

On Her

ce

WASC1094
WAI 261

~~Farmer Lecture~~

~~ALARA~~

~~7 points from~~

~~Scots from~~

~~on Explosives~~

~~WASS 784~~

~~SAFETY RECORDS~~

Photos for

~~TOP DES-RT~~

Dr R. C. Farmer

Lecture

1920

List of $3\frac{1}{4} \times 3\frac{1}{4}$ - inch slides on
explosives subjects thought
to be related to the lectures of
Dr R. C. Farmer.

To be included in WAS collection

Slides. Series C. Explosives (Artillery, etc.)

	2
	4
C.1 Sectioned Filled Shell	6
C.2. Design of large propellant bomb.	8
C.3. Calorimetric bomb	10
C.4 Calorimetric bomb.	12
C.5 Calorimetric bomb.	14
C.6 Large propellant bomb.	16
C.7 Dautriche app. for R. of D.	18
C.8. Lead plates after Dautriche test.	20
C.9 Lead plates after Dautriche test.	22
C.10 Impact machine plan and elevation.	24
C.11 Impact machine. Closed vessel	26
C.12 Impact machine	28
	30

C.13 Lead Cylinder test.	6
C.14 Pressure bar for 18 pdr shell.	8
C.15 Pressure bar for 9 aines.	10
C.16 Pressure bar for 10 gr detonators	12
C.17. Pressure bar for 10 gr detonators	14
C.18. Fragmentation of 18 pdr shell.	16
C.19 Test for CE. Vacuum stability tube.	18
C.20 Falling sphere viscometer	20
C.21. G.P. charcoal retorts	22
C.22 G.P. grinding mill.	24
C.23 G.P. mixing	26
C.24 G.P. incorporating mill	28
	30

Slides Series C. Explosives (Aniline, etc.)

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

C. 25 G.P. pressing

C. 26 G.P. granulating

C. 27. G.P. Glazing barrels

C. 28 N.G. Hill (picture)

C. 29. Nitrator Separator.

C. 30 N.G. Hill explosion.

C. 31. N.G. Nitrator Separator house explosion.

C. 32 Forms of nitroglycerine.

C. 33 N/C picking tables

C. 34. Picking tables.

C. 35 Willowing

C. 36 Drier for Cotton.

C. 37 Aluminium Cooling Unit

C. 38 Nathan Thomson Displacement pans.

C. 39. Nitrating house (G.C.)

C. 40 Wooden Vats for boiling G.C.

C. 41. Beating engines.

C. 42. Sand Chutes magnets

C. 43. Circulating tanks.

C. 44. G/C Press.

C. 45 Ballistite. Wet mixing of N/C + N/G

C. 46 Ballistite. Roller drying plate.

C. 47. Ballistite. Rolling dough.

C. 48 Ballistite. Cutting sheets into squares.

6

8

10

12

14

16

18

20

22

24

26

28

30

Slides. Series C. Explosives (Artillery Col.)

2

4

C. 49	Ballistite blending.	6
C. 50	Cordite paste mixing	8
C. 51.	N/C Incorporator	10
C. 52	N/C Incorporator tilted.	12
C. 53	Cordite Incorporator	14
C. 54.	Cordite Incorporator	16
C. 55	Drive for Incorporators	18
C. 56	Cordite press houses	20
C. 57.	Cordite press houses	22
C. 58.	Cordite press cylinder.	24
C. 59	Cordite Press	26
C. 60	Cordite Press	28
		30

C. 61	Cordite press	6
C. 62	Rifle Cordite press	8
C. 63	Cordite Solvent recovery stove	10
C. 64	Recovery drying stove.	12
C. 65	Cordite Solvent recovery. Flask trap on vapour main	14
C. 66	Air main Sulphur burners.	16
C. 67	Reaction Tower in Centre	18
C. 68	Cordite Solvent recovery towers	20
C. 69	Primary Still & Condenser.	22
C. 70	Rectifying Still & Condenser	24
C. 71	Arden Cordite discs for pressing	26
C. 72	Derivation of TNTs from Toluene (diagram)	28
		30

Slides. Series C. Explosives (Artillery Coll.)

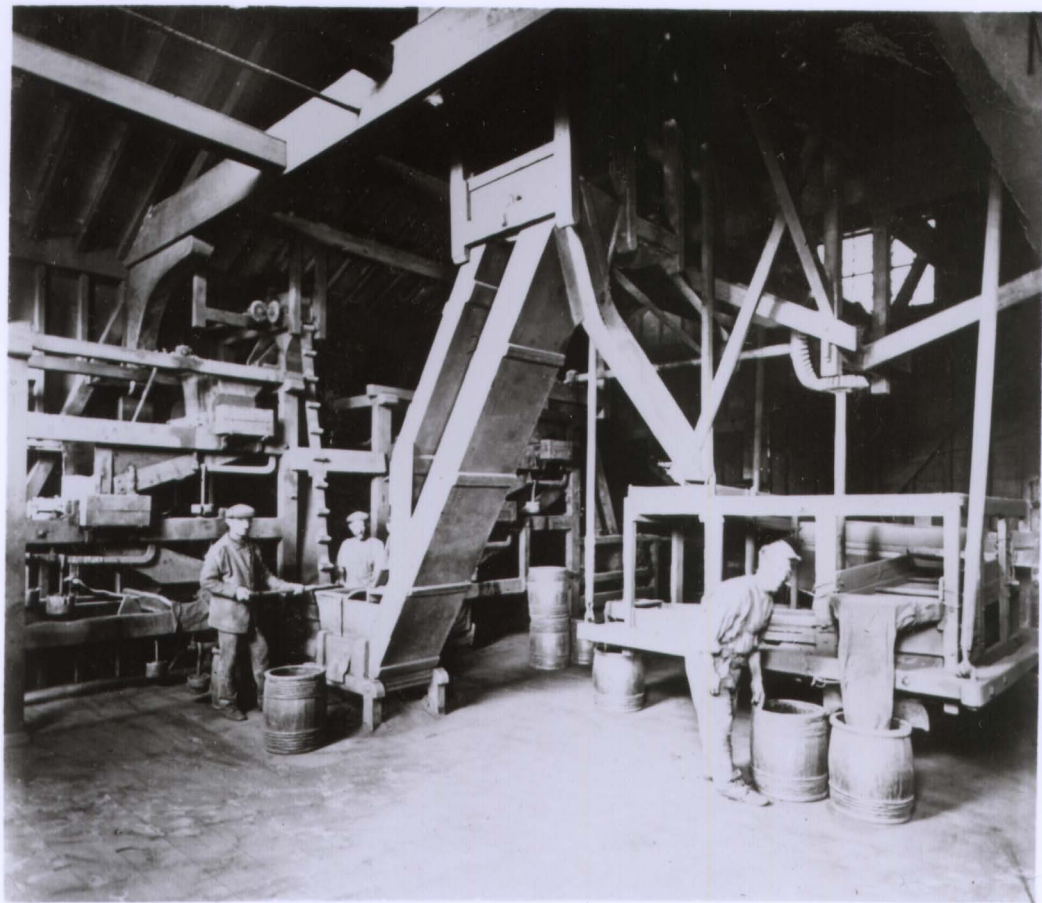
C.73	Old TNT plant.	2
C.74.	HMF Queenferry.	4
C.75	TNT. Queenferry "A" unit.	6
C.76	TNT unit's Queenferry.	8
C.77	TNT Nitration process diagram.	10
C.78	TNT Nitrating House. Nitration Pot.	12
C.79.	TNT Nitration House.	14
C.80	TNT detonators	16
C.81.	Pellite vats	18
C.82	TNT discharging pellite	20
C.83	TNT Nitration House	22
C.84.	TNT Sulphite Purif. House.	24

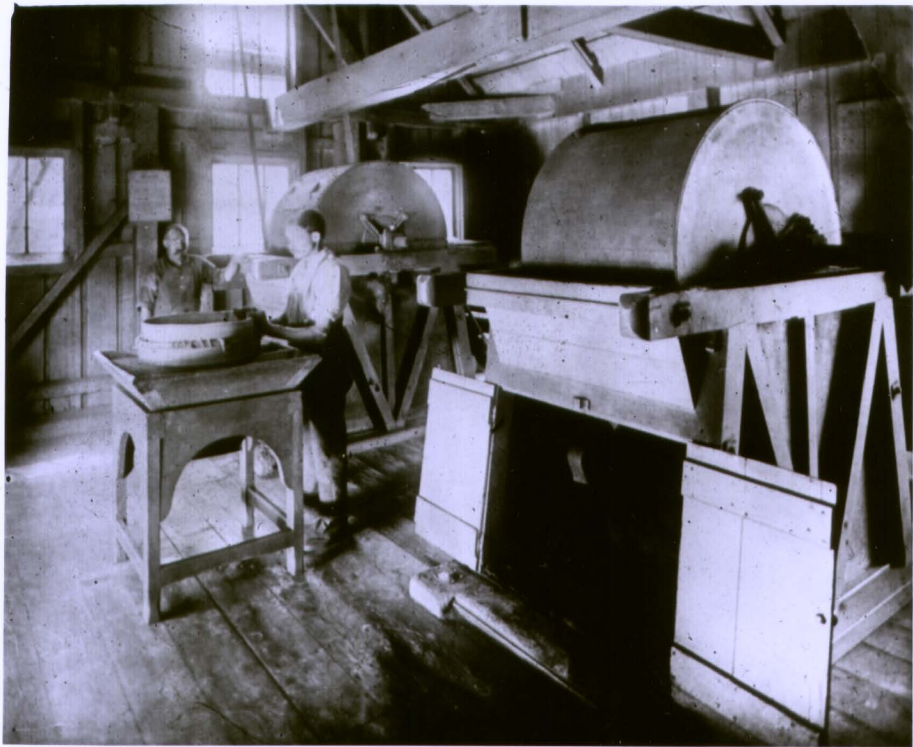
C.85	TNT Sulphiting	26
C.86	TNT Sulphite Wash.	28
C.87.	TNT Sulphite Washer.	30
C.88.	TNT. Wash House. Driers.	6
C.89	TNT Granulating roll.	8
C.90	TNT. Packing House.	10
C.91.	TNT Wash House.	12
C.92	TNT. Continuous washer.	14
C.93.	Principle of the Screwfilling machine (diagram)	16
Φ.C.94.	Incorporating mills Amatol.	18
C.95	TNT. Spewing of Amatol due to NH_4CNS	20
Φ.C.96	P.A. Pot process.	22

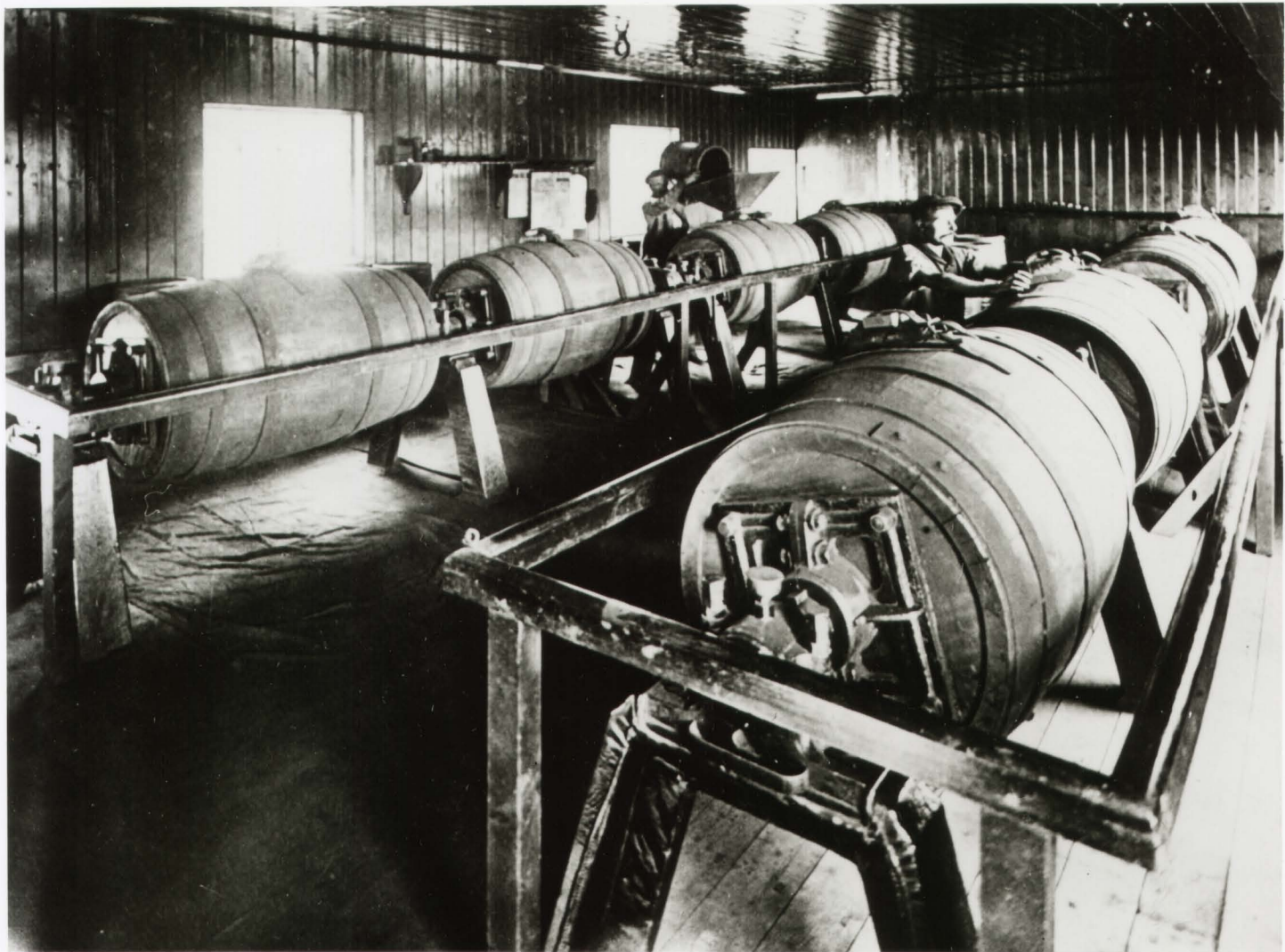
Slides Series C. Explosives (Artillery Coll.)

		2
		4
C.97.	Amatol mixer.	6
C.98	P.A. Continuous Process	8
C.99	Tetryl mixing house.	10
C.100	Tetryl Nitration.	12
C.101.	Tetryl Nitration House filler	14
C.102.	Tetryl Nitration House Boiling Vats.	16
C.103.	Tetryl Nitration House Displacement.	18
C.104.	Tetryl Nitration Purif: by HNO_3 . Boiling Vat.	20
C.105.	Tetryl Quinan Process.	22
C.106.	Tetryl-Corning House	24
C.107	Sulphonating & Nitration Tanks.	26
C.108	Sulphonating Pot for Tar Oil.	28
		30

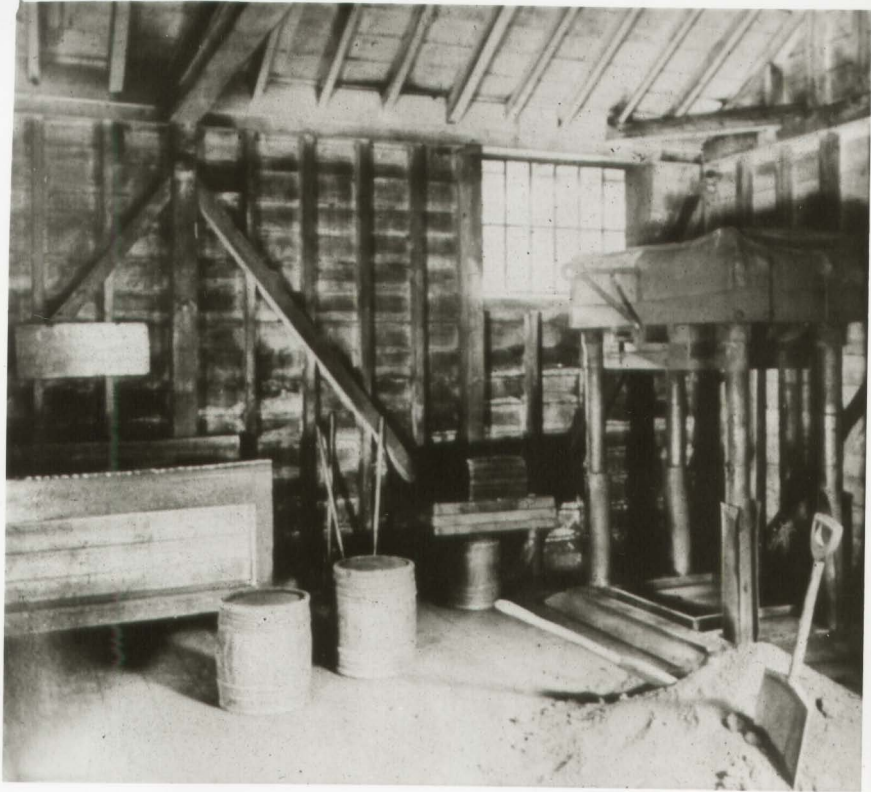
C.109	CE Filler for separating Crude CE	6
C.110	CE Purification. Acetone dissolving pots.	8
C.111	CE Purification. Acetone recovery stills.	10
C.112.	Fulminate	12
C.113.	Fulminate. Jelly Bag mixer.	14
C.114.	Fulminate. Press for filling detonators.	16
C.115	Recovery of N/G waste acids	18
C.116	G.C. Waste acids. Absorption tower.	20
C.117	G.C. Waste acids. Recovery	22
C.118	H_2SO_4 recovery.	24
C.119	H_2SO_4 Concentrator.	26
C.120	Parts of Rotary pump.	28
C.121	Rotary Pump.	30

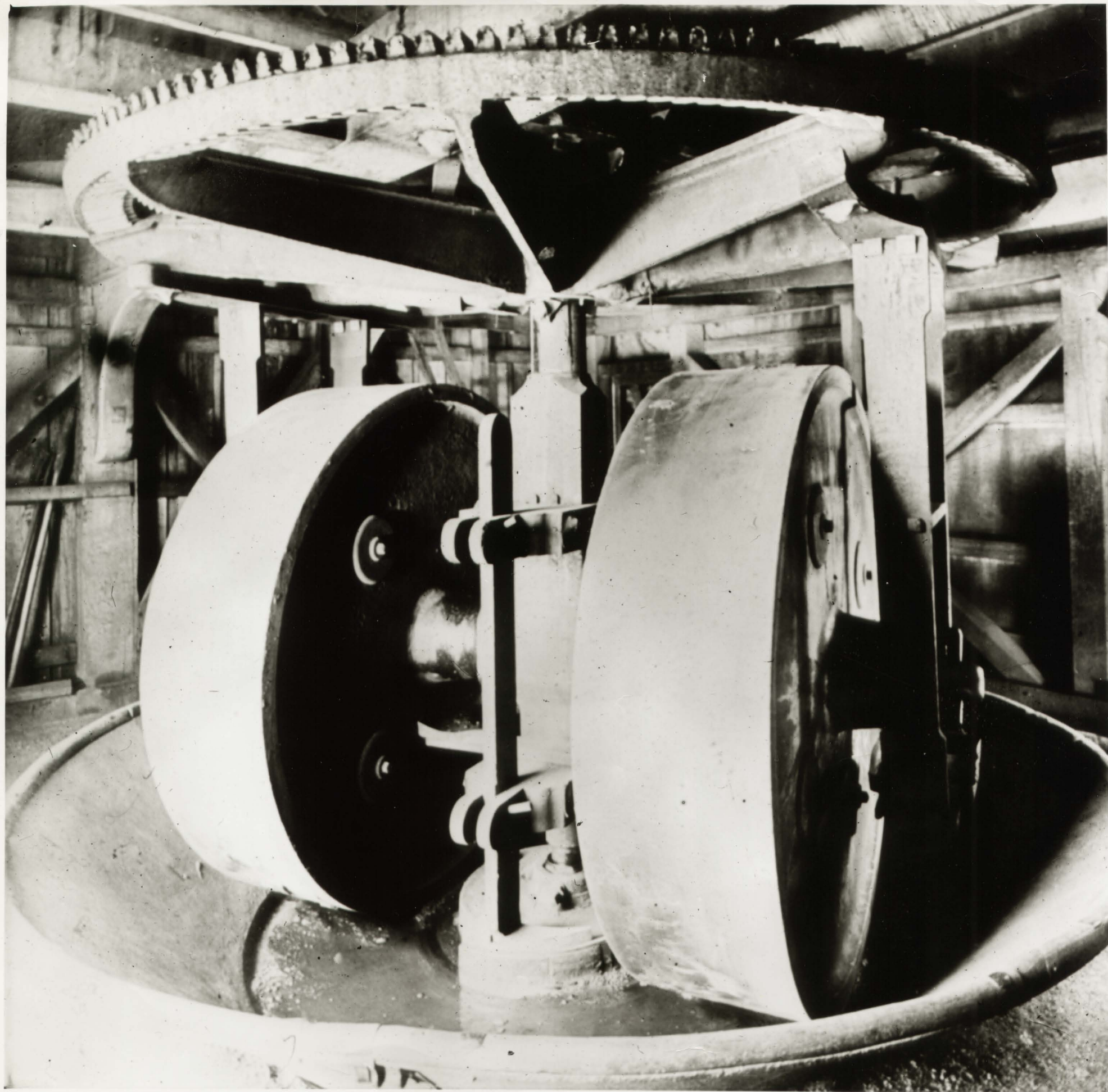












WASC ~~1588~~ / 1.
1094

List of $3\frac{1}{4} \times 3\frac{1}{4}$ - inch slides on
explosives subjects thought
to be related to the lectures of
Dr R.C. Farmer.

To be included in WRS collection

Slides. Series C. Explosives (Artillery, etc.)

Moore's Modern Methods, Ltd., London. Binder and holes in leaves, Pat'd.
To repeat order state 5x8 Q.R. Feint

C.1	Sectioned Filled Shell	2
C.2	Design of large propellant bomb.	4
C.3	Calorimetric bomb	6
C.4	Calorimetric bomb.	8
C.5	Calorimetric bomb.	10
C.6	Large propellant bomb.	12
C.7	Dautriche app. for R. of D.	14
C.8	Lead plates after Dautriche test.	16
C.9	Lead plates after Dautriche test.	18
C.10	Impact machine plan and elevation.	20
C.11	Impact machine. Closed vessel.	22
C.12	Impact machine	24
C.13	Lead Cylinder test.	26
C.14	Pressure bar for 18 pdr shell.	28
C.15	Pressure bar for 9 lbs.	30
C.16	Pressure bar for 10 gr detonators	6
C.17	Pressure bar for 10 gr detonators	8
C.18	Fragmentation of 18 pdr shell.	10
C.19	Test for C.E. Vacuum stability tube.	12
C.20	Falling sphere viscometer	14
C.21	G.P. charcoal retorts	16
C.22	G.P. grinding mill.	18
C.23	G.P. mixing	20
C.24	G.P. incorporating mill	22

Moore's Modern Methods, Ltd., London. Binder and holes in leaves, Pat'd.
To repeat order state 5x8 Q.R. Feint

Slides Series C. Explosives (Artillery Coll.)

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

C. 25 G.P. pressing

C. 26 G.P. granulating

C. 27. G.P. Glazing barrels

C. 28 N.G. Hill (picture)

C. 29. Vibrator Separator.

C. 30 N.G. Hill explosion.

C. 31. N.G. Vibrator Separator house explosion.

C. 32 Forms of nitroglycerine.

C. 33 N/C picking tables

C. 34. Picking tables.

C. 35 Willowing

C. 36 Drier for Cotton.

C. 37 Aluminium Cooling bin

C. 38 Nathan Thomson Displacement pans.

C. 39. Nitrating house (G.C.)

C. 40 Wooden Vats for boiling G.C.

C. 41. Beating engine.

C. 42. Sand chutes magnets

C. 43. Circulating tanks.

C. 44. G/C Press.

C. 45 Ballistite. Wet mixing of N/C + N/G

C. 46 Ballistite. Roller drying plate.

C. 47. Ballistite. Rolling dough.

C. 48 Ballistite. Cutting sheets into squares.

6

8

10

12

14

16

18

20

22

24

26

28

30

Slides. Series C. Explosives (Arthur Cole)

2

4

C. 49	Ballistite blending.	6
C. 50	Cordite paste mixing	8
C. 51.	N/C Incorporator	10
C. 52	N/C Incorporator tilted.	12
C. 53	Cordite Incorporator	14
C. 54.	Cordite Incorporator	16
C. 55	Drive for Incorporators	18
C. 56	Cordite press houses	20
C. 57.	Cordite press houses	22
C. 58.	Cordite press cylinder.	24
C. 59	Cordite Press	26
C. 60	Cordite Press	28
		30

C. 61	Cordite press	6
C. 62	Rifle Cordite press	8
C. 63	Cordite Solvent recovery stove	10
C. 64	Recovery drying stove.	12
C. 65	Cordite Solvent recovery. Flask trap on vapour main	14
C. 66	Air main Sulphur burners.	16
C. 67	Reaction Tower in Centre	18
C. 68	Cordite Solvent recovery towers	20
C. 69	Primary Stills & Condensers.	22
C. 70	Rectifying Still & Condensers	24
C. 71	Anden Cordite discs for pressing	26
C. 72	Derivation of TNTs from Toluene (diagram)	28
		30

Slides. Series C. Explosives (Artillery Coll.)

Moore's Modern Methods, Ltd., London. Binder and holes in leaves, Pat'd.
To repeat order state 5x8 Q.R. Feint

C.73	Old TNT plant.	2
C.74.	HMF Queensferry.	4
C.75	TNT. Queensferry "A" unit.	6
C.76	TNT unit's Queensferry.	8
C.77	TNT Nitration process diagram.	10
C.78	TNT Nitrating House. Nitration Pot.	12
C.79.	TNT Nitration House.	14
C.80	TNT detonators	16
C.81.	Pellite vats	18
C.82	TNT discharging pellite	20
C.83	TNT Nitration House	22
C.84.	TNT Sulphite Purif. House.	24

Moore's Modern Methods, Ltd., London. Binder and holes in leaves, Pat'd.
To repeat order state 5x8 Q.R. Feint

C.85	TNT Sulphiting	26
C.86	TNT Sulphite Wash.	28
C.87.	TNT Sulphite Washer.	30
C.88.	TNT. Wash House. Drums.	6
C.89	TNT Granulating roll.	8
C.90	TNT. Packing House.	10
C.91.	TNT Wash House.	12
C.92	TNT. Continuous Washer.	14
C.93.	Principle of the Screwfilling machine (diagram)	16
C.94.	Incorporating mills Amatol.	18
C.95	TNT. Spewing of Amatol due to NH_4CNS	20
C.96	P.A. Pot process.	22

Slides Series C. Explosives (Artillery Coll.)

2

4

Moore's Modern Methods, Ltd., London. Binder and holes in leaves, Pat'd.
To repeat order state 5x8 Q.R. Print

C.97.	Amatol mixer.	6
C.98	P.A. Continuous Process	8
C.99	Tetryl mixing house.	10
C.100	Tetryl Nitration.	12
C.101.	Tetryl Nitration House filling	14
C.102.	Tetryl Nitration House Boiling Vats.	16
C.103.	Tetryl Nitration House Displacement.	18
C.104.	Tetryl Nitration Purif: by HNO_3 . Boiling vat.	20
C.105.	Tetryl Quinam Process.	22
C.106.	Tetryl-Corning House	24
C.107	Sulphonating & Nitration Tanks.	26
C.108	Sulphonating Pot for Tar Oil.	28

30

Moore's Modern Methods, Ltd., London. Binder and holes in leaves, Pat'd.
To repeat order state 5x8 Q.R. Print

C.109	CE Filling for separating crude CE	6
C.110	CE Purification. Acetone dissolving pots.	8
C.110	CE Purification. Acetone recovery stills.	10
C.111	Fulminate	12
C.112.	Fulminate. Jelly Bag mixer.	14
C.113.	Fulminate. Press for filling detonators.	16
C.114	Recovery of N/g waste acids	18
C.115	G.C. Waste acids. Absorption tower.	20
C.116	G.C. Waste acids. Recovery	22
C.118	H_2SO_4 recovery.	24
C.119	H_2SO_4 Concentrator.	26
C.120	Parts of Rotary pump.	28
C.121	Rotary Pump.	30