

S. M. ALVIS

April 15, 1963

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FOLLOW-UP ON ITEMS DISCUSSED WITH G.M. CALHOUN DURING LAST VISIT

1. M/600 NYLON PARTS

This problem has been thoroughly discussed and reviewed by R&D and Plant people, and I think there is no reason for confusion. All questionable items have been answered and dates have been established. However, to accomplish the end result complete cooperation between the Plant molding personnel and our own R&D molding group must be achieved. It is my opinion that this work is proceeding smoothly and that cooperation is in good order.

As far as the M/600 is concerned I think that the rib will be delayed in its molding operation as we will not receive the die until about the middle of May. At the present time we are experimenting with several types of plastic materials for the butt plate and have had very satisfactory results. We are continuing our experimentation, however, to obtain the ultimate for the butt plate for this rifle.

Concerning the M/600 accuracy device, tests have been conducted with a rifle in the device and it has been proven satisfactory. This test was conducted simultaneously between Howard Chambers and Harold Waterman so the latter will be familiar with its specifications and characteristics.

With regard to the testing of nylon weighted rifles, this has been scheduled and as you know we have observed the testing on April 9th. Paul Eccleston will issue a report concerning the results. I believe it was decided that at present we would not consider weighting the rifles as far as the stocks are concerned but would proceed to provide samples of these rifles with 24" barrels and so-called "corn cob" type insulators in both fore end and stock. As you know, the calculations that you and I made indicate that this combination will add approximately 4 oz. to the rifle and I believe Pete Morgan has agreed that this is probably the best approach and perhaps this will eliminate the necessity of adding weights to the stock.

With regard to the high pressure cartridge bronze cases, even though Sales does not want any of these items in the caliber sizes I feel sure that we should not deter from our efforts in this direction, especially for the XF-100 Pistol. As you know we are interested in this experimental case in developing higher pressures with resultant higher velocities which can be applied to the military version in this caliber. This will greatly aid higher velocity and penetration quality of an armour piercing projectile. At the same time high

S. M. Alvis

-2-

April 15, 1963

velocities and energy can be obtained for commercial use. There is no question, I don't believe, in anyone's mind but what this pistol would handle more than anyone could pack into one of these cartridges, regardless of the burning rate of the powder. I believe in referring to Bill Foster's letter he was concerned that some of these bronze cartridges might eventually be fired in rifles that are not of adequate strength. I believe this is a true statement and good thinking on his part, but he refers to a situation where this bronze case should not be utilized in present or existing cartridges. I believe this does not apply to the 221 as it is a new cartridge and at the present time is used only in the pistol, and the strength of this pistol is as strong or stronger than the M/700 action. Therefore, there should be no hesitancy to use it.

2. M/1100 LACK OF POWER PROBLEM

An investigation so far indicates that lack of power results in about 30% of the fail to blow back situations, whereas 70% are due to interferences somewhere in the action. This is also true in the 3" Magnum. There is a considerable amount of investigation going on at the present time to determine just what this lack of power is and what is causing it. Several items are being experimented with and I think fairly satisfactory results will be available to us at the end of this week. In the meantime some experimental work is going on to develop a more versatile gas piston and seal.

3. INTERNATIONAL MATCH PISTOL

With reference to the Custom Shop offering an International Match Pistol I have discussed this with Mike Walker and advised him that we have developed a 22 LR rim fire combination in the XP-100 utilizing the 40X lock-up system. I suggested to Mike that this basically would be, I believe, ideal for a match pistol and I am aware of some experimental work in design that he has been investigating which would improve a match type trigger with an adjustment to the trigger pull. I also suggested that we consider a different type of stock for the pistol, which would probably be made of wood so that the user could alter it as he sees fit, and the various sections of the grip should be quite versatile in their adjustment. I also suggested to Mike that perhaps if we are seriously considering such a design, we should purchase at least two of the more popular and more desirable style of free type pistols so that we can become more familiar with this type of competition. He and I are both looking over the availability of the various types of free style pistols and will cooperate in this effort to first obtain pistols and decide on the design procedure to be followed.

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