

Ilion, New York

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To: A.A. Hugick  
From: K.W. Soucy  
Subject: Pendulum Drop Test - Progress Report

Introduction:

The pendulum drop test device was constructed to provide a means of reliably drop testing firearms. The former method of drop testing was felt to be inadequate due to lack of repeatability and undue damage to test guns.

Objective:

In order to design a repeatable drop test, information on the nature and magnitude of the forces involved was needed. Also needed was quantitative data on the effects of different drop heights, different positions and different striking surfaces.

Summary and Conclusions:

The above stated objectives were met fully. We now have a reproducible drop test that has been tested for a range of conditions, including the use of three different materials for a striking surface. A positive correlation between the pendulum drop test and the vertical drop test has also been verified.

Future Work:

Future work will include instrumentation of other models of firearms and possibly further investigation into the effects of different striking surfaces.