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SILENCERS FOR SEMI-AUTOMATIC MOVABLE-BARREL PISTOLS

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This paper is devoted to the topical problem of the development of silencers for movable-barrel pistols, such as the Tokalev pistol model 1933 (TT), the Yarygin pistol (PYa), the Glock pistols, etc. Law-enforcement agencies of Ukraine and other countries and military units use pistols of this type due to their design simplicity, ease of use, and relatively small dimensions and mass.

The paper presents the results of the development of new silencers with various baffle elements for short-recoil blowback pistols. The features of three design groups, which differ in the shape of the spreader components: cones, cylindrical bushings, and helicoidal swirling spreaders, are grouped and described. The above-mentioned parts are made of an aluminum alloy. All the devices have identical bodies, covers, and pulse disconnectors made of a titanium alloy.

The features of design solutions are shown, and the design of the internal components is described with reference to their effect on the overall performance depending on their embodiments.

Full-scale tests of the silencers developed were conducted with cartridges of different energy capacities, and the test results showed that:

- the sound suppression efficiency of the silencers compares well with that for the best foreign silencers at comparable dimensions and mass;
- the silencers are less expensive due to the use of advanced technologies in the manufacture of their structural components and the silencers as a whole;
- the silencers completely eliminate muzzle flash;
- the silencers do not affect the automatic operation, firing accuracy, shot grouping, or performance characteristics.

The technical characteristics of the silencers reported in this paper demonstrate their compactness, reliability, and high sound suppression efficiency.

Keywords: *silencer, movable-barrel pistol, baffle elements, shot sound intensity reduction.*

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