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CIA/SC/RR 74

18 June 1954

11440
Dissemination Authorized
Assistant Director
Office of Current Intelligence

No. Pages - 6

**CIA HISTORICAL REVIEW PROGRAM
RELEASE AS SANITIZED**

"MUSING" GEAR:
A TYPE OF AMMUNITION HANDLING INSTALLATION

Office of Research and Reports
CENTRAL INTELLIGENCE AGENCY

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"MUSING" GEAR:
A TYPE OF AMMUNITION HANDLING INSTALLATION*

A series dealing with Soviet ship construction during the period 1949 to December 1953 makes reference to such terms as "musingovaya podacha," "musingovye ustrojstva," "musingi" ("mousings," "mousing apparatus," "mousing feed," "musing") used in connection with _____, which have been identified as destroyer and cruiser types.

The earliest _____ did not provide any indication as to the definition of these terms. _____ 2/ published in 1954 suggest that the use of the gear has continued and that the installation is a "type of deck-handling gear." Another _____ in 1949 but _____ in 1954, provides positive identification as to the functioning of the equipment -- namely, a means of handling ammunition. This identification is confirmed by the following excerpt from a Soviet book on naval architecture, the author of which is understood to be the designer of the SHTORM class destroyer 4/:

"Musingovaya podacha," or delivery of ammunition from its storage place, that is, magazine, to the guns by bucket conveyer, is accomplished by means of one block on deck and a second block at the bottom of the magazine. A cable is reeved through the block. This cable has "musings," or bosses. By heaving on the cable by hand the crew of the gun raises a canvas bag, sometimes called a "stool" (besedkoy) containing three projectiles. The canvas bag is hooked to the boss or "musing."

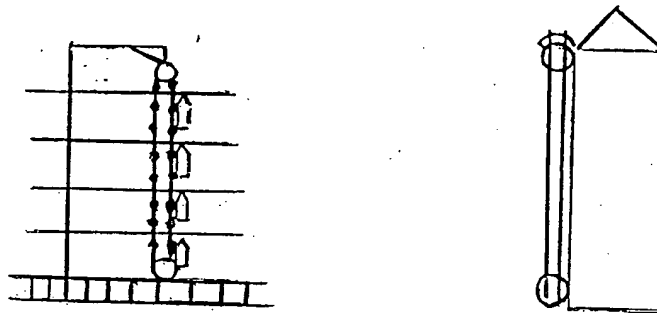
* The estimates and conclusions contained in this report represent the best judgment of the responsible analyst as of 1 June 1954.

** Footnote references in arabic numerals are to sources listed in the Appendix.

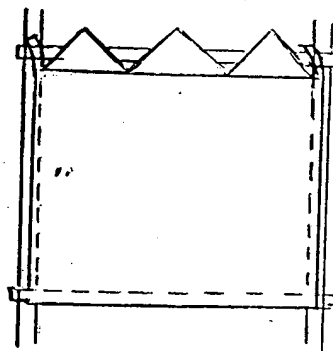
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The empty bags are thrown to the bottom. The "musingovaya podacha" is used primarily for loading projectiles in the magazine. Braking is done by means of a hand brake and a friction block. Hemp rope with a wire core is used for a "musingovaya podacha." The use of such a delivery system is not always convenient on board ship, for it is necessary that all the hatches in the decks be located in one vertical line 5/

The following sketches indicate that such gear is, or can be, used for the handling of semifixed ammunition on the types of warships cited above.



Sketches of "Musing" Gear as Shown in Reference Book. 6/



Suggested Front View of Canvas Bag and Projectiles

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The significance of identification of the "musing" gear lies in the fact that, by the use of such a relatively primitive means for the delivery of ammunition to the guns, the rate of fire of such guns is sharply reduced. Because a well-trained, US Navy gun crew serving a 5-inch 38-caliber AA gun may be expected to fire 20 to 24 projectiles per minute (based on a computer dead time of 2-1/2 to 3 seconds) when serviced by a hydraulic hoisting mechanism, Soviet gun crews, serving a comparable gun but in turn serviced by "musing" gear, might be expected to fire not more than 5 to 10 projectiles per minute. The weak effect of such a slow rate of fire, particularly of AA weapons against rapidly moving targets, is obvious.

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