



Home Made Firearm's Type and Investigation

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Abstract: The home-made weapons are generally made from crude materials such as steel or iron tubes, water pipes, screws, discarded steel or iron materials of automobiles, etc. all the home /improvised weapons examined in the paper are categorized into four kinds such as (i) home-made pistol, (ii) home-made firearm, (iii) improvise firearm and (iv) home-made pipe firearm. The weapons generally are chambered for those cartridges which are easily available. The popular bore/calibers are 12 bore, 0.410 bore, 0.303 rifles, 0.32/7.65 mm pistol, 9mm pistol/sten gun, 0.38 revolver and 0.22 rim fire cartridge. In this paper is explaining the introduction, type's home-made weapons, investigation, evaluation and conclusion.

Keywords: *Home Made Firearms, Investigation.*

Introduction

Firearms related crimes are increasing due to the use of firearms in the activities of terrorists, naxalites, interstate criminals, serial killers, and repeat offenders in the country. Criminals generally commit several crimes in different jurisdiction after unknown spans of time usually with the same firearm. These crimes are investigated by investigating agencies of the respective areas in an isolated manner due to lack of any clue between them. Many of these crimes remained unsolved and unlinked for an indefinite period. In addition, the increase in casework loads to overburdening the Forensic Science Laboratories in the country, this poses problems in effective examination and comparison of huge amount of exhibits with the traditional manual technique using comparison microscope.¹

The improvised firearms are called by different names. They are commonly known as 'country made firearm.' The barrels are often made of pipes meant for water lines and often used standard ammunition.² The improvised firearms are also known as country-made firearms, home-made firearms, pipe-guns, zip guns etc. these weapons are made by ordinary blacksmiths to no particulars specifications, nor any standard raw material is used. These firearms

¹ S.S. Baisoya, "National Ballistics Imaging Database Management and its Applications in Indian Perspective" 1 *IPJ* 2005, available at: <http://www.bprd.nic.in/WriteReadData> (last visited on September 12, 2016).

² B.S. Nabar, *Forensic Science in Crime Investigation* 179 (Asia Law House, Hyderabad, 2014).

have short span of life and most of them are extremely dangerous.³ These may be country made firearms called 'Desi-Kattas' or factory-made firearms smuggled across the international border⁴ and Punishment for illegal weapons.⁵ The home-made weapons are generally made from crude materials such as steel or iron tubes, water pipes, screws, discarded steel or iron materials of automobiles, etc. all the home /improvised weapons examined in the paper are categorized into four kinds such as (i) home-made pistol, (ii) home-made firearm, (iii) improvise firearm and (iv) home-made pipe firearm.⁶

The crime statistics of India reveal the large scale use of improvised firearms for commission of crime. The nature of injuries by such weapon do not compare favorably with those produced by authenticated weapons. Their effects against the targets are unpredictable. The poor qualities of these firearms are attributed to the non-standard raw material, lack of expertise and facilities and outdated implements. The weapons generally are chambered for those cartridges which are easily available. The popular bore/calibers are 12 bore, 0.410 bore, 0.303 rifles, 0.32/7.65 mm pistol, 9mm pistol/sten gun, 0.38 revolver and 0.22 rim fire cartridge.⁷

Types of Home Made Firearms⁸

Shotgun: These are generally single barreled. The length of the barrel is not generally of standard size. Very rarely double barreled shot gun is manufactured. Shotguns are twelve, sixteen bore etc.

Pistol: The most common variety of Country made weapon which is generally seen is the pistol in which twelve bore cartridges is used. The barrel of this type of country made weapon is also not uniform.

Revolvers, Rifle and Stengun: Country made revolvers, rifles and stenguns have also been found. Revolvers 0.38, twelve bore, rifles-0.303, nine mm stenguns etc.

Characteristics of Home Made Weapons

The home-made firearms are: (i) the weapons become increasingly dangerous with each subsequent shot due to poor craftsmanship, (ii) they are effective at short ranges only as the combustion of propellants is often incomplete and the extent of combustion varies from shot to shot, (iii) the generalizations made from the cartridges, bullet by the manufacturer, for standard weapons, do not hold good. Even results of experiments with the same weapons are only rough approximations, (vi) they do not permit accurate or even approximate estimates of range from the spread of pellets or direction of injury. The direction may have suffered change due to some abnormality in the internal surface of the bore near the muzzle end. Such abnormalities give variations in different shots with the same weapons, (v) the

³ *Id.* at 273.

⁴ Thejaswi HT, Kumar A, *et. al.*, "Desi-Katta (Country-Made Firearm) and Wound Ballistics A Review" 35 *JIAFM* (2013), available at: <http://medind.nic.in/jal/t13/i2/jalt13i2p165.pdf> (last visited on September 13, 2016).

⁵ Section 25 of the Arms Act, 1959: Punishment for certain offences.

⁶ Ajitesh Pal and Hemanta Kumar Pratihari, "Examination of Some Country made Smooth Bore Firearms" *JFS&C* (2014), available at: <http://www.annepublishers.com/article> (last visited on September 12, 2016).

⁷ Kaushalendra Kumar, *Forensic Ballistics in Criminal Justice* 183 (Eastern Book Company, Delhi, 1987).

⁸ B.C. Jauhary and S.N. Gaur (eds.), *Fire Arms, Forensic Ballistics, Forensic Chemistry And Criminal Jurisprudence* 137 (Delhi Law House, Delhi, 2009).

marks imprinted on the projectiles or shells fired from improvised weapons are numerous and characteristic, which facilitate the identification of the fired bullets, cartridges⁹ and (vi) it is, therefore, essential that the required information in respect of a country-made firearms could be ascertained with a degree of reliability and certainty only by experimenting with the firearm and the cartridge, bullet combination.¹⁰

Scene Investigation of Home Made Firearms Cases

Challenges before a genuine investigator are manifold, generally of which are:

- Identification of location of crime.
- Visit the location and collection of physical evidence from scene of occurrence.
- Detection of firearm used in the crime.
- Collection of evidence from inputs.
- Supply of one or more missing link in a chain of evidence.
- Strengthening of a weak link or links in a chain of evidence.
- Clarification of doubts in the preliminary investigative stage, which may or may not be significant at a later stage.¹¹

The investigating agency has to get answer of many questions such as: (i) what kind of firearm used? (ii) Was the firearm working condition? (iii) What was the range and direction of fire? (iv) Did the specific firearm fire cartridge which was recovered from deceased's body? (v) Did a particular person fire the firearm? Whether the case was an accident, homicide or suicide? This also includes examination of cartridge, cartridge cases, bullets, wads, firearm shot residues, etc.¹²

Evaluations Home Made Firearms

The main evaluations in cases involving home-made firearms are similar to those in the standard weapons: (i) Firing pin marks are not available on the crime bullet. The absence of the firing pin marks offers no serious difficulty, in most of the cases. The other marks, such as the firing pin scrapes, breech face, chamber and extractor marks are available,¹³ (ii) in few cases which involve firearm ammunition, the base gets separated from the tubular portion (cylinder) of the bullet. The base carries the firing pin, breech face and the extractor marks. They permit the comparison of these marks with the marks on the test bullets,¹⁴ and (iii) the identification of the barrel marks on the projectiles from a multi-projectiles cartridge has always been difficult. The small size of the projectiles, their turning movement and lateral shift are responsible for the problems. They are accentuated in the country-made weapons due

⁹ B.R. Sharma, *Firearms in Criminal Investigation & Trials* 54 (Universal Law Publishing Co. Pvt. Ltd., New Delhi, 2012).

¹⁰ *Ibid.*

¹¹ Anoopam Modak, *Scientific Techniques in Criminal Investigation 2* (Universal Law Publishing an imprint of Lexis Nexis, Gurgaon, 2016).

¹² B.P. Maithi, *Physical Evidence in Criminal Investigation & Trials* 274 (Selective & Scientific Books, New Delhi, 2012).

¹³ *Supra* note 9 at 283.

¹⁴ *Ibid.*

to the non-standardized barrel dimensions, improper firing process and the shorter barrel lengths. However, the basic principles of the country-made weapons buckshot linkage are the same as those in the standard weapons.¹⁵

The investigator can confine his studies to small home-made firearms, *i.e.*, guns, rifles, pistols, revolvers and magazine firearms. The constituent parts of all these firearms are the lock, the stock, the barrel and the accessories. If the barrel is long and the butt end of the stock transverse to it, so that, when fired, the firearm can be placed against the shoulder, it is called a gun or rifle. If the barrel is short and the stock curved down so that the firearm must be held in the hand when fired, it is a pistol or revolver.¹⁶ Any home-made firearms found at the spot of the crime should not be snatched up at once. It must be ascertained whether they have passed through anybody's hands before they are collected. If any home-made firearms found have not been touched by anybody, the investigator may find valuable fingerprints of the criminal on it. The investigator should note the number; make, etc., of the weapon found and carefully pack it up for expert examination.¹⁷

Range of a particular weapon is defined for forensic purposes, the distance where the effectiveness of the projectile drops to the threshold value so that no penetration can occur in human target. The range, therefore, in forensic sense is not a usefulness of the weapon from the point of view of accurate aim.¹⁸ The range of fire is important aspects of Forensic home-made firearms. The determination of the range of fire is possible if proper images, sketches, description of the injuries, the suspected weapon and the bullet, cartridge similar to the one used in the commission of crime are available.¹⁹

The concept that buck-shots and pellets can be linked to the home-made firearms which fired them is recent. It is of a great importance in forensic firearm. A shotgun is firearm of choice with the criminals in India; firstly, because the firearm and the weapon of choice with the criminals in India; firstly, because the ballistic weapons and the bullets, cartridges are easily available. Secondly, the ballistic weapon can be easily homemade. The surface characteristics of the weapon which scratches the marks on a pellet are like the barrel of a rifled weapon which scratches its thumbprint on a cartridge.²⁰

Home-made firearms and ammunition examination, the firearm expert may be able to provide further information of interest to the investigation. A major consideration in many crimes is the distance from which the shot was fired. By conducting comparative tests the lab can assist the investigator in cases where suicide or a claim of self-defense is involved. In addition to determining distance by studying firearm patterns, the firearm expert can often

¹⁵ *Id.* at 286.

¹⁶ Ronald Martin Howe, M.C., *Criminal Investigation A Practical Textbook for Magistrates, Police Officers and Lawyers* 164 (Sweet & Maxwell Limited, London, 1949).

¹⁷ K. Krishna Murthi, *Police Diaries, Statements Reports, Investigation and Arrest* 119 (Law Book Company, Lucknow, 1963).

¹⁸ B.N. Matto, "Physical Aspects of Firearms Injuries" *The Maharashtra Police Journal*, Vol. 14, (1973).

¹⁹ *Supra* note 9 at 221.

²⁰ *Id.* at 196.

conduct an analysis of powder pattern resulting from the discharge of rifled weapons. Generally, the further the firearm is from the target, the larger will be pattern.²¹

The work in Forensic firearm consists in identification of the firearm, which recovered or is used. The basis of identification is the law of individuality. In case of a recovered firearm, it may be required to know whether the firearm is a properly manufactured one or of illegal manufacture. The serial number, make and model, the type and the bore/caliber of the firearm are also required to be known as a part of lab investigation. At times the criminal destroys the serial number in an attempt to prevent identification or being claimed by the lawful owner of the firearm. It is the lab's role to provide an answer to all such questions. The principle of identification in such cases is provided by the law itself.²²

The evidence available on home-made firearms should be collected systematically: (i) Search and collect all the extraneous evidence like bloodstains, skin, flesh hair, paint or dust. Detach and pack them in separate small cellophane/plastic pouches, after drying, before the ballistic weapon is processed to fingerprints, (ii) Hold the home-made firearms from place like the sling, ring, trigger guard or the corrugated surface on the butt where the possibility of fingerprints does not exist, (iii) Check the breech face for enamel or paint left by the bullet fired through the ballistic weapon. They help in the identification of the ammunition;²³ (iv) Put the identification particulars (FIR No, with the date and name of the police-station) and the initials with the date of recovery of the firearm at the prominent parts like barrel, action block or stock of the home-made firearms, (v) The position of the fired and live cartridges in the cylinder when revolver is involved, and (vi) The nature, quality and the quantity of the extraneous evidence, if any, observed and collected from the home-made firearms.²⁴

Conclusion

The homemade ballistic weapons usually do not have specially made chambers. The chambers of home-made weapons do not have proper dimensions, nor do they have any settlement for seating the ammunition correctly. In few cases the overlapping homemade weapons of parts make them unsafe. The firing pin of a homemade ballistic weapon can be easily changed. The offenders have at times changed the firing pin or its original surface characteristics. The breech of face marks of homemade ballistic weapons provides relevant identification data.

In the stud guns, like the cattle guns, the blank cartridges are used to push projectiles into wood, concrete, steel etc. Carabines are semi-automatic home-made firearms, which can be turned to automatic action. The home-made firearms are basically a containing and directing device for the ammunition. Cartridges cases are belted, rimmed, semi-rimmed or rimless. The propellants used are either black powder or smokeless powder. The projectiles have a different shapes, sizes, weights and constructions. A bullet is the projectile loaded into the cartridge case. The cartridges may also be illustrated through every side image.

²¹ Richard H. and D. Crim., *Introduction to Criminal Investigation* 90 (Addison-Wesley Publishing Company, U.S.A., 1975).

²² *Supra* note 7 at 216.

²³ *Supra* note 9 at 124.

²⁴ *Ibid.*