

Nature of Problem:

To evaluate the possibilities of a plastic gun stock for shotguns using the 12 gauge Model 850.

Summary of Progress from Inception:

The Ekko process which involved the iron plating of an unfilled walnut stock so as to simulate wood graining in the plastic stock was selected by the Watertown Manufacturing Company to mold gun stocks. The mold made by Watertown proved to be incapable of withstanding the high pressures involved in molding impact phenolic. Watertown therefore absorbed the cost of the mold. In an attempt to salvage something of value from the mold, a new order was placed with Watertown to produce a fairly wide variety of color samples using low-pressure-molding "Plastacele". The appearance of all the samples was so poor, however, that this was not done and the project was closed out.

The Quarter's Work:

The color samples were received from Watertown and found to be unsatisfactory.

Proposed Next Quarter's Work:

The project has been closed out and work will be concluded with the issuance of a brief report. Basically, the plastic gun stock project can be considered as an attempt to secure first, dimensional stability and, second, economical checkering. There seems to be some basis for the hope that both these aims may be achieved by the methylol urea impregnation of wood being prosecuted under another project.

Project: Piston Plus - B-339 (L-3091)

Personnel: G. E. Hutchinson, G. G. Garrison

Authorized Amount: \$20,400 Total Expended to Date: \$21,445

Nature of Problem:

Piston Plus represents an attempt both to render the Molded Wad ballistically adequate in high velocity loads and, equally important, to render it merchandisable. Its virtue lies in its practically perfect gas sealing which achieves both these aims. Piston Plus consists of a Piston Wad which is completely impregnated with a special impregnant and rests directly on the powder; and a compressible Cushion Wad which can be either rim impregnated or not impregnated at all and which is directly under the shot. Because of the proximity of the Piston Wad impregnant to the powder, special storage stability means are required to prevent wax from the body soaking into the powder at normally elevated storage temperatures.

Summary of Progress from Inception:

The virtually perfect gas sealing of Piston Plus makes it essential to use it solely in New Crimp shells since there is insufficient gas leakage to blow the top wad out of the way with Roll Crimp yielding 100 percent blown patterns. With Piston Plus