

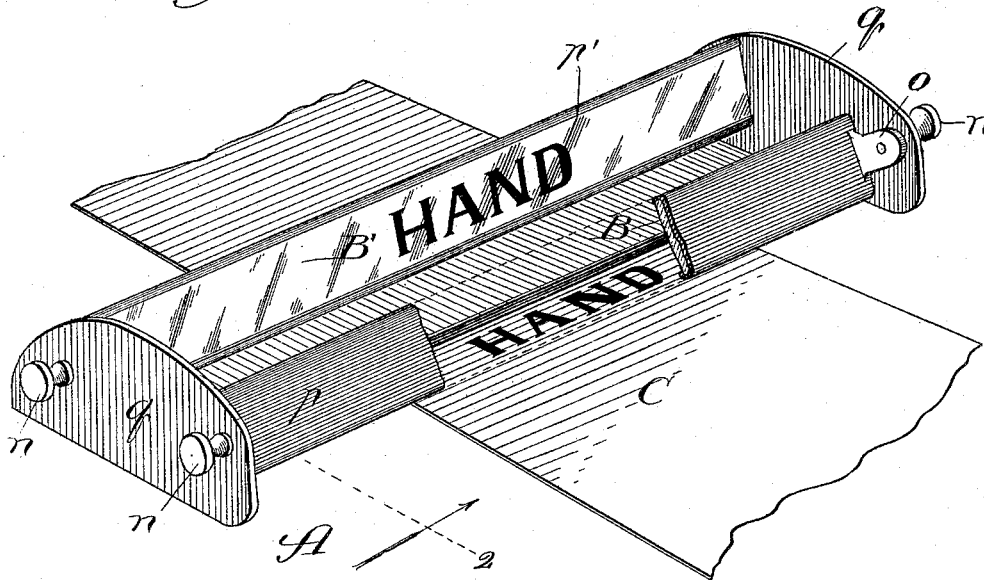
(No Model.)

J. J. HILL.  
DEVICE FOR FACILITATING COPYING.

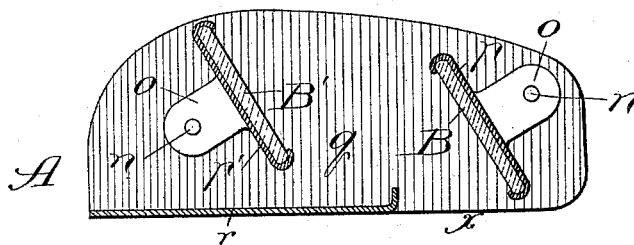
No. 489,953.

Patented Jan. 17, 1893.

*Fig. 1.*



*Fig. 2.*



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN J. HILL, OF CHICAGO, ILLINOIS.

## DEVICE FOR FACILITATING COPYING.

SPECIFICATION forming part of Letters Patent No. 489,953, dated January 17, 1893.

Application filed June 21, 1892. Serial No. 437,516. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. HILL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented a new and useful Improvement in Devices for Facilitating Copying, of which the following is a specification.

My invention relates to an improved device for rendering the more convenient, particularly, the work of the copyist in copying from  
10 manuscript, printed or other such matter.

To facilitate the operation of copying, it is usual to support the copy in an upright position of proper inclination to bring the matter  
15 into convenient visual range and thus avoid the inconvenience that would ensue to the reader of the copy were the copy to rest flat on the table or other surface upon which it is supported. It is common for typewriters to  
20 use frames, affording copy-rests, for the purpose referred to; and it is also common to employ line-indicating means with or without such rests, to supplant the requirement for the exercise of the great care and attention that would otherwise be required to be  
25 exercised to avoid skipping lines of the copy in the copying operation.

My object is to provide a simple and inexpensive device which shall supplant the copy-rest by being adapted, by reflection, to bring  
30 the copy, in any convenient position, (thus including the position of resting flatwise on a horizontal surface) one or more lines at a time, into any convenient visual angle with relation to the reader or copyist. Besides, my improved device may afford, at the same time, a line-indicator of especial advantage.

My improvement is illustrated in the accompanying drawings, in which

40 Figure 1 is a broken perspective view of the device, showing it, by way of diagrammatic representation, operatively applied; and Fig. 2 is a somewhat enlarged sectional view taken at the line 2 on Fig. 1 and viewed in  
45 the direction of the arrow.

Generally stated, my improved device comprises a suitable frame supporting two reflectors (which may be ordinary mirrors, or magnifying or diminishing ones) arranged in  
50 such position with relation to each other in the frame and with one in such relation to the open base or side of the frame, that the

reading matter of the copy will be reflected, in inverted condition, on the one mirror, which will again reflect it in right position to the  
55 desired angle of convenient vision of the reader of the copy.

The best construction, as to details, so far as I have been able to ascertain, for my improved device, involves a frame A comprising  
60 a flat oblong base *r* having end-pieces, *q, q*, at its opposite ends, affording bearings for the ends of strips *p* and *p'* carrying reflectors or mirrors B and B'. The strips *p* and *p'*, which I prefer to form of sheet-metal with  
65 their edges bent over, as represented, to overlap and confine the reflectors along their longitudinal edges, should, for convenience, be pivotally supported to render them adjustable with relation to each other, and to render  
70 the reflector B adjustable with relation to the open portion *x* of the base of the device, through which the copy is reflected. To render the strips thus adjustable, I provide  
75 each at its opposite ends with ears *o*, through which set-screws *n* extend from the end-bearings *q*.

To apply my improvement the device is used as follows: The copy, represented at C as a sheet with the single word "hand" upon it,  
80 may rest, and is preferably intended to rest, flatwise upon a horizontal surface, such as the horizontal top of a table or desk. The device rests at its base upon the copy C, and the reflector B is turned to such an angle  
85 with relation to a line, represented by the word "hand," (or more than one line) of the copy as to reflect it, through the open base *x*, upon the reflector B', the adjusted position of which is such as to again reflect the re-  
90 flected matter to an angle convenient to the vision of the user, as represented in Fig. 1. By moving the device from line to line, or from covering a series of lines to covering another series thereof, it serves as a line-in-  
95 dicator as well as a reflector.

What I claim as new and desire to secure by Letters Patent is—

1. In a device for facilitating the reading of copy, the combination with a suitable frame  
100 having an open base and adapted to rest at its base on the copy, of a pair of reflectors occupying relative positions the one to reflect the copy upon the other and the latter to

again reflect the reflection into the angle of vision of the user, substantially as described.

2. In a device for facilitating the reading of copy, the combination with a suitable frame  
5 having an open base and adapted to rest at its base on the copy, of a pair of reflectors adjustable into positions to cause the one to reflect the copy, through the open base, upon the other and the latter to again reflect the  
10 reflection into the desired angle of vision of the user, substantially as described.

3. A device for facilitating the reading of copy, comprising, in combination, a frame A formed with a base  $r$  and end-pieces  $q$ , and

reflectors B and B' pivotally supported on the 15 end-pieces, substantially as described.

4. A device for facilitating the reading of copy, comprising, in combination, a frame A formed of a base  $r$  and end-pieces  $q$ , strips  $p$  and  $p'$  having ears  $o$  at their opposite ends, 20 set-screws  $n$  supporting the strips at their said ears on the end-pieces, and reflectors B and B' fastened on the strips, substantially as described.

JOHN J. HILL.

In presence of—

M. J. FROST,

J. W. DYRENFORTH.