

SOME ACCOUNT
OF
THE BRIGADE OF
HOSPITAL CONVEYANCE
CARTS,

ATTACHED TO THE ARMY IN THE EAST;

FORMED ON IMPROVEMENTS SUGGESTED
BY
LIEUT.-COLONEL TULLOH,
Of the Royal Artillery,
AND
MR. GUTHRIE.

PRICE ONE SHILLING.

L O N D O N :
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SOME ACCOUNT
OF THE
BRIGADE OF HOSPITAL CONVEYANCE, &c.

HER Majesty's Government having decided on the establishment of a Corps of Hospital Conveyance, for the purpose, not only of assisting the over-fatigued soldier on a march, by relieving him of a part of his incumbrances; but of carrying the wounded, as soon as possible, from the field of battle to the nearest eligible place of safety; until the principal medical officer of the army shall be able to remove them to a general hospital, fitted for their reception; a Corps has been formed composed of pensioners and others under the command of a Superior Officer, and an Adjutant Quarter-master. It is intended to furnish servants from it for the officers of the general Medical Staff of the army; to supply the General Hospitals, if possible, with non-commissioned officers and orderlies, so as to prevent the necessity for efficient soldiers being retained from their regiments for these services; and to take care of the carts and horses necessary for the conveyance of the sick and wounded.

A brigade has been permitted to be formed, under the direction of the Quarter-master General, by Lieut.-Col. Tulloh, of the Royal Artillery, and Mr. Guthrie, on an improved principle, to be attached, on trial, to two divisions of the Expeditionary Army in the East, complete in every way for duty in the field. It is composed of twenty carts, four store waggons, one forge cart, and one portable forge, in a store cart. Each cart is drawn by two horses—one in shafts, the other affixed by an outrigger, although when loaded it can be drawn by one horse; and, in a difficult country, a third and fourth horse can be attached to the wheelers. The cart weighs $10\frac{1}{2}$ cwt., the stores $1\frac{1}{2}$ cwt. The store waggons are drawn by four horses, the forge cart and the portable forge cart by two horses: and whilst they can always move faster than troops can march, the carts can, if necessary, keep up with horse artillery on any service; the first principle of military medical conveyance being, that wherever a gun can go, a spring cart should be able to follow. The cost of a cart is computed at the arsenal at Woolwich to be £25.

A brigade thus constituted is sufficient for two divisions of an army, provided each regiment is furnished with two waggons, drawn by oxen or horses, as the custom of the country may be. These country waggons are to be sent to the rear with the sick when an action is imminent; but one of the conveyance carts is to be attached to each of the six regiments of a division, and is to remain with it under all circumstances, the remaining four being in reserve, the whole under the superintendence and charge of the Staff Surgeon of the division. The forge cart and two store waggons A. and D. are to be attached to the 1st division; two store waggons B. and C. and the portable forge to the 2nd division, with six regimental and four reserve carts.

The value of a well-appointed Hospital Conveyance will be perceived by its being able to carry the wounded from the field in its carts and by its bearers; and by its being able to supply from its own stores most things necessary for their surgical care for many days, even after a general action of importance; and to continue it until the wounded can be received into a general hospital.

The stores of the conveyance waggons should also be sufficient to replace those which may be expended by the regimental surgeons in the field, so that they may proceed with their regiments, their medicaments being undiminished or replenished. The conveyance stores themselves should be replaced from time to time, from the general stores of the army.

The brigade is essentially adapted for, and is only equal in point of numbers to divisional duty in *the field*; and ought not to be employed for any other objects, unless the army is at a distance from the enemy, or under particular circumstances, by order of the General Commanding in Chief. The carts, if taken off their springs, and especially the store waggons, may be used for any purposes. The tools belonging to each cart may occasionally be found useful in the field, whenever a larger supply of entrenching tools are required than is immediately forthcoming.

An Hospital Conveyance Cart runs on two wheels, corresponding with those of the Artillery. It is covered with a white painted canvass, has curtains of the same material all round, and an apron attached to the foot-board before and behind. Each cart carries under the seat in front, a small chest of utensils, two sets of iron splints in boxes, and a small box of surgical stores, with a strap attached for the convenience of carriage, a lantern for oil, pickets and ropes for the horses, a pick-axe, spade, saw in case, ten stretchers or bearers, with appropriate slings, two empty ten-gallon casks, hung underneath for water, a bag with

hammer, nails, two brass cocks for the water casks, and four horse shoes; a filter made of gutta percha, with a moveable spout, in a wooden case and sling, capable of yielding ~~four~~ ⁴⁰ gallons of clear water each day when in use. Two spare springs, and one spare axle are carried for every three carts in the store waggons.

Ten of these carts have round tops or covers, ten have flat ones; the ten round topped carts have seats inside, and will carry sixteen persons; the ten flat topped carts carry two bearers on vulcanized springs and rollers on the floor of the cart; and nine persons before and behind, in all eleven, and a twelfth may be added on a bearer slung to the roof. These carts might also have side seats, to be raised if necessary, when the bearers on the floor are not required. On drawing out two iron supports at the end of each cart, the front seat, which is moveable, makes a table when placed upon them, for operations, or other purposes. The carts are lettered "Hospital Conveyance Carts," and are numbered from "1 to 20."

The four waggons are lettered Hospital Conveyance Store Waggons A. B. C. D.; the boxes, bales, tents, &c., in them, as well as in the carts, are properly secured or locked, the keys being firmly affixed to or upon them, and the contents of each are painted or printed on the covers or lids in two places to prevent trouble. It is not expected, however, that the boxes will be opened until after an engagement has taken place, or their contents are otherwise urgently called for. This corps of Hospital Conveyance being essentially formed to prevent the evils which formerly occurred after a great battle, from the want of sufficient means being attached to each division of the Army. The cases, packages, &c., in which the stores are contained, should be preserved with care, in order that they may be sent to the rear when empty, to be replenished from the general stores of the Army.

The Store Waggons, when empty, weigh 16 cwt. each; the stores of all kinds are 29 cwt., in all about 45 cwt. The waggons, having been in the arsenal for several years, are no additional expense.

The firelocks and knapsacks of the wounded soldiers may be carried below the carts, the barrels of water and the stores being left at the field hospital. The barrels are provided with proper cocks and moveable keys to prevent waste, and should be placed under the charge of a person competent to superintend the distribution of the water. When the carts are fully employed carrying sick or wounded, the conductors are to lead the horses. A great advantage is derived from the construction of these carts, that whilst they will carry many persons with little motion at an ordinary pace, they will also convey one person without inconvenience; and at a trot or gallop, the movement can be

borne for a time without complaint, unless under very disadvantageous circumstances, of broken ground.

One Sergeant Major³ of approved character, four other mounted non-commissioned officers, and 62 drivers, including three farriers, in all 67, is the *least* number of men with which the duties of this brigade can be efficiently performed, and the same number of horses will be required; thus only five men and five horses are supernumerary in the event of illness, accident, or the occurrence of those claims for other services, which they may be imperatively called upon to perform.

If fifty or a hundred wounded men be left of an advancing division, the Staff Surgeon and such assistant surgeons as he may require should perform all the necessary operations; when these officers should be sent to their regiments, with the exception of one or two, who remain in charge with such of the medicines and stores of one or more of the reserve carts, as may be required for several days' use; the carts themselves being forwarded to the front as quickly as possible, as their services may be required.

If a larger number of wounded are left behind, one or more of the wooden panniers marked from 1 to 4 should be taken from one of the store waggons, perhaps a marquee and a tent, and such other stores as are apparently required.

If from three to five hundred are wounded, all the assistant surgeons of the brigades which have suffered most should be retained, until all the operations, &c. urgently necessary, have been performed. Two out of three of the hospital establishments of the regiments of these brigades should be sent for, and remain for a time. One or two store waggons should be retained to furnish the hospital establishment, until assistance can be obtained from the general Medical Staff of the army.

In the event of a general and decisive battle, attended by great loss, one surgeon only should remain with the troops per brigade, including the artillery in the first instance. The whole of the remaining Medical Officers should be employed with the wounded. On an advance taking place, the regimental surgeons should return to their regiments, with such assistants as can by any possibility be spared, and as many carts as are not wanted, with their stores. The store waggons remaining with the wounded, until relieved by the arrival of supplies from the rear.

The staff surgeon of a division should have attached to him a public horse or mule, with pack saddle and two panniers, containing a case of capital instruments, and a small supply of medicines, and surgical

apparatus for immediate use. The animal should be in charge of a soldier of the conveyance corps, and never leave the division until required in the rear for the service of the wounded.

A regiment of 800 bayonets, when before the enemy, should have present, if possible, one surgeon and three assistant surgeons, of at least one year's standing; officers who understand their duties as soldiers as well as surgeons. An assistant staff surgeon may be attached to each regiment, as a fourth, for instruction as well as use—for good and sufficient medical men never were in proper numbers on a field of battle—and unless these additions take place, it may be doubted whether the deficiency will not again occur.

Under the most unfavorable circumstances of no village being at hand, the corps of hospital conveyance attached to two divisions, would furnish an encampment of—

6 large hospital marquees, which, by separating the linings and making poles, may be twelve;

21 Portuguese Officers' large tents;

10 empty carts (the other 10 accompanying the divisions, with stores and bearers) and 4 empty store waggons, all, when unloaded, affording cover within and below. There would be left with the wounded

130 firm bearers, capable of being raised 1 foot from the ground;

30 air beds and pillows;

54 sets of bedding, 3 sheets to each set;

108 water decks, defending 108 men from damp ground;

so that some kind of comfortable accommodation would be afforded for perhaps all the badly wounded; particularly if dry oat straw could be obtained, to fill the palliasses and to make mats; thus giving to the wounded soldier assistance unknown during the last war; whilst his means of subsistence should also be attended to, which were then much neglected.

When a division formerly advanced after a battle attended with considerable loss, the commissariat officers, consisting of a deputy assistant commissary-general and a clerk to each brigade, did not consider the provisioning of the wounded to be within their province, and therefore accompanied the division. The purveyor-general, or medical commissary, considered his duties began only when the wounded were collected in the general hospital, for which he provided. In the intermediate time they were therefore left to their fate, which was sometimes rather too near starvation, even for wounded men, exposed perhaps to a burning sun by day, and to damp by night for three or four days.

A deputy inspector-general of the medical department of the army should be in the field even with one division, when a serious collision

with the enemy is expected. He should arrange with the principal commissariat officer on the field, or at head quarters, for a sufficient supply of meat and bread being at hand; and with the purveyor-general for such other articles as he may require. A clerk, who should be an accountant under the purveyor, should always be attached to him, to aid in his correspondence, and to do the duty of provisioning the wounded in such emergency. If a deputy-inspector cannot be spared, the clerk should be attached to the senior staff surgeon, for this particular service, or occasion.

Extracts from Mr. Guthrie's Commentaries in Surgery for the
IMMEDIATE EXIGENCIES of a field of battle.

- 1.—Water being of the utmost importance to wounded men, care should be taken, when before the enemy, not only that the barrels attached to the conveyance carts are properly filled with good water; but that skins for holding water, or such other means as are commonly used in the country for carrying it, should be procured and duly filled.
- 2.—Bandages or rollers, applied on the field of battle, are, in general, so many things wasted; as they become dirty and stiff, and are usually cut away and destroyed, without having been really useful; they are therefore not forthcoming when required, and would be of use.
- 3.—Simple gun-shot wounds require nothing more, for the first two or three days, than the application of a piece of wet or oiled lint or linen, fastened on with a strip of sticking plaster, or, if possible, kept constantly wet and cold with water. When cold disagrees, warm water should be substituted.
- 4.—Wounds made by swords, sabres, or other sharp cutting instruments, are to be treated principally by position. Thus a cut down to the bone, across the thick part of the arm, immediately below the shoulder, is to be treated by raising the arm to, or above a right angle with the body; in which position it is to be retained, however inconvenient it may be. Ligatures may be inserted, but through the skin only. If the throat be cut across in front, any great vessels should be tied, and the oozing stopped by a sponge. After a few hours, when the oozing is arrested, the sponge should be removed, and the head brought down towards the chest, and retained in that position without ligatures; if this is done too soon, the sufferer may possibly be suffocated by the infiltration of blood into the areolar tissue of the parts adjacent.
- 5.—If the cavity of the chest is opened into by a sword or lance,

it is of the utmost importance that the wound in the skin should be effectively closed, and this can only be done by sewing it up as a tailor or a lady would sew up a seam, skin only being included; a compress of list should be applied over the stitches, fastened on by sticking plaster. The patient is then to be placed on the wounded side, that the lung may fall down, if it can, upon, or apply itself to the wounded part, and adhere to it, by which happy and hoped for accident life will in all probability be preserved. If the lung should be seen protruding in the wound, it should not be returned beyond the level of the ribs, but be covered over by the external parts.

- 6.—It is advisable to encourage previously the discharge of blood from the cavity of the chest, if any have fallen into it; but if the bleeding from within should continue, so as to place the life of the sufferer in danger, the external wound should be closed, and events awaited, according to those principles which are more fully detailed in the commentaries*.
- 7.—When it is doubtful whether the bleeding proceeds from the cavity of the chest, or from the intercostal artery (a surgical bugbear), an incision through the skin and the external intercostal muscle, will expose the artery close to the edge of the rib, having the internal intercostal muscle behind it. The vessel thus exposed may be tied, or the end pinched by the forceps, until it ceases to bleed. Tying a string round the rib is a destructive piece of cruelty, and the plugs, &c. formerly recommended, may be considered as surgical incongruities.
- 8.—A gunshot wound in the chest cannot close by adhesion, and must remain open. The position of the sufferer should therefore be that which is most comfortable to him. A small hole penetrating the cavity is more dangerous than a large one, and the wound is less dangerous if the ball goes through the body. The wounds should be examined, and enlarged if necessary, in order to remove all extraneous substances, even if they should be seen to stick on the surface of the lung; the opening should be covered with soft oiled or wet lint, a bandage when agreeable. The ear of the surgeon and the stethoscope are invaluable aids, and ought always to be in use; indeed no injury of the chest can be scientifically treated without them.
- 9.—Incised and gun shot wounds of the abdomen, are to be treated in *nearly* a similar manner; the position in both being that which is most agreeable to the patient, the parts being relaxed. The

*A copy of the Commentaries is placed in box No. 7, in Store Waggon A, B, C.

Commentaries to be attentively studied with reference to these injuries, and particularly when the intestines are wounded.

- 11.—In wounds of the bladder, an elastic catheter is generally necessary. If it cannot be passed, an opening should be made in the perinæum for the evacuation of the urine, with as little delay as possible. (*See Commentaries*).
- 12.—In gun shot fractures of the skull, the loose broken pieces of bone, and all extraneous substances, are to be removed as soon as possible, and depressed fractures of bone are to be raised. A deep cut, made by a heavy sword through the bone into the brain, generally causes a considerable depression of the inner table of the bone, whilst the outer may appear to be merely divided.
- 13.—An arm is rarely to be amputated, except from the effects of a cannon-shot. The head of the bone is to be sawn off if necessary. The elbow-joint is to be cut out if destroyed, and the sufferer, in either case, may have a very useful arm.
- 14.—In a case of gun-shot fracture of the upper arm, in which the bone is much splintered, incisions are to be made, for the removal of all the broken pieces which it is feasible to take away. The elbow is to be supported. The fore arm is to be treated in a similar manner; the splints used should be solid.
- 15.—The hand is never to be amputated, unless all or nearly all its parts are destroyed. Different bones of it and of the wrist are to be removed when irrecoverably injured, with or without the metacarpal bones and fingers or the thumb; but a thumb and one finger should always be preserved when possible.
- 16.—The head of the thigh bone should be sawn off when broken by a musket ball. Amputation at the hip joint should only be done when the fracture extends some distance into the shaft, or the limb is destroyed by cannon shot.
- 17.—The knee joint should be cut out when irrecoverably injured; but the limb is not to be amputated until it cannot be avoided.
- 18.—A gun-shot fracture of the middle of the thigh, attended by great splintering, is a case for amputation. In less difficult cases, the splinters should be removed by incisions, particularly when they can be made on the upper and outer side of the thigh. The limb should be placed on a straight, firm splint. A broken thigh does not admit of much, and sometimes of no extension, without an unadvisable increase of suffering. An inch or two of shortening in a thigh does not so materially interfere with progression, as to make the sufferer regret having escaped amputation.

- 19.—A leg injured below the knee should rarely be amputated in the first instance, unless from the effects of a cannon-shot. The splinters of bone are all to be immediately removed, by saw or forceps, after due incisions. The limb should be placed in iron splints, and hung on a permanent frame, as affording the greatest comfort, and probable chance of ultimate success.

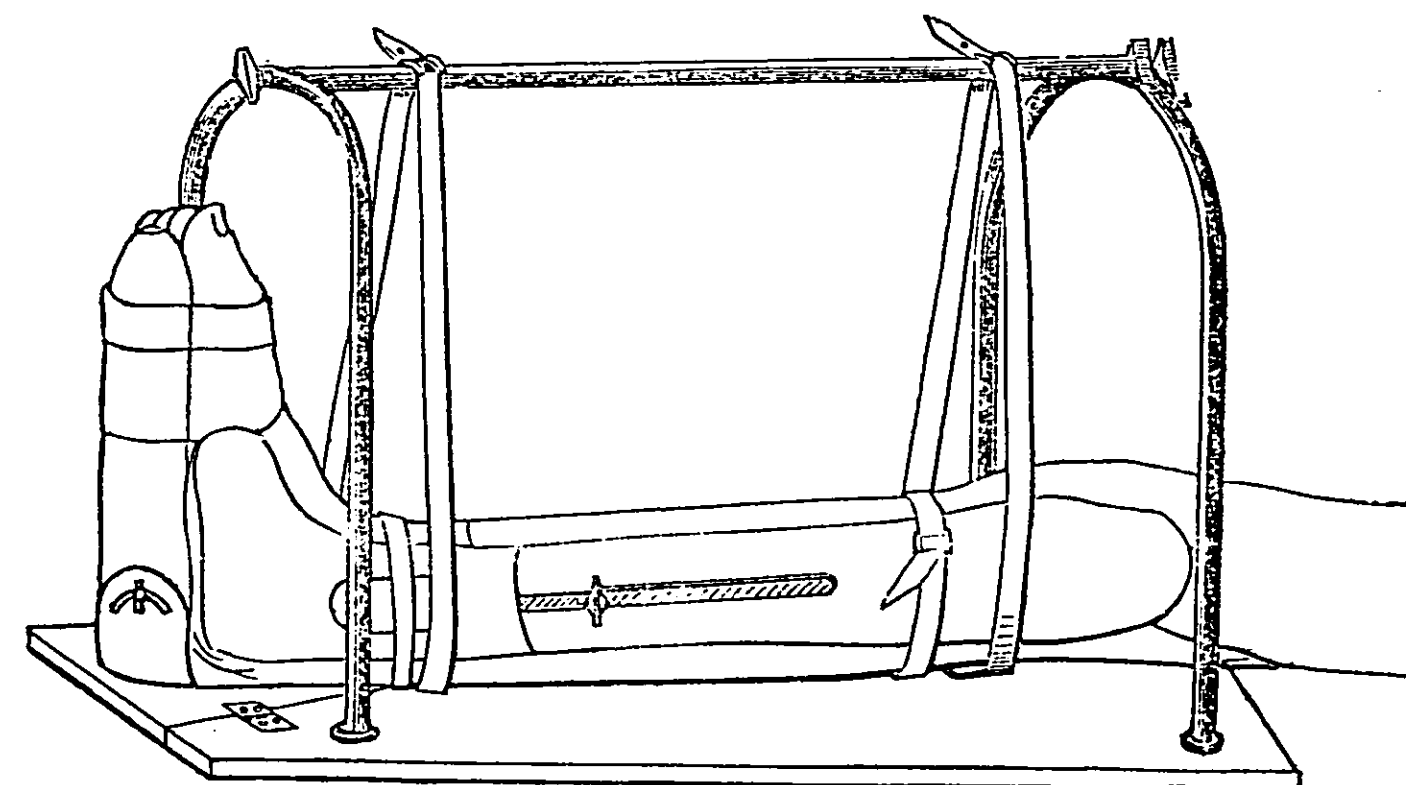
The Apparatus (Mr. Luke's) for the treatment of Fractures of the Leg by suspension, consists of a Cradle, a Leg Rest or support, two Splints, and a Folding Board. The Cradle is formed of two iron arches, held together by a straight rod, the ends of which pass through their centres and fix by binding screws. Each arch is formed of two parts, for the convenience of packing.

The Leg Rest consists of two sliding parts, and a Foot-piece, allowing of movement on either side when in use, both being fixed by a binding screw.

The Folding Board gives the Cradle a permanent support, and is absolutely necessary for the comfort as well as the safety of the sufferer.

Each splint is formed of two parts, which slide on each other, and may be fixed at the required length by a binding screw.

In using the Apparatus, the back of the leg and lower end of the thigh are to be evenly supported on a pad placed on the Leg Rest; and a Splint is to be placed on each side of the leg, and the whole secured by straps carried around near the knee and ankle. The leg is then to be suspended by two straps from the bar of the Cradle placed over the leg as represented, so as to swing without touching the Folding Board on which the Cradle is placed. The foot should be secured to the Foot-piece by a bandage.



Solid Splints, and a firmly fixed Cradle, under which the leg may hang, may be said to be the *sine qua non* of the treatment of a gun-shot fracture of the leg. The conveyance carts carry forty-six sets, with pads and slings complete.

- 20.—An ankle joint is to be cut out, unless the tendons around are too much injured, and so are the tarsal and metatarsal bones and toes. Incisions have hitherto been too little employed in the early treatment of these injuries of the foot for the removal of extraneous substances.
- 21.—A wound of the principal artery of the thigh, in addition to a gun-shot fracture, renders immediate amputation necessary. In *no other part* of the body is amputation to be done in the first instance for such injury. Ligatures are to be placed on the wounded artery, one above, the other below the wound, and events awaited.
- 22.—The occurrence of mortification in any of these cases will be known by the change of colour in the skin. It will rarely occur in the upper extremity, but will frequently do so in the lower. When about to take place, the colour of the skin of the foot changes, from the natural flesh colour to a tallowy or mottled white. Amputation should be performed immediately above the fractured part. The mortification is yet local.
- 23.—When this discoloration has not been observed, and the part shrinks, or gangrene has set in with more marked appearances, but yet seems to have *stopped* at the ankle, delay is perhaps admissible; but if it should again spread, or its cessation be doubtful, amputation should take place forthwith, although under less favorable circumstances. The mortification is becoming, or has become, constitutional.
- 24.—Bleeding, to the loss of life, is not a common occurrence in gun-shot wounds, although many do bleed considerably, seldom, however, requiring the application of a tourniquet as a matter of necessity, although frequently as one of precaution.
- 25.—When the great artery of the thigh is wounded (not torn across), the bone being *uninjured*, the sufferer will probably bleed to death, unless aid be afforded, by making compression above and on the bleeding part. A long but not broad stone, tied sharply on with a handkerchief, will often suffice until assistance can be obtained, when both ends of the divided or wounded artery are to be secured by ligatures.
- 26.—The upper end of the great artery of the thigh bleeds scarlet blood, the lower end dark venous-coloured blood; and this is not departed

from in a case of accidental injury, unless there have been previous disease in the limb. A knowledge of this fact or circumstance, which continues for several days, will prevent a mistake at the moment of injury, and at a subsequent period, if secondary hemorrhage should occur. In the *upper* extremity both ends of the principal artery bleed scarlet blood, from the free collateral circulation, and from the anastomoses in the hand.

- 27.—From this cause mortification rarely takes place after a wound of the principal artery of the arm, or even of the arm-pit. It *frequently* follows a wound of the principal artery in the upper, middle, and even lower parts of the thigh, rendering amputation necessary.
- 28.—It is a great question when the bone is *uninjured*, where and at what part the amputation should be performed. Mortification of the foot and leg from such a wound is disposed to stop a little below the knee, if it should not destroy the sufferer; and the operation if done in the first instance, as soon as the tallowy or mottled appearance of the foot is observed, should be done at that part; the wound of the artery and the operation for securing the vessel above and below the wound being left unheeded. By this proceeding, when successful, the knee joint is saved, whilst an amputation above the middle of the thigh, is always very doubtful in its result.
- 29.—When mortification has taken place from any cause, and has been arrested below the knee, and the dead parts show some sign of separation, it is usual to amputate above the knee. By not doing it, but by gradually separating and removing the dead parts, under the use of disinfecting medicaments and fresh air, a good stump may be ultimately made, the knee joint and life being preserved, which latter is frequently lost after amputation under such circumstances.
- 30.—Hospital gangrene, when it unfortunately occurs, should be considered to be contagious and infectious, and is to be treated locally by destructive remedies, such as nitric acid, which is supplied for the purpose in case No. 5, and the bivouacing or encamping of the remainder of the wounded, if it can be effected, or their removal to the open air.
- 31.—Poultices have been very often applied in gun-shot wounds from laziness, or to cover neglect, and should be used as seldom as possible.
- 32.—Chloroform may be administered in all cases of amputation of the upper extremity and below the knee, and in all minor operations;

which cases may also be deferred, without disadvantage, until the more serious operations are performed.

33.—Amputation at the upper and middle parts of the thigh are to be done as soon as possible after the receipt of the injury. The administration of chloroform in them, when there is much prostration, is doubtful, and must be attended to, and observed with great care. The question whether it should or should not be administered in such cases being undecided.

35.—If the young surgeon should not feel quite equal to the ready performance of the various operations recommended, many of them requiring great anatomical knowledge and manual dexterity (and it is not to be expected that he should); he should avail himself of every opportunity which may offer of perfecting his knowledge.

The Surgery of the British Army should be at the height of the surgery of the metropolis; and the medical officers of that service should recollect, that the elevation at which it has arrived has been on many points principally due to the labours of their predecessors, during the war in the Peninsula. It is expected then that they will not only correct any errors into which their predecessors may have fallen, but excel them by the additions their opportunities will permit them to make, in the improvement of the great art and science of Surgery.

TWENTY HOSPITAL CONVEYANCE CARTS, MARKED 1 TO 20.

Contents of the Box of Medicines in each Cart, written on the lid.

Ammon: Sesquicarb. . . 3 oz.	Liq: Ammon: fort . . 4 oz.
Acid Citric in Pulv. . . 3 „	Morph: Acet: . . . $\frac{1}{4}$ „
Antim: Potass: Tart. . 4 „	Ol: Tigllii. 1 „
Argent Nitras . . . 1 „	Ol: Menth: Pip. . . 1 „
Cupri Sulph. 4 „	Ol: Terebinth . . . 4 „
Chloroform 8 „	Pulv. Jalap 3 „
Ext: Colocynth: Co. Pulv. 2 „	Pulv. Ipecac: Co: . . 4 „
Hydrarg: Bichlorid. . . 2 „	*Pulv. Opii: $\frac{5}{8}$ „
Hydrarg: Chlorid. . . 7 „	

* Medicines purchasable in Turkey have been omitted for general use.

SUNDRIES.

Bandages, 24.	Spatula and Bolus Tile, 1.
Calico, 5 yards.	Tape, Lucifers, 1 piece, 1 box.
Lint, 4lbs.	Minim Measure, 1.
Emp. Resinæ, 2lbs.	Wax Candles, 8., for operations at night.
Ditto spread, 4 yards.	Ligature, Silk and Thread, $\frac{1}{2}$ oz. each.
Spongio Piline, $\frac{1}{4}$ yard.	Reel of Dentist's Silk, Pill Boxes,
Surgeon's Sponges, 6.	Packing Tow.
„ Tow, 1 $\frac{1}{2}$ lb.	
Pins, Needles & Thimble, 1 pkt.	
Paper & Pens, 12, paper 1 in cover	

TWENTY HOSPITAL CONVEYANCE CARTS, NUMBERED FROM 1 TO 20.

One Box for each, containing Utensils for immediate use, on an emergency only.

- 2 Sets of Iron Splints.
- 1 Screw and 2 Field Tourniquets.
- 1 Nest of Cooking Kettles, tin square, 3 in each nest.

- 1 Trivet Iron ring, and 3 legs to screw.
- 2 Large Square Dishes, for holding soup or meat.
- 9 Plates, Dinner, tin.
- 1 Tea Kettle, tin, square (folding handles).
- 10 Table Spoons, iron tinned, large.
- 10 Cups, tin, drinking, $\frac{1}{2}$ of a quart.
- 1 Carving Knife and Fork.
- 12 Table Knives and Forks, white handle.
- 1 Candlestick, tin, with shifting socket.
- 1 Pair of Snuffers, steel.
- 1 Burner, tin, single wick.
- 1 Lamp, tin, hand (globular).
- 1 Lantern, bull's-eye, Police pattern.
- 1 Chopper, for meat.
- 6 Hand Towels.
- 1 Square tin can, with brass screw, containing 3 quarts of Rape Oil
- 1 Pair of Scissors, 7-inch.
- 1 lb. of Cotton Wick.
- 1 Box of Lucifer Matches, wax.
- 2 Basins, hand, zinc
- $\frac{1}{2}$ lb. of Packing Thread, middling.
- $\frac{1}{2}$ lb. " " small
- 1 Needle, packing
- 12 " sewing.
- 2 " darning.
- 2 Papers of Pins.
- 1 Square Tin Box, containing 3 lbs. of Sperm Candles.
- 1 " Cannister " $1\frac{5}{4}$ lbs. of Green Tea.*
- 1 " " " $2\frac{5}{4}$ lbs of Black Tea.*
- 1 Can, tin, for oil feeding, $\frac{1}{2}$ pint.
- 1 Bottle of Brandy, in a tin can, in the tea kettle
- 1 Teapot, tin, with folding handle, 3 pint.

* For particular cases, and to be used with care.

THREE HOSPITAL CONVEYANCE STORE WAGGONS,

LETTERED A, B, C, FOUR CASES IN EACH.

ADAPTED FOR CARRIAGE ON A PACK SADDLE.

Contents of each Case, written on the lid, and marked from 1 to 4.

	lb.	oz.		lb.	oz.
Ammon: Sesquicarb.	0	12	Jalap Pulv.	0	8
Acid Citric in Powder	1	0	Ipecac: Co: Pulv.	1	0
Antim: Potass: Tart.	1	0	Liq: Ammon: Acet. Co.	1	0
Argenti Nitras	0	4	Liq: Opii. JEREMIE	1	0
Chloroform	1	8	Liq: Plumbi: diacet.	1	0
Cupri Sulph.	1	0	Matico Fol.	0	4
Ext: Colocynth: Co.	0	12	Opii: Pulv.	0	$\frac{3}{8}$
Hydrarg: Chlorid.	1	0	Ol: Tiglii.	0	1
Hydrarg: Bichlorid.	0	2	Quinæ: Disulph.	0	12

SUNDRIES.

Wax Candles, No. 9.	Pens, 24, Holder & Ink Powder,
Minim Measure, 1.	1 oz.
Surgeon's Sponges, 6.	Scissors and Bolus Knife, 1 each.
Silk and Thread Ligature, $\frac{3}{4}$ oz.	Broad Tape, Corkscrew, 1 "
Packthread, 2 oz., and Spongio	Blister Plaister, 1lb.
Piline, $\frac{1}{4}$ yard.	Adhesive do. 3lb.
Lucifer Matches, Pill Boxes, 1	Do. do. Spread, 4 yds.
box of each.	Papers of Pins, 4, Packing Tow.
Pencils, 4, Paper & Blotting do	Reel of Dentist's Silk, Needles
1 case.	and Thimble.

DRAWER.

40 Bandages.	4lb. Taylor's Lint.
5 Yards of Calico.	1 Old Sheet.

THREE HOSPITAL CONVEYANCE STORE WAGGONS,

LETTERED A, B, C ;

One Case in each, marked 5, the Contents, written on the cover, being :

25lbs. of the strongest Nitric Acid, specific gravity 1.50.

14lbs. of Sulphuric Acid, likely to be useful in Diarrhoea in autumn.

11lbs. of Perchloride of Iron, specific gravity 1.55.

Divided as equally as possible between the three cases, and most carefully packed to prevent accidents, with separate tin covers to each bottle. The Perchloride being highly useful as a styptic externally, and tonic internally.

THREE HOSPITAL CONVEYANCE STORE WAGGONS,

LETTERED A, B, C (ONE CASE IN EACH).

Contents written on the lid, and marked 6 Reserve.

*Alumin: Pulv. 3 lbs.	Empl: Lyttæ. 2 lbs.
*Plumb: Acet. 3 „	Empl: Adhæsiv. 14 „
Argent: Nitræ. 1 „	Ung: Hyd: Fort. 4 „
*Argent: Nitræ: (Points) 4 ozs.	*Ung: Hyd: Nitr. 1 „
Calcis Chlorid 2 lbs.	Quinin Sulph. 2 „
Sodæ: Chlorid 2 „	Ol: Tiglii. 1 oz.
*Zinc: Chlorid 2 „	Jalap Pulv. 2 lbs.
Ol: Ricini 2 „	Potas: Iodid. 1 „
Conf: Opii. 1 „	Hydr: Chlorid 4 „
Conf: Arom: Pulv. 1 „	Hydr: Bichlorid. 1 „
Ext: Col: Co: Pulv. 4 „	Hydrar: pil. 4 „
*Cupri Sulph. 3 „	Hyd: c. Cretâ 1 „

* Reference had to the Diseases of the Eye likely to occur in an ordinary and sometimes in an extraordinary manner in the East.

SUNDRIES.

Grad: Glass Measure, 3.

Bolus Knives, 2.

Spreading Spatula.

Pill Machine, 1.

Pill Slab, 1.

Spongio Piline, 1 yard.

Gutta Percha Tissue, 30 yards.

Oil Silk, 3 packets, diff. kinds.

Wax Candles, 4 packets, tin.

Wax Lucifers, 1000, in tin.

Lamp and 3 rolls of cottons, 1.

Urinals, 2.

Weiss' Bed Pan, 2.*

Calico Rollers, 250.

Calico in piece, 30 yards.

Tape, 3 pieces.

Lead Pencils, 4.

Steel Pens, 2 packets.

Needles and Pins.

Ink Powder, 1 oz.

Ink Bottles, 3, small.

Case Book, 1.

Patent Lint, 12lbs.

Sponges, 18.

Pestle and Mortar, 1.

Scales and Weights, 1 box of.

Stomach and Enema Pump, 1.

Flannel Rollers, 18.

Solid Wood Splints, 1 set.

Case of Capital Instruments, 1.

Case of Cupping ditto, 1.

Stethoscopes, 2.

Thread and Silk.

* For particular cases.

HOSPITAL CONVEYANCE STORE WAGGONS,

LETTERED A, B, C ;

One Case in each, Contents written on the lid, marked 7 ;
(PHILP & WHICKER in the left-hand corner.)

2 Sets of Iron Splints.

4 Long wooden Thigh Splints.

6 Arm Slings.

Thin Gutta Percha, a Sheet.

Thick Gutta Percha, a Sheet.

6 Straw Splints & 6 spare Covers.*

Mr. Guthrie's Commentaries, in
a leather case (one copy).

* Reeds of wheat straw, easily renewed, and very efficient in ordinary cases.

HOSPITAL CONVEYANCE STORE WAGGONS,

LETTERED A, B, C.

Each of the Three Waggon contain the following Articles:

	Cwt.	Qrs.	lbs.
4 Bags of Bedding, 3 sets each, 3 sheets to each set.	3	0	4
1 Hospital Marquee, complete, with poles in pieces, inside and outside roof, walls, pins, mallets, valize for the Marquee, and bag for the pins	4	1	6
4 Portuguese Tents, complete with poles, roof, walls, pins, mallets, valize for Tents, bags for pins	5	0	16
4 Cases, Nos. 1 to 4, Medicines	3	0	0
1 Case, containing acids, No. 5.	0	3	0
1 Case, reserve, No. 6., Medicines and Sundries	3	0	0
1 Case, 1 book splints, &c., No. 7..	0	3	0
1 Case, 30 air beds, No. 8.	1	2	0
1 Case, or pannier box, Tower, No. 9, containing			
2 Nests each of 8 tin Kettles, cooking.			
3 Trivets for ditto, iron (rings and legs to screw).			
2 Locks, Pad, small.			
1 Case, or pannier box, Tower, No. 10, containing			
1 Tea Kettle, tin, with folding handle, 7 quart.			
2 Teapots, " " 5 pint.			
12 Dishes, tin, 13½ in.			
50 Plates, dinner, tin.			
24 Spoons, iron-tinned, large.			
2 Carving knives and forks.			
24 Table " " white handle.			
40 Cups, tin drinking, ⅓rd of a quart.			
1 Cannister, Tin, 7 in., containing 4lbs. Salt.			
1 Ladle, soup, iron.			
1 Flesh Fork.			

* It would be advisable in future to separate the Medicines from the Sundries, making thereby two more portable cases, of less weight, of wood.

- 1 Chopper, Meat.
- 1 Brush, hand scrubbing.
- 24 Towels, Hand.
- 1 Steelyard, weighing up to 87 lbs.
- 1 Pair of Diet Scales, tin hand.
- 1 Set of Weights for ditto, 2lb., 1lb., ½lb., ¼lb., iron, flat, and 2oz. brass.
- 2 lb. of Cotton Wick.
- 1 lb. of Thread, whited brown.
- 2 Needles, Packing.
- 24 " Sewing.
- 6 " Darning.
- 2 Locks, Pad, small.
- 1 Case, or pannier box, Tower, No. 11, containing
- 2 Bed Pans, pewter.
- 3 Close Stool Pans, pewter.
- 3 Iron frames for ditto.
- 2 Urinals, pewter.
- 2 Basins, or Bowls, zinc.
- 1 Tea Kettle, tin, 4 quart.
- 2 Candlesticks, iron flat, for oil.
- 2 Burners, tin, double wick.
- 1 Pair of Snuffers, steel.
- 1 Pair of Scissors, 7 in.
- 1 Square Tin Box, containing 6 lbs. of Sperm Candles.
- 1 Hand Lamp, tin, globular.
- 1 Lantern, bull's eye, police pattern.
- 1 Can, tin, for oil feeding.
- 2 Bottles, tin, containing 2 gallons of Rape Oil.
- 1 lb. of Cotton Wick.
- 2 Boxes of Matches, wax.
- 1 Axe, Felling, Canada pattern.
- 2 Brass Cocks, bib driving, ½ in., with keys.
- 1 lb. of Thread, Packing, ½lb. middling, ½lb. small.
- 18½ lbs. of Soap, Yellow, 6 bars.
- 2 Locks, Pad, small.

- 1 Case, or pannier box, Tower, No. 12, containing
 1 Square Tin Box, for Sugar, 48 lbs.
 1 Square Tin Box of best Green Tea, 7 lbs.*
 1 Square Tin Box of Black Tea, 18 lbs.*
 6 Bottles of Brandy, in a wood case
 1 Corkscrew.

2 Locks, Pad, small.

	Cwt.	Qrs.	lbs.
The 4 Boxes of Utensils, &c., weigh	4	2	25
3 Bundles, containing 36 Saddle Water Decks	1	1	26
1 Filter of Gutta Percha	0	1	3
2 Kegs for Water	0	1	21

Total weight in each waggon, 28 1 11

* The tea of the best quality is intended as a solace or comfort in particular cases only, not for general use.

HOSPITAL CONVEYANCE STORE WAGGON,

LETTER D.

CONTENTS.

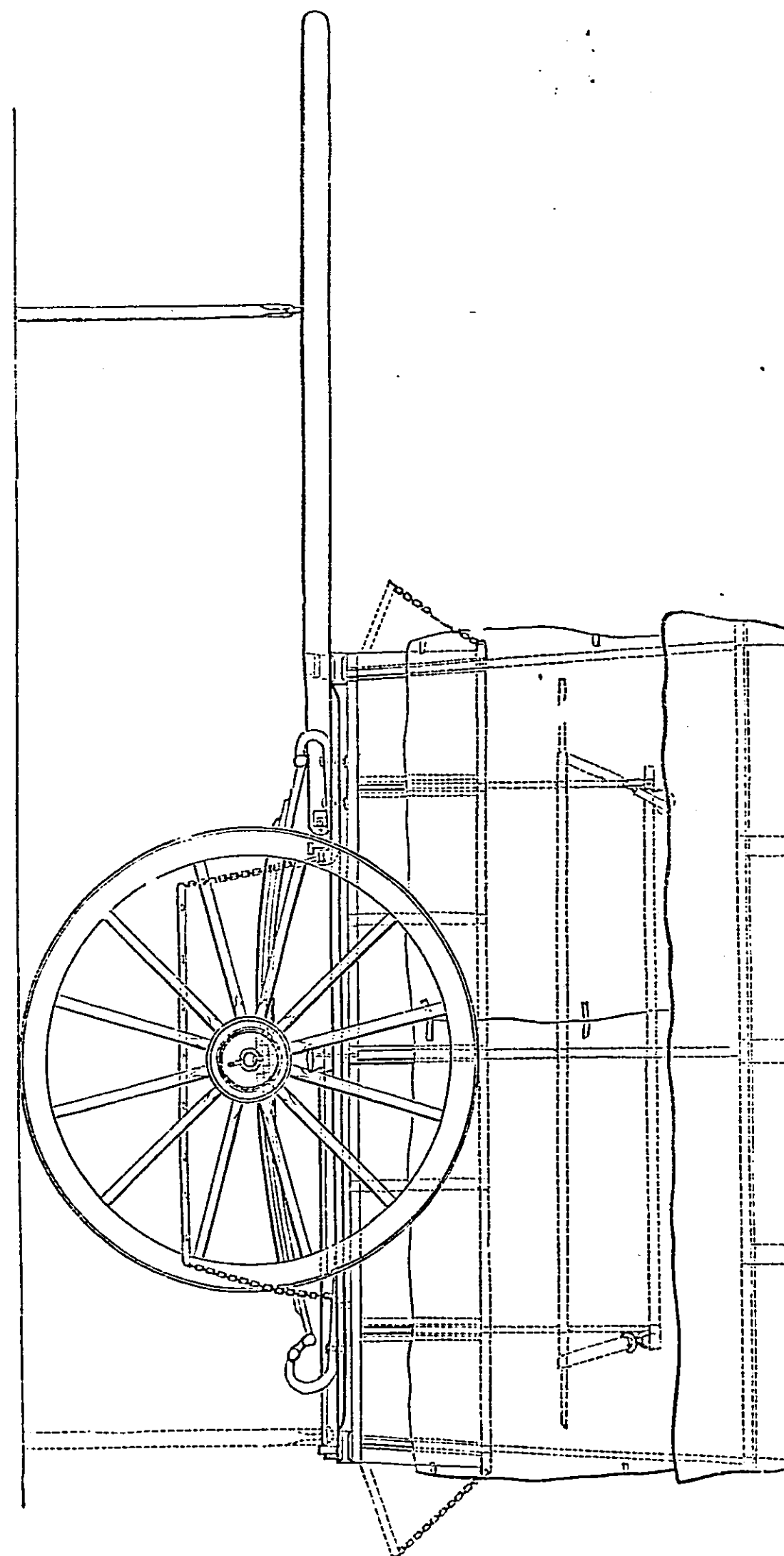
	Cwt.	Qrs.	lbs.
3 Marquees, complete	12	3	0
9 Portuguese Officers' Tents, complete	12	0	15
6 Bales of Bedding, 3 sets to each bale, 3 sheets to each set	4	2	6
Total weight	29	1	21

The Store Waggon, in the event of the baggage of the division going to the rear, may accompany it, if not too far; but on the report of the first cannon-shot being heard, they should move forwards, the non-commissioned officer in charge communicating with the principal medical officer of his division, stating their position.

April 27, 1854.

FINIS.

HOSPITAL CONVEYANCE CART.



L O N D O N :

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