER.
TYPE JUSTIFYING MACHINE.

No. 559,707.

Patented May 5, 1896.



Witnesses.
Thos. A. Gunn
Robert Everett.

Inventor.
Charles F. Hilder.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

CHARLES F. HILDER, OF LONDON, ENGLAND.

TYPE-JUSTIFYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 559,707, dated May 5, 1896.

Application filed August 16, 1895. Serial No. 559,376. (No model.)

To all whom it may concern:

Be it known that I, CHARLES FREDERICK HILDER, mechanician, a citizen of England, residing at Brompton House, Hampton, London, county of Middlesex, England, have invented certain new and useful Improvements in Apparatus for Facilitating the Justifying of Lines of Type Composed by Machinery, of which the following is a specification.

My invention relates to apparatus whereby the justifying of lines of type composed by machinery is facilitated, as I shall describe.

Referring to the accompanying drawings, Figure 1 is a front view; Fig. 2, a side view, partly in section; and Fig. 3 is a plan.

The types as they are composed are pushed into a trough which is usually much longer than a line of form. This trough, when it is full, is removed to the justifying apparatus, which may be at some distance from the composing-machine. When, however, the justifying apparatus can be conveniently arranged in connection with the composing-machine, I prefer to have several of the long troughs above mentioned placed side by side or formed as parallel grooves in one piece of metal, which, when one of the grooves is filled, can be moved laterally, so as to bring another in line with the discharging-mouth of the composing-machine to be filled in its turn while the types in the previously-filled groove are being divided into lines and justified. The filled trough or groove A is brought up to a position in line with a short trough B, one side of which is a rule C, that can be slid up and down. This trough is formed in a block D, which is pivoted on a horizontal axis *d* below and is provided with a handle E, by which it can be moved on its pivot *d* through an arc of a circle. When the short trough B is filled with types from the long trough A, it is moved downward, as indicated by the dotted lines in Fig. 2, so as to bring the line of types which it contains to face the end of an inclined galley G. Just before the rule C, which forms the front of the short trough B, meets the galley G it is caused to slide down by moving a handle F against E, and thereupon a spring-pin H, situated in the block D, presses the line of types into the galley G. This line, being always shorter than the justified line of types when presented at the front of the gal-

ley in an inclined position, is justified by inserting suitable spaces between the words. The types are supported in the galley by a sliding block Q, provided with springs to produce friction. The galley is pivoted on a horizontal axis *g* and counterpoised, so that after it is filled with the successive lines of type pushed into it and justified in it it is turned down on its axis from its inclined position to a horizontal position, (indicated by the dotted lines G' in Fig. 2,) and then its contents are pushed into an ordinary galley, whence they are slid into the form, the pivoted galley G being then moved back to its former inclined position to receive other lines of type. The short pivoted trough B, into which the types are transferred from the long trough, is provided with a sliding block K at its rear end, so that the length of the line of types received in it can be varied, but can never be so great as the length of a justified line.

In order to prevent the types from leaving the open end of the short trough B while it is moved toward the galley, a segment-plate N of breadth about half the height of a type is fixed to the side of the trough A, and another like plate P is pivoted to the side of the galley G, the latter plate lying over the former and the two together forming a cover to the end of the trough B.

In the case of two troughs or grooves A the frames carrying the axes *d* and *g* can be moved by a screw M so as to bring the short trough B in line with the second groove A when the first has been emptied of type.

Having thus described the nature of my said invention and the best means I know for carrying the same into practical effect, I claim—

1. An apparatus for facilitating the justification of lines of type, consisting of a horizontal axis, a swinging trough mounted on said axis, an inclined galley, a handle for bodily swinging the trough in the arc of a circle to and from the inclined galley, and means for moving the composed type from the trough into the galley when the trough is swung to the upper end of said galley, substantially as described.

2. An apparatus for facilitating the justification of lines of type, consisting of a piv-

oted, swinging trough, an inclined galley,
means for bodily swinging the trough in the
arc of a circle to and from the upper end of
the galley, a sliding rule forming the front of
5 the trough, means for sliding the rule down-
ward when the trough is swung to the upper
end of the galley, and means for moving the
composed type from the trough into the gal-
ley when the trough is swung to the upper
10 end of said galley, substantially as described.

3. An apparatus for facilitating the justi-
fication of lines of type, consisting of a piv-
oted, swinging trough, an inclined galley, a
sliding rule forming the front of the trough,

means for sliding the rule downward when 15
the trough is swung to the upper end of the
galley, and a spring-pin for pressing the type
from the trough into the galley when the rule
is slid downward, substantially as described.

In testimony whereof I have signed my 20
name to this specification, in the presence of
two subscribing witnesses, this 7th day of
August, A. D. 1895.

CHARLES F. HILDER.

Witnesses:

GEO. J. B. FRANKLIN,

WALTER J. S. RERTEN.