Gas - Copy of notes on employment of "Chemical Shells" and "Effect of shell gases on horses and mules.

2ND. LIGHT HORSE BRIGADE

Hqrs. 11/3/17

C.O.,

6th L.H. Regt.

Herewith for your information copy of "Notes on Emplcyment of Chemical shells" and "Effect of shell gasses on horses and mules".

J.H. WHYTE Major
Brigade Major 2nd. L.H. Brigade

DIRECTIONS FOR THE USE OF ANTI-GAS HORSE RESPIRATOR.

ALERT POSITION.

When horses are being sent into the neighbourhood of the trenches, the Transport, or other Officer responsible, should have the respirators adjusted into the "Alert" position before moving off. This is done as follows :—

(*a*) The flap of the respirator case is unbuttoned and slipped under the noseband of the headcollar from below upwards.

(*b*) The straps on either side of the case are also passed under the noseband and secured to the cheek pieces of the headcollar above the metal D on each side.

(*c*) The small unbleached calico patch on the upper side of the opening of the respirator is buttoned on to the noseband so that the respirator is ready to be slipped on immediately.

(*d*) The cover of the case is then closed over the noseband and the respirator thus protected from rain, etc. (*See* Fig. 1.)

(NOTE.—Should it be found that the respirator carried in the "Alert" position galls the nose, it may be carried as an alternative :—

(*a*) On the saddle for riding horses.

(*b*) On the breastplate attached to the rings of the supporting strap or on the supporting strap itself for draught horses.)

WEARING IN GAS.

The respirator carried in the "Alert" position can be rapidly adjusted when necessity arises, as follows :—

(1) Unbutton case and remove respirator, leaving the case attached to the cheek pieces of the head-collar and lying flat on the face.

(2) Holding the lower side of the opening of the respirator with one hand on each side of the canvas mouthpiece, draw it down over the upper lip and upper incisor teeth into the mouth. Gently enlarging the opening of the respirator, adjust it well up into the angle of the mouth (the linen portion which is buttoned on to the noseband will prevent the bag from slipping off the nose).

(3) Then take the elastic band on either side close to the mouthpiece and pull outwards so as to tighten the mouth of

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the bag over the upper jaw above the nostrils. This is most important, to permit of sufficient length of loop of the elastic to go over the horse's poll, and also to ensure the respirator being gas proof.

(4) Slip the elastic loop over the horse's poll (*vide* Fig. 2),

or

in the case of a restive horse, or when the attendant is a very small man and unable to reach the horse's poll, draw the elastic loop taut from each side of the mouth, thence under the lower jaw, and fix securely to the lowest portion of the throat lash. (*Vide* Fig. 3.) The respirator is then in position, and the animal may be worked in it without difficulty or undue distress. The bit and reins are not interfered with in any way. (*See* Figs. 2 and 3.)

REPLACEMENT IN CASE.

In folding the respirator and replacing it in the case the following points should be observed :—

(1) The canvas mouthpiece should be wiped as clean as possible.

(2) The bag should be held with the canvas mouthpiece downward and the elastic band looped round the bag. Commencing at the sac end, roll tightly over the elastic band. Afterwards insert into the case with the linen flap uppermost.

J. MOORE,
Brigadier-General,
Director of Veterinary Services.

HEADQUARTERS, D.V.S.,
1*st June*, 1917.

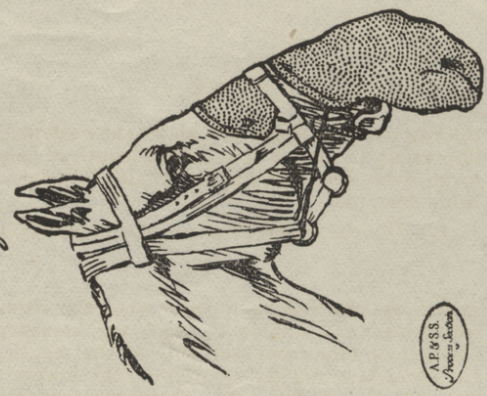

Fig III

Respirator adjusted and secured by fastening elastic to throat lash.

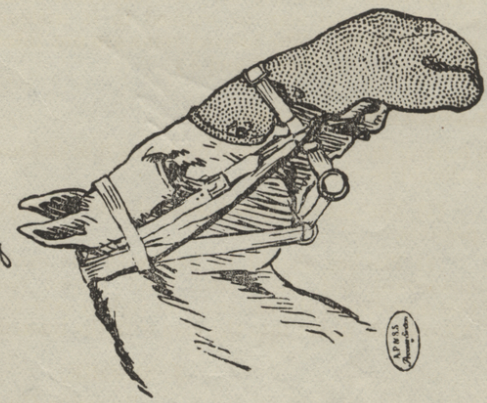

Fig II

Respirator adjusted and secured by elastic over poll.

Fig I

Alert Position.

NOTES ON EMPLOYMENT OF CHEMICAL SHELL

1. MODIFICATION OF METHOD OF BARRAGING & NUMBER OF CHEMICAL SHELL REQUIRED

SS134, paras 9,10,11, presume the enemy to be equipped with anti-gas appliances. If the enemy be not so equipped, it is not essential to produce:

1. A surprise effect. A few minutes warning is of no great value to enemy who possesses no gas helmets.

2. A high concentration of gas. A comparatively low concentration is effective against an unprotected enemy.

It may therefore be desirable:

(a) In ranging to obtain a short bracket with Lyddite shell and to verify this with ranging rounds of gas shell.

(b) To barage 'down wind' and not 'up wind' as described in SS134, para 11. This will minimise waste of gas.

(c) to reduce the depth of barage, as 50 - 100 yards of gas barage would be quite impossible to an unprotected enemy.

(Should the enemy be found to possess Gas masks, allotment of one gas shell per minute per 1,000 square yards of hostile position would be required and the bombardment continued for five minutes).

In calculating the allotment of 4.5 Howitzer Chemical shell required for searching an area (e.g., Redoubt, Village, etc.) it may be assumed that two effective bursts per minute per 400 yards (square) render a position immediately untenable by unprotected troops.

In barraging a linear target, the best effect is obtained by bursting the shell on, or up to 25 yards to windward of, the target.

Two effective rounds per 25 yards of front should suffice.

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2. PERSISTENCE OF GAS SHELL IN HOSTILE TRENCHES, REDOUBTS, ETC.

(1) It is unlikely that cavalry operations will be impeded owing to the effect of gas from a barrage of the enemy's position.

(2) It should be possible for advancing infantry to cross the enemy's position within five minutes of the termination of bombardment with lethal shells (White star or C.B.R.)

Enemy's trenches would usually be clear of gas within 30 minutes to one hour, but if our infantry remained in occupation of the enemy's position, gas helmets should be worn if a smell of gas is noticed. The remains of the gas could be expelled in a few minutes by fanning it out with sand bags, etc.

A hostile position shelled with Lachrymatiory Shell (S.K.) could be crossed by advancing Infantry within 15 - 20 minutes of the termination of the bombardment, but deep dug-outs and trenches may retain sufficient of the gas to necessitate goggles (or in very rare cases, helmets) being worn until the expiration of 8 - 12 hours after the bombardment.

THE GAS FROM S.K. SHELLS DOES NOT PRODUCE FATAL RESULTS.

3. If reliable information that the enemy has no cloud gas or gas shells available be obtained, it may be considered advisable for all arms to leave the second gas helmet with 1st Line Transport and to carry only one helmet and one pair of goggles into action. Medical officers of units should be advised that, for cases of gassing, the best immediate treatment is inhalation of ammonia, provision of hot drinks and complete rest for 24 hours.

EFFECT OF SHELL GASSES ON HORSES AND MULES

Cases of horses and mules being seriously affected by Lachrymatory gases (e.g. from S.K. shells) are unknown.

The gas (e.g.C.B.R. or White star) from Lethal Shell may produce serious after effects. Severe bronchial symptoms including copious watery discharge from the mouth and nostrils may follow exposure to Lethal gas. In exceptionally severe cases it may be necessary to destroy the animal but the majority of those affected recover in 48 - 64 hours if kept under conditions of warmth and rest. Hot mashes are beneficial.

If it be necessary to work horses and mules in gas the movement should be as slow as the tactical situation permits, and they should be allowed to rest as soon as possible.

No respirators for animals are at present available.

(sgd.) F.J.S. WYETH Major
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