INTERIOR OF THE ENGLISH TELEGRAPH STATIONS.

CHAPTER XV.

Interior Arrangements of a Station—Rate of Signalling—The Strand Telegraph Station—The Public Receiving Department—Blank Forms of the English Telegraphs.

INTERIOR ARRANGEMENTS OF A STATION.

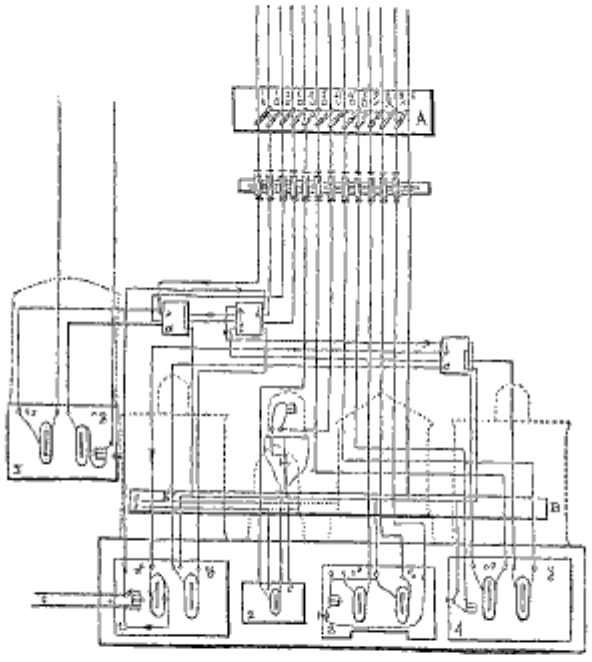
It is my purpose, in the present chapter, to describe the interior of an English telegraph station, embracing the operating

Fig 1.

and the business departments. It will be impossible, however, for me to give a full account of the immense business details common to the larger stations, such, for example, as the Lothbury, in London. I will make my remarks general; but on such things as will be sufficient to enable the foreign telegrapher to comprehend the peculiar routine. In presenting these explanations, I will avail myself of the views expressed by Mr. Charles V. Walker, a distinguished telegraphic engineer, and to whom the world is much indebted for many valuable and important improvements in the art of electric telegraphing.

For the purpose of illustrating the organization of the interior of an office, I will first explain the wire connections, which will be seen illustrated in fig. 2, as arranged upon the interior wall of the station at Tunbridge. This station is just midway be-

Fig. 2.

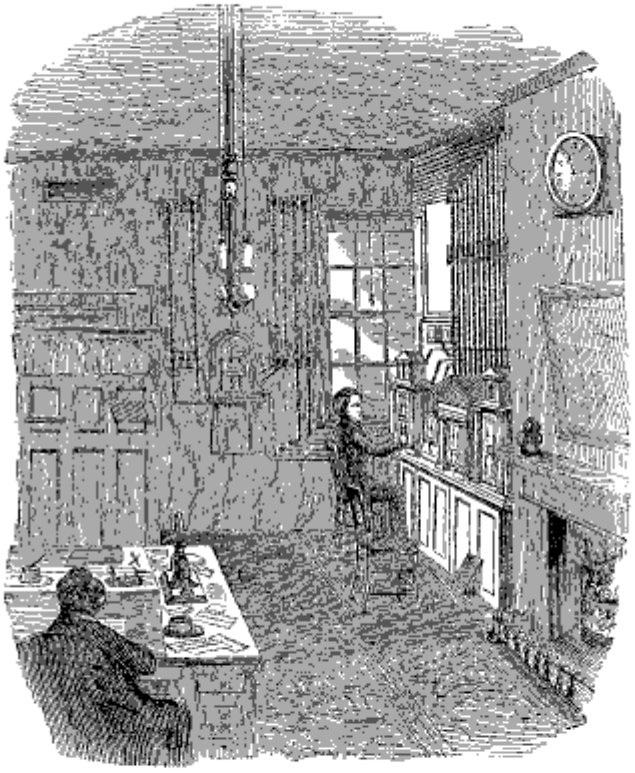


tween London and Dover. It is a commanding position upon the line, and it has charge of branch lines centring there; and, besides the supervision of the affairs on that range of lines, it is the first station from London, holding a position on the through wires, and from it the branch lines to Tunbridge Wells and to

Maidstone diverge. In regard to the station, Mr. Walker graphically writes, viz.:

"It is midway between the capital and the coast, and in a central position, in regard to the rest of the district. Here the conduct and management of the telegraph department is carried on: we have here our staff for maintaining the integrity of the line work, for cleaning and repairing the apparatus, and for keeping all stations supplied with battery power: and here we keep our stores. We befriend and assist all stations, and are their prime resource in time of distress and difficulty, helping on their messages when their own powers are crippled, and, under all circumstances, securing the successful working of the line.

Fig. 3.



"Fig. 3 is an accurate sketch of the interior of the Tunbridge office, just as it now appears. The telegraph table supports four instruments, and there is a fifth on a bracket on the wall. The

wires, which are cotton-covered copper, enter the room above the window, and passing on, are led in coils down the wainscot to their respective destinations. Some of the batteries are in the closet beneath the table, and others are in a battery-room across the station yard. The screen to the left is the Rubicon, beyond which, by the necessary rules of the telegraph service, the public are not allowed to pass.

"Fig. 2, which is drawn to scale, is a plan of the wires and instruments, shown in their places in fig. 3. The wires are numbered on their right to correspond. Nos. 7, 8, and 9, are the Tunbridge Wells wires; the letter U is put on the right side of the *up* wires, and the letter D on the *down* wires. An up wire is one that comes from the London side, a down wire from the Dover side. The last wire, marked E, is the earth wire, and is connected with the gas pipes.

"A is a mahogany tablet, carrying the old form of lightning conductors, one for each line-wire. A brass elbow, carrying points and a small ball, is attached to each wire, and a similar elbow is placed opposite to each, with the points and ball as near as possible to the other, without being in actual contact. This second set of elbows are screwed upon a slip of brass that leads from the earth-wire E, as shown at the upper part of the system. The principle is, that atmospheric charges, collected by the line-wires, shall discharge by the points or balls to the earth; and true enough, in thunder-storms, very vivid and loud discharges occur between these balls; but enough often remains to damage the instruments, so that these conductors are now rejected. The table next below A carries a set of lightning conductors on a new principle.

"B is a tablet carrying three brass rods. The upper one, E, is seen to be in connection with the earth-wire E, so that it is virtually a continuation of the earth-wire brought for convenience sake into near proximity to the back of the instruments. The others, marked *c* and *z*, are connected respectively with the copper and zinc ends of the battery. They extend along the tablet, and thus bring battery power close at hand to the instruments. I have drawn only a portion of them to prevent confusion.

"The table and its four instruments, shown in perspective in fig. 3, are here given in plan. The instrument next the window, at which the officer on duty is seated, is the through instrument, communicating with London and Dover. 2 is the single-needle instrument. It is the termination of a group, of which Ryegate is the commencement. 3 is one of two instruments, its companion being at Tunbridge Wells. 4 is the ter-

minal instrument of the Maidstone group; the other termination is at Maidstone. 5 is one of two instruments, its fellow being at my residence. To include it in this plan, I have moved it a little from its true position. The dotted lines are the outlines of the instruments themselves. The relation of these five instruments with those at other stations, may be readily gathered from the plan. On one instrument only, No. 2, have I shown how the terminals, *c* and *z*, are connected with the battery wires: brass wires are led down to them from the table B. I have shown the terminals *c* and *z* on the rest, but have omitted the wires to avoid crowding. I have given outlines of galvanometers and electro-magnets on all the instruments, that the connections may be traced. From the earth-wire E, a wire goes to all—to Nos. 1, 2, and 3, it passes *direct*, to 4 and 5 it arrives by a circuitous course, by the intervention of the turn-plates *a b c*. The wires that go from the *left*-hand side of the galvanometer all lead *up* the line, or toward London. Those from the *right*-hand side lead *down* the line, or *from* London. This may be seen by tracing the wires on the plan. When the wires cross in the plan, it must be understood that they do not touch each other. We can easily enough trace the wires that go uninterruptedly upward to the table A; but it requires some further description to understand what happens to those whose course is through a turn-plate.

"The turn-plate *c* is for putting the Maidstone branch in communication with London; the double action turn-plate *a* is for putting the superintendent's instrument into connecting with either London or Dover; the turn-plate *b* is for connecting both wires, either up or down the line, with the same needle coil, in the cases of connection between the line wires. I have not been able to give here a section of their cylinders, as the plan is on too small a scale. We will, however, show their application by tracing wire 1; first, while the through communication between London and Dover is open; and, secondly, when communication is established between London and Maidstone.

"Our first example will be the course of a signal passing from London to Dover. I have marked out this course by small arrow-heads. It enters the station by wire 1 up, the first wire to the left; it is led to the left side of the turn-plate *a*, which it enters by the second terminal; it passes *through* the box and the cylinder, and out on the other side by the terminal immediately opposite: the cylinder in this position has a bit of brass for this wire inlaid on either side, and connected by a brass bolt running through the cylinder. The current now passes in a direct line to the turn-plate *b*, entering it by the second ter-

minal on the left-hand side, and passing in the direction of the contiguous arrow-head, leaving it by the first or upper terminal on the same side. In this drum, when thus arranged, there is inlaid a slip of brass, of sufficient length to allow the springs of both these terminals to press upon it. The current now goes on to turn-plate *c*, which it enters by the first or upper terminal on the left, and comes out by the second on the same side, the connection being exactly similar to that last described. It now pursues its course without interruption, to the telegraph instrument, which it enters on the left-hand side of the left-hand coil: it circulates around the coil; and, on leaving it, circulates round the coil of the electro-magnet belonging to the alarum. Its course is then to the upper terminal on the right-hand side of turn-plate *b*, coming out by the second terminal on the same side, and so leaving the station to continue its course to Dover by down wire No. 1, D.

"We will now trace the course of the same up-wire 1, when the turn-plate *c* is so turned that London is put in communication with Maidstone. The current pursues the same course as before, until it arrives at the turn-plate *c*: it now enters it by the upper terminal on the left side, and passing through the box and drum, leaves it by the upper terminal on the right side; it then descends to the left-hand side of the left-hand coil of the Maidstone instrument, No. 4; passes round the coil, and continues its course to Maidstone by wire 3 down, which becomes the No. 1 of the Maidstone branch at Paddock Wood, as shown in the previous plan. But the turn-plates are so constructed, that while they make a particular connection for one part of the line, they provide perfectly for the part not so immediately concerned, by putting the wires that lead to that part in connection with the earth, and so the circuit is complete, as far as it goes. In the present instance, the same operation that turns 1 and 2 up-wires to Maidstone, connects the earth with the up side of the through instrument, and the communication is thus kept perfect between Dover and Tunbridge on the through instrument. By following with the eye, and in the reverse direction to the arrows, the wire that comes from the left coil of the through instrument, it is traced to the second terminal of the turn-plate *c*; the connection there is such, that the circuit is continued through the box and cylinder to the second terminal on the opposite side: this is in connection with the lower terminal on the same side, whence a wire descends to the common earth-wire. What has here been said of wire 1, equally holds good in respect to wire 2.

"Turn-plate *a* has allowed the circuit of wire 1 up to enter

one side and pass over to the other; but another position of the cylinder will close this circuit, and guide the current out by the terminal next above the one at which it enters. The wire from this terminal leads to the left side of the left coil of the instrument, No. 5; it passes out on the right side of the coil by the wire that passes upward, and which leads along part of the Tunbridge Wells branch line, and under the Hastings road to the companion-instrument in the superintendent's study.

"The action of this turn-plate may be better understood, by showing how it operates in its three positions upon the two wires that lead to it from the No. 5 instrument. When this circuit terminates at Tunbridge station the course of the current is *directly through* the box where there are three terminals, each connected with the earth by a common wire. When it is to be turned on and to terminate at London, the course is out of the box on the same side it enters; and when it is to terminate in Dover the course is through the drum, but so contrived as to come out by the pair of wires that pass between the two boxes, the arrangements being such that the earth is in each case connected with the circuit not then in use.

"It would occupy too much time to describe the course of the whole series of wires; but, from what has been said, the careful reader will have no difficulty in studing the disposition of each, as they are all faithfully traced and correctly numbered. And, by comparing this plan with the general plan of the line, there can be no great difficulty in connecting the special arrangements of this office with the general disposition of the line.

"The mode by which both wires, either *up* or *down*, are connected with the left needle, by turn-plate *b*, can be soon explained. When all is well the drum is so presented to the springs that strips of brass connect them in pairs, two pairs being on each side of the box. They were so connected when we traced the course of wire 1 just now. Suppose the wires *down* the line are connected, and it is desirable to join them both on the left needle-coil inside Tunbridge station: from the right-hand side of the box the top wire leads to the left needle, and the two middle wires are the down wires, we merely turn the cylinder and a long slip of brass presents itself, and presses on the three springs, connecting at once both wires with one needle, and leaving the other needle out of circuit. The same is done for the *up* wire by turning the handle in the reverse direction, and presenting the brass slip on the other side.

"The character of the bell circuit may be further illustrated from this plan. Wire 1 from London, in its course, after pass-

ing the left needle coil of No. 1 instrument has been seen to pass the bell-coil or electro-magnet, before it left the station on its way to Dover. The magnet would act and the bell ring; but if the bell-handle were turned, the current would mostly pass across at * by the stouter wires. These wires are continued round the room, and there is another bell-handle within reach of the clerk, who can make the short circuit at ⁂ without leaving his desk.

"The Maidstone branch bell, No. 4, is on a third wire, distinct from the needle-coil. Wire 5, D, descends to the electro-magnet; it is continued from the magnet to the ringing key; it is thence led upward, and joined to the earth-wire E′, on the tablet B. The Tunbridge Wells bell-wire 9 pursues a similar course; coming, however, first to the ringing key, and then to the electro-magnet, and away thence to the earth-wire. Wire 4, U, which comes from Ryegate, performs a similar office. I have given the outline of the bell-case, and the bracket on which it stands, to which latter the ringing-key is attached. As thus described, these three bells are always in circuit, and they are so arranged at all stations that have them; but here we have supplementary apparatus by which the short circuit can be made, when the noise of the bell, ringing for other stations, would interrupt business here.

"Fittings such as we have now described exist in all stations, limited in each according to the requirements of the station. But from this hasty sketch the most careless reader will have seen what great facilities may be gained by well-arranged means of intercommunication between the instruments. I might have enlarged upon the capabilities of this station, and have shown how we can take one part of a dispatch from Dover by the telegraph at one end of the table, at the same time we are sending another part on to London by that at the other; how we can cut off the line and test its character; how we can watch the variations in insulation or the augmentation of resistance, and feel out the weaker points and provide remedies; and how the eye of the chief officer of the department can command the whole line by night from his home, as well as by day from his office, and quick as thought can transmit instructions in all emergencies, in season and out of season; but I must pass on."

RATE OF SIGNALLING.

The rate at which newspaper dispatches are transmitted from Dover to London, is a good illustration of the perfect state

to which the needle telegraph has attained, and of the apt manipulation of the officers in charge. The mail, which leaves Paris about mid-day, conveys to England dispatches containing the latest news, which are intended to appear in the whole impression of the morning paper. To this end, it is necessary that a copy be delivered to the editor in London about three o'clock, A. M. The dispatches are given to the telegrapher at Dover soon after the arrival of the boat, which, of course, depends on the wind and the weather. The officer on duty at Dover, having first hastily glanced through the manuscript, to see that all is clear to him and legible, calls London, and commences the transmission. The nature of these dispatches may be daily seen by reference to the *Times*. The miscellaneous character of the intelligence therein contained, and the continual fresh names of persons and places, make them a fair sample for illustrating the capabilities of the electric telegraph as it now is. The clerk, who is all alone, placing the paper before him in a good light, and seated at the instrument, delivers the dispatch, letter by letter, and word by word, to his correspondent in London; and, although the eye is transferred rapidly from the manuscript copy to the telegraph instrument, and both hands are occupied at the latter, he very rarely has cause to pause in his progress, and as rarely also does he commit an error. And, on account of the extremely limited time within which the whole operation must be compressed, he is not able, like the printer, to correct his copy.

At London, there are two clerks on duty, one to read the signals as they come, and the other to write. They have previously arranged their books and papers; and, as soon as the signal for preparation is given, the writer sits before his manifold book, and the reader gives him distinctly word for word as it arrives: meanwhile, a messenger has been dispatched for a cab, which now waits in readiness. When the dispatch is completed, the clerk who has received it, reads through the manuscript of the other, in order to see that he has not misunderstood him in any word. The hours and minutes of commencing and ending are noted, and the copy being signed, is sent under official seal to its destination, the manifold facsimile being retained as the office copy, to authenticate verbatim what has been delivered. This copy and the original meet together at the chief telegraph office at Tunbridge, early in the day, and are compared. When the work is over, and the dispatches have reached their destination, the clerks count over the number of words and the number of minutes, and find the rate per minute. From twelve to fifteen words per minute has become

a very ordinary rate; seventeen or eighteen words per minute is of very common occurrence, and even twenty words. Indeed, when all is well, and the insulation is good, seventeen or eighteen words is likely to be the average.

In 1849, Mr. Walker selected eleven messages, the minimum of which was 73 words, and the maximum was 364 words. The aggregate number of words was 2,638. The total time occupied in the transmission of these eleven messages was 162 minutes, making an average of $16\frac{1}{4}$ words per minute.

In 1854, while I was in London, Mr. Foudrinier, the secretary of the Electric Telegraph Company, instituted an inquiry in regard to the celerity of the signalling then in practice. He selected eleven messages, containing in the aggregate 244 words, and the time required to transmit them was 689 seconds, or at the rate of $21\frac{1}{3}$ words per minute. This trial was made on the English double-needle telegraph. At this experiment, the minimum celerity was $16\frac{3}{4}$ words per minute, and the maximum was $24\frac{1}{2}$ words per minute.

While visiting the office of the Magnetic Telegraph Company, in Liverpool, in 1854, I was informed by the brothers Bright, that, with their apparatus, the average celerity attained at a trial was $27\frac{1}{3}$ words per minute; the maximum was $37\frac{1}{6}$ words per minute. The apparatus used by the Magnetic Company is described elsewhere in this work, as employing magneto-electricity. An opinion is entertained by the friends of this improvement, that the increased celerity in the last experiments cited, was owing to the use of this species of electricity.

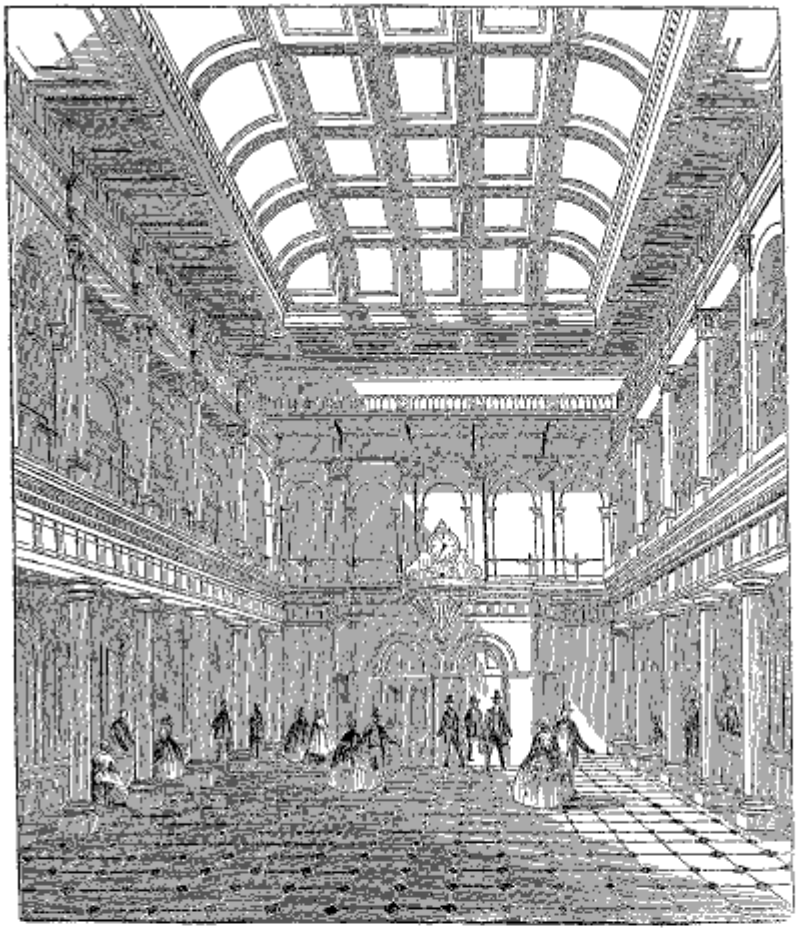
THE STRAND TELEGRAPH STATION.

I have explained to the reader the arrangement of the wires in a station, and there is but little left for me to say in regard to the operating department. Fig. 1 is a view of the operating room of the telegraph office on the Strand, Charing Cross, London. I have visited this office frequently, and I recognize the drawing as very correct. In this office, I saw several young ladies employed in the service of the company. To the right, in the figure, are two ladies seated, one of them is watching the signals, and repeating the words thus formed to the other, who is engaged in writing the message as thus given. At the centre apparatus is a male operator transmitting; and to the left is a female operator, also transmitting. In the middle, sitting by a table, is employed a clerk, preparing the messages for delivery. In front and to the left, are two male operators engaged in sending by the Bain chemical telegraph instru-

ments. This room is on the second floor. On the first floor is the public reception-room. Figs. 2 and 3 have been already described.

THE PUBLIC RECEIVING DEPARTMENT.

Fig. 4.



The public business room of the station is separate from the operating department. Fig. 4 represents the receiving room of the great Lothbury station, London. In this room will be found

one or more clerks for the reception of dispatches from the public. Arrangements are made to give the public an opportunity to prepare their messages in private; no one can overlook and see what another is writing. Great regard has been given to this subject. Blanks are furnished, and upon these blanks are written the message desired to be sent, and all dispatches offered must be signed by the sender. If messages are brought into an office on plain paper, the person bringing such is requested to copy the communication upon the printed forms provided by the company. If it is not copied or written on the company's forms, it is refused. If the customer cannot write, one of the company's clerks copies the message, reads it to the customer, keeps the original, and obtains the signature or mark of the person, at the foot of the company's paper. The message is then sent, the company being free from liability.

Printed forms have been used by the telegraph companies in England from the first established lines. The difference of cost between ordinary paper and the printed forms is very small, and the printed headings facilitate the registration; and the defined position of the address from and to, and of the body of the message, materially aids the instrument clerk in forwarding the communication. To all good customers small books of forms are issued. Larger books lie at the places of general resort (such as the exchanges, reading rooms, &c., &c.); while casual customers find forms ready at the company's offices upon counters of a height suited for writing, when standing, and subdivided into spaces, with fluted glass screens between each, to prevent, as before stated, any person seeing another's message.

As a commercial affair the companies regard the use of the blank forms as indispensably necessary, so that the stipulations thereon printed shall become the conditions upon which the company agrees to send the message, and upon which the sender presents the same for transmission, all duly signed by him.

When the message is thus presented, every condition contained on the blank forms a contract. Being legally signed by the sender completes it upon his part. The reception of the money for its transmission by the company, completes the contract by both parties. They are from that moment bound and responsible according to the stipulations therein set forth, and from which neither party can recede without the consent of the other.

The company's cashier quickly counts the words in the body of the message (the address not being included, but passing

free), endorses the message, and writes a receipt of the amount; the customer is handed the *receipt*, upon the money being paid. Parties sending messages are advised to write them distinctly; and the cashier reads the message, in order to see that the writing is legible, before handing it through to the instrument room.

The cashier enters upon a list, opposite to the consecutive number of the message, the amount received; and, on being passed through to the instrument room, the lad receiving the message marks the number upon a similar list, and sends the message to the instrument for which it is intended. The clerk at the instrument then dispatches it to or toward its destination, receiving an affirmative or negative signal after each word; if the latter, the word is repeated, not having been rightly understood by the receiving clerk at the distant station. So commencing the message, the *sending* clerk signals the number of words the message contains (previously inscribed on the paper by the cashier), and, as soon as completed, the *receiving* clerk's writer counts the number of words received, to see that the message is correct as to length; and, as will have been seen, the "understand" or "not understand" signals after each word, check the words themselves—admitting, when the system is carefully carried out, of little possibility of mistake.

In the foregoing I have embodied the routine observed in the *chief* stations. In small stations, where there is no great influx of messages, the checking is not carried out to such an extent.

As soon as the message has been sent, it is returned to the checking lad, who files it, and draws his pen through its consecutive number, to intimate that, as far as the due forwarding is concerned, the company have performed their duty, and it is his business to see that the signal clerk has endorsed upon the document the time at which he sent it, the station to which he signalled it, and his initials. By such an arrangement all chance of a message being mislaid is avoided; as, if the communication is not returned in a quarter of an hour to have its number marked off the list, it is the duty of the checking clerk to inquire after it, and to ascertain why it has not been dispatched.

Very little time is lost in such an arrangement, and the chance of error of any nature greatly diminished.

BUSINESS FORMS OF THE ENGLISH TELEGRAPHS.

I annex a series of blank forms used by the respective telegraph companies in Great Britain. They are herein presented in their adopted form, and about the same size, as those in use by the lines in England. I also give the blank receipts and account forms.

Document A is a blank form, which is used by the public in the presentation of a message, to be transmitted by the telegraph company. The two pages represent the face of the blank form in which the message is written, and the heading is to be filled by the company's clerk. The patron signs the message. Documents B and C are printed on the back of the sheet on which the message is written, represented by document A.

These forms present the tariff of insurance and assumed responsibility. Document D is the head or caption of a message as sent to the public. The face of the sheet is about the size of the usual letter paper, only half of the blank being represented by document D.

Document E is a blank used by the companies for messages received from a distant office, and which is to be transmitted further by another line. The size of this blank is the same as document A, only half of the sheet being represented. The forms at the bottom of the page are to be filled, and then sent to the next line. In order to prevent confusion, the blanks are printed in different colored inks.

Document F is the form of an account sent out with the messenger, accompanying a message for collection.

Document G is the form of a receipt given the customer, on the reception of his message for transmission, at the counter of the company by the cashier.

Doc. B.

THE ELECTRIC TELEGRAPH COMPANY.

CONDITIONS AS TO UNINSURED MESSAGES.

The Public are informed that, in order to provide against Mistakes in the transmission of MESSAGES by the ELECTRIC TELEGRAPH, every Message of consequence ought to be REPEATED by being sent back from the Station at which it is to be received, to the Station from which it is originally sent. Half the usual price for transmission will be charged for repeating the Message. The Company will not be responsible for Mistakes in the transmission of unrepeated Messages, from whatever cause they may arise. Nor will the Company be responsible for Mistakes in the transmission of a repeated Message, nor for delay in the transmission or delivery, nor for non-transmission or non-delivery of any Message, whether repeated or unrepeated, to any extent above £5, unless it be insured.

Correctness in the transmission of Messages can be Insured at the following rates in addition to the usual charge for repetition —

	£	s.	d.		£	s.	d.		£	s.	d.
For any Sum up to £100	1	0	0	Above £400 to £500	5	0	0	Above £700 to £ 800	8	0	0
Above £100 to £200	2	0	0	£500 to £600	6	0	0	£800 to £ 900	9	0	0
£200 to £300	3	0	0	£600 to £700	7	0	0	£900 to £1000	10	0	0
£300 to £400	4	0	0								

and 20*s.* for every £100, or fraction of £100 above that sum; and the Company will not be responsible for any amount beyond the sum for which the Message is insured and the rates paid.—The Company will not be responsible in any case for delays arising from interruptions in the working of their Telegraphs.

J. L. RICARDO, *Chairman.*

Doc. A.

THE ELECTRIC TELEGRAPH COMPANY.

STATION

Prefix ..... Code Time ..... No. .....

Received ..... *m*
Finished ..... *m*

Date 185
Sent to ..... *Station.*
by me ..... *Clerk.*

Message.....	"	"
Repeating.....	"	"
Reply.....	"	"
Porterage.....	'	"
To be paid out..	"	"
Total.....	'	'

(All numbers must be written at length in words.)

PLEASE TO SEND THE FOLLOWING UNINSURED MESSAGE ACCORDING TO THE CONDITIONS ENDORSED HEREON.

FROM

Name and Address of the Sender of the Message. .....

TO

Name and full Address of the Person to whom the Message is to be delivered. .....

.....

.....

.....

.....

Before Signing, please to see that the amount to be charged for the Message is correctly entered above, and on the receipt, and read the endorsed Conditions.

Signature and Address of Sender.

The Company will not be answerable for Errors caused by indistinct writing.

Doc. C.

NOTICE.—Messages to be sent to any places beyond the extent of the Company's Lines or Stations, will be delivered by the Company's officers at their terminal Station mentioned in the subjoined request, to such parties as may have charge of the further means of conveyance; but it is expressly provided that the Company are in no case to be held responsible for the transmission or delivery of the Message beyond the terminal Station in such request mentioned.

(REQUEST.)

*I request that this Message may be forwarded from the Company's Office at*_____

*(being the Terminal Station of the Company) by*_____

*to the address mentioned therein, subject to the above conditions, and have deposited*_____

to be applied for that purpose.

*Signed*_____

Doc. D.

THE ELECTRIC TELEGRAPH COMPANY.

Code / Time _____ **LONDON STATION.** No. of / Words _____

Received the following Message At _____ h _____ m the _____ day of _____ 185

Signed _____ Clerk.

From	*To*
Name _____	*Name* _____
Address _____	*Address* _____

☞ No inquiry respecting this Message can be attended to without the production of this paper.

Doc. E.

THE ELECTRIC TELEGRAPH COMPANY.

From ..... *Station.* *Code Time* .... *Station.*

To ..... *Station.* *No. of Words* 185

[The Form contains full space between these lines for a Message of fifty or more words in length. I omit the space.]

RECEIVED.	SENT.
Com. ..... *h.* ..... *m.* / *Fin.* ..... *h* ..... *m.* — *Sd.*	*Com.* ..... *h.* ..... *m.* / *Fin.* ..... *h.* ..... *m.* — *Sd.* .....

Doc. F.

THE ELECTRIC TELEGRAPH COMPANY. No.

................................185

Messenger's Name................................

For................................

	H.	M.	
Sent out. . .	....	....	........M.
Received at	....	....	........M.
Returned at	....	....	........M.

Signature of Receiver................................

Charges to Pay................................

Clerk's Initials................................

N. B.—You are requested to give no fee or gratuity to the Messenger, and pay no charges beyond those entered in this sheet.

Doc. G.

THE ELECTRIC TELEGRAPH COMPANY

LONDON STATION.

Date 185

No. ..... Time received, ... No. of Words .....

From .....

.....

.....

To .....

.....

.....

Message " "

Porterage " "

Paid out " "

Total " "

Signed ..... *Clerk*