# Signalling Lamps

## §2588 Lamp, lime-light, signalling

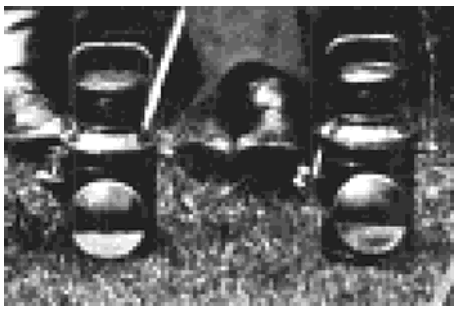
Date of approval 24th. September 1873
A pattern lamp of this description, differing in certain minor particulars from that mentioned in §2312 has been sealed to govern future supplies.

## §3448 Lamp, lime light, signalling

Date of approval and page in vocabulary 28th. September 1878 40023/3358 Page 414
A number of lamps of this description have been made, differing from the service pattern ( §§.2312, 2588) in the undermentioned particulars.
The manipulating key is fixed on top of the spirit chamber, and not on the side of the lamp as in the service pattern. The tube for admitting oxygen gas passes through the spirit chamber, and is carried to the side, where a cock is provided; the tube is thus placed under the chamber instead of over it as in the sealed pattern. Four legs, four inches long, are riveted to the side of the spirit chamber, the service pattern having knobs only, which screw on to the legs of the lamp, which latter pass through holes in the spirit chamber.

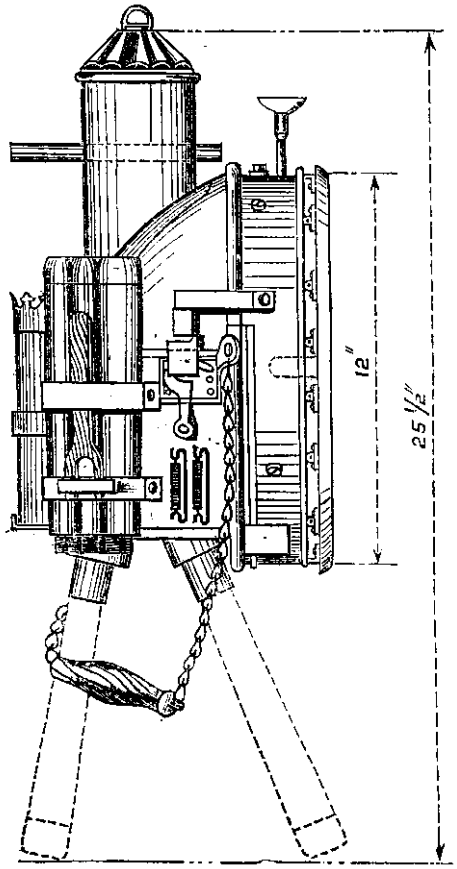
Provision is made for attaching the lamp to the tripod stand by a lengthening piece inserted between each screw knob and the bottom of the chamber.

No observing hole fitted with coloured glass is provided. These lamps will be held as a reserve to meet future demands for submarine mining service, and the pattern will be considered exceptional. They bear the distinguishing mark “E.P.S.M.” (“for exceptional pattern, submarine mining”)

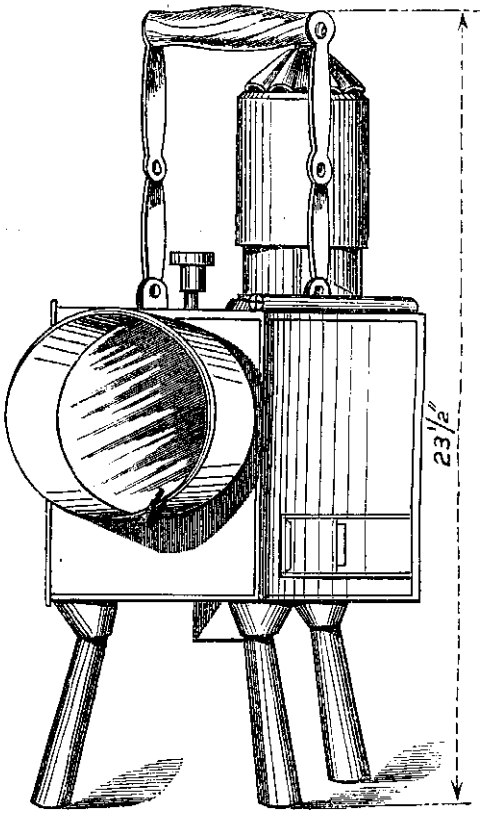


**Signalling lamps**
**from Navy and Army Illustrated**
**Dec 11th. 1896**

**Lamp, Lime Light, Signalling**
**from Navy and Army Illustrated**
**Dec 11th. 1896**




**Lamp, Signalling 'A' Mark 1 (L)**




**Lamp, Signalling 'B' Mark 1 (L)**

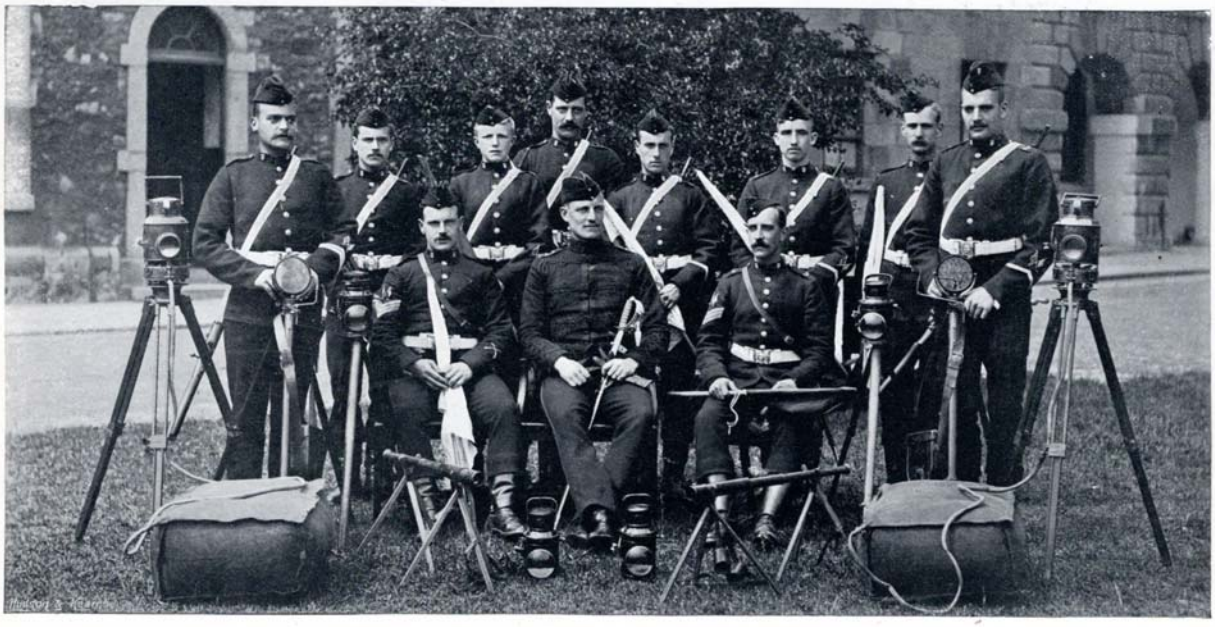
**Lamp Signalling 'A' Mark 1 (L)**
**Lamp Signalling 'B' Mark 1 (L)**
28 December 1899 - Patterns of the above lamps have been sealed to govern manufacture as may be specially ordered. They are made to the form and dimensions shown on the accompanying drawings. The oil for use in these lamps will be known as 'oil, mineral, colza'. The nomenclature and details of the complete lamps and their parts are as follows :**Lamp Signalling 'A' Mark 1 (L)**
Begbie, CC in wood case; containing body, reflector, louvred shutter, reservoir, burner, cowl, 3 legs, felt jacket, brass chimney, fork, 3 wedges, 2 spare springs, oil can, wood box for spare chimneys and wick, 9 glass chimneys, 6 pieces of wick, screw driver, funnel and 2lb of cotton waste.
Body (Mark 1) - Tin, with chain handle
Box (Mark 1) Wood, 11½ inches by 10½ inches by 2¾ inches with leather handle; for 8 spare chimneys and wick.
Burner (Mark 1) for $2^{5}/_{8}$ inch flat wick.
Can, oil (Mark 1) Tin, with brass cap and handle; triangular, 12½ inches high.
Case (Mark1) Wood, 18 inches by 18 inches by 12 inches; with leather handles
Cowl (Mark 1) Tin
Driver, screw (Mark 1) Handled
Funnel (Mark 1) Tin, 3¼ inches diameter, filling lamp
Legs (Mark 1) Tin, with screwed gunmetal attachments, and wood feet
Reflector (Mark 1) With sighting tube and cowl stack
Reservoir (Mark 1) Tin
Shutter (Mark 1) Louvred, with plate-glass window
Spring (Mark 1) Brass, spiral; for louvred shutter
Chimney, brass (Mark 1)
**Lamp Signalling 'B' Mark 1 (L)**
Begbie, BB in wood case; containing body, lens, louvred shutter, reservoir, burner, cowl stack, 3 legs, 3 felt jackets, brass chimney, fork, 3 wedges, spare spring, oil can, wood box for spare chimneys and wick, 9 glass chimneys, 6 pieces of wick, ½lb of cotton waste.
Body (Mark 1) - Tin, with closing handle and lens guard
Box (Mark 1) Wood, 11 inches by 7¾ inches by 3 inches for 6 spare chimneys and wick.
Burner (Mark 1) for $2^{5}/_{8}$ inch flat wick.
Can, oil (Mark 1) Tin, with brass cap 11 inches by 3 inches by 2¼ inches
Case (Mark1) Wood, 12 inches by 11½ inches by 11½ inches; with leather handle
Cowl (Mark 1) Copper
Cowl Stack (Mark 1) Tin, $3^{5}/_{16}$ inches diameter
Legs (Mark 1) Tin, 6 inches long
Lens (Mark 1) 6 inches diameter
Reservoir (Mark 1) Tin
Shutter (Mark 1) Louvred
Spring (Mark 1) Brass, spiral; for louvred shutter
Chimney, brass (Mark 1)
**Lamps, Signalling A & B**
Chimney, Glass (Mark 1)
Fork, removing glass chimney (Mark 1) Wood
Jacket, felt (Mark 1) For spare chimney glass
Wedges (Mark 1) Wood (set of 3)
Wick, flat, $2^{5}/_{8}$ inch (Mark 1) Cotton
Cotton, waste, white


**The Army and Navy Gazette. 16 August 1862**
**Captain Bolton's Lime-Light Signal.**

*The course of experiments lately carried out at the camp at Aldershot, under the superintendence of Bolton, 12th Regiment, with his newly invented lime-light signal apparatus and system of telegraphy, having been brought to a conclusion, Lieutenant-General Sir J. L. Pennefather, K.C.B., commanding the division at the Camp, accompanied by his staff, attended at the Bell Hill, on Thursday night, to test the merits of the system. Telegraph stations were established at Caesar's Camp, Cove Common, and Bagshot, and messages were sent to and from the various places with great rapidity and correctness, the lights being peculiarly bright and beautiful, although the state of the atmosphere was very hazy. The trial lasted from half-past eight until eleven o'clock, when Sir J. L. Pennefather expressed to the inventor his entire satisfaction at the successful results he had witnessed, and at the proficiency of the men who have been so short a time under instruction. This invention is likely to prove of great value in our future warfare, as by its menus communication can be established when the laying of the electric wire would be impracticable, and signals made at a distance hitherto deemed impossible for ordinary signals, while it has the advantage of not being liable to interruption from the enemy. Captain Bolton, having now successfully carried on his experiments at Woolwich, Chatham, and Aldershot, will proceed to Portsmouth, where his system and invention is to be further tested.*

**Sun (London) - Thursday 18 December 1862 from The Times**

*"During the past three weeks Captain Bolton, of the 12th Regiment, has been engaged at Portsmouth in carrying out a series of experiments with his system of telegraphy by lime-light with an apparatus of his own invention, and has had under his instruction during that time several non-commissioned officers and men of the Royal Engineers, Royal Artillery, and line regiments stationed in the garrison. Establishing his head quarters in the tower of the Baltic wharf, at Portsmouth, Captain Bolton selected for his experimental out stations Fort Widley on Portsdown hill, Southsea Castle, and the new fort now being constructed on the top of Bembridge down, at the east end of the Isle of Wight, the distance between Forts Widley and Bembridge being thirteen miles. On Monday evening Major General Lord William Paulet, C.B commanding the garrison and south-west district, accompanied by Colonel E. Somerset, CB, Deputy Quartermaster-General : Colonel Thackwell, Deputy-Assistant-Adjutant-General, Capt Millegan, Aide-de-Camp, and a number of other officers, military and naval, attended at the tower of the Baltic-wharf to witness a series of experimental signals carried out by the men, under Captain Bolton's supervision, illustrating his system of night telegraphy as applied to military purposes. At five p.m. signalling commenced between Portsmouth and the several out station messages being flashed from station to station in words, code, numbers, and secret cipher, as would be done in time of actual warfare or in the event of an invasion, with astonishing rapidity and correctness, notwithstanding that the night was somewhat hazy, and that a considerable smoke cloud hung over Portsmouth, midway between the two extreme signalling points, Fort Bembridge and Widley. The extraordinary size, distinctness, and brilliancy of the light, as seen from these two points, were very remarkable The messages were transmitted at the rate of eleven words per minute, but with men who had been under a longer period of training, and who, therefore, were more perfectly acquainted with the system, eighteen words per minute have been signalled. From the certainty and ease with which the messages were signalled, and the general success of the experiments, it was evident to all present that Captain Bolton's system of night telegraphy was vastly superior to any other known form for military purposes, and is likely to be of the utmost value and importance in any future warfare in which this country may be engaged. The size and weight of any telegraphic apparatus are no mean consideration when using it in the field. This great difficulty is, however, so, fully met by Captain Bolton's apparatus that the soldier operator carries it in his knapsack on his back. With the light in front he becomes a moving telegraph, a constant attendant upon the commanding officer and his staff. It is thus free from the danger of interruption by an enemy attending the use of 'other systems of telegraphy in the field' It is also equally adapted for signalling by sea as by land, and, in the event of hostilities with a powerful maritime power, the means of certain and rapid communication it would afford between the headlands of our coast line and our fleets in the Channel would be invaluable. The Admiralty are fully aware of the importance any certain means of night communication with our ships in the Channel would have in the event of a maritime war, and a series of experiments are ordered to be made with Captain Bolton's light for their Lordships' information on this point. To carry out these experiments, a naval officer has been associated with Captain Bolton by direction, of the Admiralty"*



*SIGNALLERS, with EQUIPMENT, under the Command of Captain MARTYN.*

## *2nd BATTALION QUEEN'S OWN (ROYAL WEST KENT REGIMENT.)*

REGIMENTAL Cyclist Sections being now permanent institutions, the "Queen's Own" have organized a Corps. When with the field column, the services of this Cyclist Section are available for any employment in which speed, celerity, and general smartness are requisite. Regimental Transport is an institution peculiar to regiments forming the first Army Corps, and which are well up on the roll for foreign service. The men detailed for this duty have passed through a course of riding and driving, the care of horses generally, dismounting and mounting wagons, etc., and are available when required to act as mounted infantry. All the transport duties in connection with their regiment are carried out by this useful body of men. The full signalling equipment for a transmitting station, comprising apparatus for both day and night signalling, is shown in the lower photograph, lime-light lanterns for long distance work by night, with inflated oxygen bags, hand lanterns, heliographs, and flags, together with the telescopes necessary for reading signals from distant stations. The men are equipped as if in the field, with rifles slung, and message books in charge of the N.C.O.'s.

Navy and Army Illustrated Dec 11th 1896

# SIGNALLING IN THE ARMY.

THE importance of an efficient signalling staff is fully recognised in the Army, and every regiment of cavalry and infantry has its signalling establishment. The headquarters of Army signalling is ordinarily the School of Signalling at Aldershot, under an inspector of signalling, a colonel, with an assistant inspector, a captain. Classes of instruction are formed every year, each comprising thirty officers and thirty non-commissioned officers. Aldershot supplies each unit of cavalry and infantry, and each garrison artillery station of two or more companies, with one officer instructor and two non-commissioned officers as assistant instructors, who all hold proficiency certificates. The instruction in each case is intrusted to these officers. In the infantry, classes consisting of one officer and nine rank and file are formed under their tuition during the summer months each year, from whom the battalion staff of signallers is drawn. Each battalion provides six qualified signallers, who are inspected every autumn by the Inspector of Army Signalling. Our first photograph shows the signallers of the 2nd East Lancashire Regiment, the signalling champions for infantry since 1896.

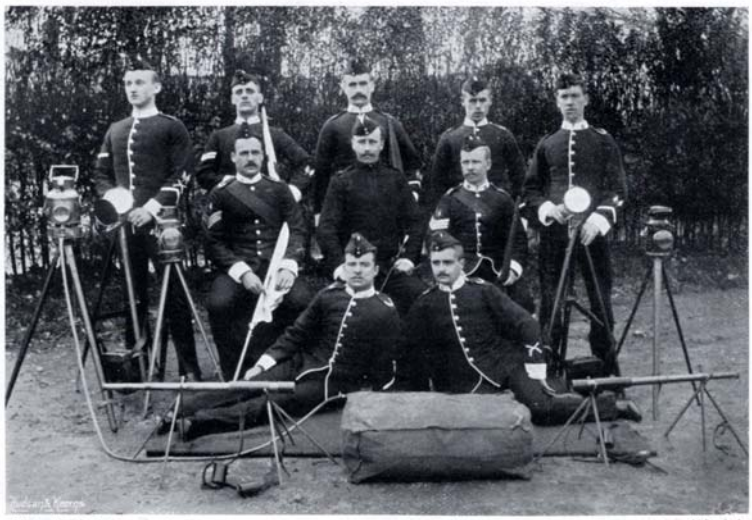


Photo. Evelyn & Co. Aldershot.

*LIEUT. LAMBERT AND SIGNALLERS, 2nd EAST LANCASHIRE REGIMENT*

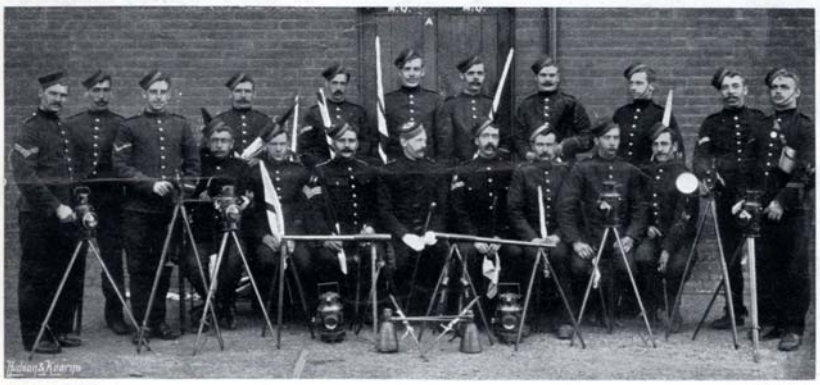


Photo. J. W. Gavin. Norwich.

*CAPTAIN COOPER AND SIGNALLERS, 7th DRAGOON GUARDS.*

In the cavalry special attention is similarly paid to the training of the twelve regimental signallers who form the staff of every cavalry regiment, the tuition being, as in the infantry, under Aldershot-trained officers. Our photograph shows the signallers of the 7th Dragoon Guards, who hold the second prize for cavalry signalling in the Service. The groups are shown fully equipped with heliograph and flags for day signalling, and the Begbie B.B. lamp with its limelight apparatus for night signalling, telescopes, etc.



*THE BRIGADE SIGNALLERS.*

Signallers Plymouth Volunteer Infantry Brigade