

Danish horse-drawn field artillery 1940



Introduction

The content of this article is essentially a copy of the chapters in *Lærebog for Hærens menige, II. Part for horse-drawn field artillery, 1940*, which deals with organization as well as equipment and materiel.

The image material also originates from here, unless otherwise stated.

The spelling has been adapted to contemporary standards, while the practice at the time of specifying a cart's draft horses, e.g. 16 (= a carriage pulled by 6 horses) is retained. To avoid confusion with footnotes, these are therefore indicated as e.g. A.

Organization

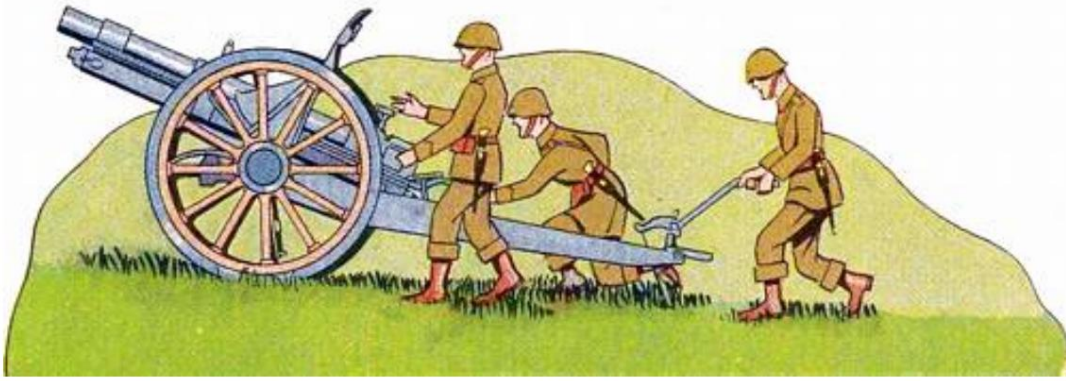
1. The artillery is divided into field and anti-aircraft artillery.

The field artillery is divided into regiments, divisions (light and heavy) and batteries. Heavy units and anti-aircraft units are motorized. Light departments can be horse-drawn and motorized.

A light, horse-drawn division consists of: staff, 3 batteries (1st - 3rd Battery), each with 4 pcs. 75 mm field gun.

2. The light, horse-drawn artillery can be moved off-road without difficulty. Its guns have a significant rate of fire and can quickly switch targets. The fire is very effective against uncovered troops; against covered troops and resistant targets (trench installations, buried batteries, buildings and the like) its effect is rather less. Maximum firing range 10 km; the best effect is achieved at distances up to 5 km.

Due to its special characteristics, the light, horse-drawn artillery is particularly suitable for use in close contact with the infantry. It is therefore, where possible, brought into position so far forward that it can be in safe and close connection with the infantry it is to support.



Section of clipping sheet from approx. 1941A). ____

3. *The department* staff is divided into: *the department head's entourage* - the department head's closest assistants - *the department troop* (with the personnel and equipment necessary for establishing observation and connection), as well as *train*.

The division squad consists of: the division squad leader's entourage, artillery liaison command and infantry liaison command; its personnel is partly mounted, partly it is carried, like the material, on 52 carts (called central carts, radio carts, observation carts and telephone carts¹ and telephone carts²) and finally there are some cyclists.

The training is divided into fencing training and luggage training.

In the *fencing training*, there are caretakers with spare horses, 1 mechanic's wagon (training wagon) and kitchen wagon (light cargo wagon), which will be used during or immediately after fencing, and also 1 passenger wagon (for the accountant).

On the luggage cart are the items (archives, luggage, etc.) that can only be expected to be needed after the end of fencing and the day's march.

4. *The battery* is divided into: battery troop and cannon line and train.

The battery platoon, which is most often divided into retinue and shooting platoon, assists the battery commander in reconnaissance, basic positioning and observation, establishes connections and participates in the security service. The personnel is partly mounted, partly carried like the material on 22 carts (observation carts and telephone carts).

The gun line consists of 2 *half-batteries* of 2 gun platoons (1st - 4th Platoon). Each platoon consists of 16 cannon and ammunition wagon; the 2nd and 6th 3rd platoon includes recoilless rifle personnel with 2 recoilless rifles, there are also 8 1 security riders.

5. The training is divided into fencing training and luggage training.

The *fencing train* consists of 26 ammunition wagons (5th Platoon), 1 wheeled wagon, guards with the spare horses and 2 bicycle orderlies (6th Platoon) as well as a kitchen wagon and oat wagon (light cargo motor wagons) (7th Platoon).

Doctors and vets (with sack coach drivers **B**) are normally included in the 5th Platoon, while craftsmen are included in the 6th. Sharing (on the wheeled carriage).

The baggage train is a baggage wagon (light cargo motor vehicle), on which archive, baggage and spare cases are carried.



On the march.

From Source 3.

Packing

The crew's personal equipment is packed in saddlebags, mantle sacks and saddlebags, while the things necessary for dressing and caring for the horses are carried in saddlebags, fodder bags and sacks as well as coachman's rucksacks.

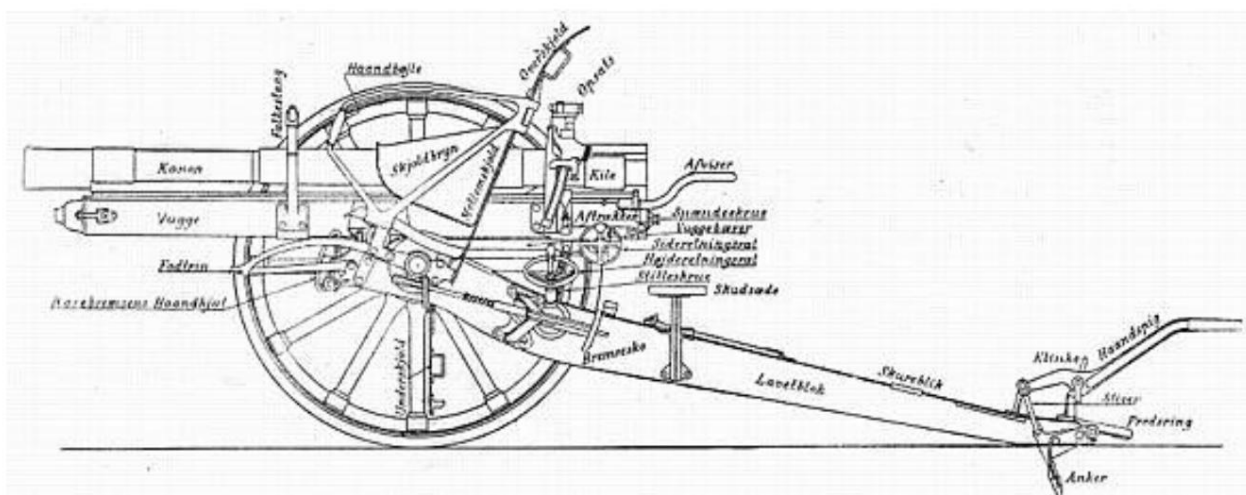
The footmen's spiers and cloaks were packed in the stern of the props, on which the steel helmets could also be hung, in carabiners.

The battle battery's accessories and spare parts are packed on cannons (in the made box), props (in the prop box, the saddle box and in the hand and saddle side compartments), wagons and carts.

In the combat battery itself, the spare parts, the placement of which can and must be carried out on the spot and without expert help, and the tools necessary for the placement are carried.

A number of additional spare parts with the necessary tools are found in the battery's fencing yard, and there is a man trained in the craft to carry out the work.

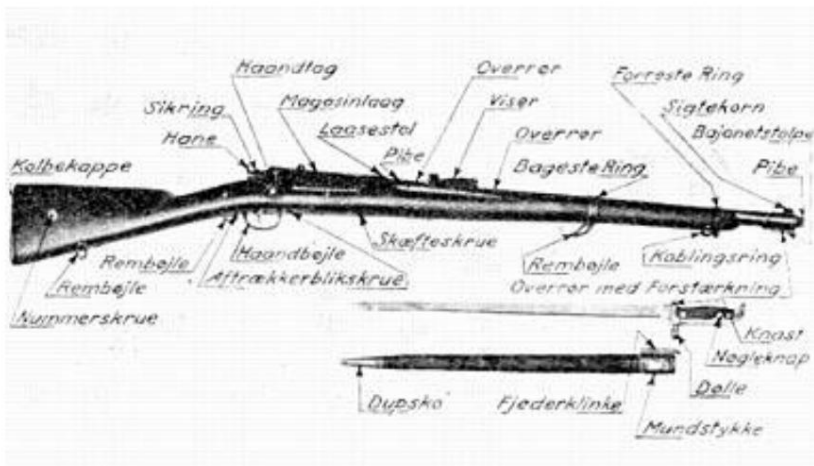
Finally, there are spare parts and other cases, the placement and use of which require special facilities and a fully trained craftsman; these cases are collected for each department in its tree, where the craftsman is also.



75 mm L/30 hSK M. 1902.

Shield

The cannon is a 75 mm 30-calibre long fast-firing steel cannon Model 1902. The cannon and ammunition data appears in my article Danish Motorized Field Artillery, to which reference is made.



Handguns and instruments

The crew in the horse-drawn field artillery is equipped with the 1889 Artillery carbine with the bayonet.

The carbine weighs 4 kg without and 4.4 kg with the bayonet. The length is 110 cm and 156 cm respectively.

An experienced marksman has the prospect of hitting a lying man within 250 m with a single shot, a standing man within 350 m, while at greater distances only effect against larger targets can be expected.

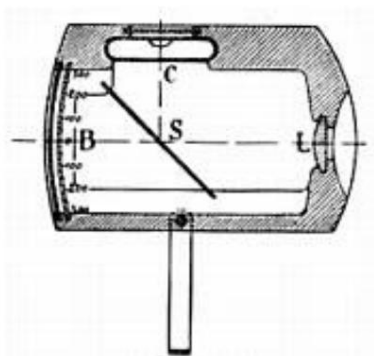


Observer, with relief binoculars M.1916 C).

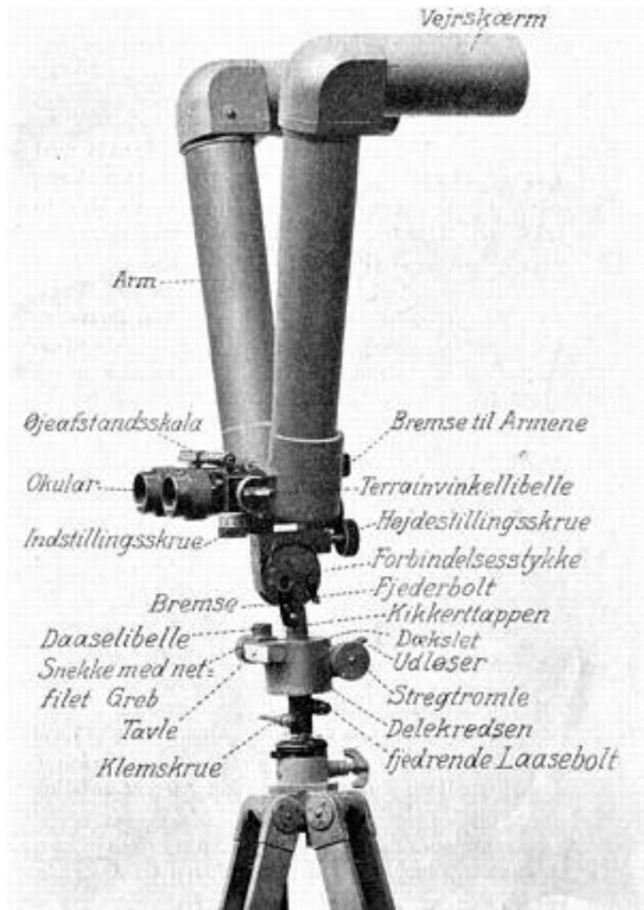
The recoil guns, measuring instruments and signaling equipment of the batteries were of the same type as used in the motorized field artillery.

These things are discussed and illustrated in my article Danish Motorized Field Artillery, to which reference is made.

The binoculars were the forerunner of the Relief binoculars M.1924.



Inclinometer M.1919.



Relief binoculars M.1916.

The inclinometer, which is carried on the observation vessel, is manufactured by *Huet & Cie*, and is used for measuring height and depth angles, especially when determining the minimum elevation that one can shoot with over a hill crest.

The inclinometer is carried in a leather case.

The binoculars are double prism binoculars of a special shape, from the company Carl Zeiss.

Like its successor relief binoculars M.1924, illustrated in Danish Motorized Field Artillery 1940, it magnifies 10 times.

On the march it is transported in the observation vessel; in the field it is carried in a leather sheath that can be carried on a horse or as a bridle.

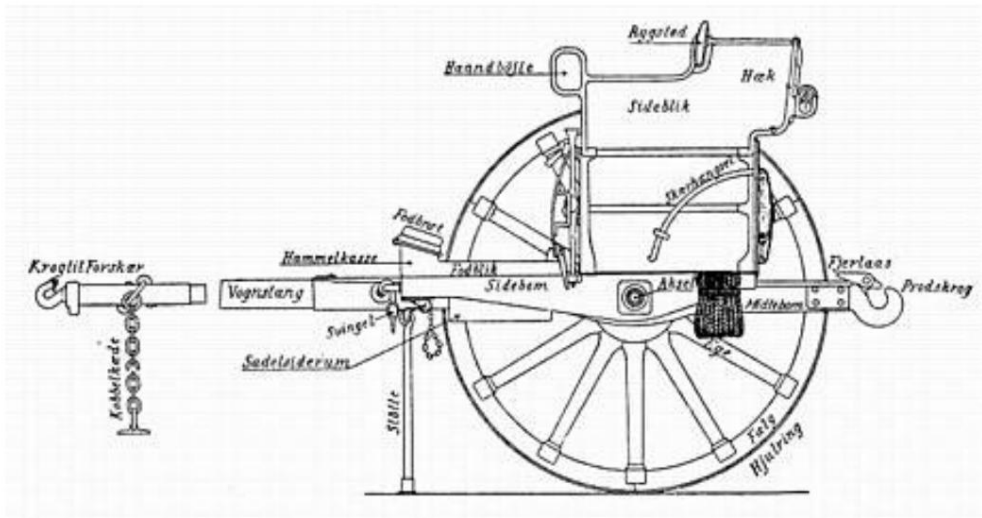
The tripod belonging to the relief binoculars is also carried in a leather case; the stand is of the same type as that used for the protractor, only with longer legs.



Shooting course at Amager Fælled. From Source 3.

Here you can see the binoculars turned to the lowest position. This results in the observed objects appearing in greater *relief*.

With the scope tubes in a more vertical position, the relief binoculars function more like a kind of periscope, with which you can observe beyond a vertical coverage.



Performance M.1902.

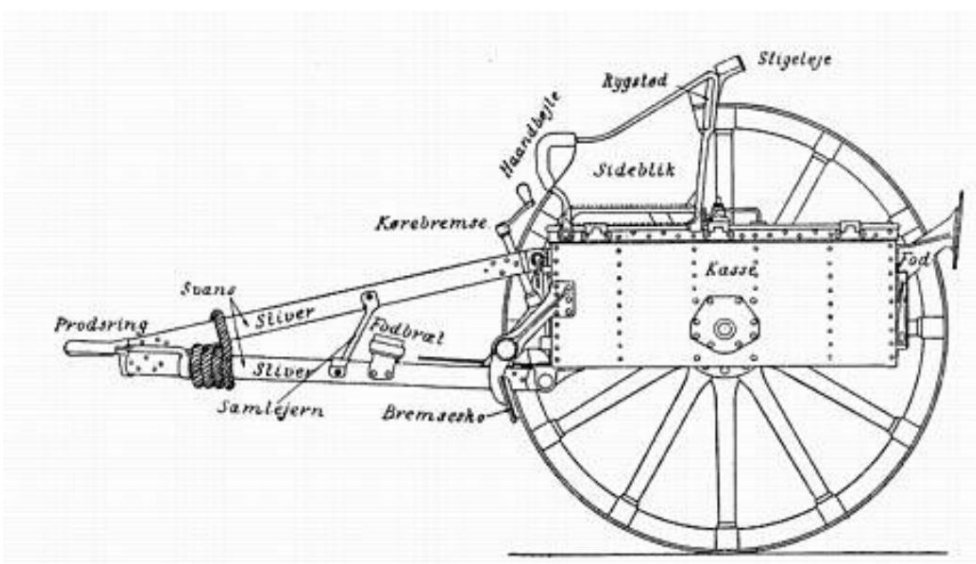
Vehicles

The performance box is divided into 12 compartments for cartridge baskets and props boxes.

The performance weighs approx. 975 kg.



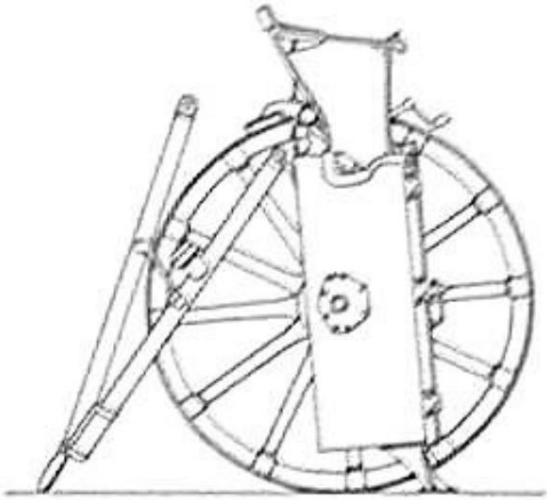
Above stick and stone... in the lower left corner can be seen the shield of the field cannon [D](#)).



Ammunition wagon M.1902 consists of ammunition wagon front and ammunition rear wagon. The performance is like the canon performance.

The trailer weighs approx. 1,175 kg.

The entire length of the vehicle is approx. 7.7 m (of which removable drawbar approx. 3.2 m). Weight approx. 2,150 kg, with mounted personnel approx. 2,650 kg.



Ammunition trailer in position.

After photostat at Varde Artillerimuseum.

The rear ammunition carriage can be tilted backwards and its armored bottom and open doors then provide approximately the same coverage as the gun's shield [E](#).

The battery's cannon ammunition is distributed as follows (Source 2):

75 mm grenade cartridges

Per cannon performance:

44 Per ammunition wagon presentation: 48

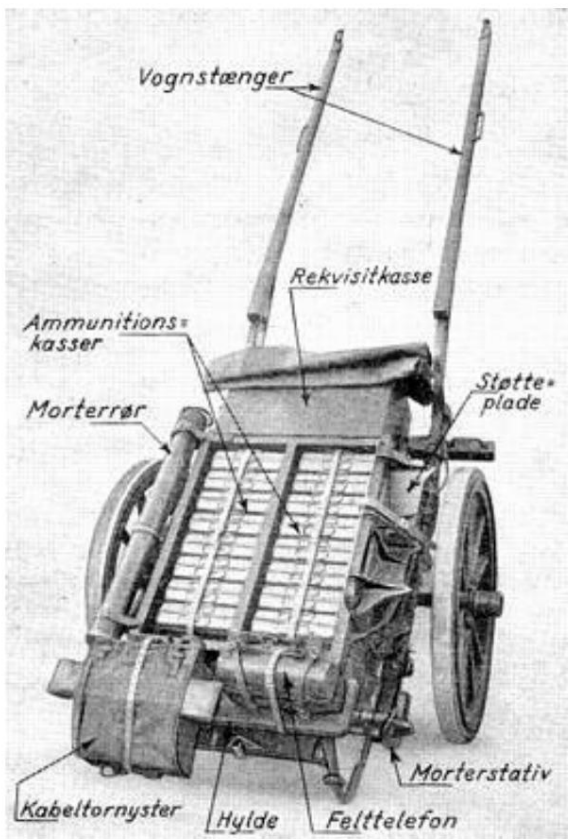
Per ammunition trailer 1-4: 68 Pr. ammunition
rear wagon 5-6: 72

In total per canon: 220

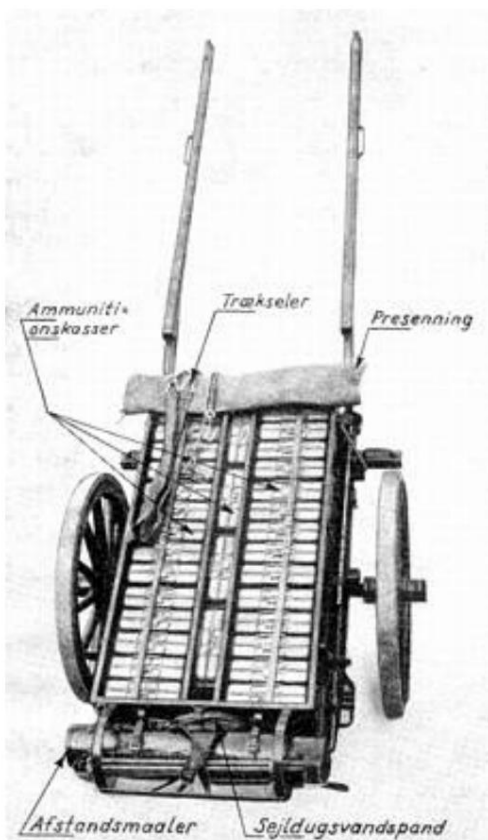
Total in the battery: 880

Instrument cart M.1931 is a light 2-wheeled vehicle with fork bar. In the vessel's 3 compartments are instruments for observation and basic positioning (relief binoculars M.1916, protractor M.1928, inclinometer M.1919, field compass M.1923, artillery map target M.1931 and map target M.1931 etc.) and/or radio, signal and telephone equipment. In addition, maps and cases used during shooting as well as lights and barbed wire scissors.

Weight (of packed container) 7-800 kg.



Mortar cart M.1931F).

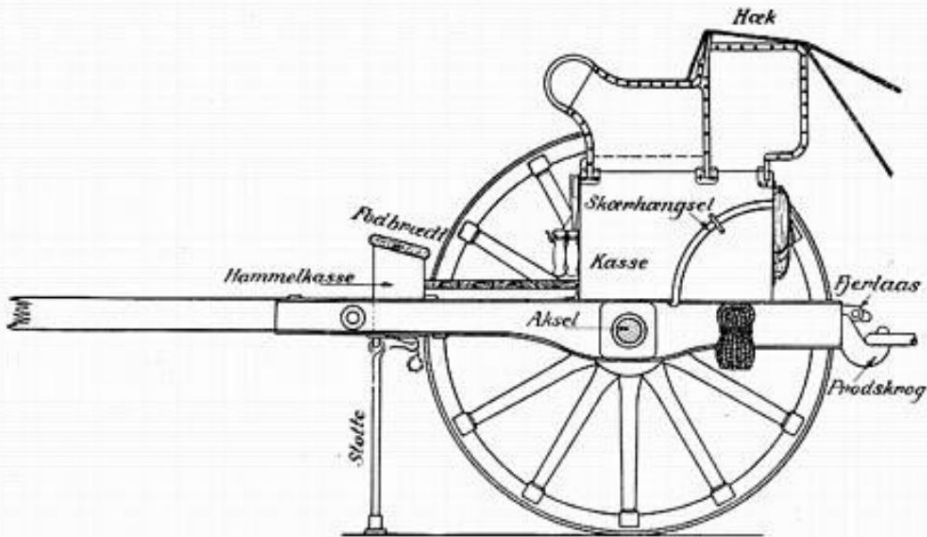


Grenade cart M.1931 F).

Unfortunately, I do not have any pictures of Instrument Karre M.1931.

It is possible that it was similar to the tank material used in the infantry mortar divisions (81 mm infantry mortar M.1931). Here, each cart was pulled by 1 horse, while the artillery's cart material, cf. source 2, was pulled by two horses. If this is true, then it may have been "tandem hauling".

Wheeled wagon M. 1905 consists of wheeled wagon rear wagon and wheeled wagon front. The maximum height of the vehicle is approx. 1.7 m. Width approx. 1.7 m and total length approx. 7.7 m (of which removable drawbar approx. 3.2 m). The vehicle is pulled by 6 horses.

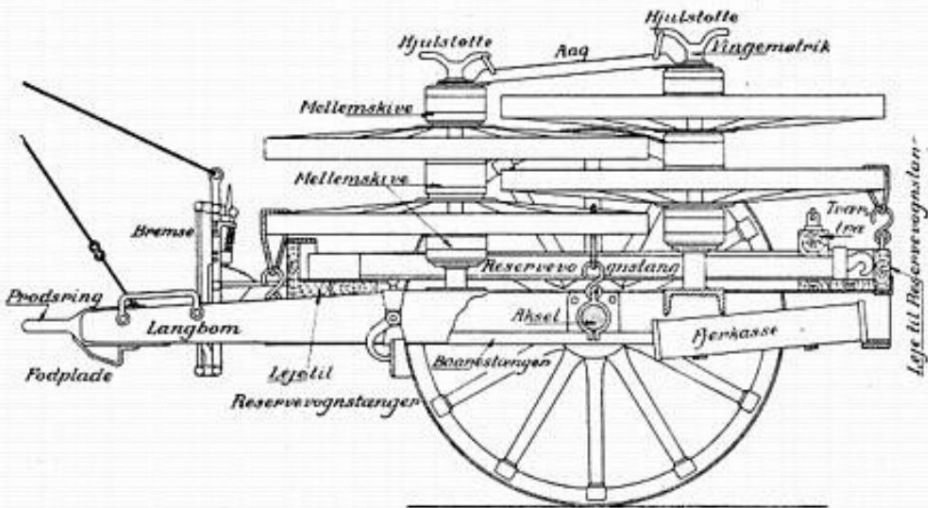


Wheeled wagon performance M. 1905.

The fore-frame is similar to that of the cannon, but the center boom of the under-frame consists of 2 U-shaped side pieces, united by a bottom surface.

The display does not have a foot tin compartment, and the display case only has one room inside, which is equipped with bearings for the various objects that are packed in it.

The wheeled carriage performance weighs approx. 725 kg.



Wheeled wagon rear wagon M. 1905.

The wheeled cart carries 4 spare wheels and spare cart bars, 650 pistol cartridges, sanitary equipment (canteen and stretcher), tools for field craftsmen, etc.

Weight of packed trailer is approx. 1,025 kg

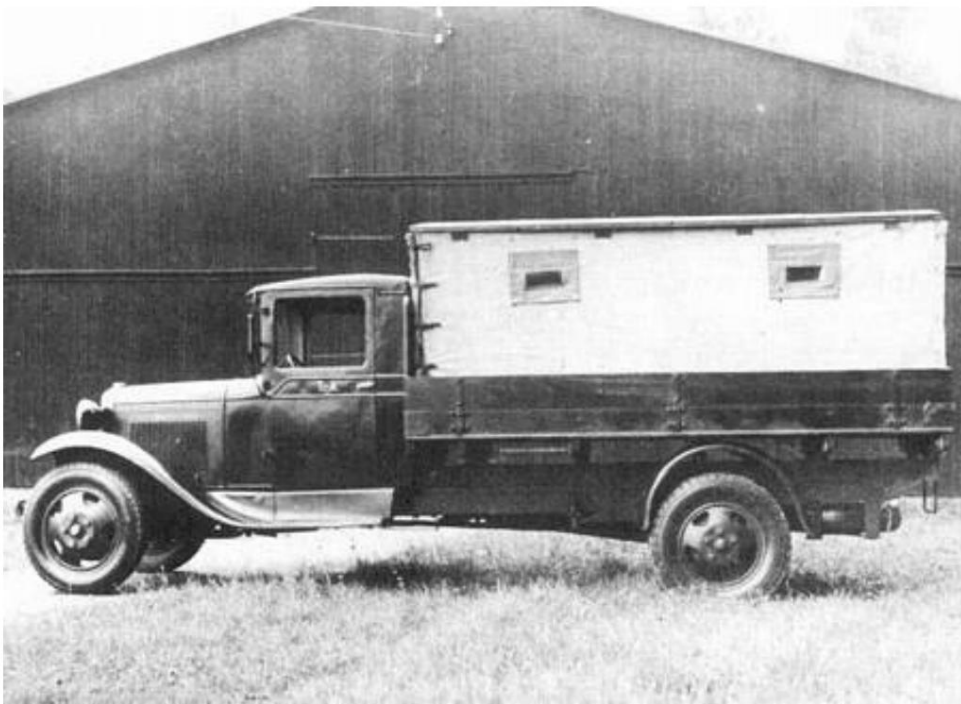
Weight of the entire vehicle with mounted personnel (3) is approx. 2,000 kg.



Train wagon M.1909 G is approx. 1.55 m high and approx. 1.8 m wide. The total length is approx. 6 m (of which removable carriage pole approx. 3 m).

The train wagon's own weight is 600 kg and its carrying capacity 1,200 kg.

The wagon is equipped with an age chair M.1920 and spade M.1915.

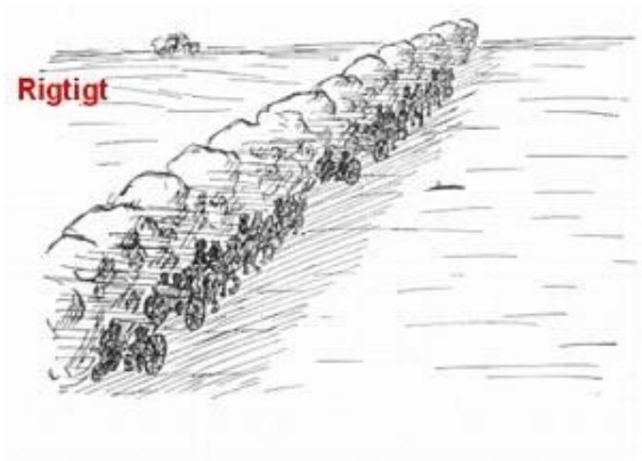
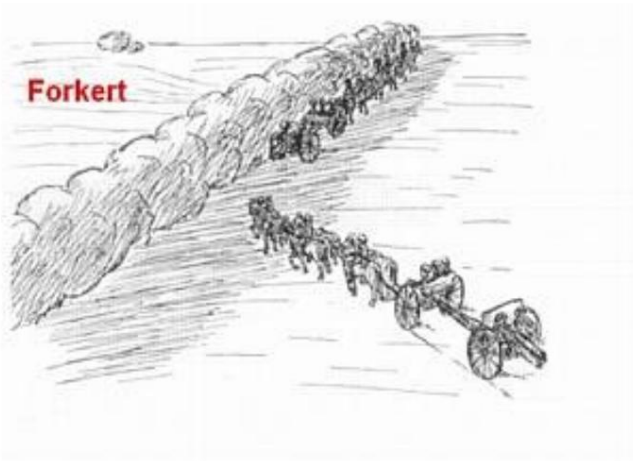


Kitchen wagons, baggage wagons and oat wagons were light trucks.

Truck of the type Ford A 1937 H from the Training Department's first experiment with a fixed roof (metal roof and canvas sides). The version in question was intended for personnel transport and as a battery squad car in the motorized batteries.

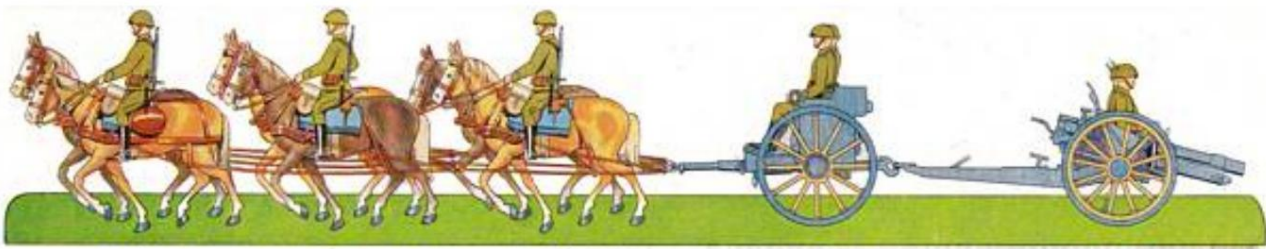
The horse-drawn battery and department lorries did not necessarily have a fixed roof, but could otherwise be of the same type.

The textbook prescribes that the artillery must use the guiding lines of the terrain and, as far as possible, drive and take up positions along fences, ditches, fences and field divides.

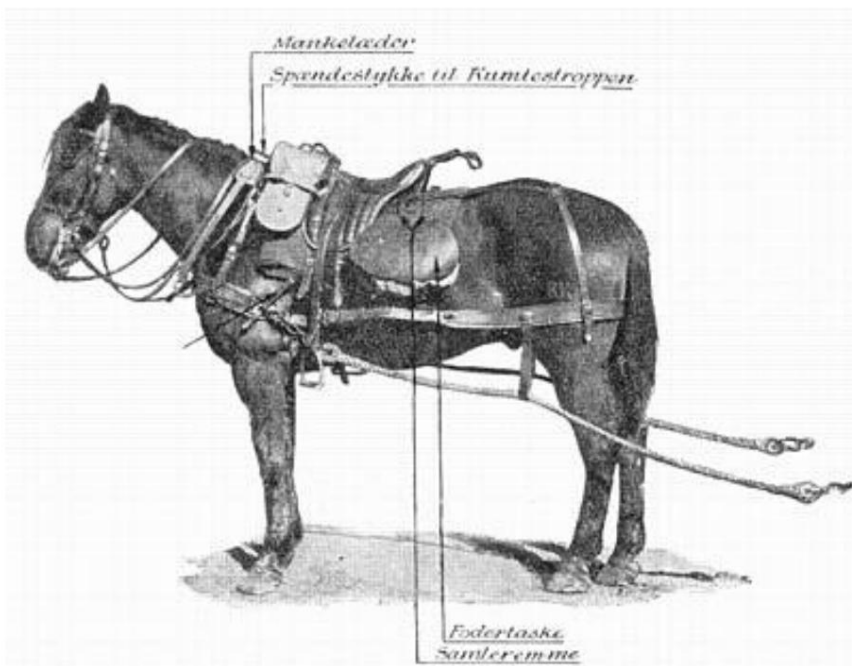


Horses

The artillery has black, brown, red and spiky horses, as well as some moulds. Brown horses have black legs, black mane and black tail. Red horses have either a red mane and tail or a light mane and tail. A spiky horse has darker sound (color) with frosted white hairs. Some horses have a dark stripe - eel - on their back.



Section of clipping sheet from approx. 1941.



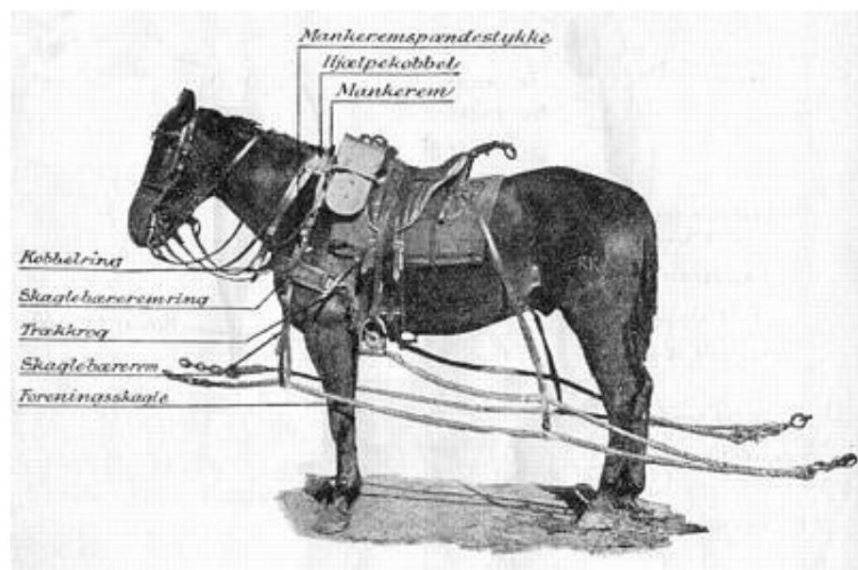
Red horse.

If you are not knowledgeable about the designations of the many different parts that make up the horse's harness, then

the textbook's illustrations provide good help.

The pole horses are the horses that go closest to the performance, i.e. on each side of the carriage bar.

If the photograph of the pole horse is compared with the drawing above, it appears, however, that the draftsman has changed the position of the horses in the bucket.



Intermediate horse.

The horse's harness, like other leather equipment, is made at the saddle maker's workshop at the Army's arsenal.

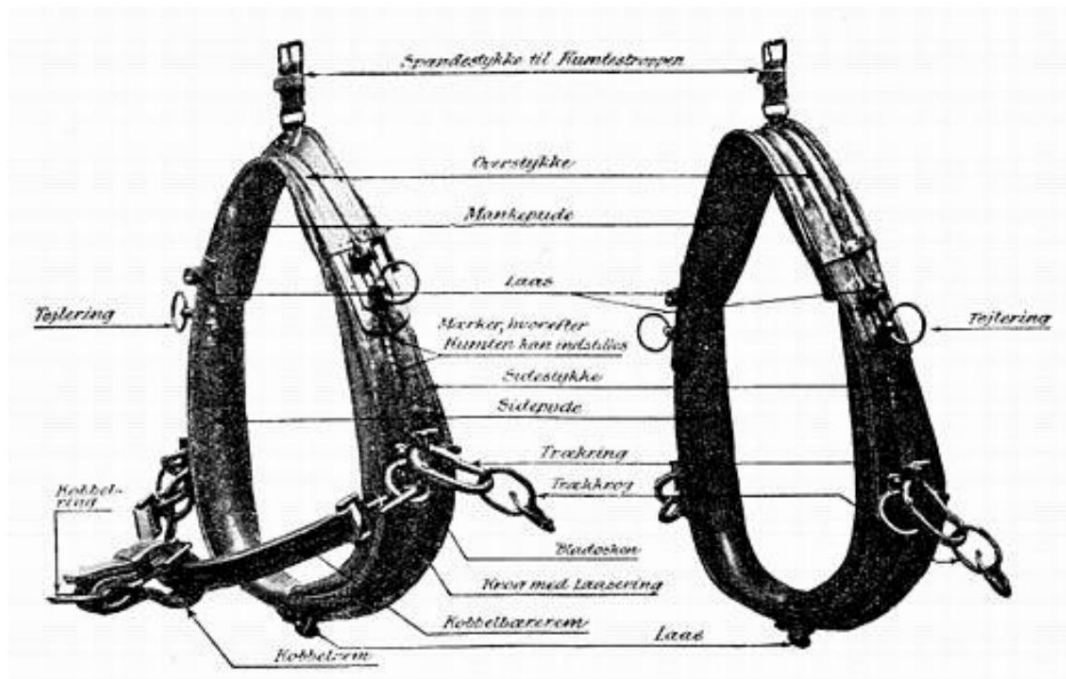


A horse has crashed...

The picture is reproduced from a newspaper clipping from Berlingske Tidende and you get a clear impression of some of the problems that can be associated with the use of horses.

However, it seems that the tree constable - who is in the process of calming his horse - and the others have the situation under control.

The situation also provides an opportunity to see the harness on the pole rider's hand horse.



Kumte.

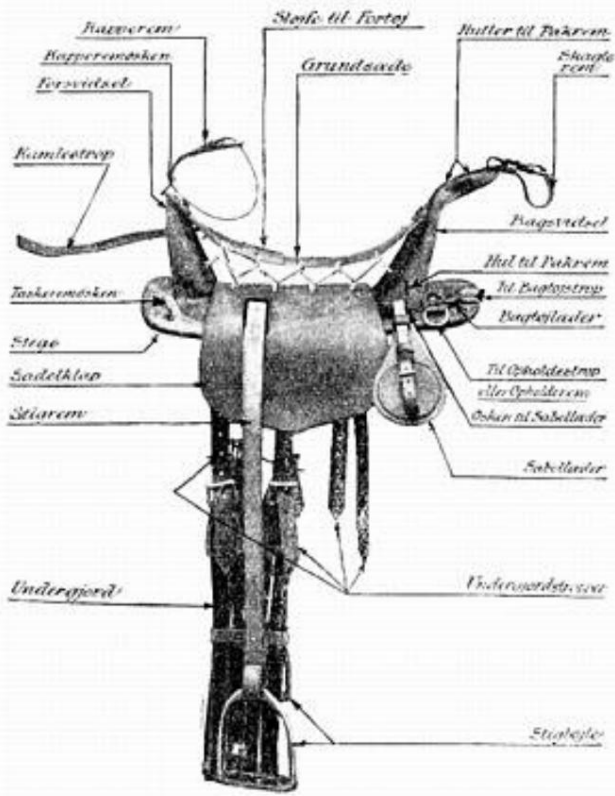
The picture shows a towing harness seen from both sides.

Information in Source 8 proves that the towing harness - *kumt* or *kumte* - shown here was replaced by the carrying harness M.1918. It is thus mentioned that in the case of replacements only harnesses will be included, but of course the old equipment would have to be worn out first...



A section of Adolph Holst's sheet Danske Bilder, Artilleri, Series 2, No. 6.

The drawing, which is perhaps not as beautiful in line as the previous one, is another take on the period's horse-drawn artillery. The constables are shown with sabres, which in 1924 - with the introduction of the artillery carbine M.1889 - were replaced by bayonets. Adolph Host's drawing also exists in a second and larger version, where the soldiers are in gray M.1915 uniforms. The drawing has clearly been modernized in that the uniforms are now khaki-coloured instead, but the sabres have been chosen to be retained. And as for the cannon... it looks more like a toy cannon than a 75mm field gun.



Saddle beam M. 1902.

Despite the abolition of tree constables' sabres, the textbook still shows the saddle bar (which carries the saddle itself) with saber leather.

Closing

After the 1937 scheme, the Army's artillery included 3 field artillery regiments and 1 anti-aircraft regiment:

Regiment

Departments

Garrison Type

1. Field Artillery Regiment 1. Artillery Division Copenhagen Light, motorized division (Sjællandske Division)

2nd Artillery Division Copenhagen Heavy, motorized division

6. Artillery Division Copenhagen Heavy, motorized division

2nd Field Artillery Regiment 4th Artillery Division Ringsted Light, horse-drawn division (Sealand Division)

5. Artillery Division Holbæk Light, motorized division

11. Artillery division Ringsted Light, horse-drawn division

12. Artillery Division Holbæk Light, motorized division

3rd Field Artillery Regiment
(Jutland Division)

3. Artillery Division Aarhus

Light, horse-drawn department

7. Artillery Division Aarhus

Heavy, motorized department

8. Artillery Division Haderslev Light, motorized division

9. Artillery Division Aarhus

Light, horse-drawn department

Air Force Regiment 10. Artillery Division) Copenhagen Copenhagen Air
Defense (Zeeland Division)
(Jutland Division)

13. Artillery Department Copenhagen Motorized Air Defense Department

14th Artillery Division, Aarhus

Motorized Air Defense Division

In 1902, the Army placed an order for 128 pcs. 75 mm field guns for the Krupp factories in Germany and thereby acquired, for 5 million kroner, his first modern field guns. Prior to the decision, an extensive series of trials had been carried out, during which cannons from Cockerill, Erhardt, Schneider and Krupp were tested.

In 1937, 8 of the 11 field artillery divisions were thus equipped with 75 mm field cannon. In this way, 96 of the pamphlets were disposed of. Added to this was a number (possibly a battery with 4 pamphlets) at Bornholm's Værn, which was a pure mobilization unit.



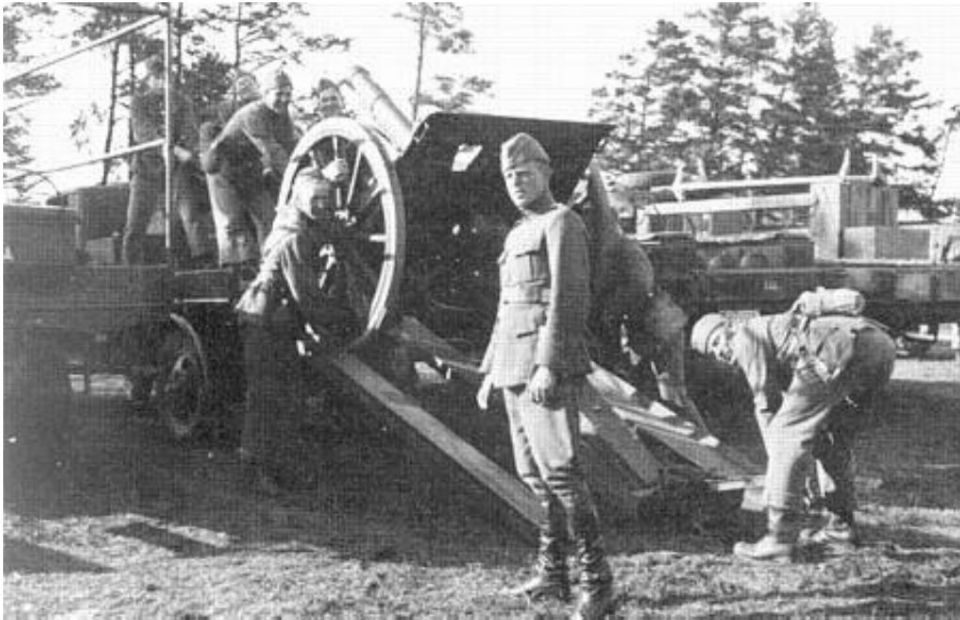
Light battery in Jægerspris shooting range, circa 1939.

From a simultaneous postcard.

Sources

1. *Textbook for Army Privates, Part II for Horse-drawn Field Artillery*, Ministry of War, Copenhagen 1940.
2. *Memory book for use in the field, during exercises and war games* by HH Jørgensen, N. Olaf Møllers Forlag, Copenhagen 1936.
3. *Denmark's Army, Volumes I and II*, Society for the publication of cultural writings, Copenhagen 1934-1935.
4. *Field equipment for Individuals*, Ministry of War, Copenhagen 1936, with correction sheets up to August 1941.
5. *The planning of Zealand's land defenses 1922-1940* by Ole Isgaard Olsen, Published by the Defense Command, 1985.
6. *Artillery's Materiel* by Ole Frantzen, Danish Artillery Journal Nr. 4, August 1984, ISSN 0011-6203.
7. *Field artillery in Aarhus 1881-1969* by PE Niemann, Forlaget ZAC, Copenhagen 1981, ISBN 87-7348-047-9.
8. *Regulations for Field Artillery I*, Ministry of War, Copenhagen 1920, with corrections up to 1926.

Postscript



In 1933-34, experiments were carried out, i.a. at the 8th Artillery Division, to investigate whether the light motorized divisions should be motor-drawn or motor-borne.

That is to say, the guns were driven onto the bed of the lorries by means of chutes and in this way driven to where the battery had to go into position.

The Ministry of War subsequently decided that the guns should be motor-driven. (Source 7.)

Per Finsted

Notes:

A) See the whole sheet here Danish artillery etc. 1941.

B) A pair of sack cookers corresponds to a canteen *turnyster*, and thus contains parts of the horsemen of units

sanitary equipment (intended for both humans and animals).

C) From *Artilleri i Danmark* edited by Marian Plough, Varde Artillerimuseum, 2001, ISBN 87-89834-39-9.

D) The picture comes from an issue of the journal *Folk og Værn*, from approx. 1941.

E) Resists grenade launcher bullets and rifle projectiles, the latter only at distances over 125 m.

F) From *Textbook for Infantry Corporal Schools - Weapons*, Ministry of War, Copenhagen 1938.

G) From *the Gardehusarkasernen on 29 August 1943* by Anders D. Henriksen, Forlaget Devantier, Næstved 1993, ISBN 87-984530-0-9. In the *1st Training Battalion 1880-1990* (jubilee publication), *Driving Instructions for the Army*, 1929, are cited, in which it is mentioned that the training wagon should only be loaded with 800 kg for the sake of the horses. The driver's weight included.

H) From *the history of the Zealand Train Regiment*, published by the regiment in 1991.

I) The 10th Artillery Division was directly under the General Command