tinctly visible when the boarded telegraph was so much en­veloped in mist or fog, that the particular boards, shut or thrown open, could not be distinguished ; and it appeared by a journal kept by this officer, that in the course of the winter, the days on which the semaphore was visible ex­ceeded those on which the shutters could be seen by fully one third. If, then, this be the case with a six-boarded te­legraph, how much more objectionable must one of twelve shutters be, which must necessarily be placed so near to each other as to make it at all times a matter of difficulty to discern at once how many, and which of them, are closed, and which open ? Even in the six-shutter telegraph, one board has frequently been mistaken for the other ; for it may be remarked, that such a mass of timber as is required for a shutter-telegraph is seldom free from haze.

It will probably be urged, that the arms of the sema­phore, having to describe a larger circle, must be slower in their operations ; but this increased slowness is so amply compensated by the ease and certainty of reading off the signals as to render any such objection of little or no weight : it may make the difference of *one second* in each signal, while the machinery by which the semaphore is worked is as simple and as little liable to be out of order as that of the boarded telegraph.

The six-shutter telegraph, it is true, has greater powers than the two-armed semaphore, and much greater than the universal semaphore of Colonel Pasley ; that is to say, the number of combinations which it is capable of making without using the stop-signal (or signal which separates one word or one sentence from another), is much greater than in either of the other two ; but *all* of them have sufficient powers, and a sufficient number of combinations, to convey with facility and despatch any communication whatsoever, and in any language, either by letters, words, or sentences. Their respective powers may be seen by the following tables of their positions.

*Admiralty Six-shutter Telegraph.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. of Signal, or of Shutters Closed. | Signification. | No. of Signal, | | No. of Signal, or of Shutters Closed. | Signification. |
| or of Shutters Closed. | Signification. |
| 1 | A | 123 | 9 | 1235 |  |
| 2 | Z | 124 | 6 | 1236 |  |
| 3 | X | 125 | 6 | 1245 |  |
| 4 | W | 126 | 4 | 1246 |  |
| 5 | B | 134 | 0 | 1256 |  |
| 6 | F | 135 | 1 | 1345 |  |
| 12 | L | 136 | 2 | 1346 |  |
| 13 | O | 145 | 6 | 1356 |  |
| 14 | V | 146 | 3 | 1456 |  |
| 15 | U | 156 | 8 | 2345 |  |
| 16 | H | 234 | G | 2346 |  |
| 23 | Qu | 235 | C | 2356 |  |
| 24 | R | 236 | D | 2456 |  |
| 25 | T | 245 | E | 3456 |  |
| 26 | S | 246 | Y | 12345 |  |
| 34 | P | 256 |  | 12346 |  |
| 35 | N | 345 |  | 12356 |  |
| 36 | I | 346 |  | 12456 |  |
| 45 | o | 356 |  | 13456 |  |
| 46 | K | 456 |  | 23456 |  |
| 56 | M | 1234 |  | 123456 |  |

In all, sixty-two separate and distinct signals, which may be made consecutively in any order, without requiring any *stop*-signal when applied to spelling. The letters of the alphabet opposite to the signals, and the numbers from 1 to 0, may be changed in every possible way.

When spelling is intended to be used, the number of changes need not, of course, exceed that of the alphabet ;

the rest, as in the table, may be applied to numbers ; and what still remains may be made to represent *words* that are most commonly in use ; as, for instance, *admiral, captain, ship of the line, frigate, arrived, sailed, harbour,* &c. in the navy ; or, if military, *general, regiment, camp,* &c*.*

*Admiralty Semaphore now in use.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. of Signal by 1 and 2 Arms. | Signi­fica­tion. | No. of Signal by 1 and 2 Arms. | Signi­fica­tion. | No. of Signal by 1 and 2 Arms. | Signi­fica­tion. |
| 1 | 1 | 15 | G | 43 | **X** |
| 2 | 2 | 16 | H | 44 | **Y** |
| 3 | 3 | 21 | I | 45 | **z** |
| 4 | 4 | 22 | K | 46 |  |
| 5 | 5 | 23 | L | 51 |  |
| 6 | 6 | 24 | M | 52 |  |
| 1 | A | 25 | N | 53 |  |
| 2 | B | 26 | O | 54 |  |
| 3 | C | 31 | P | 55 |  |
| 4 | D | 32 | Qu | 56 |  |
| 5 | E | 33 | R | 61 |  |
| 6 | F | 34 | S | 62 |  |
| 11 | 7 | 35 | T | 63 |  |
| 12 | 8 | 36 | U | 64 |  |
| 13 | 9 | 41 | V | 65 |  |
| 14 | 0 | 42 | W | 66 |  |

In all, forty-eight separate and distinct signals, being the whole which the two arms are capable of making, as in the annexed figure ; in which the two arms actually exhibited (in black lines) represent the number 16 or H, according to the table or *key,* as above ar­ranged.

We have here, in addition to the alphabet and the nume­ral digits, thirteen signs over, applicable to the names of sta­tions, preparative, finish, stop-signals, &c.

*colonel Pasley's Universal Telegraph.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. of Signals. | Significa­tion. | No. of Signals. | Significa­tion. | No. of Signals. | Significataon. |
| 1 | A | 15 | L | 36 | V |
| 2 | B | 16 | M | 37 | W |
| 3 | C | 17 | N | 45 | X |
| 4 | D | 23 | O | 46 | Y |
| 5 | E | 24 | P | 47 | z |
| 6 | F | 25 | Qu | 56 |  |
| 7 | G | 26 | R | 57 |  |
| 12 | H | 27 | S | 67 |  |
| 13 | I | 34 | T |  |  |
| 14 | K | 35 | U |  |  |

In all, twenty-eight separate and distinct signals ; con­taining a sufficient number for expressing the letters of the alphabet, and, consequently, for spelling any message ; but not a sufficient number left to express the numeral digits by single signs. The signal No. 4 is, besides, as Colonel Pasley is aware, liable to be mistaken, it being a mere elon­gation of the mast, which, at a great distance, and owing