Jan. 7, 1930. B. A. FISKE 1,742,640

READING MACHINE

Filed Nov. 10, 1927 2 Sheets-Sheet 1

Fig. 3

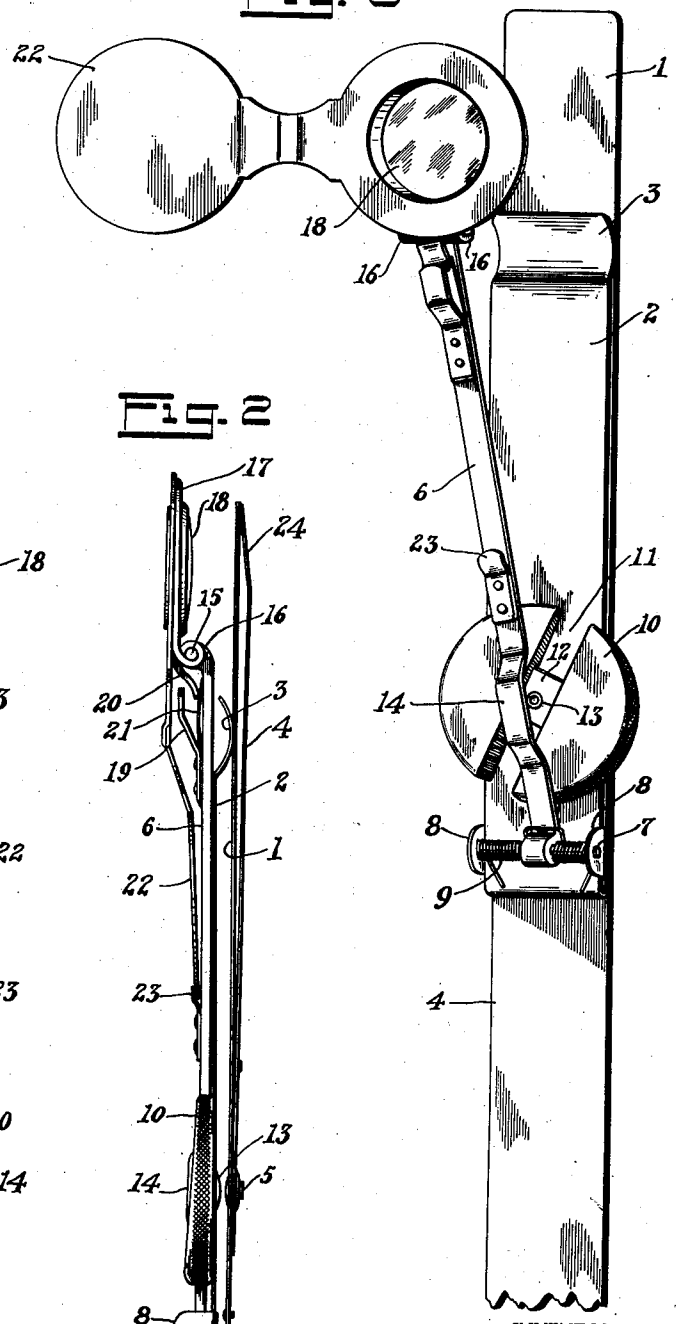


Fig. 1

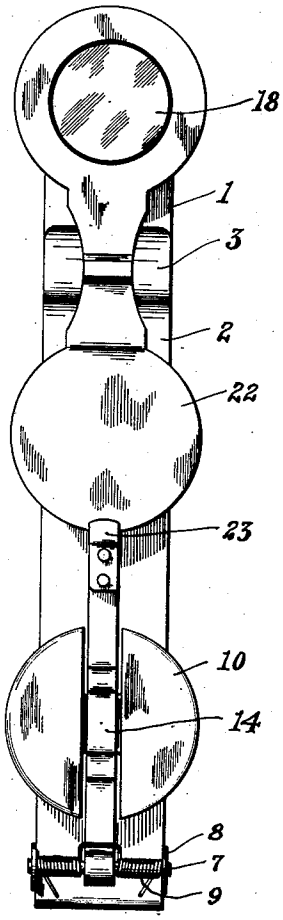


Fig. 2

INVENTOR

Bradley A. Fiske

BY

Mann & Mann

ATTORNEY

Jan. 7, 1930. B. A. FISKE 1,742,640

READING MACHINE

Filed Nov. 10, 1927 2 Sheets-Sheet 2

Fig. 4

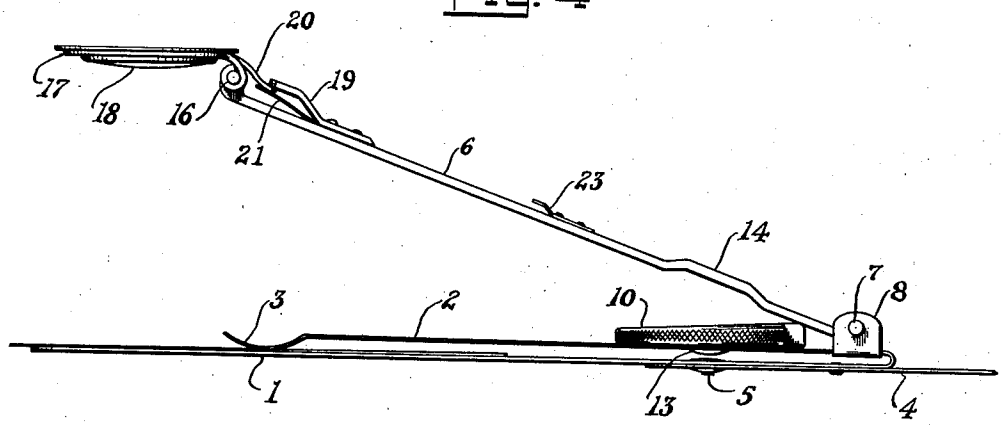
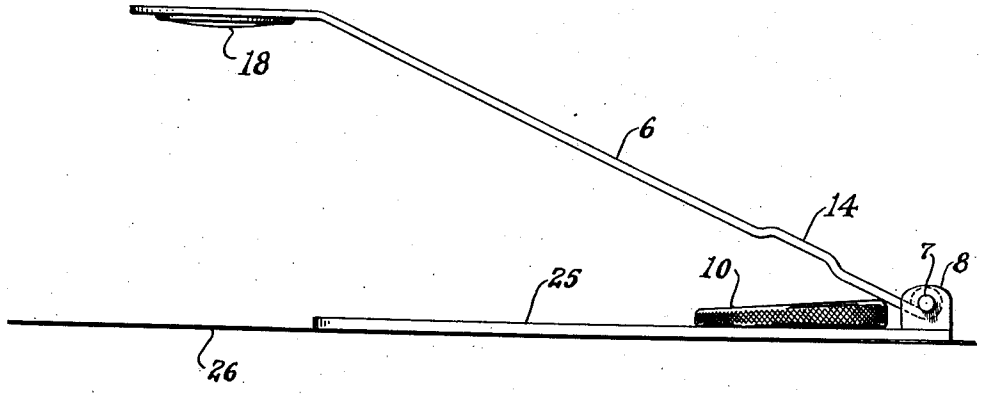


Fig. 5



INVENTOR
Bradley A. Fiske
BY
Francis L. Byers
ATTORNEY

Patented Jan. 7, 1930 1,742,640

UNITED STATES PATENT OFFICE

BRADLEY A. FISKE, OF NEW YORK, N. Y.

READING MACHINE

Application filed November 10, 1927. Serial No. 232,317.

My present invention relates to various new and useful improvements in reading machines, and the principal object of the invention is to provide a device for the purpose having the capacity of being folded in very compact form when not in use. At the same time my improved reading machine is efficient and convenient in operation.

Another object is to provide simple, compact and effective mechanism by which the lens may be focussed with respect to the reading matter. In order that the invention may be better understood, attention is directed to the accompanying drawings forming part of this specification and in which—

Figure 1 is a plan view of my improved reading machine in folded position;

Figure 2 is a side elevation of the same;

Figure 3 is a perspective view illustrating the machine in use;

Figure 4 is a side elevation showing the machine in use; and

Figure 5 is a side elevation illustrating a modified form of the invention.

In all of the above views corresponding parts are represented by the same numerals.

The body or frame of the machine comprises two sheet metal strips 1 and 2 made preferably of brass or steel, so as to be elastic. As is shown they may be integral. The strip 1 is somewhat longer than the strip 2, as shown, so as to afford a support for the reading matter which is carried on a card or sheet held frictionally between the two strips.

To facilitate the clamping or gripping of the reading matter the strip 2 at its forward end is so made, as at 3, as to press against the reading matter and hold the same frictionally. This form also facilitates the ready introduction of the sheet or card between two strips being held frictionally. The card or sheet may be moved in any desired direction being held flat against the strip 1 always in the focus of the lens.

A handle 4 is secured to the bottom strip 1 by a suitable pivot 5, so that said handle may be folded up in the position shown in Figure 2 or be swung down so as to be parallel with the strip 1, as shown in Figure 3. In the latter position, it forms a convenient handle by which the machine as a whole may be held.

An arm 6, made of somewhat heavier metal than the strips 1 and 2 but very much narrower than the same, is secured to a rod 7 mounted in ears 8—8 secured in any suitable way to the strip 2. A spiral spring 9 encircles the rod 7, as shown particularly in Figure 3, and tends to press the lens-supporting arm 6 toward the strip 2.

When the machine is in use the arm 6 rests upon a disk 10 mounted upon the strip 2 so as to be capable of rotation. This adjusting disk 10 is made of gradually increasing thickness, as clearly shown in Figures 2 and 3, so that it acts as a cam to adjust the lens-supporting arm 6 toward or away from the strip 2 in performing a focussing operation.

The adjusting disk 10 is cut away diametrically at 11 and the two halves are connected by a cross piece 12, by which the disk is supported on pivot 13. As will be seen, the two halves of the adjusting disk are complementary, so that focussing of the lens will be effected by either half. When the adjusting disk is moved so as to bring the supporting arm 6 into line with the slot 11, the said arm will be snapped into its folded position by the tension of the spring 9. In order that the arm 6 may clear the cross bar 12 it is provided with an offset portion 14. Therefore, when said arm is in folded position it rests flat against the strip 2, as shown in Figure 2.

The outer end of the arm 6 is provided with a pivot pin 15 with which the two eyes 16—16 engage, said eyes being part of the lens frame 17 carrying the lens 18 of any desired power. By means of this construction the lens is capable of a pivotal movement with respect to the arm 6, its movement being limited by a stop 19, with which a tail 20 on the lens frame 17 engages. A light leaf-spring 21 engages beneath the tail 20 so as to tend to press the same into engagement with the stop 19. When the machine is in folded position, as shown in Figure 2, the lens frame will extend approximately parallel to the arm 6, the tail 20 being moved out of engagement with the stop 19, but when the device is in use the lens frame will be at a

slight angle with respect to the arm 6, as shown in Figure 4, the tail 20 being in engagement with the stop 19. In its latter position the lens will be parallel or essentially so with the paper or card carrying the printed matter.

A shutter 22 is pivotally mounted upon the lens frame in any suitable way and is adapted to be swung up to the position shown in Figure 3 when the device is in use. In this position the reading will be effected by the right eye, the shutter 22 cutting off direct vision of the left eye. If the shutter is swung to a position 180 degrees from that shown in Figure 3 reading will be done by the left eye and in this case the shutter will cut off direct vision of the right eye. When the machine is folded the shutter 22 is moved 90 degrees from the position shown in Figure 3 and is engaged beneath a small lug 23 riveted to the bar 6, as shown most clearly in Figure 3.

As shown particularly in Figure 2, the extreme end of the handle 4 is bent at an angle, as shown at 24, so that when the parts are folded the handle will be put under slight tension. This makes it easier to engage the handle and swing it around to its open position.

The form of reading machine which has just been described is one in which the reading matter is intended to be carried on a sheet or card held frictional between the strips 1 and 2. With the modified form of device shown in Figure 5, a base 25 is used adapted to rest or be held flat against a sheet or strip of reading matter 26. This may be a separate sheet or card or may be the page of a book. Otherwise, the construction is very much the same as I have already described, the arm 6 carrying the lens 18 and being pivoted to the base 25, as is clearly shown. The adjusting disk 10 is rotatably mounted with respect to the support 25 and effects the focussing of the lens 18. With this modification the lens may be carried directly on the supporting arm 6 since, when the instrument is folded, the lens will overhang the forward edge of the support 25.

Having now described my invention what I claim as new therein and desire to secure by Letters Patent is as follows:

1. In a reading machine, the combination with a support, a lens arm carried by said support and movable pivotally with respect to the same, and a lens supported by said arm, of a cam rotatably mounted on said support and adapted to be engaged by said arm, so as to adjust the lens towards or away from said support, said cam being adapted to be moved out of line with said arm so as to permit the device to be folded, substantially as set forth.

2. In a reading machine, the combination with a support, a lens-carrying arm pivotally mounted with respect to said support, and a lens carried by said arm, of an adjusting disk rotatably mounted on the support and comprising two complementary cam portions, either one of which may be engaged by said arm in effecting focussing, substantially as set forth.

3. In a reading machine, the combination with a support, a lens-carrying arm pivotally mounted with respect to said support, and a lens carried by said arm, of an adjusting disk rotatably mounted on the support and comprising two complementary cam portions, either one of which may be engaged by said arm in effecting focussing, said complementary cams being separated to provide a slot for the reception of said arm when the machine is folded, substantially as set forth.

4. In a reading machine, the combination of two strips adapted to receive between them a sheet or card carrying reading matter, an arm pivoted to one of said strips, a lens carried by said arm, and a rotary cam mounted upon and parallel with one of said strips and with which the arm may be engaged to provide for focussing of the lens, substantially as set forth.

5. In a reading machine, the combination of two strips adapted to receive between them a sheet or card carrying reading matter, an arm pivoted to one of said strips, a lens carried by said arm, and a rotary cam mounted upon and parallel with one of said strips and with which the arm may be engaged to provide for focussing of the lens, said cam being movable out of line with the arm to permit folding, substantially as set forth.

6. In a reading machine, the combination of two strips between which the printed matter is to be received, an arm pivotally mounted on one of said strips, a cam disk mounted upon and parallel with one of said strips and comprising two complementary halves with either one of which the arm may be engaged to effect focussing, the space between said half providing a slot for the reception of said arm when the machine is folded, substantially as set forth.

7. In a reading machine, the combination with a support, a lens arm carried by said support and movable pivotally with respect to the same, and a lens supported by said arm, of a cam rotatably mounted on and parallel with said support adapted to be engaged by said arm so as to adjust the lens towards or away from said support, substantially as set forth.

BRADLEY A. FISKE.