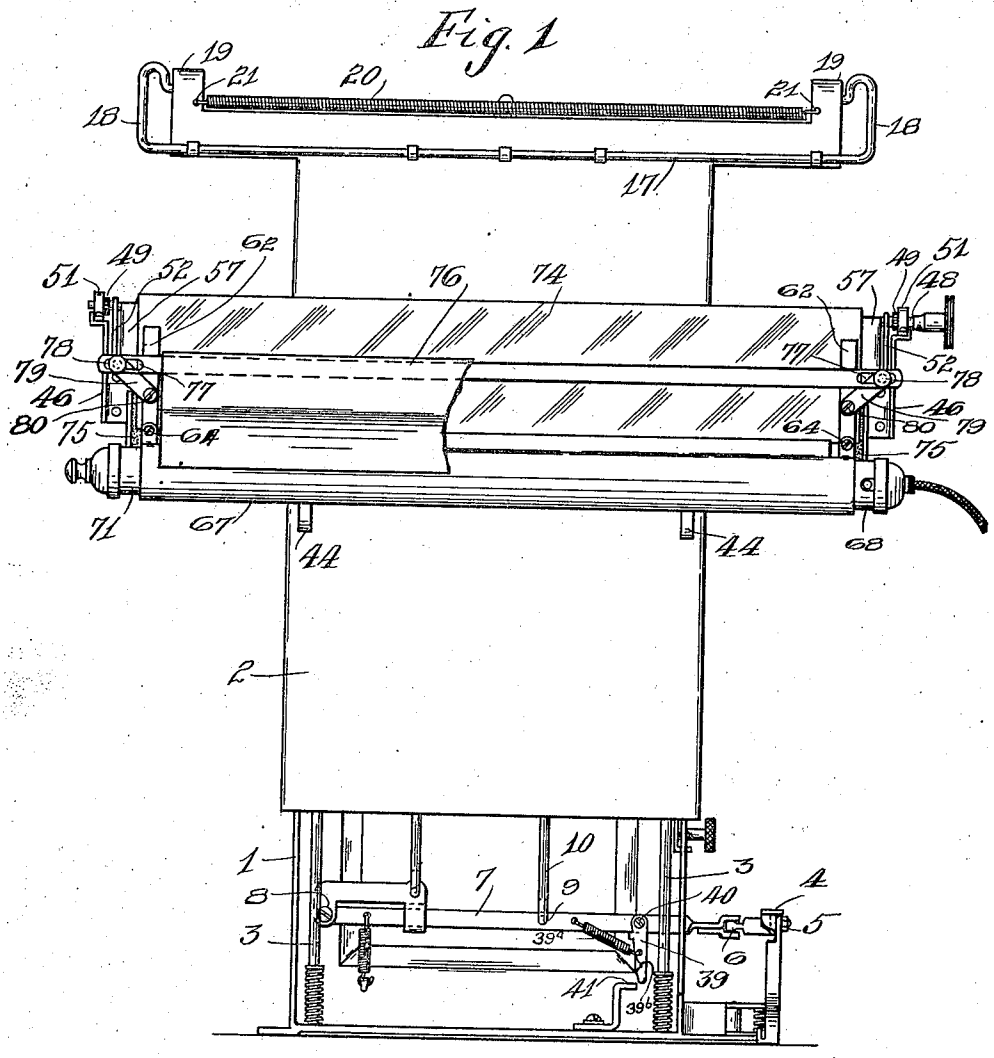
Apr. 10, 1923. 1,451,182

R. M. SEARLE

READING APPLIANCE

Original Filed Mar. 24, 1920 3 sheets-sheet 1

Fig. 1



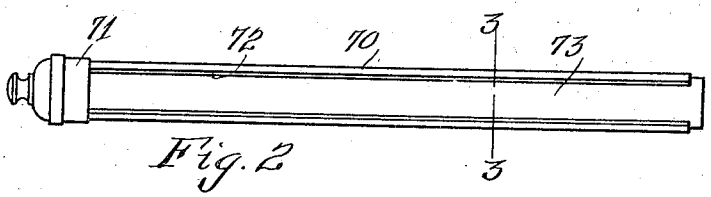


Fig. 2

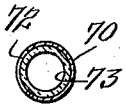


Fig. 3

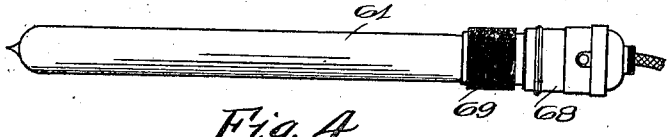


Fig. 4

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READING APPLIANCE

Original Filed Mar. 24, 1920 3 sheets-sheet 2

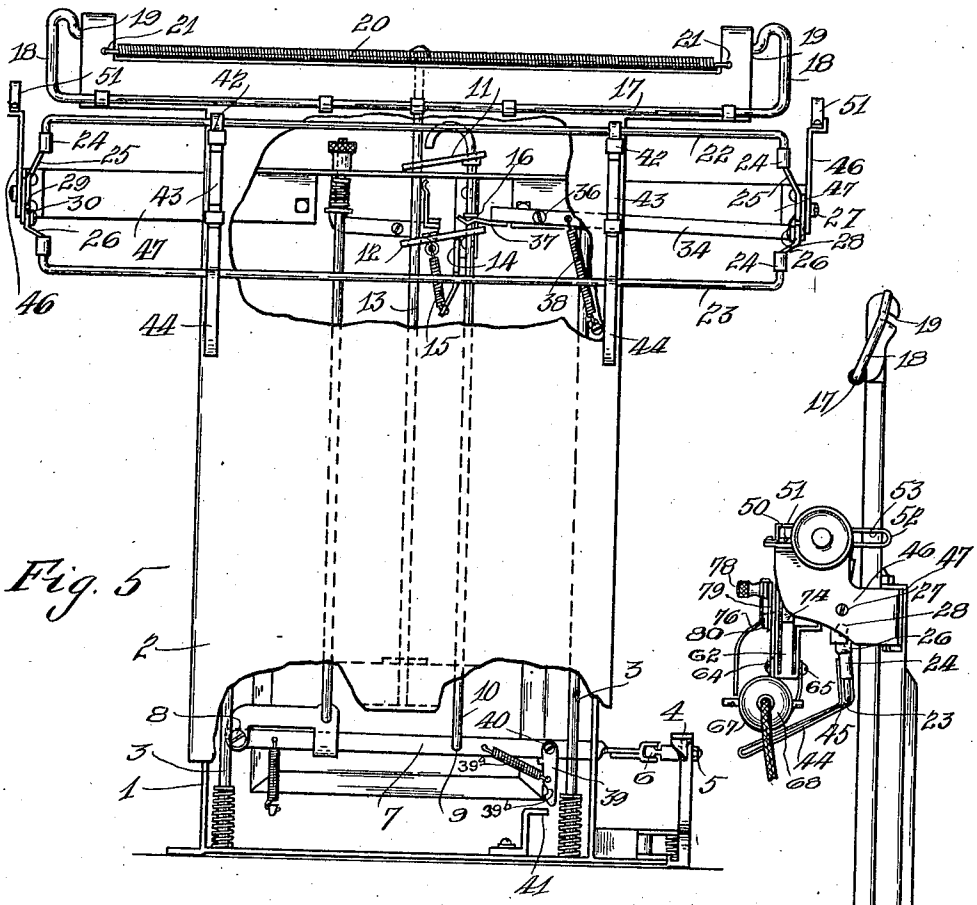


Fig. 5

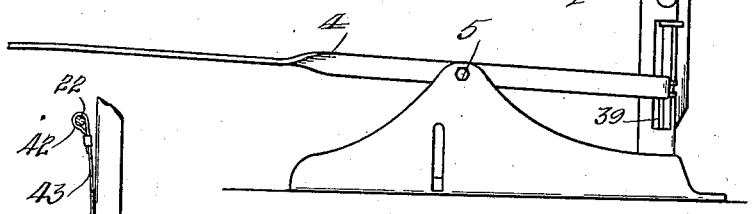


Fig. 6

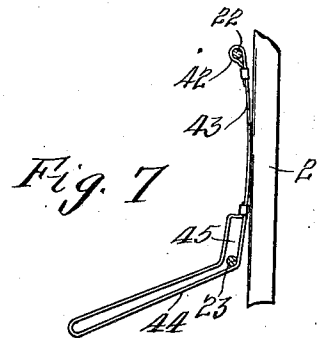


Fig. 7

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READING APPLIANCE

Original Filed Mar. 24, 1920 3 sheets-sheet 3

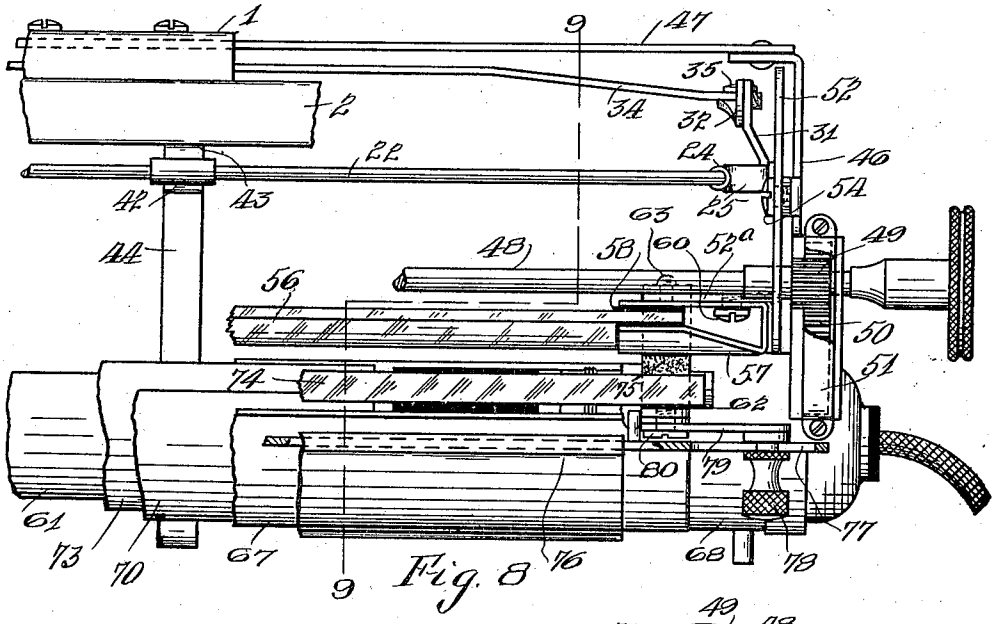


Fig. 8

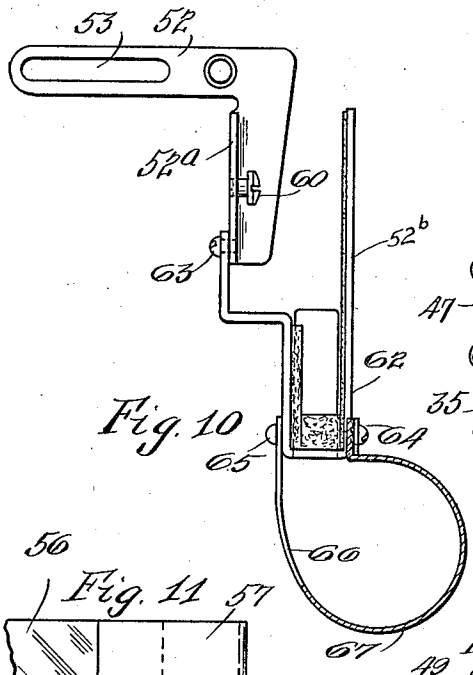


Fig. 10

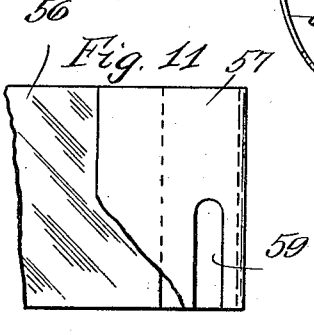


Fig. 11

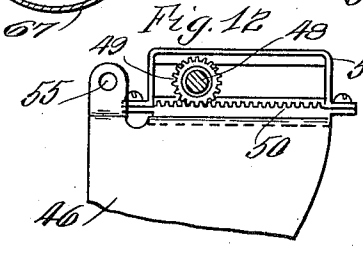


Fig. 12

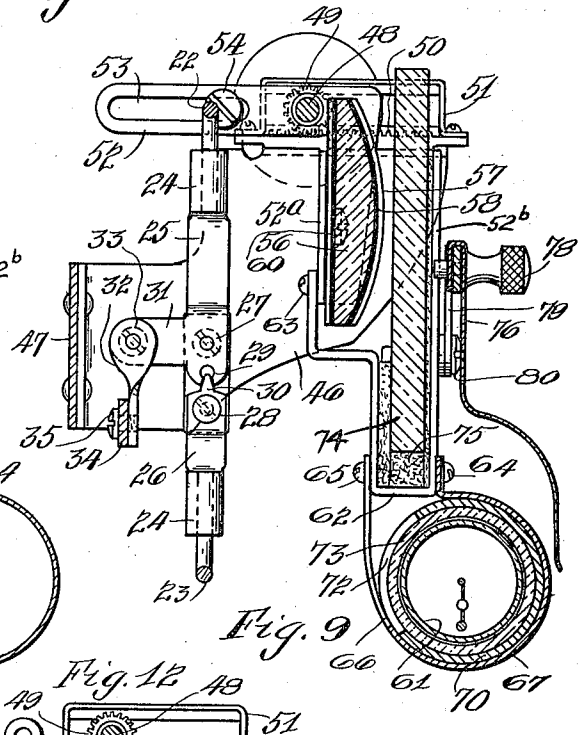


Fig. 9

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UNITED STATES PATENT OFFICE.

ROBERT M. SEARLE, OF ROCHESTER, NEW YORK.

READING APPLIANCE.

Continuation in part of application Serial No. 363,311, filed March 24, 1920. This application filed April 8, 1921. Serial No. 459,741.

To all whom it may concern:

Be it known that I, ROBERT M. SEARLE, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Reading Appliances, of which the following is a specification.

The present invention relates to reading appliances and this application is a continuation in part of an application filed by me on March 24, 1920, Serial No. 368,311. An object of this invention is to provide a reading appliance in which the field to be read is illuminated by an artificial means such as an electric light, and the eye strain of the reader is reduced to a minimum. Another object of this invention is to provide an improved mounting for a lens to magnify the field, this mounting permitting a ready adjustment of the lens toward and from the reading matter to obtain the proper focal distance. Another object of the invention is to provide a lamp housing with a shutter through which the amount or quantity of illumination of the field may be controlled. A further object of the invention is to provide a novel means of removing the red rays from the light before the rays strike the reading surface. A still further object of the invention is to remove the ultra violet rays from the reflected rays leading from the reading surface. Still another object of the invention is to provide an improved line guide which may be adjusted both parallel and angularly with relation to a line of reading, thus permitting the line guide to correspond to the position of a line of reading. A still further object of the invention is to provide in a reading appliance of the type in which the work is fed vertically with reference to a line guide, an adjustment which will permit the line guide to occupy different positions with reference to the horizontal. Another and still further object of the invention is to provide in connection with a reading appliance having a line guide and a work support which are relatively adjustable, an ironing device which will, during the relative adjustment, maintain a substantially fixed relation with reference to the line guide. Still another and further object of the invention is to provide two ironing devices, one for cooperating with the work above the line guide, and the other for cooperating with the work below the line guide, so that the work adjacent the line guide is held in a flattened condition. Another and still further object of the invention is to provide an ironing device of the type in which a line guide and a work support are relatively movable in a vertical direction through a suitable mechanism, an ironing device which will be controlled through said elevating mechanism to move automatically into and out of cooperation with the work support.

To these and other ends the invention consists of certain parts and combinations of parts, all of which will be hereinafter described, the novel features being pointed out in the appended claims.

In the drawings:

Fig. 1 shows in elevation, a copy holder embodying this invention;

Fig. 2 is a detail view of a combined shutter and ray filtering tube used in connection with the lamp;

Fig. 3 is a section on the line 3—3, Fig. 2;

Fig. 4 shows in side elevation the lamp used in this invention;

Fig. 5 shows the embodiment illustrated in Fig. 1 in front elevation with parts broken away, the work support being in lowered position;

Fig. 6 is a view of the invention in side elevation;

Fig. 7 is a fragmentary view showing the manner in which the flattening or ironing bars support the work guides;

Fig. 8 is an enlarged fragmentary plan view of parts seen to the right with reference to Fig. 1;

Fig. 9 is a section on the line 9—9, Fig. 8;

Fig. 10 is a fragmentary section of the carriage which supports the lens, the light filter and the lamp;

Fig. 11 is a fragmentary sectional view of one end of the light filter; and

Fig. 12 shows in fragmentary side elevation, one of the arms which supports the carriage.

While the invention is herein shown as embodied in a copy holder, it will be understood that features hereof are capable of being embodied in other reading appliances and as to these features the invention is not limited to use in copy holders. It is also

apparent that the invention is not limited to feeding the work with reference to the line guide and magnifying lens, as any relative movement between these two parts is within the scope of this invention.

In the illustrated embodiment the work support moves vertically with reference to the line guide and to this end there is provided a stationary or supporting frame 1 on which the work support 2 is vertically guided through the medium of guide rods 3 supported on said frame. Movement of the work support on the frame 1 may be effected through any suitable mechanism. In this instance, a double arm lever 4 is provided pivoted at 5 and having one arm projected forwardly to provide a finger piece and its rear arm connected by a loose joint 6 with a lever 7 which in turn is pivoted at 8 to the frame 1. This lever 7 is in turn pivotally connected at 9 to the lower end of a lifting rod 10 which through a clutch device 11 connects with a rod 13 secured to the rear face of the work holder 2. When the lever 4 is depressed at its outer end, the lifting and lowering rod 10 is moved upwardly and on this upward movement lifts the work holder 2 through the clutch 11. The work holder is held in this adjusted position by a retaining clutch 12 which is pivotally mounted on a fulcrum piece 14 and held downwardly into clutching relation with the rod 13 by a spring 15. The lowering of the work holder is effected through an upward movement of the outer end of the lever 4 which pulls downwardly on the rod 10 to straighten the clutch device 11 due to the cooperation with the frame of the portion of such device 11 adjacent the rod 13 and also effects the straightening of the clutch device 12 due to the shoulder 16 on the rod 10 cooperating with the clutch device and moving the latter on the fulcrum 14 against the action of the spring 15. The work holder then descends under the action of its own weight and the weight of any work thereon.

The work may be held on the work holder in any suitable manner. In this instance, a spring pressed clamping bar 17 is provided having arms 18 at its ends journalled at 19 in the work holding frame 2 and adapted to permit the swinging of the clamping member 17 toward and from the front face of the work holder. A helical spring 20 is anchored at its opposite ends 21 to the work holder and serves to retain those sheets of the work which may be swung over the upper edge of the work holder. The foregoing parts are not claimed per se in this invention, as they are already well-known.

With the end in view of flattening or ironing the work below the work holding clamp 17 there may be provided two spaced ironing devices in the forms of rods 22 and 23 having their laterally turned ends each secured in sockets 24 of two gear members 25 and 26, these gear members being pivoted at 27 and 28 respectively, and having interlocking portions 29 and 30. It is apparent that the movement of these two gear members together will effect the simultaneous movement of the ironing devices 22 and 23 toward and from each other. Simultaneous movement of the ironing devices may be effected by providing one of the gear members 25 with an arm 31 to which a link 32 may be pivotally connected at 33. To this link one arm of a double arm lever 34 is pivotally connected at 35, the double arm lever in turn being pivoted at 36 to the frame 1 and having its other arm provided with an extension 37 which is adapted to be engaged by the collar 16 on the push and pull rod 10 when said push and pull rod is lowered through the lever 7, this lowering movement effecting an automatic movement of the ironing devices 22 and 23 away from the work support. A spring 38 which is secured to the lever 39 and to the frame 1 tends to shift the lever 34 in a direction to move the ironing devices toward the work. The connection 37 between the lever 34 and the push and pull rod 10 permits the latter to be raised to elevate the work support without effecting the lever 34 or the ironing devices. It is apparent that the invention is not limited to the use of two ironing devices.

To the end that the ironing devices 22 and 23 may be held away from the work support during the lowering of the latter, the lever 7 carries a detent 39 which is pivoted at 40 to the lever 7 and is adapted to cooperate with a keeper 41 secured to the frame 1. This detent 39 is held in the position shown in Fig. 1 by a spring 39^a. The upward movement of the forward end of the lever 4 to effect the descent of the work support 2, also effects the movement of the ironing devices 22 and 23 away from the work support and free of the work. This same upward movement of the lever 4 also effects the downward movement of the lever 7, thereby causing the free end of the detent 39 to engage with the keeper 41 to move the detent against the action of the spring 39^a, in order that the keeper 41 may enter into the notch 39^b in the detent and thereby effect connection between the detent 39 and the keeper 41 so that the ironing devices 22 and 23 are held away from the work support until the lever 4 is again depressed to elevate the work support and elevate the lever 7, the wall of the notch 39^b being such that the detent shifts on such upward movement of the lever 7 and becomes detached from the keeper 41. The springs 38 will upon such depression, return the ironing devices 22 and 23 into cooperation with the work in

order that the ironing or flattening out of the work will occur during the elevation of the work support.

With the purpose in view of guiding or directing the work beneath the ironing devices while the latter are moving away from the work support, guiding devices may be employed which are mounted upon the ironing devices and preferably move toward and from the work with said ironing devices. These guiding devices, in this instance, each comprise a metal strip secured at one end at 42 about the upper ironing bar 22, bowed inwardly to provide a resilient portion 43, extended in rear of the lower ironing bar 23 and having a portion 44 deflected downwardly and forwardly from the lower bar 23, the metal being looped to form this deflected portion and also to form a space 45 in which the lower ironing bar 23 may operate due to the fact that a relative movement between the ironing bars 22 and 23 occurs as the bars are moved through the gears 25. The bowed portion 43 acts to produce pressure upon the work as the ironing devices 22 move toward the latter and this bowed portion also assists in the ironing action.

Preferably mounted for movement toward and from the work support is a carriage which is, in this instance, supported by arms 46 projected forwardly from the ends of arms 47 which project laterally in opposite directions from the frame 1, the gears 25 and 26 hereinbefore mentioned being pivoted to the arms 46. The carriage is supported on the arms through a shaft 48 which is provided near opposite ends with gears 49 arranged to roll upon racks 50 formed on the arms 46, straps 51 being secured to the arms over the gears and serving to hold the gears 49 on the shaft 48 to the racks 50. The shaft 48 is journalled in and connects two arms 52, each of these arms being provided with a slot 53 in which a headed screw 54, secured in an opening 55 in an arm 46 operates, the shaft and the walls of the slots with the headed screws serving to guide the carriage toward and from the work support on the arms 46.

Each arm 52 may have a portion turned laterally at 52^a to which an elongated lens 56 is preferably detachably secured. Any other suitable means may be employed for detachably securing the lens to the carriage. In this embodiment, the lens is provided at opposite ends with substantially U shaped metal clips 57 which have their opposed faces covered with a soft yielding material such as cloth 58 to engage opposite faces of the lens. These clips project beyond the ends of the lens and, in their projecting portions are provided with slots 59 leading from the lower side of the clips. These slots are adapted to receive headed screws 60 projecting from the laterally turned portions 52^a. It is apparent that this arrangement permits the lens to be readily moved by lifting upwardly on the same.

With the end in view of illuminating the work support in rear of the lens 56, an illuminating device may be provided. This illuminating device comprises, in this instance, an illuminating lamp 61 which is so enclosed that the eyes of the user are protected from the direct rays of the illuminating device, while at the same time proper illumination of the work is obtained. This result is secured, in the present embodiment, by providing two brackets 62, each having an arm secured at 63 to the rear face of a laterally turned portion 52^a and an arm 52^b projected upwardly in front of the lens 56. The two brackets are connected by a lamp housing which preferably is formed from a single piece of metal rolled to form an open ended member 67 substantially of a tube like structure, one edge of the sheet of metal being secured at 64 to the forward arm of the bracket 62 and the rear edge of the metal being secured at 65 to the rear arm of the bracket 62. Between its secured portions 65 the metal is cut away at 66 to provide an opening which will permit the rays from the lamp 61 to pass rearwardly on the work support 2. The lamp 61 is supported in the casing by providing the socket 68 of such lamp with a sleeve 69 of yielding material which will fit in one end of the tube and support the lamp 61 out of contact with the wall of said tube.

With the purpose in view of controlling the amount of illumination from the lamp 61, there may be provided a shutter for the opening 66 in the lamp casing. This shutter, in this instance, is in the form of a longitudinally slotted tube 70 having a cap 71 at one end which fits rotatably in the end of the lamp casing 67 about the lamp bulb 61. It is apparent that the turning of this tube so that the longitudinal slot 72 thereof is opposite the opening 66, rays from the lamp will pass to the work, whereas the larger the amount of the wall of the tube which is interposed between the lamp and the slot 66 will reduce the amount of illumination.

In order to reduce eye strain of the user of the machine, the red rays from the lamp 61 may be taken out or eliminated and to this end, an open ended blue glass tube 73 is provided which fits tightly within the shutter tube 70 about the lamp 61, so that rays issuing from the lamp through the opening 72 of the shutter tube must pass through the blue glass tube 73.

The ultra-violet rays from the lamp as well as those from daylight which may strike the reading surface may be eliminated, and to this end an elongated lens or bar 74 of white Crooke's glass may be arranged in the line of vision, preferably in front of the magnify-

ing lens 56. In this instance, this lens 74 is supported on the carriage which supports the lamp and with this end in view, the brackets 62 are provided with yielding seats 75 for receiving the lower edges of the lens 74 below the magnifying lens 56.

There may be provided in the copy holder, a line guide for defining the line of vision. This line guide may be supported so as to be vertically adjustable with reference to the main frame 1, while at the same time permitting the work support to adjust vertically with reference to the line guide. This result, in this embodiment, is secured by supporting the line guide on the carriage which supports the lens 56, ray filter 74 and lamp 61. The line guide is indicated at 76 and has slots 77 near opposite ends in which headed pivots 78 operate, these pivots being carried by the free ends of arms 79 which are pivoted at 80 to the brackets 62, the pivots being extended to provide finger pieces. This arrangement permits the line guide to be raised and lowered and also to assume a slight angle to the horizontal in order that it may correspond to the line of work when such line is not positioned horizontally on the work support, this movement of the line guide being effected through the headed pivots 78. The line guide preferably has a width sufficient to cover the ray filter 74 between the upper edge of the line guide and the lamp casing for any adjusted position of such line guide, thereby preventing any of the work below the upper edge of the line guide being visible.

In operation, the work holder 2 is moved to its lowermost position and the detent 39 is caused to engage with the keeper 41 to hold the ironers 22 and 23 out of cooperation. The guides formed by the parts 42, 43 and 44 are adjusted to correspond to the width of the work and the work is introduced below the lower ends of the guides between the ironers and the work support 2, the clamping bar 17 being employed for engaging the upper portion of the work. After the work is properly positioned, a depression of the lever 4 will release the ironers and permit them to be held with yielding pressure against the work through the spring 38. Each depression of the lever effects through the lifting clutch 11 an upward movement of the work support 2, the position of the work support being maintained through the holding clutch 12. The line guide 76 is, of course, adjusted to correspond with the angle of the line which it is desired to read. The line guide may be so positioned with reference to the lenses that a number of lines may be viewed simultaneously through the magnifying lens. The magnifying lens is adjustable toward and from the work so that the desired magnification may be obtained. The work is illuminated by the lamp and the amount or quantity of this illumination is controlled through the shutter 70. The blue glass which surrounds the lamp takes out the red rays and the ultra violet rays are taken out of the illuminated field through the filter or lens 74. The lamp may be used or not as desired, and either the magnifying lens or the ultra violet ray filter may be removed readily. The line guide is so arranged that it may be adjusted to correspond to the angle of the line of matter to be read and the work support moves vertically with reference to the line guide. The ironing devices hold the work in a flattened condition with reference to the lenses and the line guide and are automatically controlled through the mechanism which effects relative movement between the line guide and the work support.

What I claim as my invention and desire to secure by Letters Patent is:

1. In a copy holder, the combination with a work support and a line guide, one of which is movable vertically relatively to the other; of an ironing device for flattening the work directly above the line guide, and an elongated lens for viewing the work flattened by the ironing device.

2. In a copy holder, the combination with a line guide and a work support movable vertically relatively to the line guide, of an ironing device having a fixed relation to the line guide during the movement of the work support for flattening the work above said line guide.

3. In a copy holder, the combination with a line guide and a work support movable vertically relatively to the line guide, of an ironing device having a fixed relation to the line guide during the movement of the work support for flattening the work above said line guide, and an elongated lens for viewing the work flattened by the ironing device and having a fixed relation to the line guide.

4. In a copy holder, the combination with a line guide and a work support movable vertically relatively to the line guide, of an ironing device having a fixed relation to the line guide during the movement of the work support for flattening the work above said line guide, and means for supporting the ironing device so that it may be moved out of cooperation with the work on the work support to permit the movement of the work support to its lowered position.

5. In a copy holder, the combination with a work support, a line guide, and mechanism for effecting vertical movement of one of said parts relatively to the other to cause the line guide to traverse the work support from the upper to the lower portion of said support, said mechanism being controllable to cause the line guide to cooperate with the upper portion of the work support after any traversing action for the purpose of starting

another traversing action, of an ironing device for flattening the work above the line guide, and means for moving the ironing device automatically out of cooperation with the work support when the mechanism is operated to effect cooperation between the line guide and upper portion of the work support for a new traversing action.

6. In a copy holder, the combination with a line guide, a work support movable vertically relatively to the line guide, and mechanism for effecting the vertical movement of the work support controllable to permit the lowering of the work support; of an ironing device for cooperating with the work on the work support above the line guide, and means permitting said ironing device to be moved out of cooperation with the work support when said mechanism is operated to permit the lowering of the work support.

7. In a copy holder, the combination with a line guide, a work support movable vertically with reference to the line guide, and mechanism for effecting the vertical movement of the line guide having an operating member movable in one direction to elevate the work support and in the other direction to effect the lowering of the work support; of an ironing device for cooperation with the work support, and means for moving said ironing device out of such cooperation with the work support when the operating member is moved to effect the lowering of the work support and into such cooperation when the operating member is next moved to effect the elevation of said work support.

8. In a copy holder, the combination with a line guide, a vertically movable work support, mechanism for effecting the vertical movement of the work support relatively to the line guide; of an ironing device, and means controlled by said mechanism to move said ironing device out of cooperation with the work support when the mechanism is operated to lower the work support and to move said ironing device into cooperation with the work support when the mechanism is next operated to elevate the work support.

9. In a copy holder, the combination with a line guide and a work support movable relatively to the line guide; of an ironing device extending transversely of the work support adjacent to the line guide.

10. In a copy holder, the combination with a line guide and a work support movable vertically relatively to said line guide; of an ironing device comprising a bar extending transversely of the work support adjacent to the line guide and movable toward and from the plane of operation of the work support.

11. In a copy holder, the combination with a line guide and a work support movable vertically with reference to the line guide; of an ironing device comprising a bar extending transversely of the work support and having arms at opposite ends pivotally mounted to permit the bar to be moved toward and from the plane of operation of the work support.

12. In a copy holder, the combination with a line guide, a work support movable vertically with reference to the line guide, and mechanism for effecting the vertical movement of the work support with reference to the line guide; of an ironing device comprising a bar extending transversely of the work support adjacent to the line guide and having arms at opposite ends pivotally mounted, and a connection between one of said arms and said mechanism for effecting the movement of the ironing bar away from the plane of operation of the work support upon the lowering of the work support.

13. In a copy holder, the combination with a line guide and a work support movable vertically with reference to the line guide; of an ironing device for cooperating with the work support, mounted in proximity to the line guide and movable toward and from the plane of operation of the work support, a detent for holding the ironing device out of cooperation with the work support, and mechanism for effecting vertical movement of the work support relatively to the line guide, said mechanism being controllable to effect the lowering of the work support and having connection with the ironing device to move the latter out of cooperation with the work support to a position where it will be held by the detent, said mechanism having provision which upon the next operation of the mechanism to elevate the work support, releases the ironing device from the detent and effects cooperation between the ironing device and the work support.

14. A copy holder comprising a line guide, a work support movable vertically with reference to said line guide, an operating rod, clutching connection between said operating rod and the work support effecting the movement of the work support upwardly when the operating rod is moving in one direction from a normal position and releasing said work support when the operating rod is moved in the other direction from its normal position, an ironing device for cooperation with the work support movable toward and from the plane of operation of such work support, and connection between said operating rod and said ironing device for moving the ironing device away from the work support when the operating rod is moved to release the work support and moving said ironing device toward the work support when the operating rod is next moved to elevate the work support.

15. A copy holder comprising a line guide, a work support movable vertically with reference to said line guide, an operating rod, clutch connection between said operating

rod and the work support for effecting the movement of the work support upwardly when the operating rod is moving in one direction from a normal position and releasing said work support when the operating rod is moved in the other direction from its normal position, an ironing device for cooperation with the work support movable toward and from the plane of operation of such work support, connection between said operating rod and said ironing device for moving the ironing device away from the work support when the operating rod is moved to release the work support and moving said ironing device toward the work support when the operating rod is next moved to elevate the work support, and a detent for retaining said operating rod away from normal position after it has been moved to release the work support.

16. A copy holder comprising a line guide, a work support movable vertically with reference to said line guide, an operating rod, clutching connection between said operating rod and the work support effecting the movement of the work support upwardly when the operating rod is moving in one direction from a normal position and releasing said work support when the operating rod is moved in the other direction from its normal position, an ironing device for cooperation with the work support movable toward and from the plane of operation of such work support, connection between said operating rod and said ironing device for moving the ironing device away from the work support when the operating rod is moved to release the work support and moving said ironing device toward the work support when the operating rod is next moved to elevate the work support, a lever to which said operating rod is pivotally connected, a detent carried by said lever, and a keeper for the detent arranged to cooperate with the detent when said operating rod is moved by the lever away from its normal position to effect the lowering of the work support.

17. The combination with a field to be viewed, of racks suitably supported, a frame adjustable toward and from the field to be viewed, a lens carried by the last mentioned frame, and a shaft mounted to turn on said frame and having pinions thereon meshing with the racks.

18. A copy holder comprising a frame, a work support vertically movable on the frame, arms projecting from the frame in front of the work support, racks on said arms, a frame guided on said arms, a shaft provided with pinions meshing with said racks, and a lens supported by said second mentioned frame.

19. The combination with a field to be viewed, arms projecting from opposite sides of the field, a frame guided on said arms, a shaft carried by the frame and having connection with the arms whereby turning of the shaft will move the frame toward and from the work support, and a lens carried by the frame.

20. A copy holder comprising a frame, a work support vertically movable on the frame, arms carried by said frame and projecting on opposite sides of the work support, a second frame guided on said arms, a shaft carried by the second mentioned frame and having connection with the arms whereby turning of the shaft will move the second mentioned frame toward and from the work support, a lens carried by the second mentioned frame, and a light filter supported on the frame and movable into and out of cooperation with the lens.

21. A copy holder comprising a frame, a work support vertically movable on the frame, arms projected from the frame on opposite sides of the work support, a frame movable on said arms toward and from the work support and provided with a lamp housing and a line guide, a lens carried by the second mentioned frame, and a shaft mounted to turn on the second mentioned frame and having connection with the arms whereby the turning of the shaft moves the second mentioned frame toward and from the work support.

22. A copy holder comprising a frame, a work support vertically movable on the frame, arms projected from the frame on opposite sides of the work support, a second frame movable on said arms toward and from the work support, a lens carried by the second mentioned frame, a shaft on the second mentioned frame and having connection with the arms whereby the turning of the shaft moves the second mentioned frame toward and from the work support on the arms, and a light filter associated with said lens.

23. A copy holder comprising a stationary frame, a work support vertically adjustable on said frame, a line guide, and supports at opposite ends of the line guide bar relatively adjustable to permit the line guide to assume different angular positions with reference to the line of adjustment of the work support.

24. A copy holder comprising a stationary frame, a work support vertically adjustable on said frame, a line guide, and supports at opposite ends of the line guide bar relatively adjustable to permit the line guide to assume different angular positions with reference to the line of adjustment of the work support, each of said supports comprising a swinging arm adjustably connected to the line guide.

25. A copy holder comprising a stationary frame, a work support movable on said frame, a line guide provided with slots near

opposite ends, and two swinging arms, each having pins operating in said slots, said arms being supported by the stationary frame.

26. A copy holder comprising a stationary frame, a work support movable on the stationary frame, a line guide supported by said stationary frame, and a pair of ironing devices arranged one below and the other above said line guide to cooperate with work on the work support.

27. A copy holder comprising a stationary frame, a work support movable on the stationary frame, a line guide supported by said stationary frame, a pair of ironing devices arranged one below and the other above said line guide to cooperate with work on the work support, and means for effecting a simultaneous movement of the ironing devices toward and from the work support.

28. A copy holder comprising a stationary frame, a work support vertically adjustable on said frame, arms projected from said support on opposite sides of the work support, a pair of intermeshing gears pivoted to each of said arms, a pair of ironing devices each connected to one of the gears of each pair, and means for operating said gears to effect the movement of the ironing devices simultaneously toward and from the work support.

29. A copy holder comprising a stationary frame, a work support adjustable on said frame, an elongated lens supported by said frame, and ironing devices cooperating with the work support at opposite sides of the field of the lens.

30. A copy holder comprising a stationary frame, a work support vertically adjustable on the stationary frame, two ironing devices carried by the stationary frame in parallel relation, and work guides extending between said ironing devices.

31. A copy holder comprising a stationary frame, a work support vertically adjustable on the stationary frame, two ironing devices carried by the stationary frame in parallel relation, and work guides extending between said ironing devices and having their lower ends deflected away from the work support to direct the work between the guides and the work support.

32. A copy holder comprising a stationary frame, a work support vertically movable on the stationary frame, two ironing devices arranged in parallel relation and carried by the stationary frame for flattening the work on the work support, and work guides extending between the ironing devices and relatively adjustable toward and from each other for cooperating with work of different widths.

33. A copy holder comprising a stationary frame, a work support vertically movable on the stationary frame, two ironing devices arranged in parallel relation and cooperating with work on the work support, two guides mounted on said ironing devices and adjustable toward and from each other, the lower ends of said guides projecting below the lowermost ironing devices and being deflected away from the work support.

34. A copy holder comprising a stationary frame, a work support vertically adjustable on the stationary frame, two ironing bars extending transversely of the work support, one above the other, means for effecting the simultaneous movement of the ironing bars toward or from the work support, two guides mounted upon the ironing bars and adjustable toward and from each other on said bars, each guide having between the bars, a bowed portion for cooperating with the work.

35. A copy holder comprising a stationary frame, a work support vertically movable on the stationary frame. two ironing bars extending transversely of the work support, one above the other, and work guides connecting said ironing bars and bowed between the bars to cooperate with the work.

36. A copy holder comprising a stationary frame, a work support vertically movable on the stationary frame, a lamp housing extending transversely of the work support, a lamp arranged in said housing, and means for controlling the quantity of light issuing from said housing from said lamp.

37. In combination with a field to be viewed, a lens for viewing said field, an elongated lamp housing for illuminating the field in rear of the lens, an elongated lamp arranged in said housing, and a rotary tubular shutter surrounding the lamp within the housing and adapted to control the amount of light issuing from said lamp housing.

38. In combination with a field to be viewed, a lens for viewing said field, an elongated open ended lamp housing for illuminating said field in rear of the lens, an elongated lamp fitting in one end of the housing, a tubular shutter having an elongated slot fitted in the opposite end of the housing about the lamp and rotatable to control the amount of light issuing from the housing.

39. A copy holder comprising a stationary frame, a work support vertically movable on the stationary frame, a lamp housing supported by the frame, an elongated lamp arranged in said housing and a light filter tube arranged about said lamp.

40. A copy holder comprising a stationary frame, a work support vertically adjustable on said stationary frame, a lens supported by said stationary frame, and a line guide also supported by said stationary frame and adjustable angularly with reference to the lens.

41. In combination with a field to be viewed, a lens through which a view of said field may be obtained, a lamp housing opening to throw rays between the lens and the field, a lamp arranged in said housing, and means controlling the amount of rays issuing from said housing from said lamp.

42. In combination with a field to be viewed, a lens for obtaining a view of the field, a lamp housing having an opening for throwing rays between the lens and the field, a lamp in said housing, and a light filter associated with said lamp for removing certain of the rays from the light projected by said lens.

43. In combination with a field to be viewed, a lens for viewing said field, a lamp housing opening to throw rays between the lens and the field, a lamp arranged in said housing, a rotary shutter surrounding said lamp and adapted to control the amount of rays of light issuing from the housing.

44. In combination with a field to be viewed, a lens associated with the field, a lamp housing arranged to throw light rays between the lens and the field, a lamp in said housing, a blue glass associated with the lamp to remove the red rays from the light thrown by said lamp, and a light filter associated with said lens so that the ultra violet rays from the reading surface will not pass to the eyes of the user of the machine.

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