operation in the manufacture of a gun is that of checkering. This project proposed to investigate the possibility of economical checkering in walnut by methylol urea impregnation followed by molding under heat and pressure.

Summary of Progress from Inception:

A number of the more evident variables such as pressure, temperature, time of molding, degree of impregnation, etc., have been evaluated on small walnut samples without much promise. The checkering diamond is relatively small and, to be satisfactory in appearance and tactual sense, must come to a sharp point. It appears that the temperatures and pressures required to flow the surface of the wood into the point of the diamond are so high that the wood itself collapses very appreciably.

This Quarter's Work:

The project was started within the last Quarter.

Proposed Next Quarter's Work:

It appears at this time that a more promising approach to this problem is the use of conventional molding powder such as a brown bakelite placed on the wood and molded so that the checkering is formed simultaneously with the bonding of the bakelite to the walnut. This possibility will be evaluated before closing out the project.

A Part II covering economical replacements for walnut by use of methylol urea treatment has been submitted.

Active Projects For Which No Detailed Report Is Made At This Time	Authorized Amount
Study of Lead Bullet Lubrication - B-227 (K-3028)	$17,500
Constriction Length Method of Choke Boring B-399 (K-3062)	3,850
High Velocity Rim Fire Finish - TM-3365	2,250
Steel Air Rifle Shot - TP-3420	4,200
Steel Rim Fire Shells - B-63 (F-125-R)	33,105
Coloring Lead Bullets - MCB-2039 (K-3052)	1,000
100% Asplund Fiber - B-424 (L-3135)	1,000
Functioning and Casualty Tests of #65 Lubricant - TP-3392	750
Variable Pattern Devices - TP-3432	5,000
Basic Study of Aluminum Extrusion - TP-3441	4,500
Alternative Molded Wad Binders - TP-3410	900