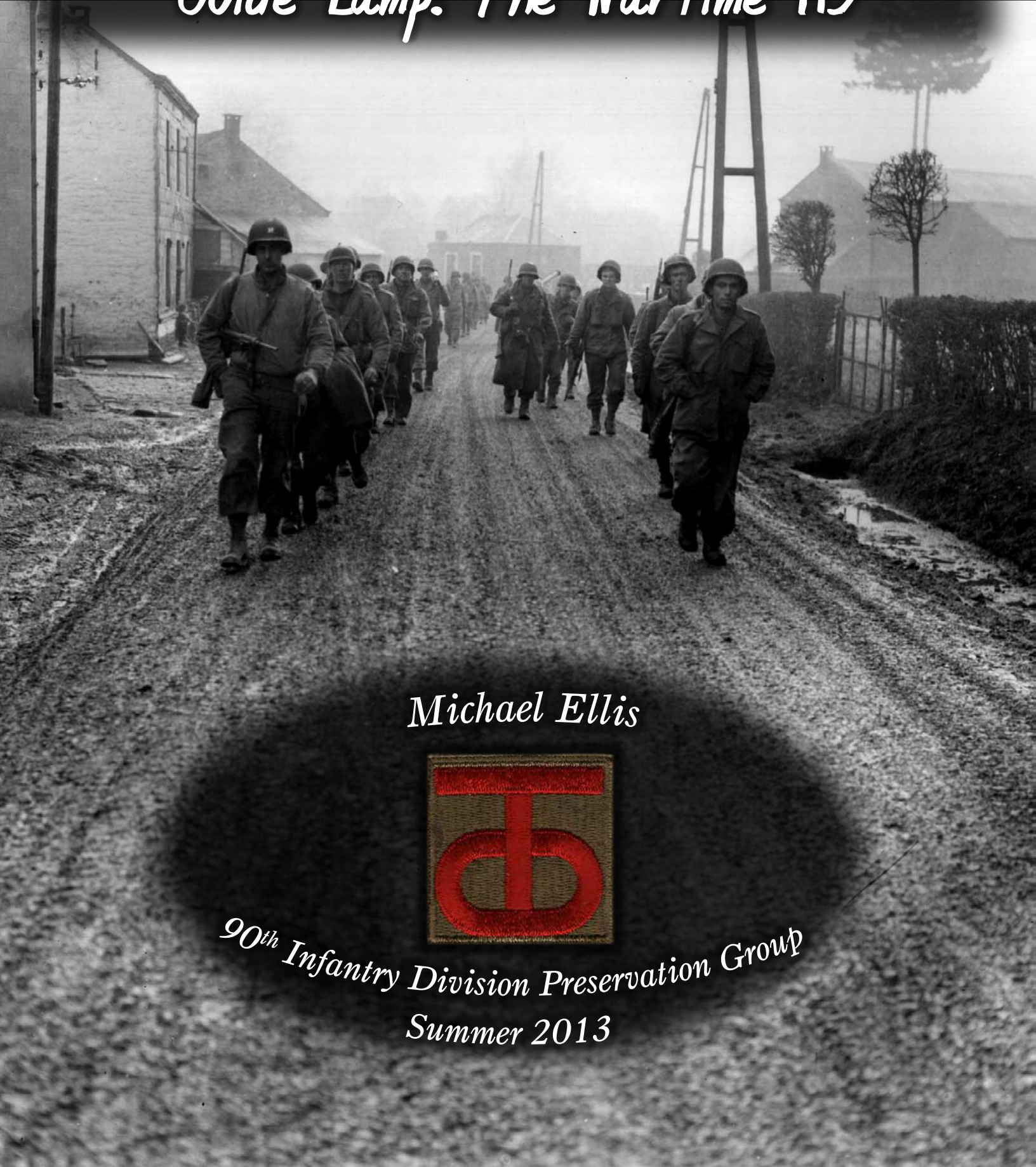




Guide Lamp: The Wartime M3




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90th Infantry Division Preservation Group
Summer 2013




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'Although it would be dangerous to state that further improvements and developments are unlikely, the ultimate has been reached in this type of weapon for the time being'

*Aberdeen Proving Ground report
on the M3, 10 April 1943.*



The Thompson was an unsatisfactory design, from the Ordnance Department point of view. With war looming, requests for designs were solicited in February 1941 for a cheaper, lighter, more accurate weapon suitable for mass production. Several months were wasted when the Submachine Gun, M2 proved impossible to produce in quantity. In July 1942 the Technical Division of the Ordnance Department authorized the development of an entirely new weapon making use of steel stampings. This would become the Submachine Gun, Caliber .45, M3.

Background

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January 19, 1944. Wednesday.

You would have liked the little gun we started work on today - the new M3 submachine gun. It's a new version of the Tommy gun, but looks like a Buck Rogers affair.

- from letters of Captain Wallace Russell, U.S. Armored Infantry



This was not the crude STEN gun built by unskilled English cottage industry - the M3 was a revolutionary stamped and welded steel design showcasing U.S. industrial prowess. The weapon was solidly built, able to be rapidly manufactured, low in price, and utilized no critical wartime materials, unlike the complex steel, plastic and aluminum German MP40. A quintessentially American sub machine gun it was designed not only for mass production, but also the performance to deliver best of class fully-automatic accurate fire to both suppress and kill. The weapon was so strikingly futuristic for the time that troops quickly gave it a nickname to match; the 'Buck Rogers'.



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January 21, 1944. Friday.

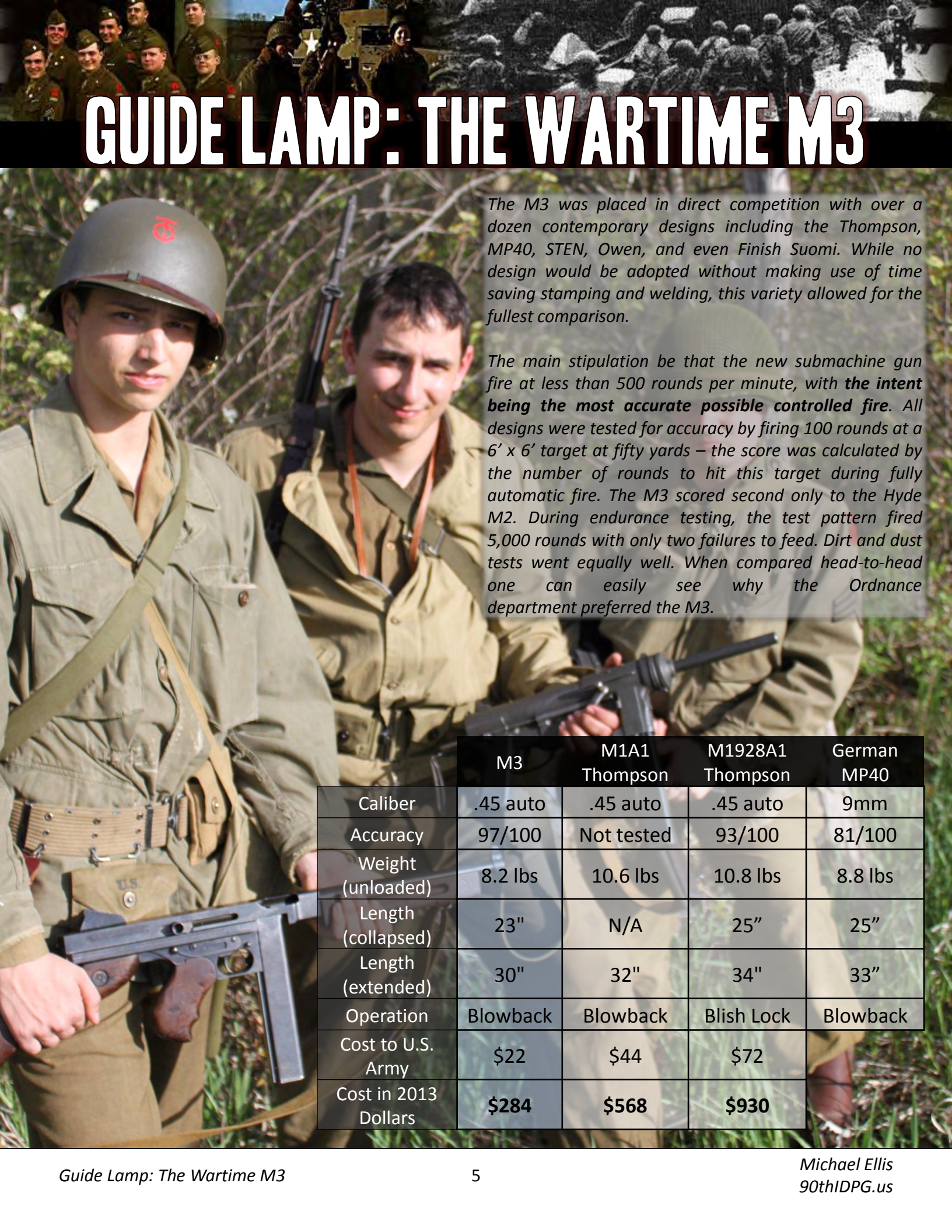
Went to the range and fired our Buck Rogers sub-machine gun for record today. At long last, I qualified as an expert on something. Fired 88 of a possible 100 points on a short range where silhouette targets pop up here and there for 3 seconds and you try to mow 'em down. 80 points is all that is needed for expert.

After that we fired for fun and I wasted government money to feel like a killer - took a whole magazine full of shells and fired the whole thing into one distant target in one big burst. Rate of 450 rounds per minute. Really makes your teeth chatter to hold the trigger back and just let it ride.

- from letters of Captain Wallace Russell, U.S. Armored Infantry



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The M3 was placed in direct competition with over a dozen contemporary designs including the Thompson, MP40, STEN, Owen, and even Finish Suomi. While no design would be adopted without making use of time saving stamping and welding, this variety allowed for the fullest comparison.

The main stipulation be that the new submachine gun fire at less than 500 rounds per minute, with **the intent being the most accurate possible controlled fire**. All designs were tested for accuracy by firing 100 rounds at a 6' x 6' target at fifty yards – the score was calculated by the number of rounds to hit this target during fully automatic fire. The M3 scored second only to the Hyde M2. During endurance testing, the test pattern fired 5,000 rounds with only two failures to feed. Dirt and dust tests went equally well. When compared head-to-head one can easily see why the Ordnance department preferred the M3.

	M3	M1A1 Thompson	M1928A1 Thompson	German MP40
Caliber	.45 auto	.45 auto	.45 auto	9mm
Accuracy	97/100	Not tested	93/100	81/100
Weight (unloaded)	8.2 lbs	10.6 lbs	10.8 lbs	8.8 lbs
Length (collapsed)	23"	N/A	25"	25"
Length (extended)	30"	32"	34"	33"
Operation	Blowback	Blowback	Blish Lock	Blowback
Cost to U.S. Army	\$22	\$44	\$72	
Cost in 2013 Dollars	\$284	\$568	\$930	

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The M3 passed all Ordnance Department tests with flying colors. It was approved by the Infantry board, the Armored corps, and the United States paratroopers. Despite this, the M3 never fully replaced the M1 Thompson for a number of reasons.



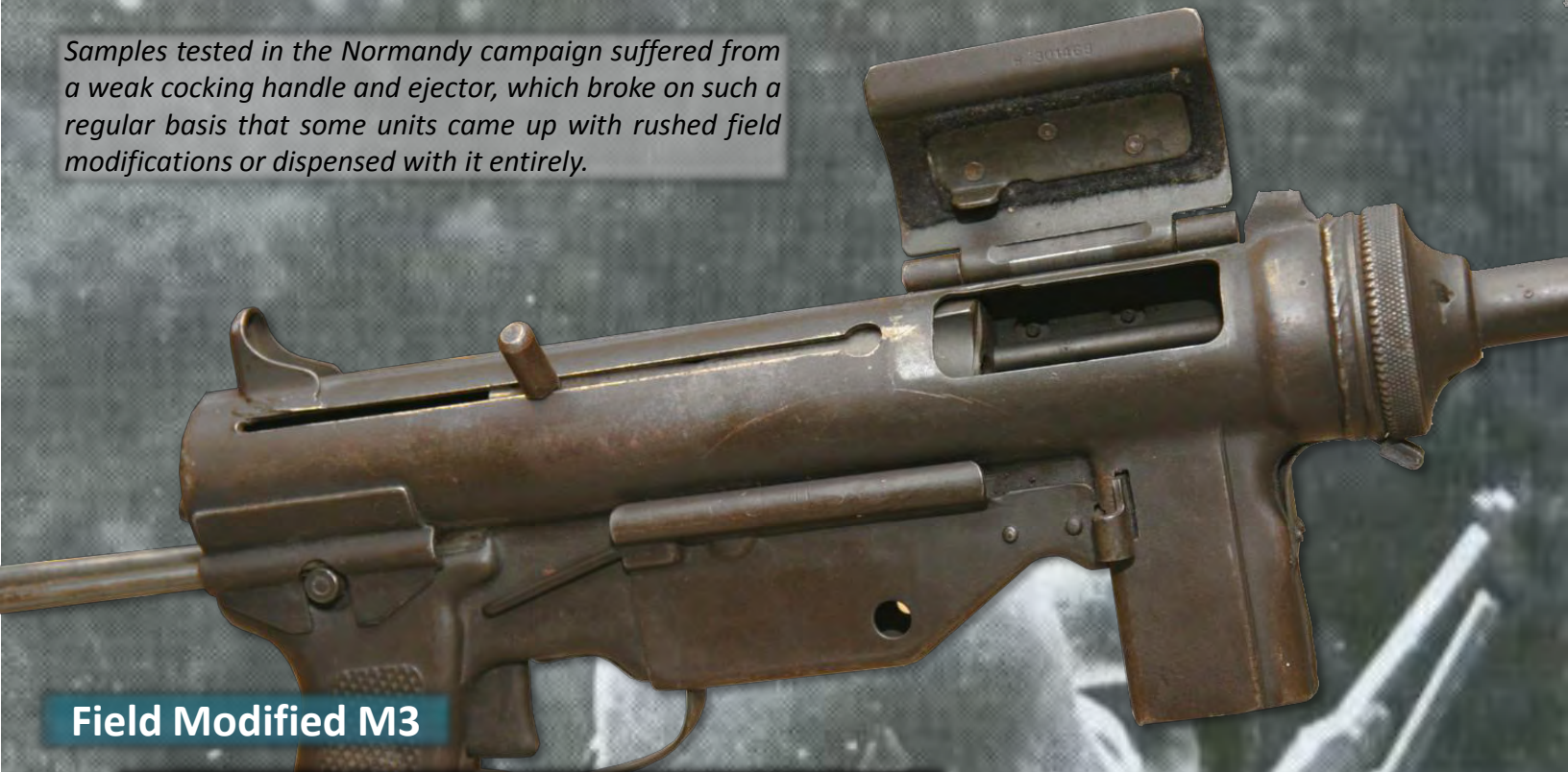
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Initial production struggled with proper alignment of left and right half during the welding process, limiting the numbers available in time for the Normandy invasion.

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Samples tested in the Normandy campaign suffered from a weak cocking handle and ejector, which broke on such a regular basis that some units came up with rushed field modifications or dispensed with it entirely.



Field Modified M3

On this wartime M3, the cocking handle has been removed and a STEN-type cocking knob fitted via a slot cut into the receiver. This was done by unit armorers when left with no other choice to keep M3s operational. Both wartime images illustrate M3s modified in this manner.





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Perceptions dogged the M3 because of early field issues and inevitable comparisons to the Thompson. Some users objected to the lower rate of fire, despite the M3 matching that of the Browning 1919 series machine guns at 400-450 rounds per minute. Others complained that it just didn't have the dashing appearance of the 'Tommy gun', lacking traditional features such as wooden furniture and milled steel construction. This last point in particular, the perception of "quality", could never be overcome despite the unsustainable cost and manufacturing intensity of the Thompson; these very "positives" were the reason the Ordnance Department required a replacement!



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January 21, 1944. Friday.

These little things are what tank men use instead of rifles. If I go to the armored command, I'll use one. If I go to armored infantry, I'll get a carbine. Both are nice.

- from letters of Captain Wallace Russell, U.S. Armored Infantry



Who Carried It?



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As originally conceived, the M3 was to replace the Thompson on the front lines. Multiple accounts confirm this did happen on a very limited basis, however if anything the M1 Rifle remained far and away the average weapon carried in the U.S. Army Infantry platoon. The Thompson was already "up front" in significant quantities in line units equipped and shipped overseas prior to the M3 being ready. Units arriving in theater after mid 1944, or special purpose troops with greater access to the supply chain appear to have been issued a greater number of M3s.



- Regular Infantry

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The first wide scale issue of the M3 was to the 101st and 82nd Airborne divisions for testing prior to Operation Overlord. Troopers could jump with weapon assembled and ready to go, or disassembled it was only 13" x 8" x 3". Along with the M1A1 carbine, the M3 was the only weapon designed with the Airborne in mind. Interestingly enough, even the Airborne appears to have scaled-back use after initial trials in Normandy in favor of the Thompson.




- Paratroopers



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Reconnaissance elements initially preferred the M3 due to its compactness. The weapon was designed to be fired with the stock either open or collapsed, and could be used as a two handed pistol for clearing out close quarters. It fit within the confines of a jeep without requiring a special rack or any more space than necessary.



Scouts of 63rd Armored Infantry, 11th Armored Division

- Scouts



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The nascent special forces of the time made use of the M3 for the same reason scouts and the Airborne – compactness, general reliability, and even the ability to be silenced or used in 9mm. The M3 was paraded to various resistance groups working with the OSS. The OSS also requested approximately 1,000 .45-caliber M3 submachine guns with an integral sound suppressor designed by Bell Laboratories. Unlike more traditional ground forces, these ‘special’ groups had the time and resources to perform preventative maintenance on the M3’s finicky cocking handle and ejector, improving reliability and allowing the weapon to shine.



- Commandos



Officers of the 5th US Ranger Bn., Germany, 1945

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Men carrying crew served weapons such as the Bazooka, M1917 and M1919 series, and Mortars faced a difficult tradeoff of weight and safety when they chose a personal defense weapon. The M1911 was relatively light, but was worthless at all but the closest of ranges. The M1 carbine was long and did not sit well on one's back when carrying a large secondary item. The M3 solved this problem neatly, allowing Soldiers to carry a weapon accurate out to 200 yards that was also much more compact than the M1 carbine.



- Weapons Crews



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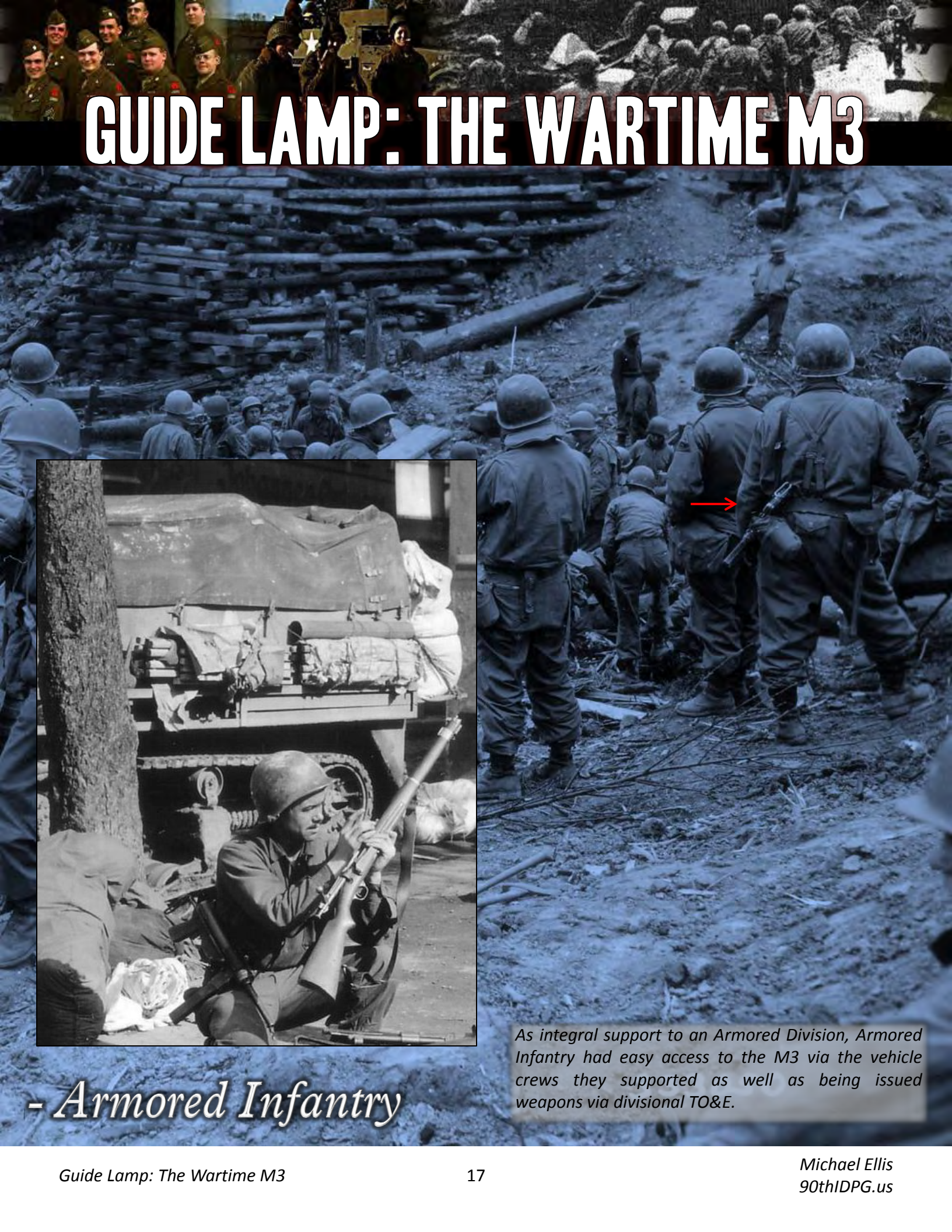
The M3 was standard equipment on many vehicles as they hit the content, with their crews taking full advantage of the new weapon.



- Vehicle Crews

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- Armored Infantry

As integral support to an Armored Division, Armored Infantry had easy access to the M3 via the vehicle crews they supported as well as being issued weapons via divisional TO&E.

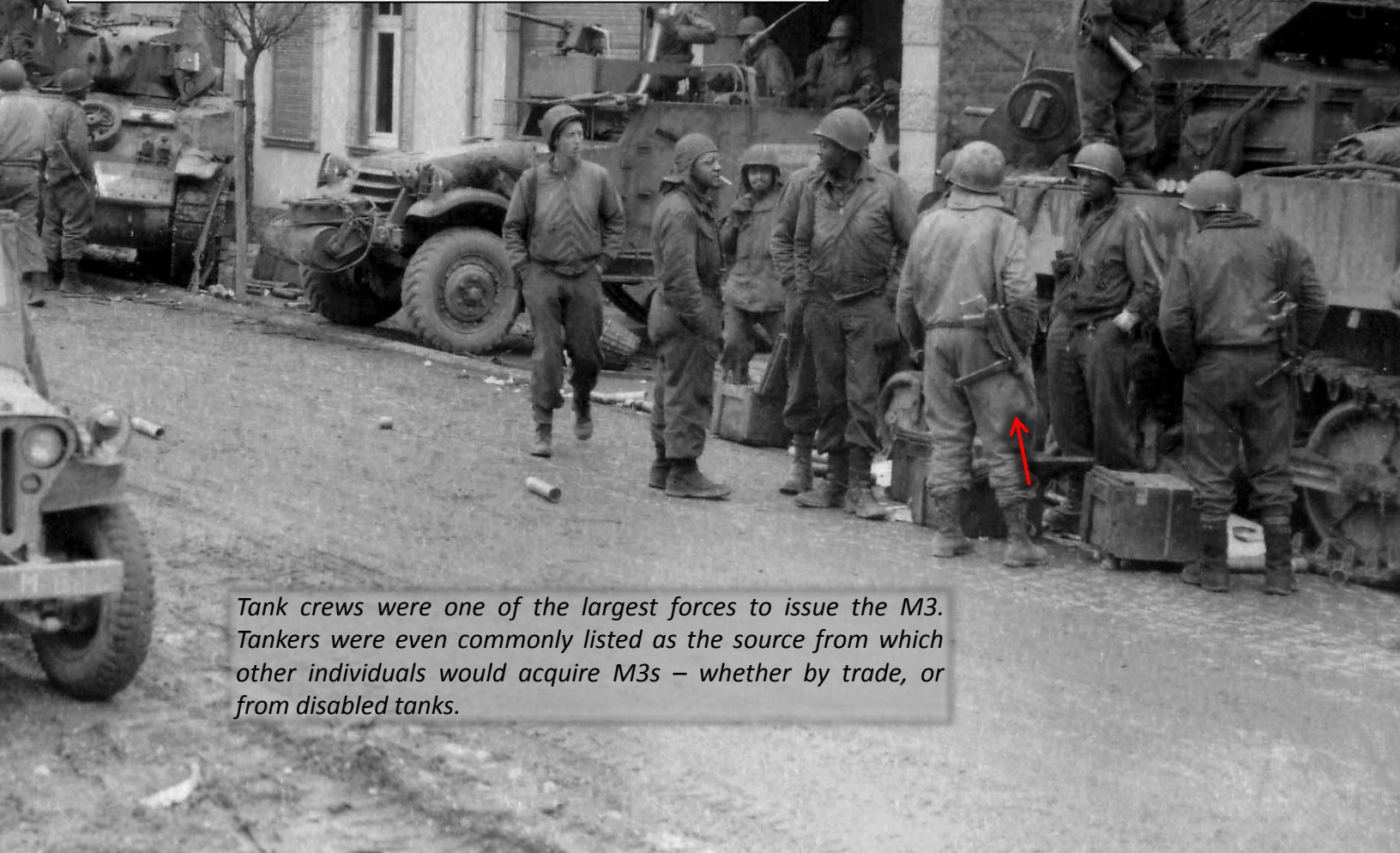


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- Tank Crews

There are few weapons that easily fit inside the hatch of a tank. Within this group is the M1 Carbine, the Thompson, and the M3; only the M3 required no disassembly or special care be taken. The weapon was so well-liked by the Armored corps that even after the war it remained in service for over fifty years.

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Tank crews were one of the largest forces to issue the M3. Tankers were even commonly listed as the source from which other individuals would acquire M3s – whether by trade, or from disabled tanks.



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Who used the M3? Aside from those it was issued to, anyone who could get their hands on one! Many Officers and well-connected Enlisted saw it for what it was; relatively light, compact, and better for self-defense than a pistol. It wasn't so much a weapon of choice, as of convenience.



- Anyone who could get one!



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How it was carried

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The Ordnance department may have designed the M3, but the accompanying pouches and web gear were the purview of the Quartermaster. While the sling was the same as for the M1 carbine, there was no officially available method for carrying the magazines provided by the Quartermaster Corps.

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ORD 7 SNL A-58
Organizational Spare
Parts and Equipment

Excerpt from April 1944 Standard Nomenclature List (SNL A-58). While the correct sling, oiler, and other accessories are listed, no standard pouch is specified.

NOTE SYMBOL	STOCK NO.	FIGURE NO.	PIECE MARK OR PART NO.	DRAWING NO.	NOMENCLATURE	UNIT PRICE	UNIT PRICE
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
(*)	A058-02-87149			C153427	MAGAZINE, box, 30-round M3, S.M.G. (Consisting of: 1 PARTS, spare, Gun, submachine, cal..45, M3, set. 5 CATCH, magazine, assembly 1 CLIP, retaining, guide rod. 2 EXTRACTOR 2 GUARD, trigger 1 SPRING, driving 2 SPRING, magazine catch)		\$0.56
	A058-01-31649			B301453			0.16
	A058-01-37984			A349931			0.02
	A058-02-76639			B301464			1.15
	A058-03-05400			B301456			0.04
	A058-03-89804			A351193			0.06
	A058-03-89803			A351192			0.02
ORGANIZATIONAL EQUIPMENT							
ACCESSORIES							
Quantities are per submachine gun unless otherwise indicated.							
	24-B-1063-275			C59738	BAG, spare parts		0.14
J-15 W				TM 9-217	BOOK, Technical		
A-19 W	38-B-992-650			B108828	Caliber .45, M3		0.08
M-5	38-B-992-25			C4036	BRUSH, chamber cleaning, M6		0.06
J-15 W	24-E-1005			15-18-102	BRUSH, cleaning, cal..45, M5 (for use attach to threaded end of stock)		0.07
M-5 W	1-F-176			C153431	ENVELOPE, fabric, one button, 3 x 3 1/8 in.		0.11
M-5 W	13-O-775			C64364	FILLER, manual, magazine, cal..30, M1		0.06
M-5 W	41-R-2370-425			A377976	OILER, carbine, cal..30, M1		
	2-S-4025			C57152	REMOVER, extractor and pin		0.18
					SLING, carbine, cal..30, M1		



Presumably the assumption was that troops would use existing items designed for the 30 round Thompson magazine, however the M3 magazine was some 1.5" longer – neither the Thompson bag nor the magazine pouches could properly accept or carry the new design!

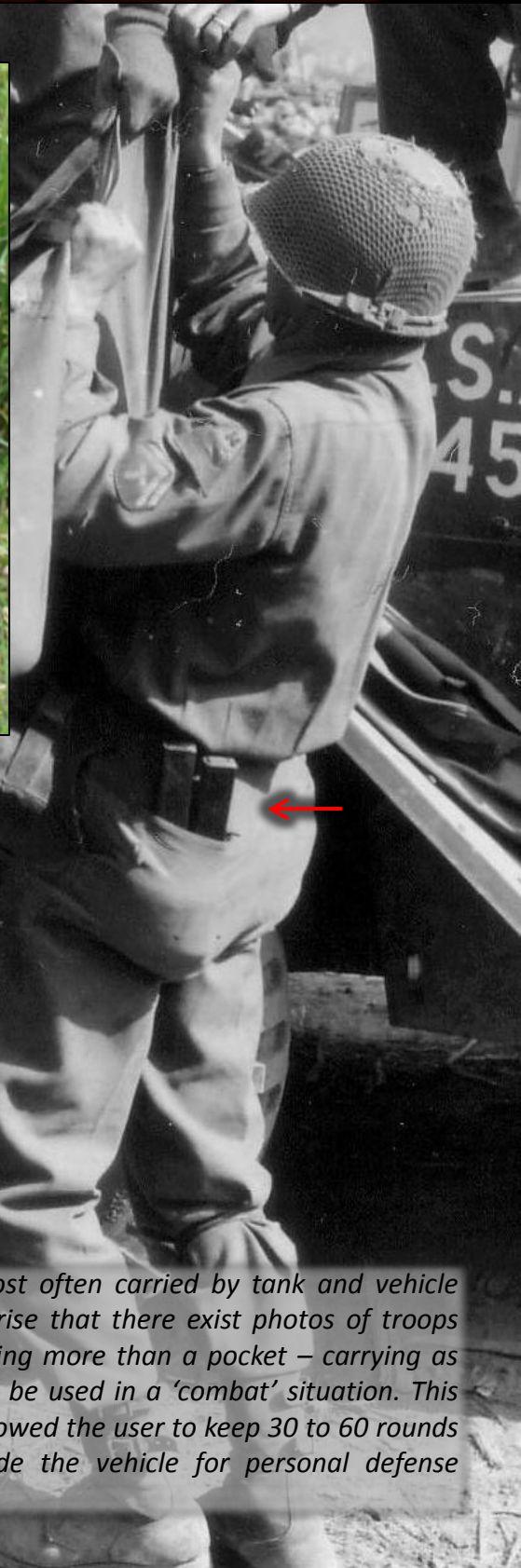
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Early Thompson magazine pouches had only .25" of extra depth to store the 8.5" Thompson magazine. These early bags do not have the necessary room to hold M3 magazines. Later bags left additional room, however are still too tight to be used with more than four magazines. The shallow closure flap was also a point of failure, allowing the tightly stretched bag to release without warning or otherwise have mags 'pop' out at inopportune times. While it may have been done, it certainly wasn't a matter of convenience, and pictures of this are rare at best.



M3 mags in an original Thompson bag – they just don't fit!

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Given that the M3 was most often carried by tank and vehicle crews, it comes as no surprise that there exist photos of troops carrying magazines in nothing more than a pocket – carrying as such was never intended to be used in a ‘combat’ situation. This ad hoc method primarily allowed the user to keep 30 to 60 rounds on his person when outside the vehicle for personal defense purposes.

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More MG Ammunition at Hand

This innovation was reported from ETO: "Three 30-round magazines, taped together as shown in the photo, give the user of the M3 submachine gun 90 rounds of ammunition immediately available for use. Any one of the magazines can be inserted into the gun without being untaped from the other two."



GI innovation on M-3 submachine gun.



A secondary technique used by those carrying the M3 in a mounted capacity was to tape two magazines together. This not only allowed the carry of 60 or more rounds in a small package weighing less than 10 pounds, but also made it much easier to grab and go. Undoubtedly some infantry chose the same method, if only to provide a faster reload time than the alternatives, such as the GP bag or gas mask bag, allowed.

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Excerpt from TM 9-759: TANK, MEDIUM, M4A3
September 1944:

TM 9-759 9-10		TANK, MEDIUM, M4A3	
Item	Number Carried	Where Carried	
OILER, filling, oil buffer	1	Spare parts box	
ROD, jointed, cleaning, M7	1	Spare parts box	
d. Caliber .45 Submachine Gun M3.			
(1) AMMUNITION.			
CAL. 45, rounds (in 30 rd. clips D35506)	900	<u>In cases D90242</u>	
(2) EQUIPMENT.			
CASE, cal. .45 submachine gun clip	5	2 in turret under ra- dio, 3 in right front spare parts box	

The Armored corps was more forward thinking. They developed a new design for a magazine bag which up to ten magazines could be crammed into. This design is identified by the number "D90242" stenciled on the front, and was only issued as part of the accessories for armored vehicles – putting it not under the Quartermaster's jurisdiction, but in the same category as seat covers!

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Wartime pouches can be distinguished by several features; two-tone in construction, with khaki edging and an OD7 body; thick, almost painted markings on the front of the bag; a wartime drawing number with no hyphen, and designed and manufactured from 100% cotton. Pictures of this pouch are very uncommon, however do occasionally surface. This specific photo was dated December of 1944.

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Images of the D90242 pouch are even less common when carried by dismounted troops. This specific image appears to show just such a pouch, however it is from only a few weeks before the German capitulation. While most reenactors prefer to have a dedicated pouch for each weapon, it appears that the wartime M3 never had such a 'matched pair'.



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Design-Related

- The M3 was designed to be a light, handy, accurate submachine gun.
- It was not a copy of the STEN, nor was it made from tubing.
- It was simple and inexpensive, but hardly crude in nature.
- The rate of fire was the same as the Browning 1919 machine gun.
- Accuracy was the second highest of any design Ordnance tested among dozens of competing models including the Thompson.
- Based on test performance, Ordnance chose the best possible design.

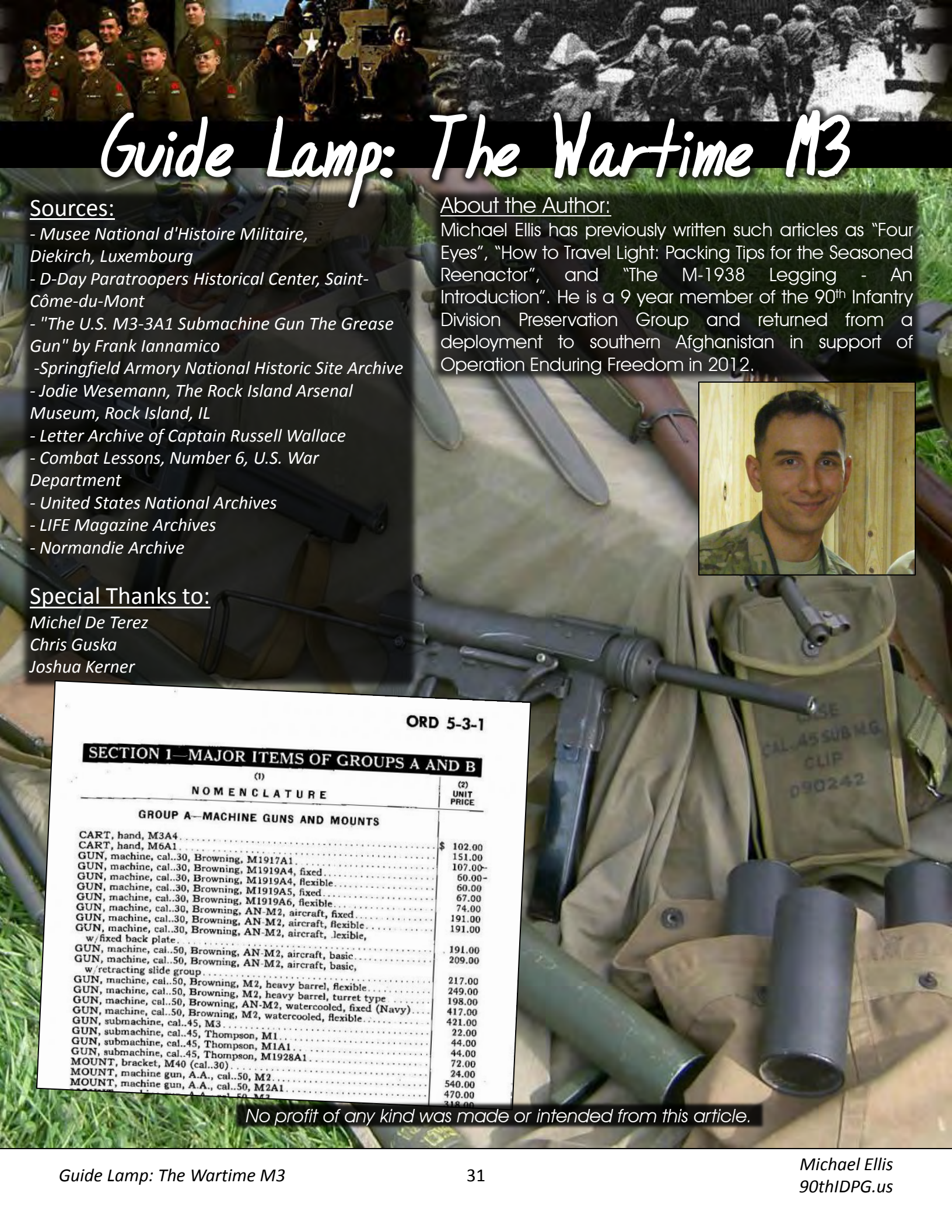
Historical Usage

- Initial production and reliability issues limited use of the M3 in the ETO during the war.
- Despite this, the M3 was very common among Armored Divisions, Paratroopers, and units arriving during the fall of 1944 and later.
- The M3a1 was standardized in December of 1944; it is likely in the same category as bayonet lugs on the M1 carbine. No wartime use in the ETO.

Reenacting Related

- There was no widely available method for carrying magazines for the M3 during 1944-45 in the ETO.
- A Thompson magazine bag will not fit M3 magazines.
- The three cell magazine pouch was not observed in wartime photos.
- The D90242 bag was only issued to tank and possibly vehicle crews.
- Carrying magazines in a gas mask bag, GP bag, or pockets is the 'most' accurate method for field events.
- Friction tape is also an accurate method, within situational limitations.
- *The M3 submachine gun remains underrepresented within the hobby.*

Summary



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Sources:

- Musee National d'Histoire Militaire, Diekirch, Luxembourg
- D-Day Paratroopers Historical Center, Saint-Côme-du-Mont
- "The U.S. M3-3A1 Submachine Gun The Grease Gun" by Frank Iannamico
- Springfield Armory National Historic Site Archive
- Jodie Wesemann, The Rock Island Arsenal Museum, Rock Island, IL
- Letter Archive of Captain Russell Wallace
- Combat Lessons, Number 6, U.S. War Department
- United States National Archives
- LIFE Magazine Archives
- Normandie Archive

About the Author:

Michael Ellis has previously written such articles as "Four Eyes", "How to Travel Light: Packing Tips for the Seasoned Reenactor", and "The M-1938 Legging - An Introduction". He is a 9 year member of the 90th Infantry Division Preservation Group and returned from a deployment to southern Afghanistan in support of Operation Enduring Freedom in 2012.



Special Thanks to:

- Michel De Terez
- Chris Guska
- Joshua Kerner

ORD 5-3-1

SECTION 1—MAJOR ITEMS OF GROUPS A AND B

(1) NOMENCLATURE	(2) UNIT PRICE
GROUP A—MACHINE GUNS AND MOUNTS	
CART, hand, M3A4	\$ 102.00
CART, hand, M6A1	151.00
GUN, machine, cal..30, Browning, M1917A1	107.00-
GUN, machine, cal..30, Browning, M1919A4, fixed	60.00-
GUN, machine, cal..30, Browning, M1919A4, flexible	60.00
GUN, machine, cal..30, Browning, M1919A5, fixed	67.00
GUN, machine, cal..30, Browning, M1919A6, flexible	74.00
GUN, machine, cal..30, Browning, AN-M2, aircraft, fixed	191.00
GUN, machine, cal..30, Browning, AN-M2, aircraft, flexible	191.00
w/fixed back plate	
GUN, machine, cal..50, Browning, AN-M2, aircraft, basic	191.00
GUN, machine, cal..50, Browning, AN-M2, aircraft, basic, w/retracting slide group	209.00
GUN, machine, cal..50, Browning, M2, heavy barrel, flexible	217.00
GUN, machine, cal..50, Browning, M2, heavy barrel, turret type	249.00
GUN, machine, cal..50, Browning, AN-M2, watercooled, fixed (Navy)	198.00
GUN, machine, cal..50, Browning, M2, watercooled, flexible	417.00
GUN, submachine, cal..45, M3	421.00
GUN, submachine, cal..45, Thompson, M1	22.00
GUN, submachine, cal..45, Thompson, M1A1	44.00
GUN, submachine, cal..45, Thompson, M1A1	44.00
MOUNT, bracket, M40 (cal..30)	72.00
MOUNT, machine gun, A.A., cal..50, M2	24.00
MOUNT, machine gun, A.A., cal..50, M2A1	540.00
MOUNT, machine gun, A.A., cal..50, M2	470.00
MOUNT, machine gun, A.A., cal..50, M2	318.00

No profit of any kind was made or intended from this article.