ON HER MAJESTY'S SERVICE

CODE No. 27-32

WO 44/642

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1354.

15th November 1816

D.r Sir

Some of the French Chemists and Powder makers having made a good deal of boash and mystery, as to their making Gunpowder the grains of which are perfectly Spherical, it may be some satisfaction to His Lordship the Master General. to Know, that I have succeeded in some Experiments which I have been carrying on at Woolwich, in making the same description of Powder, the form and glazing of which is quite equal, if not Superior to the French Spherical Powder - as I trust the sample herewith will fully prove —

I do not pretend to Know the Process by which the French Powder is made but it is sufficient to say - that the Machinery and Process which I have invented and realised, is extremely simple - indeed I must say much more so than the ordinary mode of making Gunpowder; and certainly less dangerous. - and that in fact it dispenses with all the dangerous Machinery of the old mode - the Mills the Sieves and the Corning Houses - and substitutes a Machine of great simplicity - which may be worked by Hand - as it requires no force —

I have inclosed a Report of a comparative Proof of some of my Spherical Powder, with

Some

Colonel Chapman

&c. &c. &c.

some of the French Spherical Grain — a few pounds of which were lately found in breaking up some French Musquet Cartridges — by this it will be found, that this Powder is not deficient in Strength — although hitherto the form of the grain and not its Strength has been the object of my pursuit and Experiment — but I propose to follow it up for further perfection. —

What the advantages of this new description of Gunpowder may be I shall not now enter upon until I have ascertained something more as to the limits of its strength and rapidity of inflamation — but certainly — with a view to long preservation, the spherical form of this Powder and its smooth surface, in resisting the effect of moisture, together with its entire privation from dust or from the chance of accumulating dust by time and friction, are of great promise and well worthy of further investigation — as well as the comparative safety of its manufacture. —

I shall conclude by expressing a Hope that His Lordship the Master General will not permit any Stranger to take out a Patent in this Country for any such improvement in the manufacture of Gunpowder — should any application be made to this effect — which from the proceedings of some Foreigners here; some little time since connected with this subject — is not improbable. —

I have the Honor to be
Dr. Sir
Your faithful Servant
William Congreve

The further pursuit of his [illegible] Experiments is highly important on the present Results obtained from the little Experiment with the Spherical Powder [illegible]
[illegible]

Royal Powder Magazines
Purfleet 6th November 1816 —

Report of the proof of the undermentioned descriptions of Gunpowder made this day in the Mortar & Carbine —

Sort of Grain			Range in feet of Solid Iron Balls of 68½ lbs each fired from 8 Ins Mortars laid at an angle of 45° with 20 ounces of Powder —				No. of Boards penetrated by a Steel Ball fired from a Carbine with 6 drams of Powder		Remarks —		
			A	B	C	Mean			Lights	Glasses	Beads
Gunpowder	Waltham Abbey for Comparison	T. C —	203	234	202	213	"	—	few	Clean	none
		F. C —	"	"	"	"	14	14	— do	— do	do
	Spherical Grain made under the direction of Sr. William Congreve Bart	Glazed	220	205	179	201⅓	11	11	— do	— do	do
		unglazed	200	187	195	194	10	10	— do	do	do
	Spherical Grain	French	186	205	192	194⅓	12	12	— do	— do	few

Henry Dugdale
Chief Clerk

Jam. Brymer
Clerk of Survey —

Gunpowder.

Experiments with Spherical grained Gunpowder by Sir Wm Congreve 1816.

From

Ordnance Correspondence

Laboratory

1816