

FASCAM

in defense of cities

Major George F. Smith

Large scale city fighting in World War II, Korea, and Vietnam was a relatively rare occurrence primarily because doctrine stressed the notion that built-up areas were to be isolated and bypassed rather than risking costly, time consuming operations in a difficult environment. But urban sprawl in the highly industrialized countries of Western Europe has forced a departure from that doctrine.

An examination of the traditional avenues of approach into and through West Germany quickly establishes the importance of urban sprawl to modern tactics. These historical avenues are no longer unobstructed routes suitable for fast moving armor operations but are frequently blocked or narrowed by a series of urban areas.

Soviet doctrine stresses that offensive formations attacking across highly developed regions will encounter at least one large built-up area every 70 kilometers and numerous villages and clusters of structures that restrict and even block traditional avenues of approach. Since Soviet attack doctrine also stresses that Soviet forces will advance 60 kilometers per day, it is obvious that confrontations could occur in built-up areas.

Retired British Major General J.F.C. Fuller has written that the defense "should command the roads leading toward and through the area being held. The knots in the road are villages, hamlets and small towns. These knots are also tank-proof. Therefore, small towns and villages are the first areas that must be considered." These "knots in the web," as Fuller characterizes them, are

ideal locations for antitank strongpoints.

Built-up areas supplement or extend obstacle systems. Building complexes are in themselves obstacles to a mechanized force. Therefore, with minimal effort and materials, a built-up area can become a significant obstacle to advance. Passage can be blocked, canalizing enemy armor into open natural terrain interlaced with anti-armor fires and reinforced with mines and other obstacles. The built-up area can itself become one huge tank and soldier killing zone with an insatiable appetite.

The skillful integration of built-up areas into the total defense scheme enhances and strengthens defensive combat power to attrit, delay and eventually defeat a numerically superior force.

THE USE OF MINES IN THE CITY

To maximize the defender's advantage within the city, defenses are organized in depth. Depth is achieved by selecting and preparing a series of mutually supporting battle positions, strongpoints and obstacles throughout the built-up area.

The proper selection and location of obstacles immediately increases or multiplies our available combat power. Properly employed, obstacles (in particular, mines) greatly increase the killing capability of our anti-tank weapons by increasing the amount of time that a target is in the "target window." While obstacles are discussed in most of the literature concerning combat in



built-up areas, details concerning the proper use of mines is sorely lacking. In fact, the new family of scatterable mines (FASCAM) is rarely mentioned.

The Combat in Cities Report, published by the Infantry School, concluded paradoxically that standard pattern minefield construction time precludes its use in many cases, but that mines can be used effectively along streets and at intersections within the city and at critical choke points along likely avenues of approach into the built-up area. One must hastily add that the built-up area, itself, is a choke point.

Supporting the Report's conclusion concerning conventional mines is an extract from a KETRON, Inc., Technical Report, which states, "The current inventory of mines is not suitable for use in the city. Both off-route and scatterable mines would assist in controlling specific areas by canalizing movement of enemy forces and slowing the rate of enemy advance." Before isolating on the employment of FASCAM in cities, it is first necessary to discuss current U.S. doctrine regarding the defense of a built-up area so that FASCAM can be logically introduced.

DEFENSE OF A BUILT-UP AREA

The defense begins well forward of the city on terrain suitable for a balanced combined arms covering force designed to wear down the attacker and cause him to reveal his intentions before reaching the built-up area. As the attacker approaches the periphery of the city, he

comes within range of anti-tank guided missiles and tank and artillery fire from strong, mutually supporting battle positions and strongpoints of the main battle area arranged in depth throughout the built-up area.

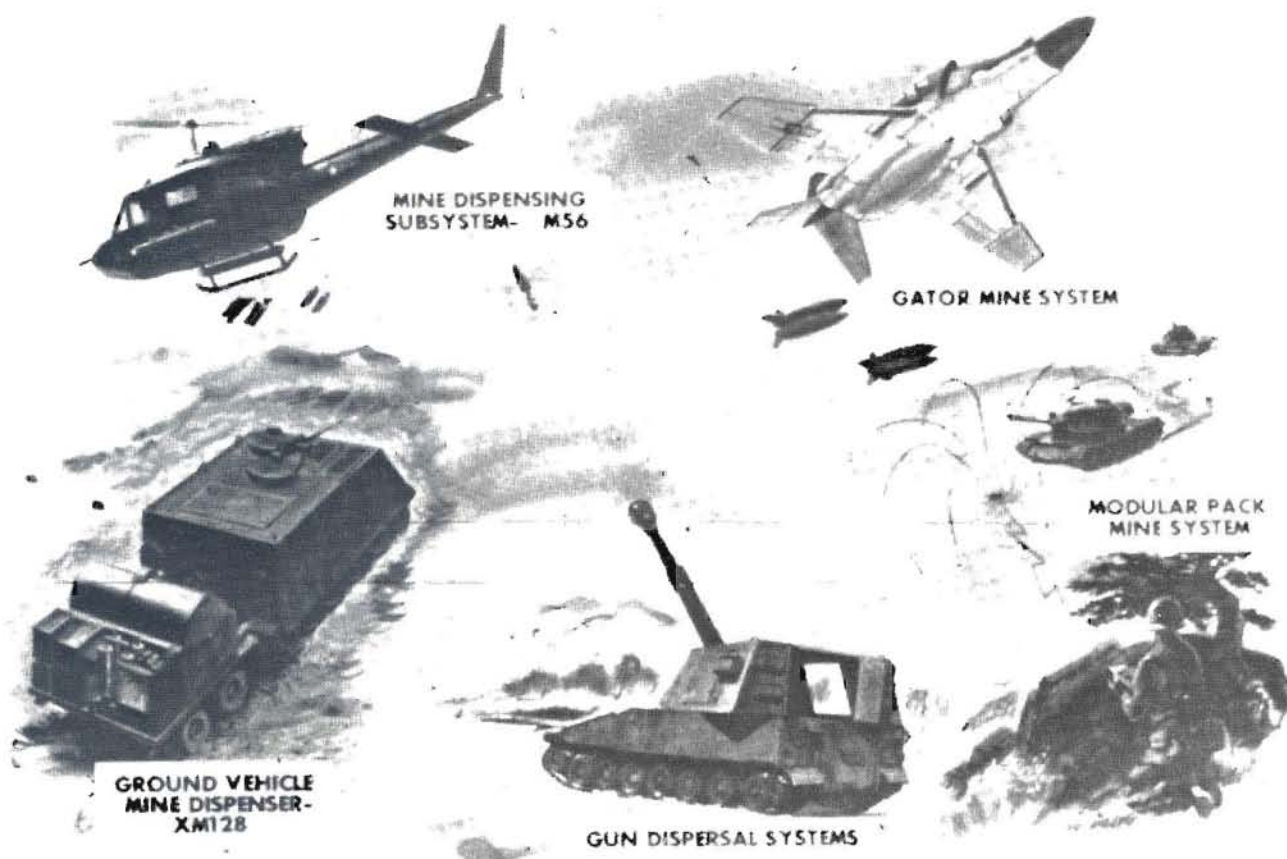
Success is achieved by an integrated defensive scheme between forces in the city and forces defending adjacent terrain. The key to defense within the city is the strongpoint, where squad and platoon leaders will often be required to fight independent battles without detailed orders. The skillful use of mines and obstacles will greatly enhance the defensive capability of these mutually supporting strongpoints.

THE USE OF FASCAM

The use of scatterable mines in the covering force area forward of the built-up area is essentially no different than in the normal defense. Prior to the battle, maximum use must be made of the Ground Emplaced Mine Scattering System (GEMSS) and M56 to rapidly emplace minefields along likely avenues of approach to enhance the effectiveness of covering anti-tank weapons.

Particular attention must be given to obstacles on the flanks of the city since it would be the defender's intention to force the attacker into the city. As the covering force withdraws, Artillery Delivered Anti-vehicle, Anti-tank and Anti-personnel Mines (ADATM and ADAPM) can be effectively employed in front of enemy formations to assist in breaking contact and further attriting the enemy. As the enemy comes within range of the Main

RESPONSIVE DELIVERY MODES FOR SCATTERABLE MINES



Battle Area (MBA), the Surface Launched Unit-Mine System (SLUMINE) can rapidly seed the obvious avenues of enemy approach and close breaches in existing minefields. The range of the SLUMINE prohibits its use forward of the MBA.

Within the city itself, the various types of scatterable mines must be emplaced to support each battle position and strongpoint. The uses for FASCAM inside the built-up area are limited only by the imagination of the defender. Because employment of these mines within the city is the heart of the issue, each mine system will be considered separately in an examination of several possible applications.

ARTILLERY DELIVERED MINES (ADAPM AND ADATM)

Since the effectiveness of artillery may be degraded due to restricted observation, proximity of friendly forces to enemy troops, the corresponding requirement for pinpoint accuracy, and frequent attachment of artillery sections to infantry platoons and squads, the ADAPM and ADATM should rarely be used within the city. Furthermore, the weight of the ADATM mine, coupled with its

rate of descent, would virtually insure its penetration of roof tops and cause the interior of many buildings to be mined. The effectiveness of an anti-tank mine in a basement is limited.

The ADAPM, however, could be used since it is not heavy enough to penetrate roof tops. In fact, anti-personnel mines emplaced on roofs would be effective in blocking that traditional avenue of approach by infantrymen in the city.

GEMSS

The GEMSS is ideally suited for the rapid emplacement of mines throughout the city. Streets and boulevards can be mined as easily as parks and cemeteries. However, mined areas must be marked to preclude friendly casualties. In most cases the defender's routes of withdrawal and lateral movement will be above or below ground, thus reducing the concern for mines in the street. The defender will use the street far less than the attacker. However, counterattack routes must be kept open. The limiting characteristic of the GEMSS is its long self-destruct time. Areas mined with it are essentially denied to defender use.

SEQUENCE OF OPERATIONS FOR MODULAR PACK MINING SYSTEM (MOPMS)



M-56 HELICOPTER DISPENSED SYSTEM

This system could not be used once the battle in the streets begins due to its high vulnerability. However, before the battle begins, it could be used to mine large, open areas such as parks, autobahns, and the like.

SLUMINE

SLUMINE is capable of covering large areas rapidly. Therefore, like the M56, it has limited effectiveness within the city, although it is not vulnerable to air defense fire like the M56. Its principal use within the built-up area might be to contain a penetration in an open area or to re-seed a breach in a GEMSS field, also in an open area. The low angle of fire of the SLUMINE rocket severely limits its application in areas containing tall buildings. The SLUMINE launcher would be more effectively employed firing SLUFAB at soft targets.

MODULAR PACK MINE SYSTEM (MOPMS)

This system has the greatest utility of any FASCAM system for combat in cities. It is easily transported and does not require a launch system. It can be placed easily in support of squad and platoon strongpoints, activated when required, and recovered if not employed. Not only would it be effective in the streets against tanks and soldiers, but it could be devastating if employed inside a building following withdrawal by defenders and just prior to enemy seizure. The expenditure of the MOPMS could be extremely effective if the building is a critical strongpoint.

MANUALLY EMPLACED MINE SYSTEM (MEMS)

This system is not currently in development, but could prove very useful in urban combat. The MEMS is essentially an ADAPM which is activated by pulling a pin and throwing the mine into place. Consider the effect of leaving one of these in each room of a building as the defender withdraws. Similar employment could be effective on flat rooftops, in alleys and doorways, and particularly in trafficable sewers. Extreme control of such a system would be necessary to prevent friendly casualties resulting from over-enthusiastic employment.

CONCLUSION

The family of scatterable mines has truly added a new dimension to mine warfare and the mechanized battlefield. No longer is mine warfare limited to open terrain on the traditional battlefield. FASCAM will enable the defenders of cities to more effectively and efficiently employ their anti-tank weapons to kill the enemy and win the first battle.



Major George F. Smith is currently assigned as the Executive Officer of the 565th Engineer Battalion, USAREUR. In his previous assignment as Project Officer at the Armor and Engineer Board, Fort Knox, KY, he designed tests for the Artillery Delivered Antitank Mine.