

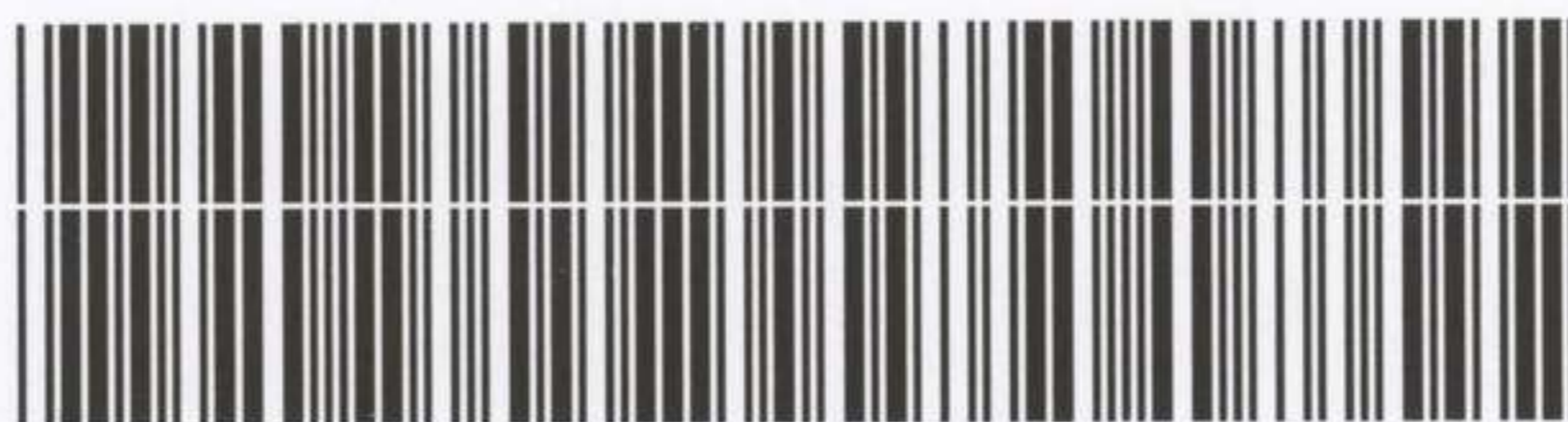
AWM4
Australian Imperial Force unit war diaries,
1914-18 War

Engineers

Item number: 14/36/4

Title: 1st Field Squadron, Australian
Engineers

September 1916



AWM4-14/36/4

WAR DIARY

Army Form C. 2118.

Instructions regarding War Diaries and Intelligence Summaries are contained in F. S. Regs., Part II. and the Staff Manual respectively. Title pages will be prepared in manuscript.

or
INTELLIGENCE SUMMARY.

1st Field Squadron, A.E.

(Erase heading not required.)

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
ABD.	22/8/16 to 19/10/16.		<p>HEADQUARTERS - at ROMANI carrying out Miscellaneous works, testing water supply equipment, surveying scheme for water supply main ANZAC MOUNTED DIVISION, designs for Racks and Carriers Pack Saddles/</p> <p>(The original of above is written on the same sheet as entries for November, and filed with volume for that month).</p>	<p>Survey for water scheme. Racks and Carriers for Pack Saddles Pack Transport.</p>

WAR DIARY

Army Form G. 2118.

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or
INTELLIGENCE SUMMARY.

(Erase heading not required.)

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
ROMANI	19/16		Erecting Huts at KILO-47 for Cholera Hospital	} Cholera Hospital KILO-47
	to 9/16		"ANZAC" Mounted Division Construction:- <u>Timber Frames sheeted with Matting</u> , work carried out by "A" Troop	
	10/16		<u>Troops engaged preparing Water Supply</u> at AMARA, BIR-EL-ABD, BIR-SALMANA	} Water Supply
	to 18/16		AFFIN, HASSANIYA, HOD-EL-GE'EILA Material used:- Well Lining Sets and 2½ inch dia Spear Points.	
	19/16		"A" Troop - Constructing <u>Rifle Range</u> and Targets for	} Rifle Range ROMANI
	to 26/16		1 st Light Horse Brigade - ROMANI	
	19/16		"B" Troop - preparing Water Supply with 2 nd Light Horse Brigade stationed at	
	to 29/16		HASSANIYA "C" Troop - " " " " 3 rd Light Horse Brigade stationed at AMARA	
	19/16		"D" Troop - preparing Water Supply and overhauling equipment.	
	to 30/16		New Zealand Mounted Rifle Brigade - ROMANI.	
	27/16		"A" Troop - left ROMANI with 1 st Light Horse Brigade enroute to KANTARA via	
	to 30/16		HILL-70 and DUEIDAR, to prepare water supply "A" Troop - with 1 st Light Horse Brigade at KANTARA	

[Handwritten signature]

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September

WAR DIARY

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INTELLIGENCE SUMMARY.

1st Field Squadron, A.E.,

(Erase heading not required.)

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
	30/9/16. to 24/11/16.		<p>"B" Troop - left HASSANIYA and treked to ROMANI preparing water supply for 2nd Light Horse Brigade.</p> <p>"B" Troop - left ROMANI on 2/10/16 and treked to Hill 70 and DUEIDAR prepared water supply on trek, and developed water supply, erected Cook Houses, Shelters and Miscellaneous work for 2nd Light Horse Brigade.</p>	<p>"B" Troop on trek. Developing Water Supply.</p>
<p>(The original of the above is written on same sheet as entries for November, and filed with volume for that month).</p>				

September

WAR DIARY

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INTELLIGENCE SUMMARY.

1st Field Squadron, A.E.,

(Erase heading not required.)

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
ROMANI.	30/9/16 to 10/10/16.		<p>"C" Troop - at AMARA preparing and developing water supply for 3rd Light Horse Brigade.</p> <p>(The original of the above is written on same sheet as entries for November, and filed with volume for that month).</p>	

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 Remarks re "Water Supply material" for Confidential Diary —
 to be attached to Sheet of Photographs and Drawings, showing
 Special "Racks and Carriers" made by 1st Field Squadron A.M.Z. Mth Div.

I put up herewith a report which gives the results of my recent experiments and experiences in dealing with the problem of Water Supply in "Sinai Peninsula." — I commenced in June sinking "Well Sets" 4' x 4' x 4'-6" made of corrugated iron and timber framing, for watering the Mounted Brigades these "Well Sets" were prepared in Camp and tied up in bundles carried on Camels to required site and there "knocked together and sunk." — I soon found that with very little extra trouble we could carry ^{and sink} similar "well sets" but 6' x 6' x 6' which gave us more than double the water area, so we used this "section" from that time on until early in September: In the meantime I had been experimenting with a 2½" diameter "Spear Point" made by a firm in Cairo (and paid for by 5th Reg. A.L.H. privately) this is similar in construction to the lower portion of the Service 1¼" Norton Tube Well Set. except that we got the holes in metal pipe covered first with a fine brass gauze and then a covering of perforated brass sheet, over that—

I had a special "double Brass Couplings" made with a Gas-thread at one end, to connect to the Spear Point; and a L.C.C. thread at other end to enable any G.S. Lift and Force Pump hose to connect up with it— It proved so satisfactory that I asked the C.E. N^o. 3. Section to have a quantity of them made so that I could water the "Auzac Mounted Division" without

(2)

carrying any more "Well Sets" on Camels. - We are now doing all the watering of the Division by means of these Spear Points and have proved so successful that I have "cut out" all the "Well Sets" from our "Water Supply material" together with their Camels etc and we now only carry 12 "Well Sets" by Rail in case of emergency. - these remain at my Head Quarters with D.H.Q. whenever it happens to be, and are available at any time if required. -

I have since had a special "Driving Cap" made for sinking these 2½" Spear Points, and their extension pieces; and it is used with the ordinary Norton Tube "pulley bar and monkey". or if these are not available, it can be used with a 10 or 12 lb hammer and a special "Spoon" we have designed and made for the purpose (see drawings). but each Field Troop carries a Norton Tube Well Set and the 10 lb Hammer & Spoon are only necessary when a Regiment or Squadron go away on detached duties, and sink a "Spear Point" for themselves.

Our ordinary procedure is to drive the "Spear Point" into the bottom of an existing well if there is one. (and in many places we have come across these wells made by the Turks during their advance upon Ramani in August last.) if there is not a well, we dig a hole until we come to moist sand if possible, and then insert the Spear Point and drive it, and "reel" around the top of same with sand-bags. -

In ordinary wells, of our own, or Turkish construction, we can as a rule pump them dry in anything from 20 minutes

③
to 45 minutes depending on the locality - But a Spear Point
driven down in the bottom of any of these wells has in all cases
given us a continuous flow of water, the most remarkable
case so far we have encountered was at "GERERAT" (on
E) Arish map 125000) where we pumped the Turkish well dry
in 15 minutes, then inserted a Spear Point and one extension
piece and pumped from a depth of 24 feet a continuous
stream of water into Canvas Reservoirs, from 0.800 until
16.00 without ceasing, and the water was still coming strong
This is the greatest depth at which we have yet had to pump,
and an ordinary G.S. Lift Force Pump was used. The average
depth at which we find water from Romani Eastwards is about
9 feet.

Having proved the utility of the "Spear Point" method of producing
the water, we then made (in our Camp) a set of "Racks and
Carrs" for carrying on Pack Horses all our water supply
material. (see sheet of drawings) as I found during the
fighting at Romani - Katia - Abd - during August, and
later at Mazar in September, we could not keep up with
the Mounted Brigades with our water supply material when
carried on Camels. as they were much too slow: my scheme
now provides for all water supply material to be carried on
Pack Horses, each Field Troop having 10 of these - 5
of which go forward with the advance troops and have
the water prepared by the time the Brigade arrives
in Camp - the other 5 Pack Horses pick up remainder

APPENDIX

④

of water supply, Rear us old camp and trucks with the Rear Guard when watering is complete, so that all the Pumps etc are travelling at same rate as the Mounted Troops - this method I may say is working with excellent results.

In extracting the "Spear Point" and extraneous pieces from the sand we - reverse the pumping operation - and pump water from the trough down into the Spear - which forces the sand away and facilitates greatly the extraction of same - :

Some of the advantages of the "Spear Points" as compared with sinking "Well Sets" are as follow.

- ① Saving of Time - Money - Labour - Camel Transport.
- ② Pace of movement.
- ③ "Spear Points" can be pulled up and used again, whereas the Well Sets are left in the ground in most cases.
- ④ "Spear Points" can be allotted and easily carried by Squadron or Regiment going on detached duty.
- ⑤ "Open wells" are liable to be contaminated, whereas Spear Points are not.
- ⑥ "Spear Points" only weigh a fractional part of the "Well Sets".

(5)

(7) The expense in regard to S. Pumps is only a "First Cost" as they are used again - the Timber Iron of Well Sets is a constant outlay - From June to September, the Anzac Mounted Division alone, used Corrugated Iron for Well Sets to the value of over £500, not mentioning timber framing or time in constructing -

I also put up a sheet of drawings showing what we find to be the Wearing Parts of G.S. Lift-Force Pumps and also of Worthington Pumps in the case of the latter the metal used for levers handles and Pins or Spindles is much too soft and wears out very quickly -

As I am using my draught horses (which under ordinary conditions would draw my Tool Carts etc) for carrying the water supply material, the only extras required for each Field Troop is Pack Saddles and the necessary complement of the "Racks and Carriots" - I have left the set of models of these with D.O.W. Curri who has since supplied us with requisite number for the Division

J.H. Alexander, Major R.E.
of C.R.E. Anzac Mounted Division

"Anzac Mounted Division" comprises

- 3. A.L.H. Brigades
- 1 N.Z.M.R. Brigade
- 5th Mounted Brigade (Yeomanry)
- Imperial Camel Corps.

Nov: 1916

(The original of this report is filed with volume for November 1916)



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Photographs Illustrating the
WATER SUPPLY MATERIAL

and special Racks and Carriers
for use on "Horse Pack Saddles"
being successfully used by the
Anzac Mounted Division
Sinai Peninsula
October 1916

J. Alexander, Major R.E.
of C.R.C. Anzac Mounted Division.

Photo No

1. Rack to carry one Spear Point 22 and one Extension piece 4 ft long.
2. Carrier for G.S. Lift and Force Pump, the handle of the Pump lock the Pump on to Carrier.
3. Carrier for Worthington Pump, the lower handles of which lock the Pump into the Carrier.
4. Carrier for two lengths of armoured hose for G.S. Pump or Worthington.
5. Carrier for 600 Gallon Canvas Trough or 2,300 Gallon Canvas Reservoir.
6. G.S. Lift and Force Pump and Worthington Pump attached to Spear Point by

Brass Unions also various fittings by themselves.

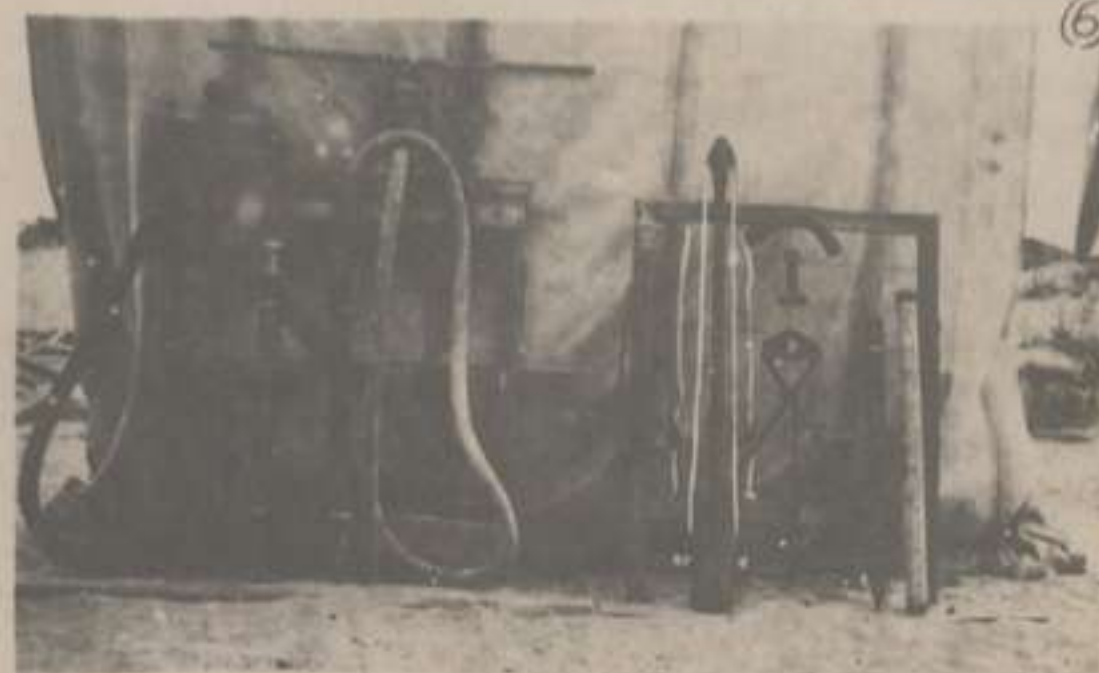
7. Two complete Well Sets "C.A.C." being carried on these camels.
8. Carrier for Trough Standards (with this wire netting).
9. Photo taken "Kalia" during well sinking operations when Turks drove us back and this Camel carried these two well sets 12 miles in 12 days successfully where we sunk it.
10. The set of model "Racks and Carriers" made by Anzac 11th Field Squadron in camp.
11. Horse carrying G.S. Pump and set of Trough Standards.
12. Spear Point - Extension Piece, Brass Couplings, driving Gear etc.
13. G.S. Lift and Force Pump and a Worthington Pump with their SPEAR POINTS attached.
14. Another view of Spear Point connected to G.S. Lift and Force Pump and Worthington pumps.

H.E.

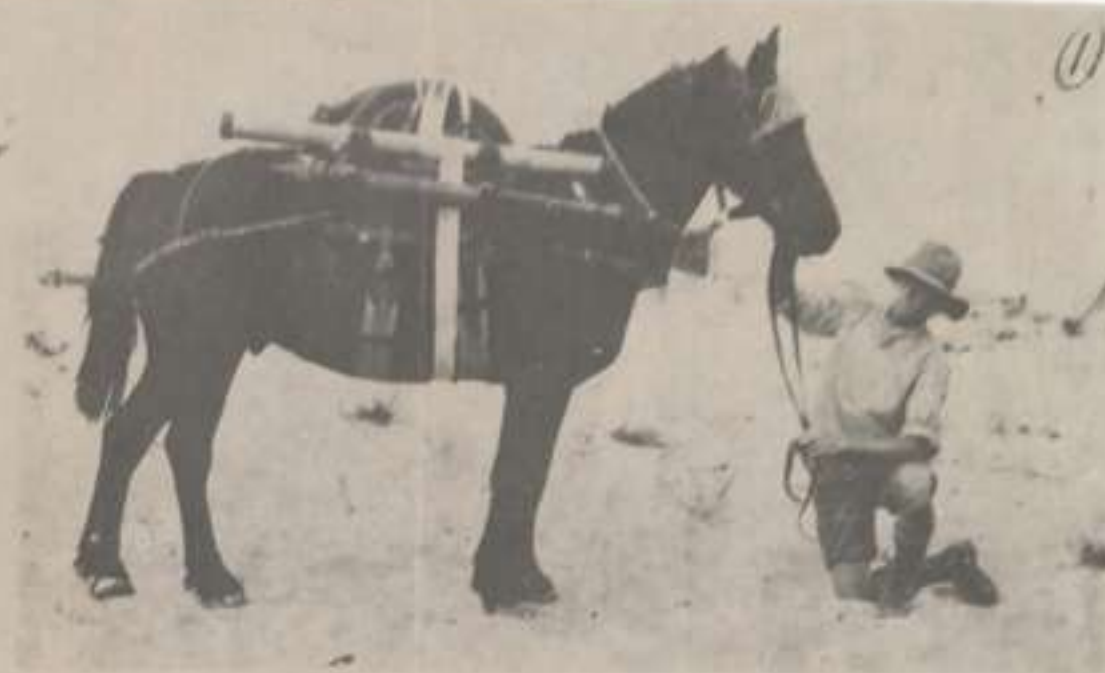
Under ordinary conditions each Rack here would carry a pair of Carriers - for Pumps or 2 Troughs etc. etc.

When I took these photographs I had only made one set of models and therefore had to put an "odd" Carrier on the horse for each photo so as to balance the load.

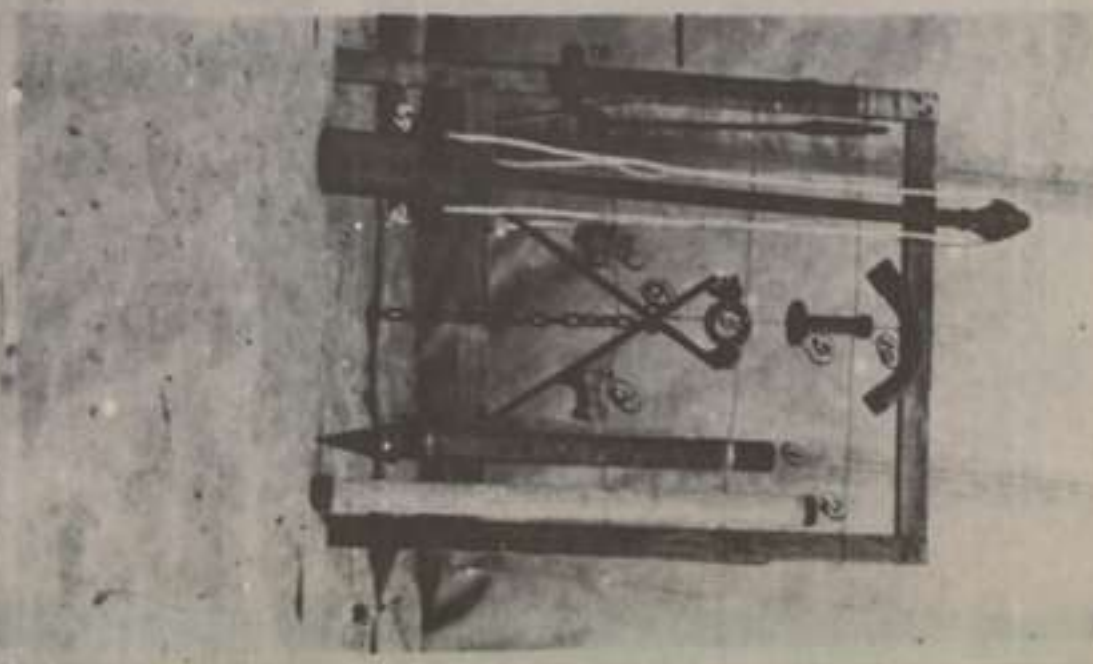
15. A wire Basket which fits on top of "Pack Saddle" with a clip and carries the Brass Couplings wrapped in a sandbag.



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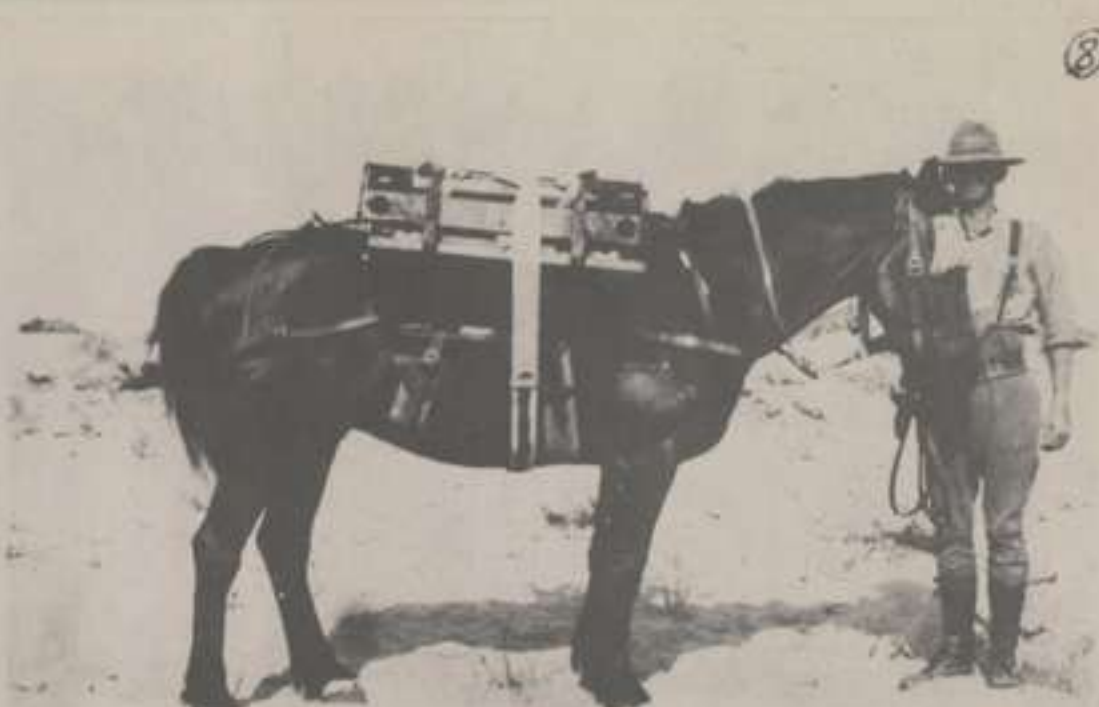
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1. Spear Point
2. Extension Piece
3. Brass Couplings
4. Driving Gear
5. G.S. Lift and Force Pump
6. Worthington Pump
7. Trough Standards
8. Carrier for Trough Standards
9. Carrier for G.S. Pump
10. Carrier for Worthington Pump
11. Carrier for 600 Gallon Canvas Trough
12. Carrier for 2,300 Gallon Canvas Reservoir
13. G.S. Lift and Force Pump
14. Worthington Pump
15. Wire Basket
16. Sandbag

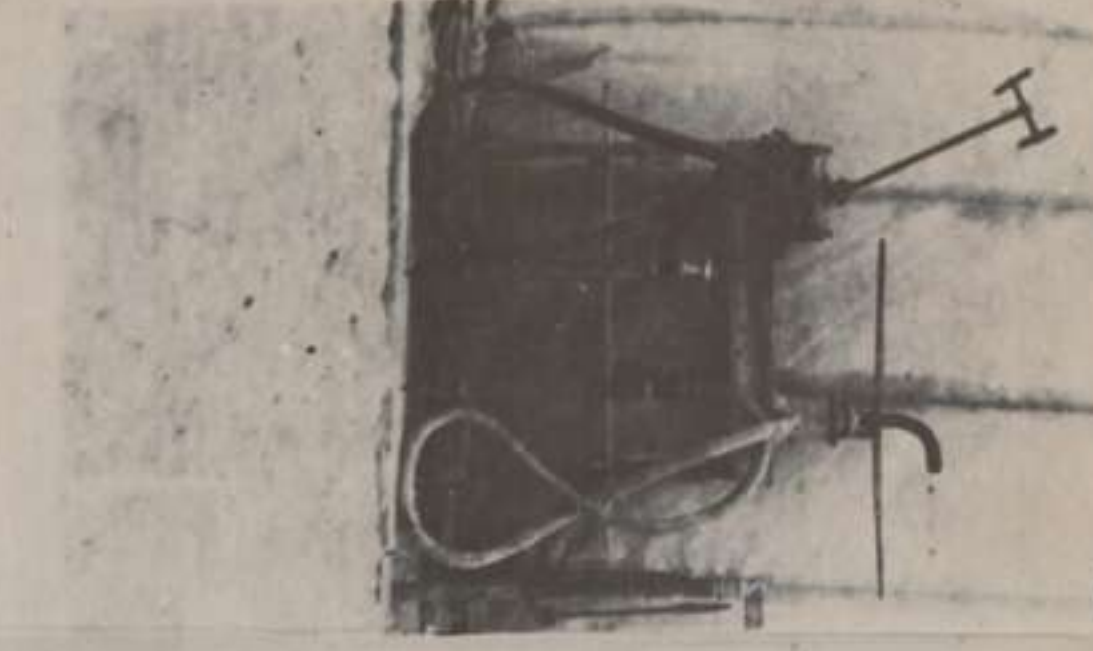
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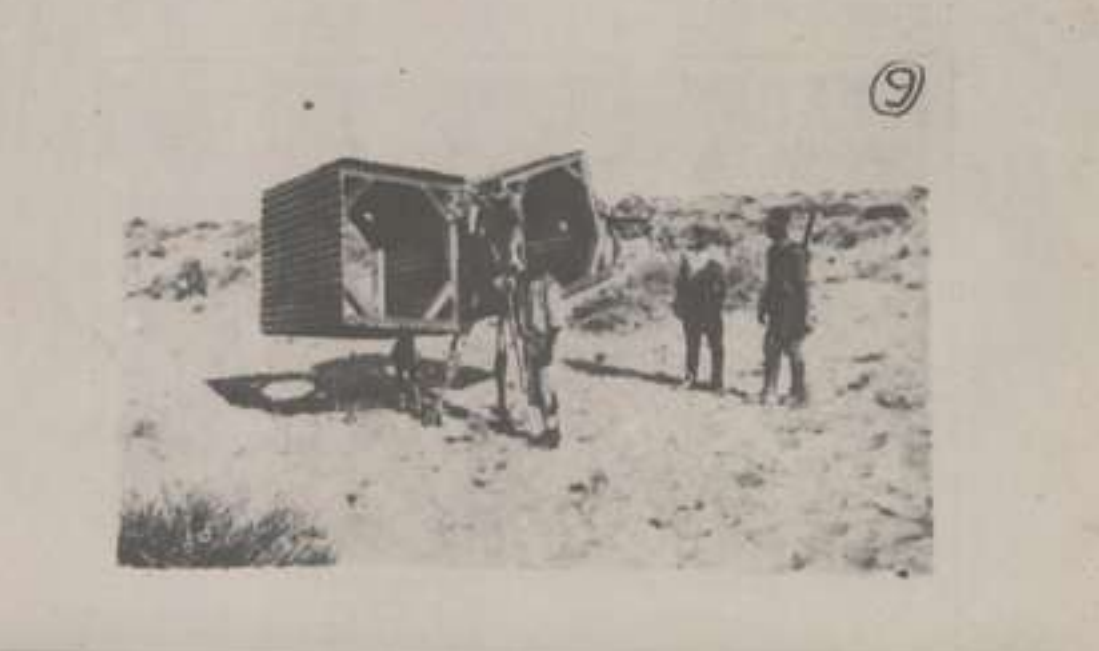
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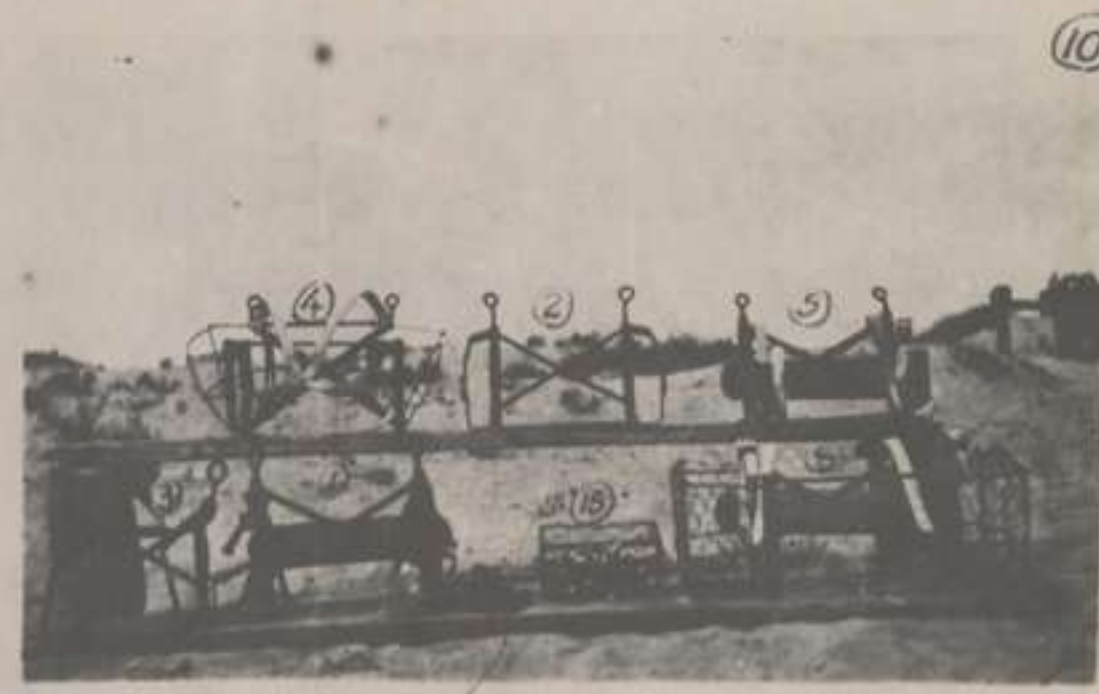
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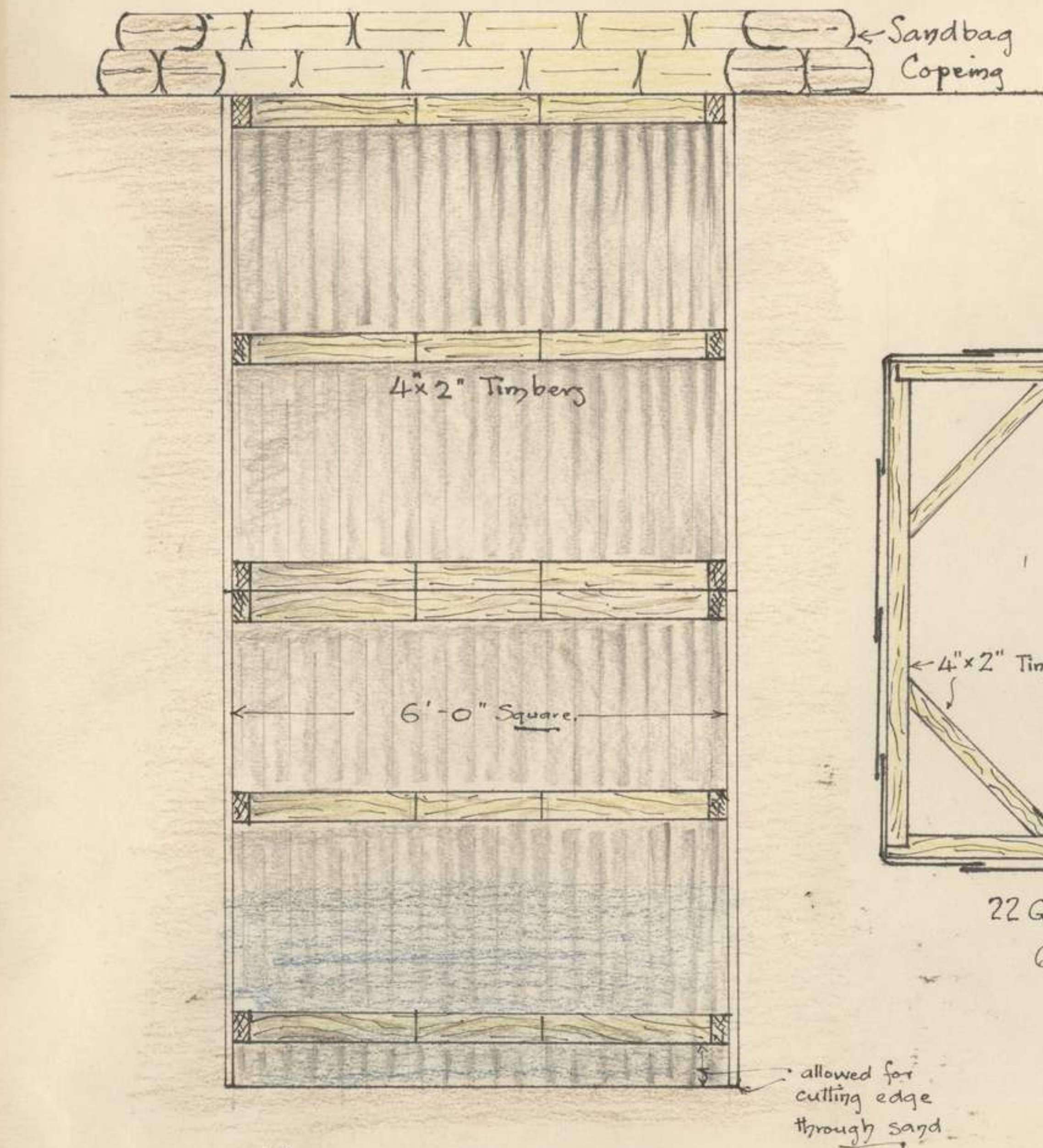
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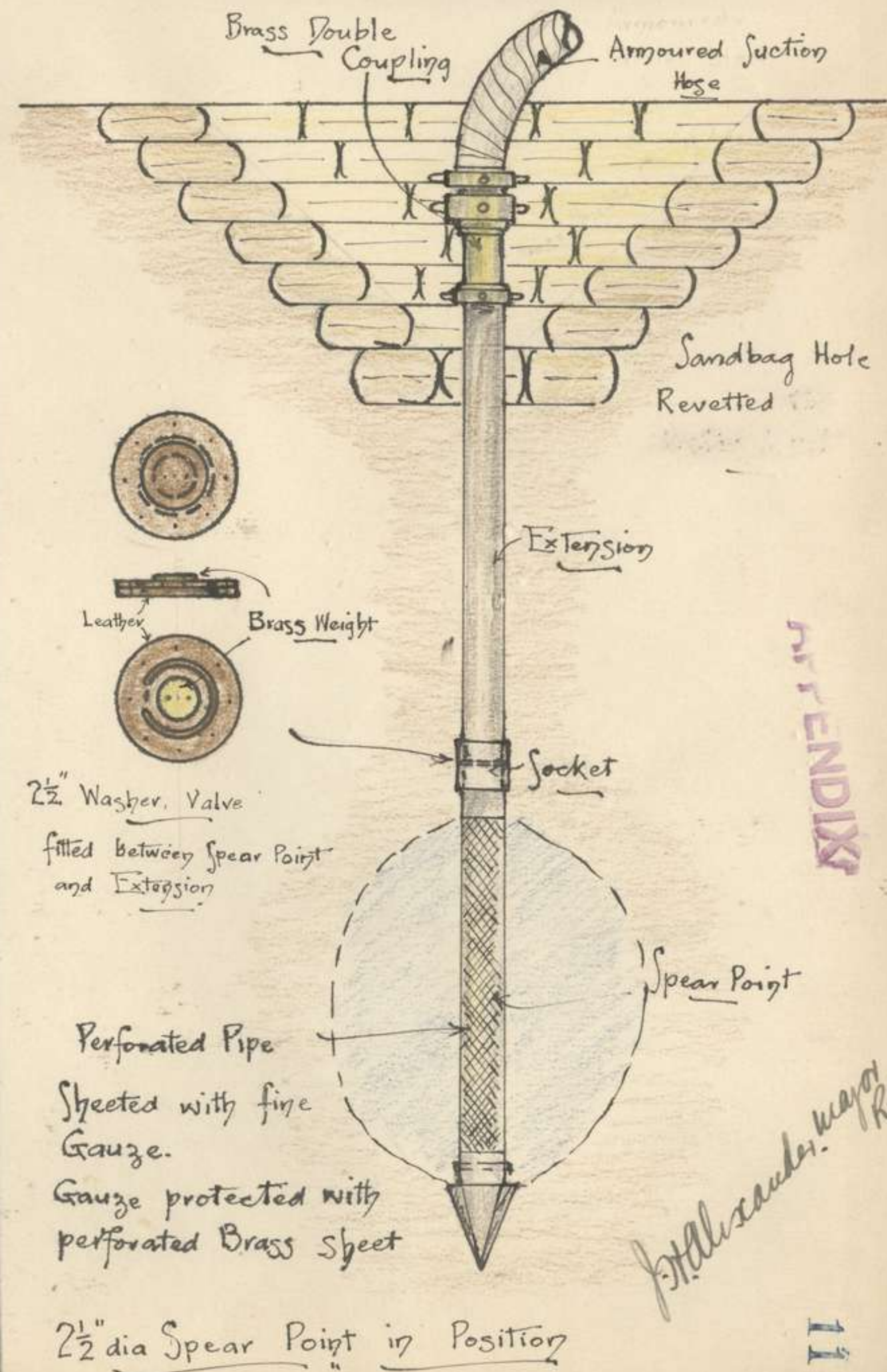
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APPENDIX

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Method used for Well Linings
each Well Lining Set measures 6ft x 6ft x 6ft



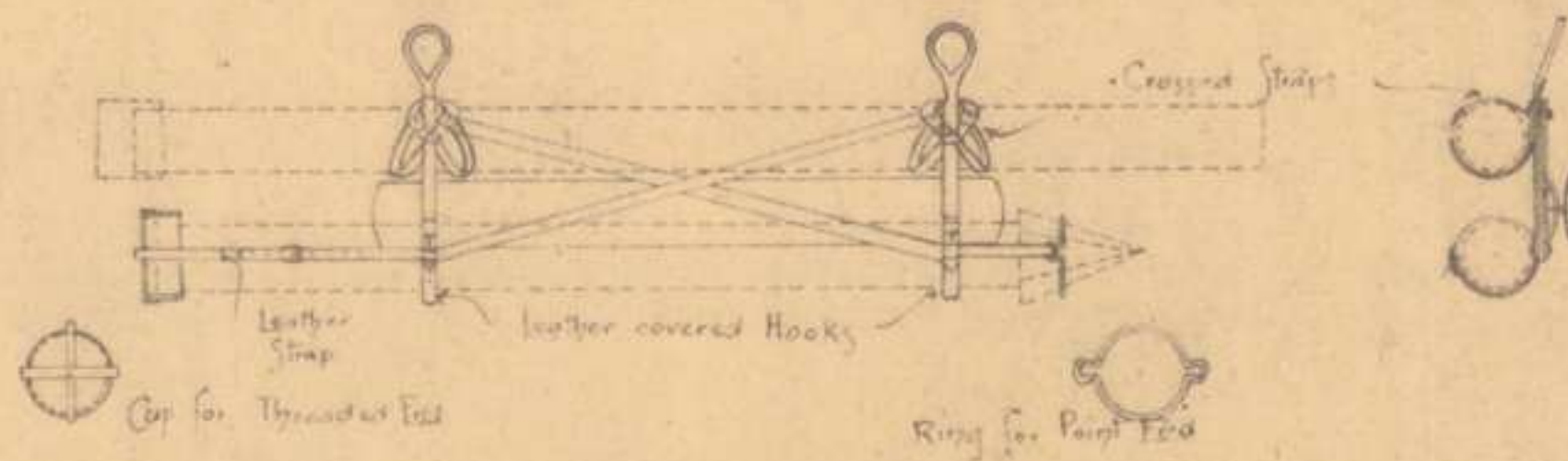
John Sanderson R.E.

8.14

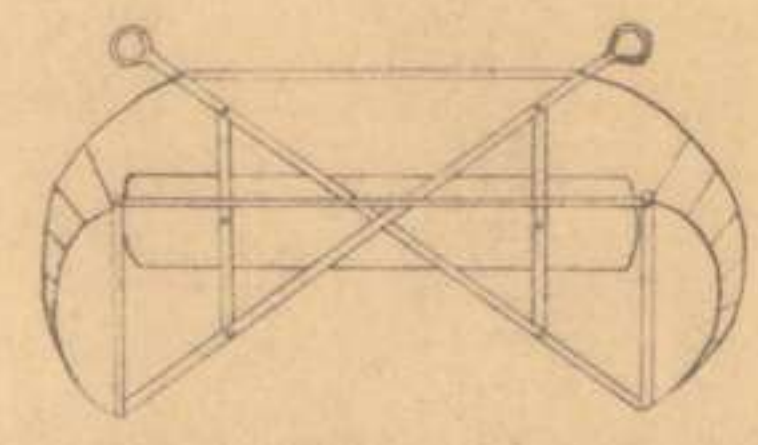
RACK AND CARRIERS FOR PACK-SADDLES (PACK HORSE TRANSPORT)

1st FIELD SQUADRON

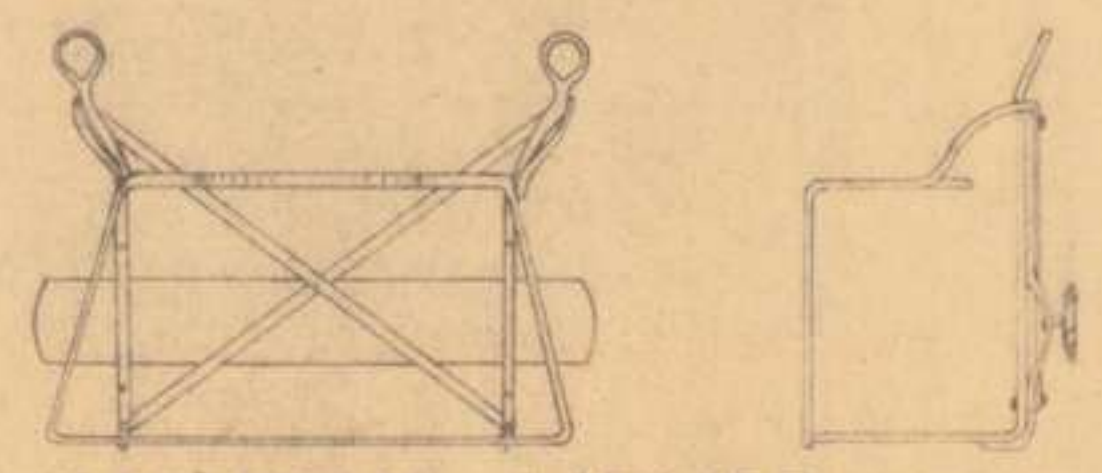
ANZAC MOUNTED DIVISION



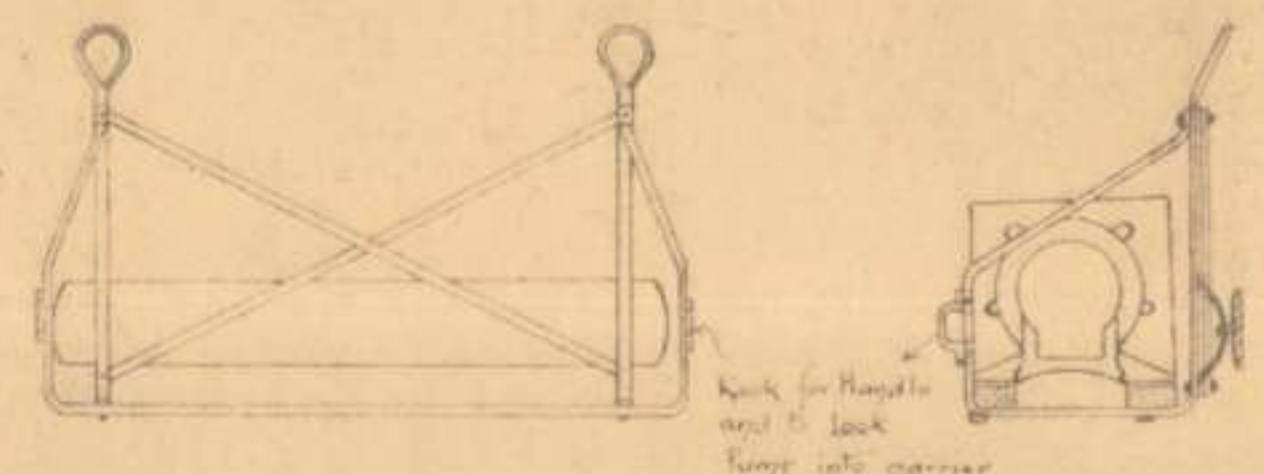
— ANZAC SPEAR-POINT RACK —



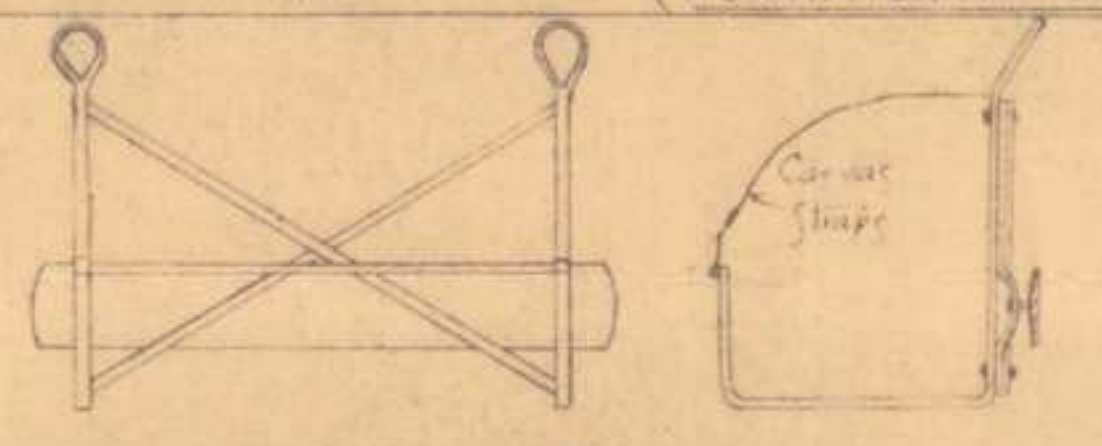
— ANZAC HOSE CARRIER —



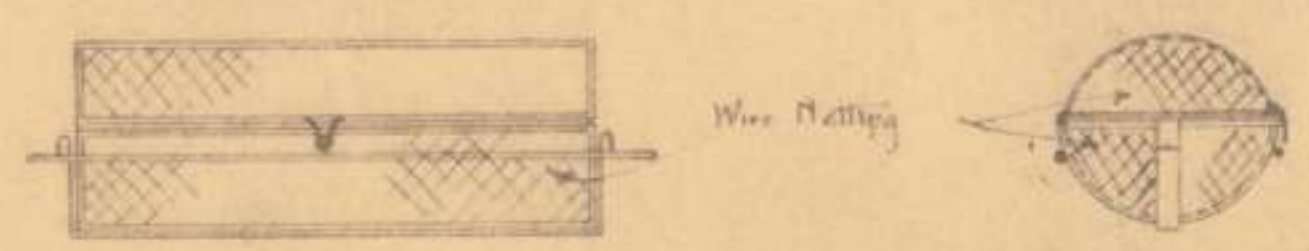
— ANZAC PUMP CARRIER —
(WORTHINGTON PUMP)



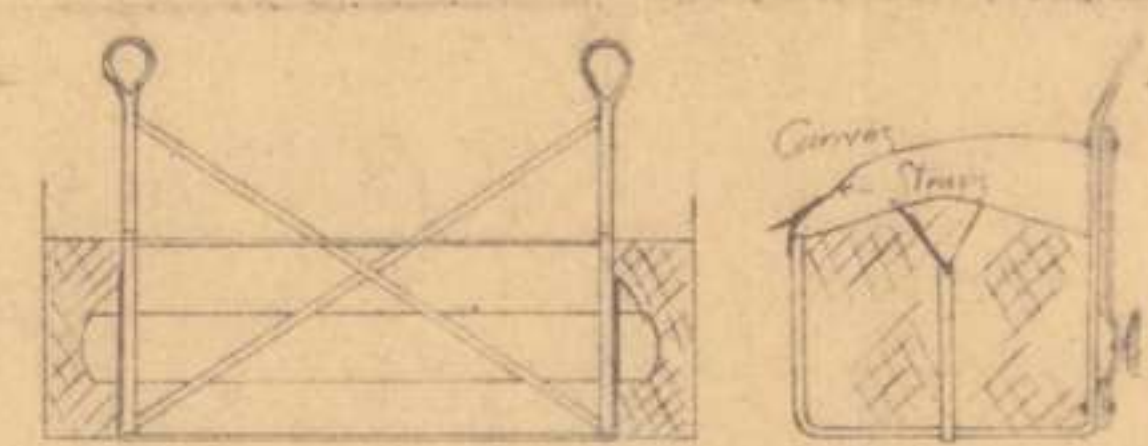
— ANZAC PUMP CARRIER —
(G.S. LIFT AND TORCE)



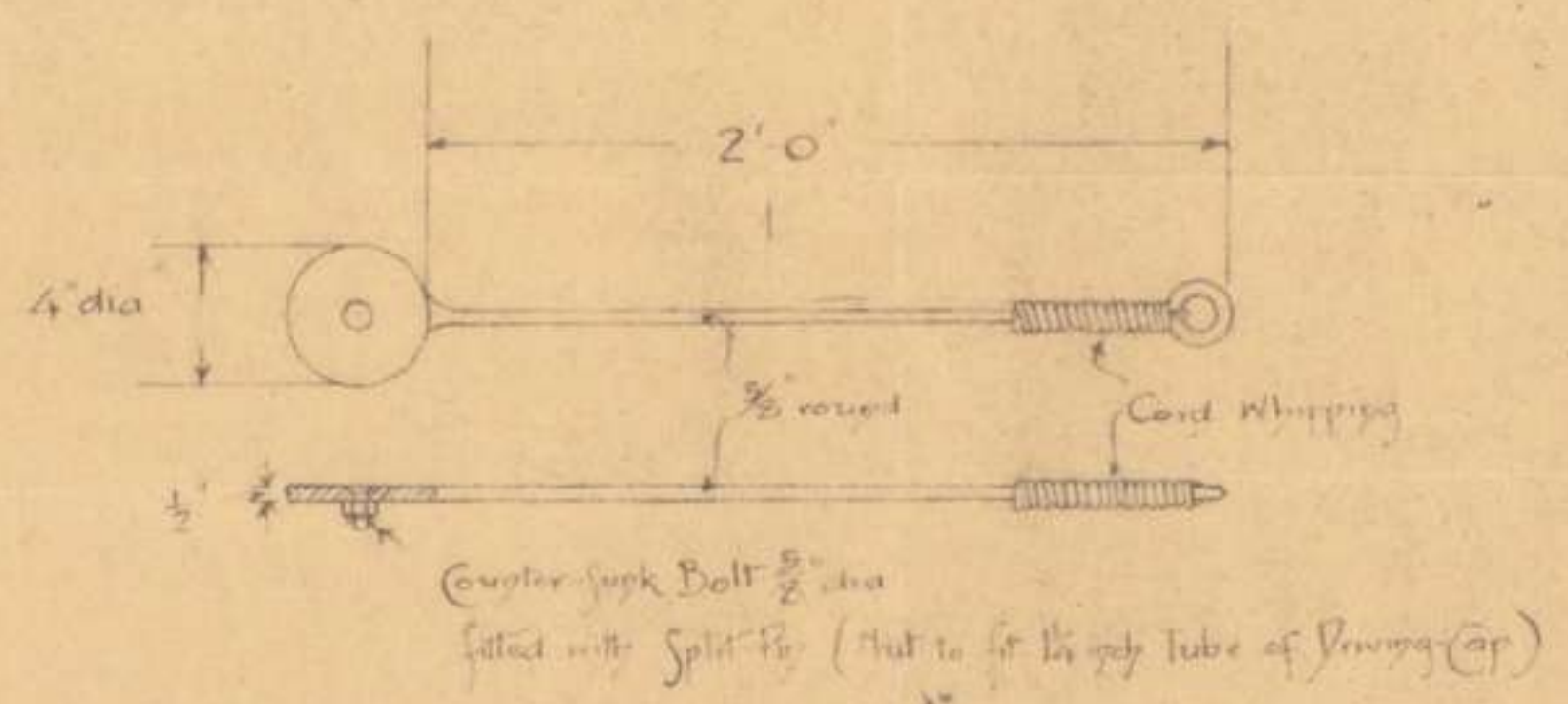
— ANZAC TROUGH CARRIER — (CANVAS 600 GALLONS)



— ANZAC COUPLING BASKET —



— ANZAC TROUGH-STANDARD CARRIER —



— ANZAC SPEAR-POINT DRIVING SPOON —

Note.— For use when Prising Gear is out of action, a 10 lb Hammer will be used for driving the 2 1/2 inch dia Spear Points and the Prising-Spoon will take the blow and protect the Prising Cap

*J. Alexander, Major, R.E.
of the ANZAC Mounted Division
ROMANI
Sep 14-1916*

APPENDIX

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(The original of this sketch is filed with volume for October 1916)

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Ball's Bay - W. of R.E.

KATIB GANNET

ET MALER

1st Light Horse Brigade H.Q.

1st Light Horse Regiment

SIGNAL SQUADRON

ROADWAY TO ROMANI RLY STN

Reservoir 500 Gallons

Repaired Road Etc

2nd Light Horse Regiment

D. H. Q. ANZAC Mounted Division

3rd Light Horse Regiment

Wireless Station Anzac Mtd Div

— PROPOSED —
— WATER SCHEME —
— ROMANI —
— ANZAC MOUNTED DIVISION —

Not to Scale

APPENDIX

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