July 9, 1940. G. W. ISRAEL 2,206,961

OFFICE UNIT

Filed Nov. 9, 1936 2 Sheets-Sheet 1

Fig. 1

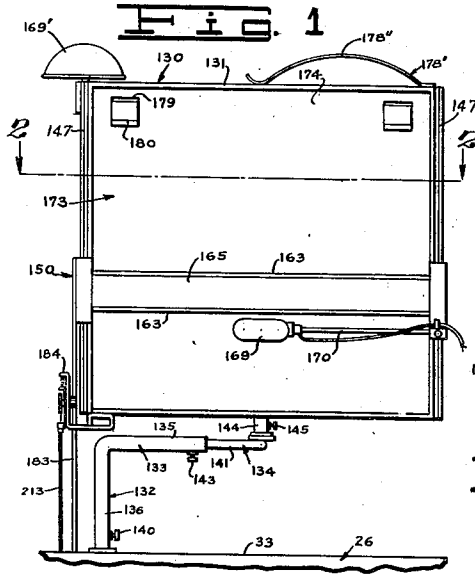


Fig. 2

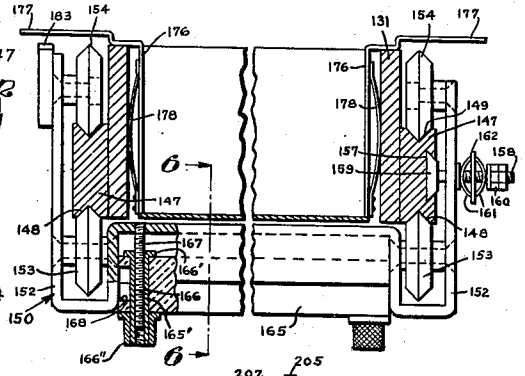


Fig. 4

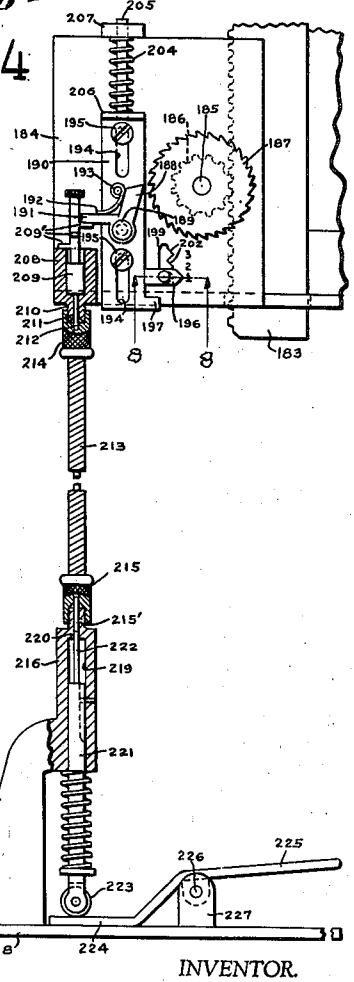


Fig. 5

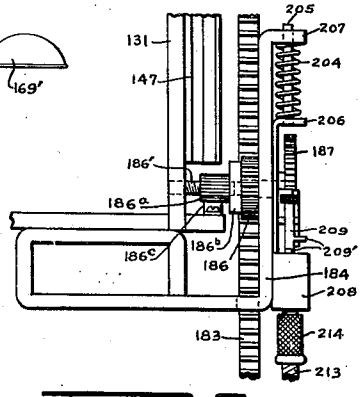


Fig. 3

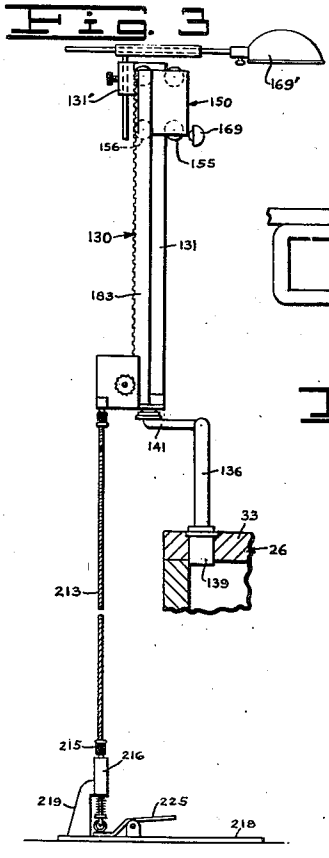
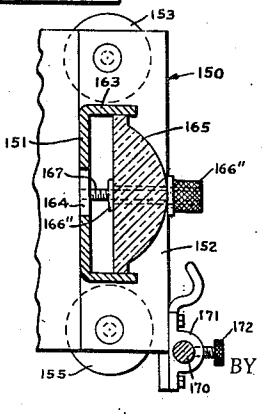


Fig. 6



INVENTOR.
G. W. ISRAEL
BY
ATTORNEY.

July 9, 1940. G. W. ISRAEL 2,206,961

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Fig. 7

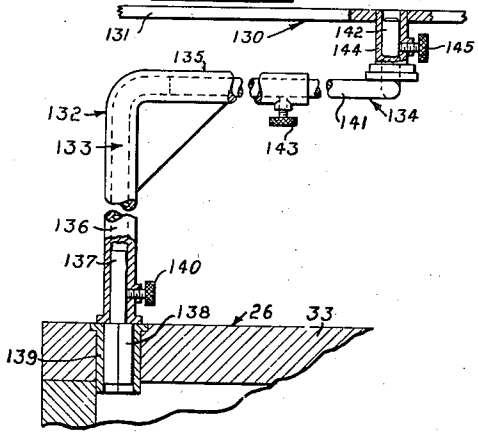


Fig. 8

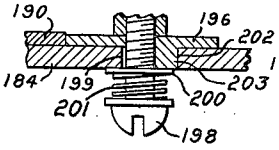


Fig. 9

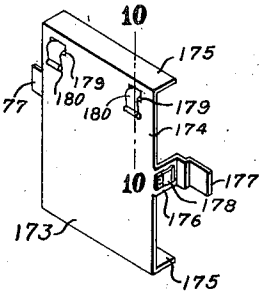


Fig. 11

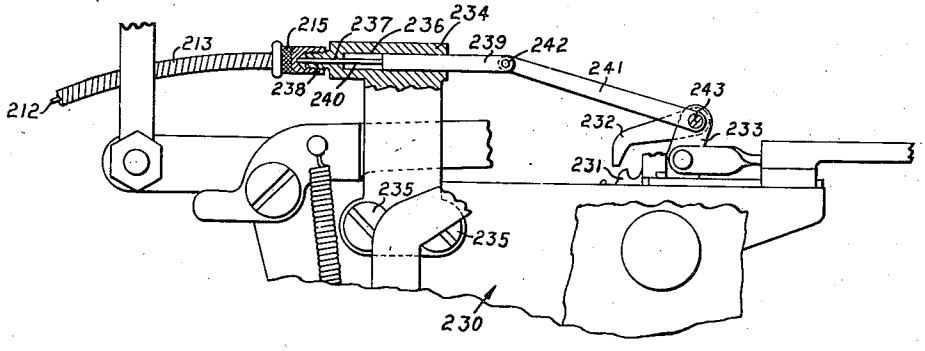


Fig. 10

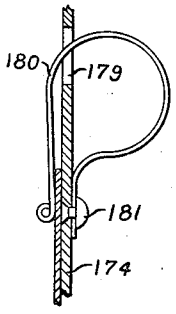


Fig. 1A

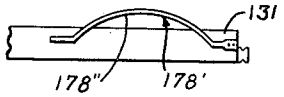
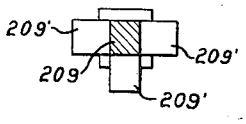


Fig. 4A



INVENTOR.
G. W. ISRAEL

BY

ATTORNEY.

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OFFICE UNIT

George W. Israel, Los Angeles, Calif.

Application November 9, 1936, Serial No. 109,889

4 Claims. (Cl. 120—34)

This invention relates to office units.

The general object of the invention is to provide an attachment which is particularly adapted for use with a typewriter machine and which includes a copy reading mechanism.

A further object of the invention is to provide a novel copy reading device.

Other objects and the advantages of my invention will be apparent from the following description taken in connection with the accompanying drawings, wherein:

Fig. 1 is an enlarged face view of my improved copy reader showing it mounted on a typewriter drawer;

Fig. 1A is a fragmentary top plan view showing the wire retention clip;

Fig. 2 is an enlarged, fragmentary section taken on line 2—2 of Fig. 1;

Fig. 3 is a side elevation of the copy reader shown in Fig. 1 and further shows the foot operating mechanism;

Fig. 4 is an enlarged, fragmentary view similar to Fig. 3 with portions thereof in section;

Fig. 4A is an enlarged cross section through the carriage operating plunger rod below the knurled head thereof.

Fig. 5 is a fragmentary, rear view of the parts shown in Fig. 4;

Fig. 6 is a fragmentary section of the copy reader carriage device taken on line 6—6 of Fig. 2;

Fig. 7 is an enlarged, fragmentary detail view of the copy reader supporting mechanism with portions thereof in section;

Fig. 8 is a fragmentary, enlarged detail section taken on line 8—8 of Fig. 4;

Fig. 9 is a perspective view, on a reduced scale, of the copy holding member of the copy reader device;

Fig. 10 is an enlarged, fragmentary section taken on line 10—10 of Fig. 9; and

Fig. 11 is a fragmentary, side elevation of a typewriter showing the method of attaching the copy reader actuating mechanism thereto.

Referring to the drawings by reference characters I have shown my invention as embodied in a copy reader which is indicated generally at 130. The copy reader is shown as mounted on a desk door 26 which includes a top 33. As shown the copy reader 130 includes a rectangular frame 131 which is open at the front and rear. The frame 131 is supported by a pivoted and adjustable arm 132 (see Fig. 7) which includes a tubular section 133 and a rod section 134. The tubular section 133 includes a horizontal portion 135 and a vertical portion 136. Positioned in the lower end of the vertical section 136 I provide a pivot stud 137 which includes a polygonal lower section 138 which is removably positioned in a suitable polygonal socket member 139 provided in the typewriter drawer 26. The vertical section 136 adjacent the stud 137 is provided with a set screw 140 for securing it to the stud.

The rod section 134 includes a horizontal portion 141 and a vertical portion 142. The horizontal portion 141 of the rod 134 is positioned in the horizontal portion 135 of the tubular section 133 which is provided with a set screw 143 for securing the rod to the tubular section. The vertical portion 142 of the rod is positioned in a suitable depending bearing member 144 on the frame 131. The bearing member 144 is provided with a set screw 145 for adjustably securing the rod to the frame.

Mounted on each side of the frame 131 adjacent the front thereof I provide vertical rail members 147 (see Fig. 2) each of which includes a front V-shaped groove 148 and a rear V-shaped groove 149.

Mounted on the frame 131 I provide a carriage member which is indicated generally at 150. As shown the carriage 150 includes a face portion 151 having side bracket portions 152 thereon which extend rearwardly to the outside of the rail members 147. Each of the side brackets 152 has a pair of upper front and rear V-shaped rollers 153 and 154 and a pair of lower front and rear V-shaped rollers 155 rotatably secured thereto. The front rollers 153 and 155 are positioned in the front V-shaped track groove 148 and the rear rollers 154 and 155 are positioned in the rear V-shaped track groove 149. One of the rail members 147 in its outer face has a vertical dovetailed groove 157 therein.

Mounted on the carriage bracket 152 adjacent the groove 157 I provide a bolt member 158 the head 159 of which is suitably shaped to slidably fit within the adjacent dovetailed groove 157. The opposite end of the bolt 158 has a nut 160 thereon and intermediate the side of the bracket 152 and the nut 160 I provide a pair of opposed spring members 161 which engage a washer 162. When the nut 160 is tightened against the action of the spring members 161 the bolt head 158 frictionally engages the beveled walls of the dovetailed groove 157. Sufficient friction is provided between the head 159 and the rail 147 to partly overcome the weight of the carriage 150. The face portion 151 of the carriage (see Fig. 6) includes spaced upper and lower flanges 163 and

intermediate the flanges 163 the face portion 151 has a viewing aperture 164 therein.

Positioned between the side brackets 152 and between the flanges 163 I provide an elongated magnifying glass member 165. The magnifying glass 165 adjacent each end has an aperture 165' in which an internally threaded sleeve 166 is positioned. The inner end of the sleeve is outwardly flared to form an enlarged flange 166' which engages the rear surface of the glass 165 and the front end of the sleeve has an enlarged head 166'' thereon which engages the front surface of the glass 165.

Mounted on the frame 150 adjacent each side thereof I provide threaded rods 167 which are positioned one in each of the sleeve members 166. Thus by rotating the sleeves 166 the magnifying glass 165 may be moved either towards or away from the face portion 151. In each end the magnifying glass member 165 has a polygonal recess 168 therein (see Fig. 2). The glass 165 may be removed and the recesses 168 may receive the ends of arms on a title reading device (not shown).

Positioned below the magnifying glass 165 I provide an electric lamp socket and shade member 169 (see Fig. 1) which is mounted on a rod 170 which is in turn removably positioned in a suitable bearing portion 171 (see Fig. 6) on one of the side brackets 152 and has a set screw 172 therein to removably secure the rod 170 to the carriage.

Pivotally mounted in a boss 131' on the copy reader frame 131 I provide a horizontally and vertically adjustable flood lamp 169'.

Removably positioned in the frame 130 I provide a copy holder which is indicated generally at 173 and shown in detail in Fig. 9. As shown the copy holder 173 includes a plate portion 174 having upper and lower rearwardly extending flanges 175. Intermediate its height at each side the plate portion 174 includes rearwardly extending arm portions 176 having outwardly extending finger portions 177 thereon. Suitably secured to each of the arm portions 176 I provide an outwardly curved flat spring member 178 which when the copy holder is positioned in the frame 131 as shown in Fig. 2 frictionally engages the sides of the frame. On the frame 131 I mount a spring wire page retention clip 178'.

As shown in Fig. 1A the central portion of the clip 178' curves upwardly and rearwardly behind the front of the frame 131 as indicated at 178'' so that the hand of the operator which raises the sheet of copy may strike and raise the clip to allow the sheet of copy to be positioned therebeneath.

Adjacent to the top and each side the plate portion 174 has an aperture 179 therein in which a clamp member 180 is positioned. (See Fig. 10.) As shown each of the clamp members 180 comprises a flat spring curved back upon itself with one end in the rear of the plate 174 and secured to the plate as by rivets 181 and the other end engaging the front of the plate 174.

Secured to one of the brackets 152 of the carriage and adjacent to the rear thereof I provide a depending gear toothed rack member 183 (see Figs 4 and 5). Mounted on the frame 131 on the side adjacent the rack 183 I provide a bracket member 184. Rotatably mounted on the bracket 184 I provide a shaft 185 having a gear 186 mounted thereon at one side of the bracket and a ratchet wheel 187 thereon to the opposite side of the bracket. The gear 186 meshes with the rack 183 and the ratchet wheel 187 is adapted to be intermittently engaged by a pawl 188.

Coaxial with the shaft 185 and inward from the gear 186 I provide a threaded stud 186' which is suitably mounted on the frame 131. Positioned on the threaded stud 186' I provide an internally threaded sleeve 186*a* which has an enlarged fiber head member 186*b* thereon. The exterior of the sleeve 186*a* is axially knurled and is engaged by a spring member 186*c* which is mounted on a portion of the frame 131. The fiber head 186*b* is adapted to frictionally engage the face of the gear 186. Sufficient friction is provided between the fiber head 186*b* and the gear 186 to partly overcome the weight of the carriage 150. Thus the friction means 159 and the friction means 186*b* overcome the entire weight of the carriage 150. The pawl 188 is pivotally mounted as at 189 on a slide member 190 and includes a rearwardly extending arm portion 191.

For resiliently retaining the pawl 188 out of engagement with the ratchet 187 I provide a flat spring member 192 which is anchored at one end to the slide 190 as at 193 and with the opposite end engaging the pawl arm 191. The slide 190 has elongated slots 194 therein in which screw members 195 secured to the bracket 184 are positioned.

To limit the upward movement of the slide 190 I provide a stop member 196 which is adapted to be engaged by a finger 197 on the slide. As shown in Fig. 8 the stop 196 has a screw 198 secured thereto which is positioned in an elongated slot 199 in the bracket 184 and has a washer 200 thereon which is urged by spring 201 into frictional engagement with the bracket 184. The slot 199 in one side thereof has a plurality of V-shaped notches 202 in one of which a similarly shaped portion 203 of the stop 196 is adapted to be positioned. To shift the stop member 196 the screw 198 is pushed against the tension of the spring 201. This allows the member 196 to move away from the bracket 184 so that the portion 203 of the stop is moved from the notch 202. The member 196 is then shifted as desired and released so that the portion 203 enters the selected notch 202.

For resiliently urging the slide 190 downwardly I provide a coiled spring 204 surrounding a rod 205 which is mounted on an out turned lip 206 on the slide and is slidably positioned in a suitable aperture in an out turned lip 207 on the bracket 184.

Mounted in a bearing portion 208 integral with the bracket 184 and below the pawl arm 191 I provide a plunger rod 209 which is square in cross section as shown in Fig. 4A. Extending outwardly from three sides of the plunger rod above the bearing 208 the plunger includes equally spaced operating finger portions 209' which are adapted to engage the arm 191 of the pawl 188. The plunger has one face with no finger portions thereon to provide a neutral side which causes no movement of the carriage when this neutral side is adjacent to the pawl arm 191.

The bearing 208 includes a reduced threaded portion 210 having a reduced aperture 211 therein. Positioned in the aperture 211 I provide a flexible push rod 212 which is mounted in a flexible conduit member 213. At one end the conduit 213 includes an internally threaded coupling member 214 which is adapted to engage the reduced threaded portion 210 of the bearing 208.

At the opposite end the conduit 213 includes a similar internally threaded coupling member

215 which is adapted to engage a reduced threaded portion 215' of a vertical bearing member 216 which is supported on an arm 217 which is on a base 218.

The vertical bearing member 216 has an aperture 219 therein and a reduced aperture 220. Positioned in the aperture 219 I provide a spring pressed plunger 221 which includes a reduced portion 222 which is positioned in the reduced aperture 220. Furthermore the lower end of the flexible push rod 212 is positioned in the aperture 220 and is adapted to be engaged by the reduced portion 222. The lower end of the plunger 221 has a roller member 223 rotatable thereon which is adapted to engage a portion 224 of foot or hand lever 225 which is pivotally mounted as at 226 intermediate its length on a bracket 227 on the base 218.

When the foot or hand lever 225 is swung downward the portion 224 thereof moves upward and forces the plunger portions 221 and 222 upward therewith thus moving the flexible push rod 212 upward which in turn moves the plunger 209 upward. As the plunger 209 moves upward the uppermost of the fingers 209' thereon swings the pawl arm 191 upward against the action of the spring 192 thereby moving the pawl 188 into engagement with the ratchet wheel 187. Continued upward movement of the plunger 209 moves the slide member 190 and the pawl 188 upward and as the pawl moves upward it rotates the ratchet 187. When the ratchet 187 is thus rotated it rotates the shaft 185 which in turn rotates the gear 186 and as the gear 186 rotates it moves the rack member 183 and the carriage 150 downwardly a predetermined distance. The stop member 196 may be set to stop the slide 190 at various positions to thereby limit the downward movement of the carriage 150.

In Fig. 11 I have shown the flexible push rod 212 as adapted to be actuated from the platen rotating means of a typewriter which is indicated generally at 230. The typewriter 230 includes a platen rotating ratchet wheel 231 which is adapted to be engaged by a dog member 232 mounted on an arm 233. As shown in Fig. 11 I provide a bearing member 234 which is adapted to be suitably secured to a portion of the typewriter carriage by screws 235. The bearing 234 has an aperture 236 therein and a reduced aperture 237. The bearing 234 includes a reduced threaded portion 238 to which the coupling member 215 of the conduit 213 is adapted to be secured. Positioned in the aperture 236 I provide a plunger member 239 which includes a reduced portion 240 which is positioned in the reduced aperture 237 and engages the end of the flexible push rod 212.

The opposite end of the plunger 239 has a link 241 pivotally secured thereto as at 242 and the opposite end of the link 241 is pivotally connected as at 243 to the typewriter arm 233. Thus when the operator of the typewriter 230 actuates the correct mechanism to rotate the platen the arm 233 moves the bearing 243 thereby pushing the link 241, the plunger 239 and reduced portion 240 toward the conduit 213 thereby moving the flexible push rod 212.

When the push rod 212 is operated by the platen rotating means of a typewriter as shown in Fig. 11 the stop member 196 is moved to its uppermost or number 3 position and the amount of movement of the ratchet 187 is controlled by correctly positioning the fingers 209' on the plunger rod 209. That is when three spaces are desired the operator sets the rod 209 so that the uppermost finger 209' will engage the pawl arm 191, when only two spaces are required the operator sets the rod 209 so that the uppermost finger 209' is out of the path of the pawl arm and the intermediate finger 209' will engage the pawl arm and when only one space is required the operator sets the rod 209 so that only the lowermost finger 209' is in the path of the pawl arm. To change the spacing the rod 209 is removed and rotated. In order to do this the stop member 196 is first moved to its upper position in the manner previously described. When in this position the slide member 190 is raised to its upper limit. This raises the pall 188 and the arm 191 thereon so that the arm is raised sufficiently to allow the rod 209 to be turned to the correct position whereupon the rod is reinserted and the other parts brought to normal operative position. Furthermore the operator may set the rod 209 so that all the fingers 209' are out of the path of the pawl arm whereupon when the typewriter platen is rotated none of the fingers 209' will engage the pawl arm and thus the ratchet 187 will not be rotated.

Having thus described my invention I claim:

1. In a copy reading device, a frame, said frame having a pair of track members thereon, a reading member, rollers on said reading member on each side of said frame and engaging opposite sides of said track members to support the reading member and means to prevent the rollers from becoming disengaged from the track members.

2. In a copy reading device, a frame, said frame having a pair of vertical rail members, said rail members having outwardly directly V grooves at the front and back, a carriage, said carriage having a face portion, said face portion having side brackets thereon, said side brackets extending rearwardly outside of said rail members, each of said brackets having a pair of upper front and rear rollers and having a pair of lower front and rear rollers rotatably mounted thereon, said rollers being V-shaped and engaging in the V grooves on the rail members.

3. In a copy reading device, a rectangular frame, said frame having a pair of vertical rail members thereon, said rail members having outwardly directed V grooves at the front and back, a carriage, said carriage having a face portion, said face portion having side brackets thereon, said side brackets being bent to extend forwardly then laterally and then rearwardly outside of said rail members, each of said brackets having a pair of upper front and rear rollers and having a pair of lower front and rear rollers rotatably mounted thereon, said rollers being V-shaped and engaging in the V grooves on the rail members, one of said rail members having a groove therein, a bolt member engaged in said groove, means to mount the bolt member on one of said side brackets, resilient means urging said member against the bracket and means to change the resiliency of said member.

4. In a copy reading device, a rectangular frame, a copy holder, said copy holder including a plate portion having upper and lower flanges extending therefrom, said flanges engaging the upper and lower portions of said frame, arm portions at each side of said plate portion, said arm portions having outwardly extending fingers thereon, and a spring on each of said arm portions, said springs engaging the sides of the frame.

GEORGE W. ISRAEL.