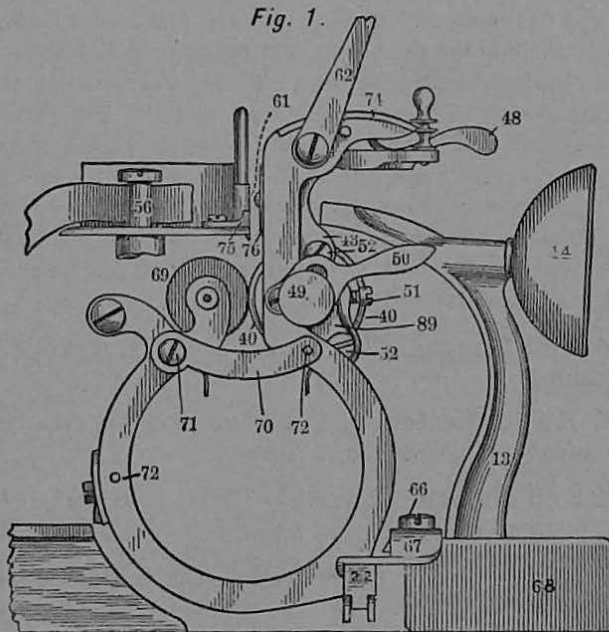


INSTRUCTIONS.

THE beginner, in learning to operate the machine, should first examine and learn the use of the following parts :—



DESCRIPTION OF PARTS—**Feed Roll.**—The larger rubber roll 40, whereby the paper is fed up or down as required.

Feed Roll Knob.—The tapering button 49, on the right end of the feed roll, for turning the said roll by hand.

Feed Roll Opener.—The lever 50, adjacent to the knob. It serves to separate the rolls and to hold them apart, so as to permit the insertion and removal of paper. To separate the rolls, press back, with the right thumb, the feed roll knob, allowing the second finger to rest on the carriage end, at the same time depressing, with the right fore finger, the feed roll opener; to bring the rolls together, lift the feed roll opener.

Bell Striker.—The pivoted piece 48, carried by the adjustable bracket arranged to slide on the rear edge of the erasing plate. It should be set near the right-hand margin of the paper, to give due notice of the end of the line, or at any distance from the same, toward the left, if it is desired to stop writing before reaching the said margin.

Impression Strip.—The rubber strip 76, stretched from one carriage end to the other. It should, in the first instance, be attached by the outer hole in the right end; but as soon as it begins to sag it should be attached by the inner one. If the lower parts of the letters print faintly, it may be taken as evidence that the impression strip is not stretched sufficiently, and it should either be shifted, as suggested, or discarded and a new one substituted. Should it become somewhat softened by extremely warm atmosphere, and thus caused to adhere to the paper and be lifted by it, the rubber should be dusted with chalk. These strips will last a long time, and new ones can be procured by mail. Several are furnished with each machine.

Feed Roll Hanger.—The pivoted piece 43, in which the rear roll is mounted.

Feed Roll Adjuster.—The curved piece 89, secured to the right-hand feed roll hanger by two screws.

Feed Roll Adjuster Screws.—The two screws 52, fastening the roll adjuster to the roll hanger.

Feed Roll Adjuster Set Screw.—The rear screw 51, in the right hand feed roll hanger.

Carriage Clamps.—The clamps 67, on the ends of the escapement shield, adjusted in shipment to press on the ends of the carriage rack.

Carriage Clamp Screws.—The screws 66, holding the carriage clamps, as well as the escapement shield, in place.

Carriage Clasps.—The curved pieces 70, on the carriage ends, which, during shipment, are adjusted to span the opening therein.

Carriage Clasp Screws.—The screws 71, fastening the clasps to the carriage ends.

Carriage Clasp Pins.—The projections 72, on the carriage ends, for holding the clasps in place.

Hammer Spring Adjusting Screw.—The screw-threaded stem 63, surmounted by a nut to the right of the hammer on the escapement shield, as viewed from the rear.

Hammer Spring Adjusting Nut.—The milled nut 64, on the hammer spring adjusting screw.

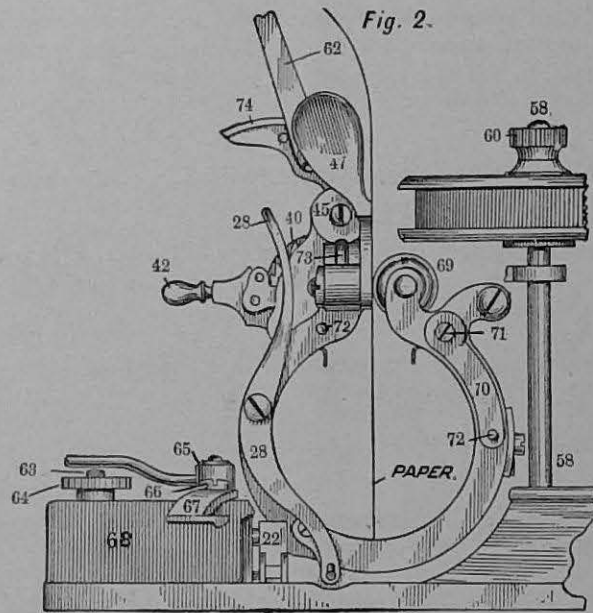
Carriage Rack.—The toothed bar 22, on the under side of the carriage.

Ribbon Spool Tightening Nut.—The milled nut 60, on the upper end of each ribbon spool shaft.

Paper Rest.—The pivoted swinging piece 62, attached to the upper part of the carriage ends.

Line Feed Lever.—The broad lever 47, at the extreme left of the carriage. When moved to the right it works the ratchet lever by which the feed roll is revolved and the paper fed upward, the distance being determined by the adjustment or set of the line feed regulator; a spring automatically returns the line feed lever to position as soon as pressure is removed.

Line Feed Regulator.—The cylindrical nut 45 (with milled edge), at the left end of the carriage, and against which the line feed lever strikes when moved to the right. When this nut is at rest, its notch should engage the spring-pressed pin beneath it; this is accomplished by turning the nut, if at all, once, or else twice, or else thrice, completely round. Four variations in line spacing are controlled by means of the line feed regulator. The nearer it is set (by turning with the left hand from you) to the line feed lever, the less will the paper be fed upward for line spacing; and conversely, the farther it is set from the line feed lever (by turning the line feed regulator toward you), the greater the distance between the lines of writing.

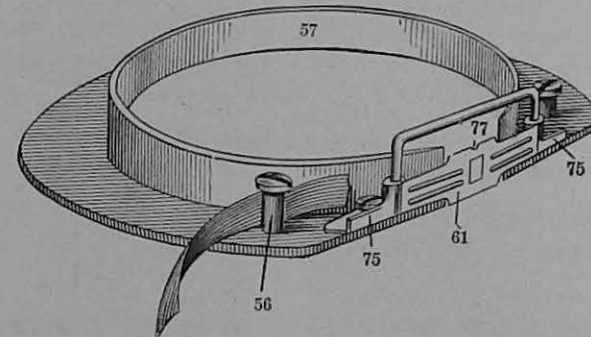


Feed Roll, Ratchet Pawl and Handle.—The rearwardly projecting handle 42, at the left end and back side of the feed roll (and not in view to the operator sitting in front of the machine—the operating position in reference to which the terms front, back, left, right, etc. are used). To disengage the pawl from the ratchet wheel, so that the feed roll may be freely revolved, raise (with the left hand) the feed pawl handle; on letting go, give to the feed pawl handle a slight downward pressure, in order to insure the engagement of the pawl with the ratchet wheel.

Disengaging Lever.—The lever 28, directly attached to the left carriage end, and conforming thereto in shape. It is used whenever it is desired to move the carriage faster than the step-by-step motion effected by means of the spacing key. To operate it, place the left thumb against the left end of the carriage in front, just under the erasing plate, and the first two fingers of the left hand against the lever, the forefinger against the blade; then, before exerting pressure on the lever, press towards the right upon the carriage end until the force of the carriage spring is overcome; then compress the fingers upon the

lever, taking care to hold firmly; then move the carriage in either direction to the point desired. Keep the carriage balanced against the force of the carriage spring until after the disengaging lever is released.

Fig. 3.



Escapement Shield.—The black japanned casting 68, behind the carriage, covering the escapement mechanism.

Carriage Stop.—The sliding and adjustable piece 65, fitting in the slot of the escapement shield. It is fastened by turning its handle toward the rear, and loosened by turning the same parallel to the slot.

Erasing Plate.—The curved plate 74, connecting the upper parts of the carriage ends. To make an erasure, raise the paper to the proper height without removing it, and allow it to rest on the erasing plate. Return it to position, as hereinafter described under "Corrections."

Ribbon Shield.—The thin metal strip 61, which protects the paper from the ribbon. If the ink, by reason of the freshness of the ribbon, should set off upon the ribbon shield, the latter, thus soiled, will smut the paper. When this is noticed, especially when the paper shows traces of ink in the spaces between the words, the shield should be lifted out of its sockets by means of its wire holder, and cleaned on the side facing the paper by gently wiping it with a soft cloth. This is a difficulty but seldom experienced if a well made ribbon such as supplied by us be used in the machine. Many of the cheap, poorly inked ribbons now in the market are liable to produce very unsatisfactory results. The shields will last a long time; but if injured or

broken, they can be quickly replaced by new ones at a slight expense. A notch in the upper edge of the shield directly over the opening in the same, indicates that immediately below it, in a vertical line, the impression is made. In commencing a new paragraph, if it is desired to begin it the same distance from the margin as the preceding one, it is only necessary to move the carriage so that the first letter of the preceding paragraph is vertically over the notch in the shield. For tabular work, especially, the said notch is of great assistance, enabling the work to be speedily executed.

Line Guides.—The guides 75, on the flanges of the type wheel guard near the paper. The sockets of the guides hold the ribbon shield.

Ribbon Guide Screws.—The screws 56, on the flange of the type wheel guard. The ribbon should pass between the screws and the guard.

Ribbon Shield Notch.—The notch 77, in the middle of the upper edge of the ribbon shield.

PRELIMINARY TO OPERATION.—In transportation the carriage clamps are adjusted to bear on the carriage rack, a piece of paper, or other soft substance, being interposed between the parts to prevent defacement of the rack. The carriage clasps on the carriage ends are also adjusted to span the opening therein. To release the carriage so that it may be free to move, loosen, without removing, the carriage clamp screws, and turn the carriage clamps on the screws as a pivot until they abut against the sides of the escapement shield. The screws should then be again tightened to hold the carriage clamps in their inoperative positions. To open the carriage ends so that paper of any width may be inserted, loosen, without removing, the carriage clasp screws and disengage the clasps from the clasp pins on the opposite side of the opening in the carriage ends, swinging them around on the screws as a pivot to engage the clasp pins on the same side of the said openings, finally again tightening the clasp screws to hold the clasps in their inoperative positions. In case of re-shipment, these carriage clamps and clasps should be returned to their original and operative positions. The ribbon spools are also both fastened to their shafts in shipment; and before any attempt is made to operate the machine, one of them—the one having the greater length of ribbon thereon—should be loosened by giving a few backward turns to the

thumb nut projecting centrally above it. The other should not be disturbed; or, if loose, should be tightened. This precaution of inspecting the ribbon spools before operating the machine should never be neglected. If at any time the keys work hard, it will be evidence that the ribbon spools have not received proper attention.

OPERATION.

ADJUSTMENT OF PAPER.—Always use two sheets; one, preferably a thick sheet, for a backing, as this will prevent any indentation of the paper. Depress the feed roll opener to separate the feed rolls. Drop the paper between them, letting it fall so that its lower edge rests on the bottom of the cylinder, and at the same time adjust the paper to within one-half an inch, more or less, of the left carriage end. Raise the feed roll opener, so that the rolls may come together and hold the paper firmly between them. If the paper has been allowed to drop to the bottom of the cylinder, it will be found that it is held straight. If a roll of paper or a wide sheet is to be inserted, it can be most conveniently done at the right carriage end by passing the edge of the sheet between the separated rolls. As the carriage will hold any width of paper, it is evident that any desired margin may be left on either side of the writing. It is best to roll a very long and wide sheet before inserting, so as to avoid creasing the paper. Next raise and hold the feed pawl handle with the left hand, and with the right turn the feed roll knob toward the front until the paper has been lowered to the desired position to begin writing. Then release the feed pawl handle, and in doing so give it a final and slight downward pressure to insure the engagement of the pawl with the ratchet wheel. Take hold of the left carriage end where the erasing plate is attached, and push the carriage to the right as far as it will go. The wider the margin desired, the further to the left should the carriage stop be placed. The notch in the top edge of the ribbon shield indicates the point immediately below which each character will be presented to, and printed on, the paper, and the operator can, therefore, see where to begin the line of writing, and does not for this purpose need a scale. Before proceeding to write, the line feed regulator should be adjusted to the interlinear space desired, by turning it one or more times in either direction. The third adjustment of the regulator, *i. e.*, the next to the widest, is preferred for general use. Having printed the first line, push the carriage back against the carriage stop by pressing toward the right

on the line feed lever, upon releasing which, after the carriage has been brought against the stop, the paper will be fed up automatically for a new line. If it is desired to push back the carriage without throwing up the paper, it should be done by taking hold of the left carriage end at the top above the line feed lever, and the latter should not be touched.

TOUCH AND FINGERING.—As the impression hammer is impelled by a spring, and as the key-levers merely operate to release this spring, so that it can act to impel the hammer, it will be readily understood that no greater force need be used in depressing the keys than is required to bring the type wheel to the printing position and release its impelling spring, and that to employ a greater force than this involves a useless waste of power. As the movement imparted to the key-levers cannot give an impetus to the impression hammer, there is no necessity for using a staccato touch in operating the keys, and the operator may save much labor by avoiding this touch. A touch more nearly legato than staccato will be found more conducive to great speed and to ease and skill of operation. Further, as the key-levers operate to oscillate the type wheel, so as to bring each character thereon opposite the impression hammer, it is, of course, essential that each key-lever should be fully depressed, otherwise the type wheel will not be carried to the proper position. As but little power is required to manipulate the keys, the operator will experience no difficulty in fully depressing them. If, however, the operator uses the staccato touch, striking at the keys from a distance and rapidly recoiling therefrom, there will be an occasional failure to fully depress them, especially those keys located near the ends of the key board, and thus an imperfect impression will be made on the paper. With the proper touch, which may be fairly described as consisting in placing the finger on the key and depressing it, rather than striking at it from a distance to depress it, no imperfect printing can result, unless the operator is exceedingly careless. In operating the keys, all the fingers of each hand can and should be brought into use, as this will aid in acquiring speed and the proper touch. If these instructions as to touch and fingering are followed it will be impossible to do imperfect printing or to fail in acquiring great speed. Properly operated, the Hammond Typewriter is capable of almost incredible speed, over 700 characters per minute have been accomplished; the astounding speed of 3023 correct finger movements have been made in five consecutive minutes, and the limit

has not been reached yet, as no operator can be found who is capable of over-tasking the machine.

CORRECTIONS.—To insert a word or character accidentally omitted, if the omission is discovered before the paper is fed up for the next line, it is only necessary to move the carriage until the place where the omission has occurred is directly below the notch in the shield. The omitted character can then be printed in perfect alignment with the others. To see whether the paper is in proper position, press back on it below the erasing plate with the finger, and the writing in front of the shield can be seen. Any word or letter just written can be brought to view below the shield by turning the feed roll knob toward the operator (without touching the pawl handle), taking care not to release the knob suddenly. To press back the paper is, however, the easier and quicker method. If the paper has been fed up more or less before the discovery of an error or omission, it should be fed down by turning the feed roll, first lifting the feed pawl handle, as before described. The feed roll should be turned until the lower edge of the line of writing to be corrected is exactly on a line with the edge of one or the other of the two line guides. If then, on releasing the pawl handle and giving the final and downward pressure to the same, the paper is thereby slightly shifted so that the lower edge of the line of writing is either a little below or a little above the line guide, it can be brought to the desired position—if two sheets have been inserted as recommended—in the following manner: If the lower edge of the line of writing is below the line guide, turn the front roll by hand so as to move the paper up until the proper alignment is secured. If it is above, lift the pawl handle again and turn the feed roll so as to bring the lower edge of the line of writing a little below the line guide. The pawl handle should then be released and depressed, and if the lower edge of the line of writing is still below the line guide, the paper should be raised by slightly turning the front roll, as before described. The carriage may now be moved to the proper place and the letter inserted, as already described. If the printed paper has been removed from the machine and is to be re-inserted to continue the writing or to make a correction, the carriage should first be pushed against the stop and the paper then inserted and shifted laterally, before closing the rolls, until the first letter of a line is directly over the notch in the ribbon shield. The rolls should then be closed, and the paper fed up or down and adjusted by the line guide, as may be required to bring it into proper alignment.

If manifolding is being done on the machine, and the paper is to be turned down to make a correction, the front roll should not be disturbed; the adjustment to the line guide being effected, in this case, by pulling the paper by hand the necessary distance upwardly through the unseparated rolls.

MANIFOLDING.—Prepare the paper in the usual way, by laying down a sheet of manifold paper and then a sheet of carbon paper, with the carbon surface downward, on top of it, and continue until the necessary number of sheets have been arranged. Insert the paper in the carriage, together with a sheet of ordinarily hard paper behind the paper prepared for manifolding, and proceed with the work. As there are various kinds of carbon in the market, many of which are of inferior qualities, we suggest when parties do not obtain satisfactory results with their carbon, that they order from us. If tissue copies are wanted, the double carbon paper should be used, and alternating with each of the tissue sheets, so that an impression may be made on both sides of the tissue sheets. The hammer spring thumb nut at the right of the hammer (from the rear) should be used to give a stronger blow to the hammer when it is required. Should the carriage move sluggishly, if the tension of the hammer spring has been increased, it will be necessary to increase the tension of the mainspring, which can be done as follows: Pass the winding key through the hole in the rear side of the case and apply it to the shaft of the spring barrel, and, while holding the key firmly and giving it a very slight pressure to the right, pull up the vertical holding pin projecting through the escapement shield, so as to release the shaft. The latter can then be turned in either direction, and the pin, having been released, will return automatically to position at every quarter turn of the shaft. If it is necessary to give more than a quarter turn to the shaft, then the holding pin should be held until the shaft has been turned to the extent desired. More than two additional turns should never be given to the shaft of the main spring. Now observe whether the carriage moves freely from end to end. If not, give an additional quarter turn to the shaft. No greater tension should be given to the carriage spring than is sufficient to move it freely from one end to the other. If it is desired to reduce the tension of the spring, the holding pin should be raised and the shaft turned to the left a quarter or half turn, or more, as may be desired.

THE SCALE.—It will be observed in writing that the number of impressions that have been made on the sheet of paper in a line

will be indicated on the scale by one of the two white lines on the edge of the key shield, either on the right or left side, according to the distance the carriage has moved.

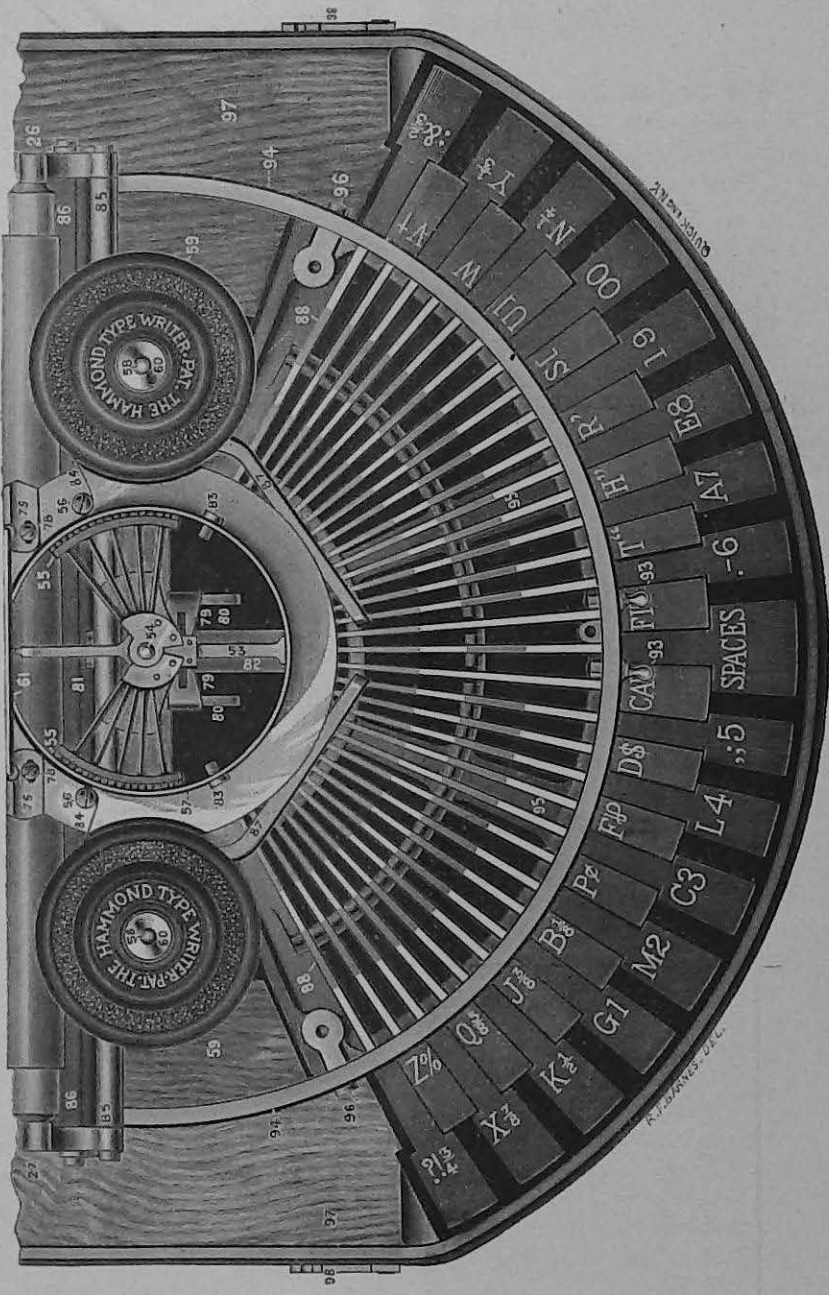
The use of the scale is twofold:—

1. To indent paragraphs uniformly. Should the paragraphs be of such length that it would be difficult to indent them correctly by the eye, then observe what number is opposite the white line on the right edge of the key shield when the proper indentation has been made. Commence each succeeding paragraph at this number.

2. To locate a heading exactly in the centre of a page. Ascertain the number of spaces required for the heading and the number covered by the paper. Subtract the less from the greater, dividing the remainder by 2, and the quotient will be the proper number at which to begin the heading. For instance, if the paper covers 82 spaces and the heading 16, the difference is 66; divided by two, equals 33. Beginning the heading at 33 at the scale, and same will be found exactly in the centre of the page, provided the left edge of the paper was opposite the notch in the ribbon shield when the figure 0 was opposite the white line on the right side of the key shield.

INSTRUCTIONS FOR CHANGING TYPE WHEELS.—To remove the type wheel, take hold of the hub with the thumb and second finger, press toward you on the knob of the catch with the first finger, and pull vertically upward. To replace type wheel, push it down until the catch snaps over the hub.

INSTRUCTIONS FOR ADJUSTING THE FEED ROLLS.—If the lines of writing on the sheet, instead of being parallel, converge at the right, the imperfect feeding of the paper, thereby indicated, can be corrected by proceeding as follows: Loosen, without removing, the two screws 52 (see Fig. 1), and then give a quarter turn or more backward to the screw 51, after which again tighten the screws 52. The effect of this will be to press the two feed rolls less firmly together than before at the right hand end, thus in effect increasing, at that end, the diameter of the larger roll, and causing the paper to be fed a greater distance than before. If one adjustment does not wholly correct the difficulty, the operation should be repeated until the feeding of the paper is the same at both ends of the rolls. Should the lines of writing diverge at the right, then, after the two screws 52 have been loosened, the screw 51 should be turned forward, more or less, as may be required.



FINGERING EXERCISES.—In operating, the keys to the right of the space-key should always be depressed by the fingers of the right hand, and those to the left thereof by the fingers of the left hand. The letters below in *Italics* are situated on the left of the space-key.

The figures, 1, 2, and 3, under the words of the exercises, indicate that the first, second, or third fingers are to be used.

To separate one word from another, depress the space-key at the end of each word, using the thumb of the *left* hand, except where it cannot be conveniently done.

When a capital letter is desired, the cap-key should be depressed by the forefinger of either hand, according to the position of the capital letter desired.

While the cap-key is held depressed by the forefinger, another finger of the same hand may be used to depress the desired key—if not too far removed from the cap-key. This rule applies also to the figure-key.

at	an	do	of	be	by	us	in	he	we	my	it	on	up	am	is	or	so	as	if	no	to	me	1
21	13	22	22	32	33	32	23	23	31	33	31	23	33	33	23	12	22	22	22	32	13	32	2
a	can	her	its	say	has	man	any	may	see	had	out	now	one	day	the	for	God	how					
1	213	122	313	313	213	313	123	313	322	212	231	312	231	218	122	221	322	123					
are	who	our	thy	his	all	let	yet	men	too	you	him	but	and	not	was	know	upon						
122	312	321	123	132	122	231	321	313	133	312	123	331	132	321	312	3212	2233						
work	long	time	well	very	part	only	take	good	unto	made	make	came	ever	your									
3213	1332	1332	3222	3123	2121	1223	1232	3222	2313	3122	2132	2132	1312	3121									

thou what Lord thee mind like most into that much love were been give have
 1232 3221 2212 1222 3131 2231 3321 1313 1221 3321 1221 3121 3113 3131 2132
 life than full come from them this just with they will word down must more when
 221 1213 222 2231 2233 1233 1223 3321 3212 1223 3222 3212 2123 3321 3212
 world human where thing white would every these after great other under heart
 32121 13313 31121 12333 31231 12333 31231 21221 13123 12233 22122 33321 31212 23212 23131
 those their truth first death power think shall there never which should little
 12321 12332 12312 22131 22312 22312 22312 22312 12233 32122 12333 31312 31221 212321 22112
 truly dear gentlemen nature spirit though object without between favor desire exact
 12323 212 21312213 321231 22121 122331 223221 32122331 3212233 22333 22333 22333 22333 22333 22333
 How long do you think we will have to wait before we hear from him in the matter?
 123 1233 22 312 12333 31 3222 2133 13 3121 22321 31 1212 2233 123 23 122 221122
 That others desire that which you state may be true, but I am sure I never will.
 1221 312123 1221 31221 312 21212 313 32 1231 331 2 13 3321 2 31312 3222
 Their death was a great blow, and it will be a long time before their places can be filled.
 12232 12219 312 1 32321 2123 132 31 3222 32 1 233 1322 22331 12232 21212 213 32 22221

While we are ever ready to meet all just demands, you have no right to expect more than we sent.
 31221 31 122 1312 22123 13 2221 122 3321 12221312 312 2132 32 23321 13 122221 3321 1212 31 2131
 Where, how, and when they managed to get out, our agent fails to state in his recent letter.
 31121 123 132 3212 1223 2131321 13 321 231 321 13131 2122 13 21212 23 132 312131 221122
 Without I first know the true reason, I can not and will not be a party to any such work.
 3212331 2 22121 3223 321 1231 1231 123 321 132 3222 321 32 1 21213 13 123 2321 3213
 That they will not come was to be expected as the notice given them was too short.
 1221 1223 3222 321 2231 312 13 32 13222121 12 122 321223 31313 1233 312 133 21321
 The first day he came I saw she would not like him, and so wrote you at once.
 122 22131 213 22 2132 2 213 212 21221 321 2231 123 132 23 31312 312 21 2322
 I have no reason to think that you would do anything but what was just and right.
 2 2132 32 221223 13 12233 1221 312 21221 22 12312233 331 3221 312 3321 132 22321
 I am confident these letters will meet every requirement, so will cheerfully await the summons.
 2 13 22322131 12232 2211233 3222 2221 13123 2232112131 23 3222 21222323 13121 122 2322232
 No one can object, I think, if we give the same favor to each and every one.
 32 231 213 22221 2 12233 22 31 3131 122 2122 11321 13 2121 132 13123 231

It is the nature of man to desire power and glory in this world.
 31 23 122 321321 22 313 18 712211 132 31213 23 1233 32121

For a long time I have been hard at work upon the first part of the story of my life.
 221 1 1233 1332 2 2132 3113 2121 21 3213 2223 122 23121 2131 22 123 21323 22 33 2221

We should very much like to know now the full truth for unless we do we can do nothing for you.
 31 21321 3133 3321 2231 13 3212 312 122 2222 13312 231 23222 31 22 31 213 22 3211232 231 312

As most of the work was not well done, you must come down and make it good or take it away.
 12 3321 22 122 3213 312 321 3222 1231 312 3321 2231 1232 132 2132 31 3222 32 1232 31 1313

Love the Lord thy God with all thy heart and it will be well with thee in the life to come.
 1221 122 2212 123 322 3212 122 123 23131 132 31 3222 32 3222 3212 1222 23 122 2221 13 2231

The very day he came he made every one, except you, do just what I said he would.
 122 3123 213 22 2132 22 3122 13123 231 131221 312 22 3331 3221 2 2121 22 21221

It was only for the love of fun that the gentlemen did it, but it will cost them dear.
 31 312 1223 221 122 1221 22 123 1221 122 213172213 121 31 331 31 3222 2331 1233 1212

It is more than I can see how any one can call his a great mind after today. I never shall.
 31 23 3321 1212 2 213 322 123 123 231 213 211 132 1 32321 3131 22122 13213 2 31312 32122

They sent us word that we were expected, but it was then too late; so they had to do without our aid.
 1233 2131 32 32112 1221 31 3121 13222121 331 31 312 1323 133 1212 33 1233 212 13 22 3212231 321 121

"Come unto me" was the subject of his remarks, and the applications made were forcible.
 2231 2313 32 312 122 332221 22 132 2121232 132 122 222122212333 3122 3121 2322212

I can see no reason why you should not come here for a little while if you have the time to spare.
 2 213 322 32 221223 313 312 312 312321 321 2231 1121 221 1 221122 31221 22 312 2132 122 1332 13 22121

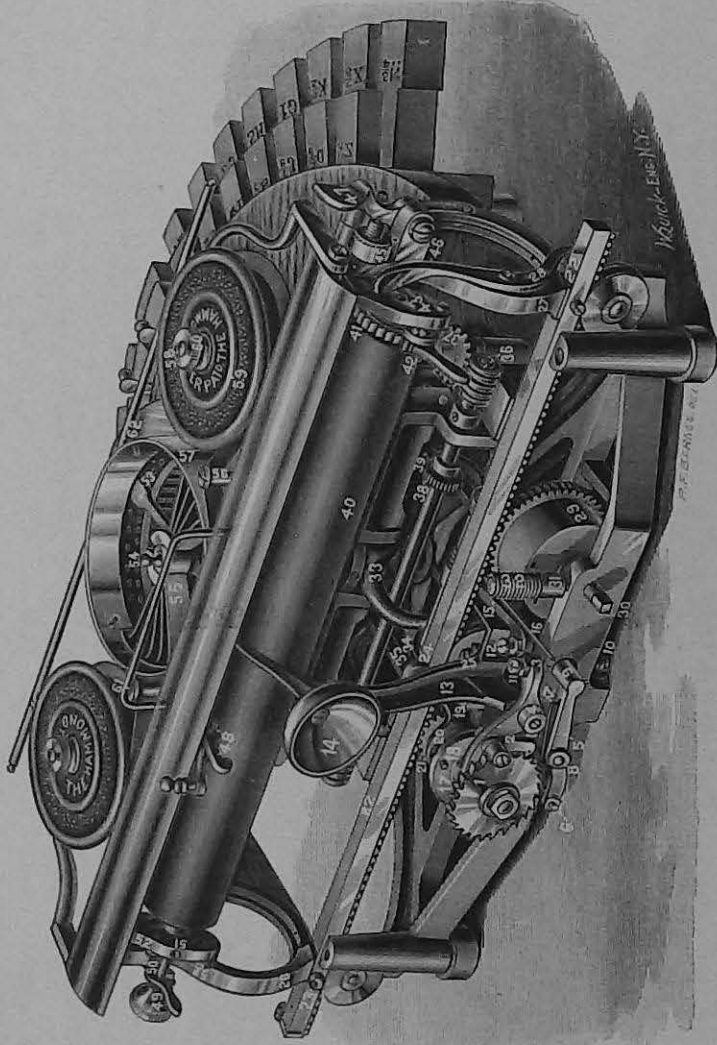
Under her influence a spirit of kindness took the place of revenge, and they parted friends.
 23212 122 222131322 1 222121 22 32313122 1333 122 21122 22 2131332 132 1223 212121 2233312

Its bad effect has been truly shown by the results, and cannot be denied by any one
 313 211 222221 213 3113 12323 21233 33 122 2123112 132 213321 32 113211 33 133 231

The human mind is too apt to judge from appearances, forgetting that the coat does not make the man.
 122 13313 3131 23 133 121 13 33122 2233 12231213212 232211333 1221 122 2321 3312 321 2132 122 313

Who let her into the house at so early an hour is really more than I can tell.
 312 221 122 1313 122 13221 21 23 21223 13 1232 23 221173 2321 1213 2 213 1222

It has been my custom for many years to have my friends up to see me on stated occasions.
 31 213 3113 33 332132 221 2123 13 2132 33 2233312 33 13 322 32 23 312121 32213232



- | | | |
|---|--|-----------------------------------|
| 1. Escapement Wheel. | 33. Space Hook. | 65. Carriage Stop. |
| 2. Escapement Pawl. | 34. Hammer Hook. | 66. Carriage Clamp Screws. |
| 3. Hammer Lever. | 35. Trip Frame. | 67. Carriage Clamp. |
| 4. Hammer Universal Joint. | 36. Ribbon Spool Shaft Worm (R. & L.). | 68. Escapement Shield. |
| 5. Escapement Lever. | 37. Ribbon Spool Shaft Gear Wheel. | 69. Small Feed Roll. |
| 6. Escapement Lever Stop Pawl. | 38. Ribbon Feed Ratchet Wheel. | 70. Carriage Clasp. |
| 7. Escapement Lever Stop Pawl. | 39. Ribbon Feed Ratchet Pawl. | 71. Carriage Clasp Screws. |
| 8. Escapement Lever Shaft. | 40. Large Feed Roll. | 72. Carriage Clasp Pins. |
| 9. Escapement Lever Arm. | 41. Feed Roll Ratchet Wheel. | 73. Line Feed Regulator Stop Pin. |
| 10. Escapement Lever Stop Screw. | 42. Feed Roll Ratchet Pawl and Handle. | 74. Erasing Plate. |
| 11. Hammer Lever Stop Screw. | 43. Feed Roll Hanger. | 75. Line Guides. |
| 12. Trip Frame Adjusting Screw, | 44. Feed Roll Ratchet Lever. | 76. Impression Strip. |
| 13. Hammer. | 45. Line Feed Regulator. | 77. Ribbon Shield Notch. |
| 14. Bell. | 46. Line Feed Lever Screw. | 78. Line Guide Screws. |
| 15. Trip Frame Arm. | 47. Line Feed Lever. | 79. Driver Arm Fingers. |
| 16. Hammer Spring. | 48. Bell Striker. | 80. Driver Arm. |
| 17. Escapement Flange. | 49. Feed Roll Knob. | 81. Front Guide Roll. |
| 18. Escapement Flange Pawl Screw. | 50. Feed Roll Opener. | 82. Top Centre piece. |
| 19. Disengaging Sleeve. | 51. Feed Roll Adjuster Set Screw. | 83. Type Wheel Stops. |
| 20. Escapement Flange Pawl. | 52. Feed Roll Adjuster Screws. | 84. Ribbon. |
| 21. Carriage Rack and Ratchet Wheel. | 53. Stop Arm. | 85. Front Guide Rod. |
| 22. Carriage Rack. | 54. Type Wheel, Shaft and Catch. | 86. Paper Cylinder. |
| 23. Eccentric Stop. | 55. Type Wheel. | 87. Type Wheel Driver Levers. |
| 24. Rack Guide Roll and Angle-piece. | 56. Ribbon Guide Screws. | 88. Key Levers. |
| 25. Angle-piece Screw. | 57. Type Wheel Guard. | 89. Feed Roll Adjuster. |
| 26. Right Carriage End. | 58. Ribbon Spool Shafts. | 93. Cap and Fig. Lock Levers. |
| 27. Left Carriage End. | 59. Ribbon Spools. | 94. Key Lever Retainer. |
| 28. Disengaging Lever. | 60. Ribbon Spool Tightening Nut. | 95. Bed Plate. |
| 29. Mainspring Barrel. | 61. Ribbon Shield. | 96. Key Lever Retainer Screws. |
| 30. Mainspring Shaft. | 62. Paper Rest. | 97. Base of Case. |
| 31. Mainspring Shaft Holding Pin. | 63. Hammer Spring Adjusting Screw. | 98. Cover Clasps. |
| 32. Mainspring Shaft Holding-pin Spring | 64. Hammer Spring Adjusting Nut. | |

RIBBON SPOOLS.—The machine, when shipped, has both ribbon spools fast. One of them should be loosened, as before explained, and the other kept tight until the ribbon has wound off from the loose spool, and the white tape to which it is attached begins to appear. The loose nut should be then tightened and the other spool made free. A little practice soon enables one to remove and replace the ribbon spools and ribbon when inks—lithographic, record, copying, etc.—require to be changed, one for the other. The ribbon should be inside the guide screws. It will be found desirable to have extra ribbons with spools, so that no handling of ribbons will be necessary by the operator.

TO MAKE LETTER-PRESS COPIES.—Lay the sheet of the letter-book over the oiled sheet, and dampen with a brush in the usual way until the color of the underlying oiled sheet is visible throughout; remove the excessive moisture with a blotter, leaving it damper, however, than for ordinary letter-press copying; then lay the letter to be copied, written side down, on the dampened sheet, and place thereon another oiled sheet. Press the letter-book in the copying press, allowing it to remain there from a few seconds to half a minute, according to the freshness or the dryness of the ribbon. If the ribbon is very fresh, the sheet to receive the copy needs less moisture as well as pressure. Moist blotter pads are frequently preferred to the method of dampening with a brush, and uniformly better results are secured by their use. Some of the users of our machines make single carbon copies of their letters instead of letter-press copies, finding it convenient to attach the manifold copy of the answer to the original letter to be filed away, thereby also effecting a slight saving of time.

CARE OF MACHINE.—No oil is necessary on any part of the machine, except a very little around the pins by which the type wheels are driven. The type wheels also may be occasionally taken off the machine, and the steel bushings thoroughly wiped inside and out, as well as the shaft, and replaced with a little clock or fine machine oil on the wearing surface. Keep the machine covered, so as to exclude dust at all times when not in use, and wipe its nickel-plated and other accessible parts daily with a soft cloth or chamois skin.

RETURN OF ARTICLES.—Whenever ribbon spools, type wheels, or other supplies are sent to the company, the name of the sender should be written on a slip of paper and enclosed in the box with the article, or marked on the wrapper of the package.