The Snail Drum Magazine

By Dick Herman

Collectors seek specific items of interest. Many of the items of interest are enhanced by the acquisition of accessories and accoutrements associated with their application. This narrative explores the application of the Trommelmagazine 08 to enhance the effectiveness of the Lange Pistole 08.

BACKGROUND

The German Army and Navy used the Lange Pistole 08 (LP.08) from the years of 1914 until 1918. During the First World War the LP.08 was developed into a Combat Assault System that was issued to the Army Sturmbataillone (Storm Troopers) and the Navy Marine-Infanterie *(F:99).*

In years of 1915 to 1916 the German military developed a 32 round magazine to enhance the firepower capability of the LP.08 *(A:1008).* The Trommelmagazine 08 (TM.08) was manufactured and supplied to the German Army in 1917 and 1918.

The use of the title Trommelmagazine 08 incorporates the descriptive German meaning of trommel indicating a cylinder or drum. Because of the physical configuration collectors refer to this device as a snail drum magazine.

The utilization of the TM.08 enhanced the assault capability of the LP.08 in the service of the Sturmbataillone. The WWI German military were impressed with the success of the LP.08 system as a trench assault weapon in the hands of the Stobruppen (Shock Troops) *(A:1007)*. This weapon combination was truly the forerunner of today's submachine gun *(F:99).*

The LP.08 Assault System.

The following is a group photograph of a German Army unit with drawn LP.08 Assault Systems and a suspended empty carry pouch. The TM.08 is clearly evident with the two front row soldiers.

The LP.08 utilized with the TM.08.

TROMMEL MAGAZINE

Friedrich Blum designed the TM.08. Blum was an Engineer from Budapest, Hungary. He was issued a patent for the TM.08 on 8 July 1916. The patent stipulates this device is "meant to be attached to the Parabellum Pistol" *(A:1007).*

The standard Luger magazine incorporates a locking groove and cartridge feeder guide knob. The TM.08 magazine stem neck attached to the drum portion duplicates the Luger magazine fit and function. The Luger magazine guide knob activates the pistol hold open device when the magazine is empty. This relationship is established with the trommel magazine stem spring loaded hold open pin and locking groove. The trommel single column stem neck is inserted into the LP.08 grip and locked in place with the magazine latch. The top plate of the snail drum is adjacent to the pistol grip. The winding mechanisms are mounted on the lower cover plate of the TM.08 on the opposite side.

There are two obvious recognizable variations of the TM.08. The significant difference in each variation is in the winding lever mechanism. The earliest trommel variations utilize a sliding steel pin winding lever. Subsequent trommel variations utilize a stamped steel folding winding lever.

This following photographs illustrates the functional features of the trommel magazine (TM.08).

This view is the spring loaded stem hold open pin at the end of the single column stem neck. The spring loaded hold open pin is mounted on the magazine cartridge feeder and serves as the Luger magazine guide knob. As the trommel magazine is loaded with rounds the cartridge feeder is forced into the stem neck. The restricted inside clearance of the stem neck pushes the spring loaded hold open pin into the cartridge feeder. When the trommel magazine is empty the spring loaded pin pops out of the stem and actuates the LP.08 hold open device.

Trommel Magazine Stem Neck Hold Open Pin & Locking Groove

Inserting the magazine into the LP.08 positions the winding lever or crank plate on the lower side or bottom of the snail drum. The drum lower crank plate is marked around the outer diameter 17, 22, 27 and 32. These numbers indicate number of loaded rounds. The maximum number of rounds in the loaded trommel magazine is 32.

Mounted in the center of the drum lower plate is the crank lever. The crank in this case is an early TM.08 variation incorporating a sliding steel pin winding lever. The later TM.08 variation incorporates a stamped steel folding winding lever. Mounted on the crank arm is a detent pin with a knurled button face. The detent pin is spring biased in the unlocked position. The detent pin is mounted on the same diameter as a retainer slot to restrain the magazine in the locked position for loading.

The Sliding Steel Pin Winding Lever Early TM.08 Variation

Internal construction of the trommel magazine incorporates two springs. Within the drum is a coiled clock spring to apply force to an auxiliary elliptical compression spring. To load the trommel magazine the crank lever must be extended and rotated clockwise into position to allow pushing the knurled button face detent pin into the retainer slot. This action locks the compressed the clock spring. The TM.08 in the locked position can receive pistol rounds for loading.

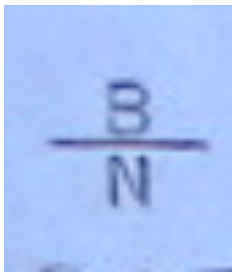
The following picture illustrates a later TM.08 variation with the stamped steel folding winding lever.

Trommel Magazine Folding Winding Crank Lower Plate Features.

The restrained detent pin locks the coiled clock spring in a compressed condition allowing the complete loading of the magazine drum. When the trommel is loaded and the detent pin is released from the retainer slot the two springs work in tandem. The coiled clock spring applies force to the elliptical compression spring. The clock spring applied force drives the loaded rounds out of the drum while the elliptical compression spring pushes the rounds into the magazine column neck. The loaded TM.08 is ready for insertion into the LP.08.

There were two manufacturers of the TM.08, Gebruder Bing and Allgemeins Elektricitats-Gesellschaft. Allgemeins Elektricitats-Gesellschaft (AEG) was located in Berlin. Gebruder Bing (B/N) was located in Nuremberg. Gebruder Bing A.G. was a manufacturer of sheet metal toys. The Bing Brothers magazines were marked with a B/N. Bing manufactured approximately 800,000 TM.08 magazines. The AEG makers mark is the a hexagon surrounding three nested hexagons. AEG manufactured approximately 70,000 TM.08 magazines. AEG manufacturing of the magazine ended in early 1917 *(A:1009)*.

AEG Makers Mark



Bing Brothers Makers Mark

Officially there were three contractors for the TM.08. The two known manufacturers of the snail drum magazine are AEG and Bing Brothers. Vereinigten Automaten-Fabriken Pelzer & Cie (VAF/C) are listed as an additional magazine supplier. However examples of the VAF/C have never been found, as if production of the TM.08 never started *(A:1009.*

While the previous illustrations display the two variations of the winding mechanisms, there are eight variations of the TM.08. AEG was an early manufacturer of the snail drum with only one version, the telescoping winding rod. Bing Brothers (B/N) manufactured seven variations of the TM.08. Initial Bing Brothers production was the telescoping winding rod subsequent variations incorporated the steel folding winding lever. Additional Bing variations include circular reinforcing ribs on the lower crank plate and top plate of the drum, assembly screw change to magazine insert bottom end, strengthening the crank plate closure reinforcement and relocation of the serial number *(B:Website).*

TM.08 VARIATIONS

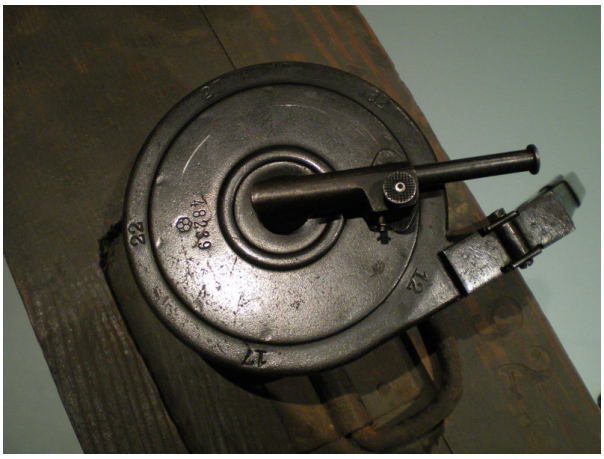
All of the AEG magazines were manufactured with a reinforcing ring on the lower cover crank plate. This implies that AEG started production of the TM.08 after Bing Brothers had manufactured their first variation of approximately 5,000 magazines.

The following Bing Brothers snail drum magazine variations are presented in chronological order of manufacturing. The pictures are numbered in pairs to present the lower crank plate and the upper plate per each variation. Observe that the snail drum magazine serial numbers are the same for each pair of photos.

AEG

#1 AEG Variation

The following photos illustrate the AEG TM.08 with the telescoping rod crank mechanism. The telescoping rod is in the extended position with the button detent locking the clock spring in the compressed position for loading the trommel. The AEG magazine has a reinforcing ring on the lower crank plate. Also note the square tab on the end of closure-reinforcement of the lower crank plate.



1a. AEG Telescoping Bottom Crank Plate With Reinforcing Ring.

The AEG magazine was manufactured with an unreinforced upper flat top plate.

1b. AEG Telescoping Crank Unreinforced Top Plate

This is the only variation of the TM.08 that AEG produced. AEG manufactured approximately 70,000 TM.08 magazines. AEG manufacturing of the magazine ended in early 1917.

Bing
#2 Bing Variation

These photos illustrate the Bing Brothers (B/N) TM.08 with the telescoping rod crank mechanism. Note the two screws used to retain the lower crank plate square end closure reinforcement to the magazine stem neck column *(A:1017)*.

2a. Bing Brothers Telescoping Crank Bottom Plate With Retainer Screws

Bing Brothers manufactured less than 5,000 TM.08 magazines with the flat unreinforced upper and lower plates.

2b. Bing Brothers Telescoping Crank Top Plate

#3 Bing Variation

The following photos illustrate the Bing Brothers (B/N) TM.08 with the telescoping rod crank mechanism and the two screws used to retain the lower crank plate square end closure-reinforcement to the magazine stem neck column *(A:1017).*

3a. Bing Brothers Telescoping Crank Reinforced Bottom Plate With Retainer Screws

Bing Brothers manufactured the first 30,000 TM.08 magazines with the square tab on the end of closure-reinforcement of the lower crank plate. Within this grouping the reinforcing ring was added to the lower plate and the upper flat plate remained unreinforced *(A:1015).*

3b. Bing Brothers Telescoping Crank Unreinforced Top Plate

#4 Bing Variation

These photographs illustrate the transition of the Bing TM.08s above serial number 30,000. The strengthened spear pointed tab on the end of closure reinforcement of the lower crank plate was incorporated *(A:1016).* A through bolt with nut for retaining the lower crank plate with the spear pointed tab closure reinforcement to the magazine stem neck column was also incorporated.

4a. Bing Brothers Telescoping Crank Bottom Plate With Retainer Through Bolt & Nut

Within this grouping the reinforcing ring was added to the lower plate and upper flat plate remained unreinforced *(A:1015).*

4b. Bing Brothers Telescoping Crank Unreinforced Top Plate

#5 Bing Variation

The following photos illustrate the Bing Brothers (B/N) TM.08 with the stamped folding crank mechanism and the through bolt with nut for retaining the lower crank plate with the modified closure reinforcement to the magazine stem neck column. Observe the strengthened spear pointed tab on the end of closure reinforcement of the lower crank plate. This closure reinforcement appears on all Bing TM.08s after serial number 30,000 *(A:1016)*.

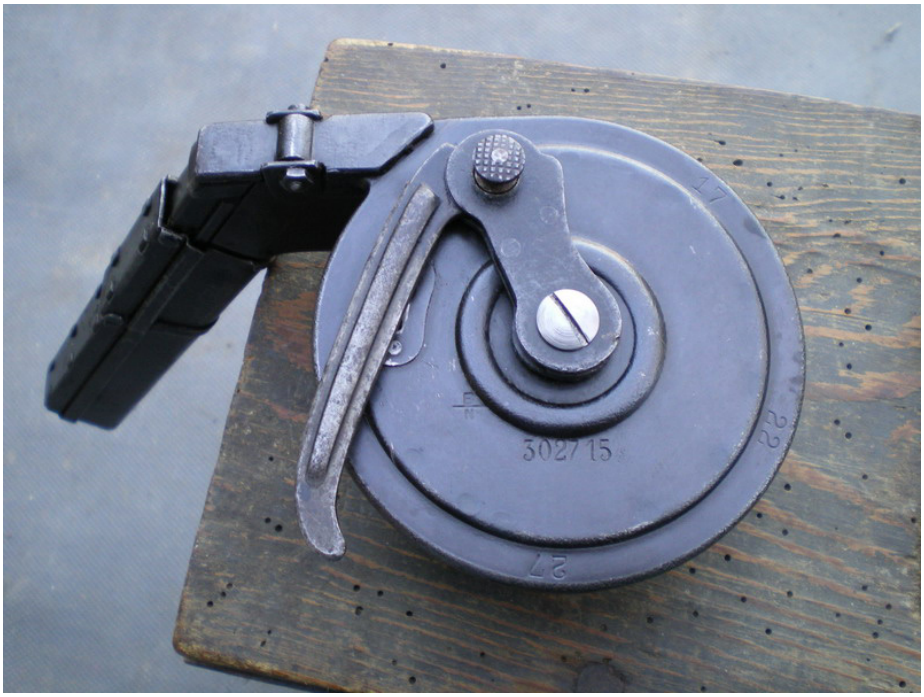
5a. Bing Brothers Folding Crank Bottom Plate

These TM.08 magazines with the reinforcing ring lower plate and flat unreinforced upper plate appear in serial number ranges above 80,000.

5b. Bing Brothers Folding Crank Top Plate

#6 Bing Variation

These photos illustrate the Bing Brothers (B/N) TM.08 with the stamped folding crank mechanism and the through bolt with nut for retaining the lower crank plate with the spear pointed tab closure reinforcement to the magazine stem neck column *(A:1017).*



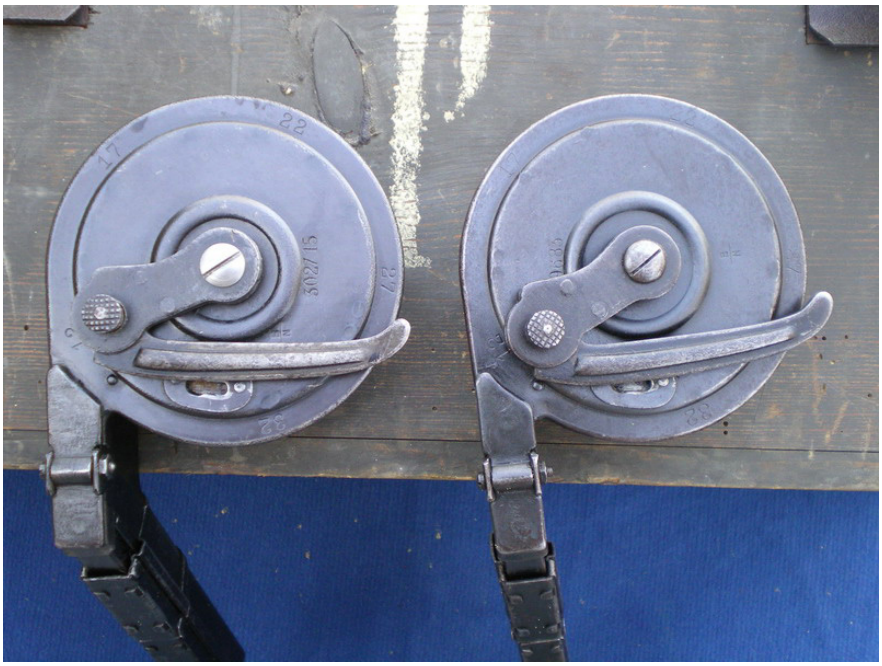
6a. Bing Brothers Folding Crank Bottom Plate

These TM.08 magazines with the reinforcing ring lower plate and two reinforcing rings on the upper plate appear in serial number ranges above 210,000.

6b. Bing Brothers Folding Crank Top Plate

#7 Bing Variation

The following photo illustrates the repositioning of the serial numbers on the TM.08 lower crank plate.

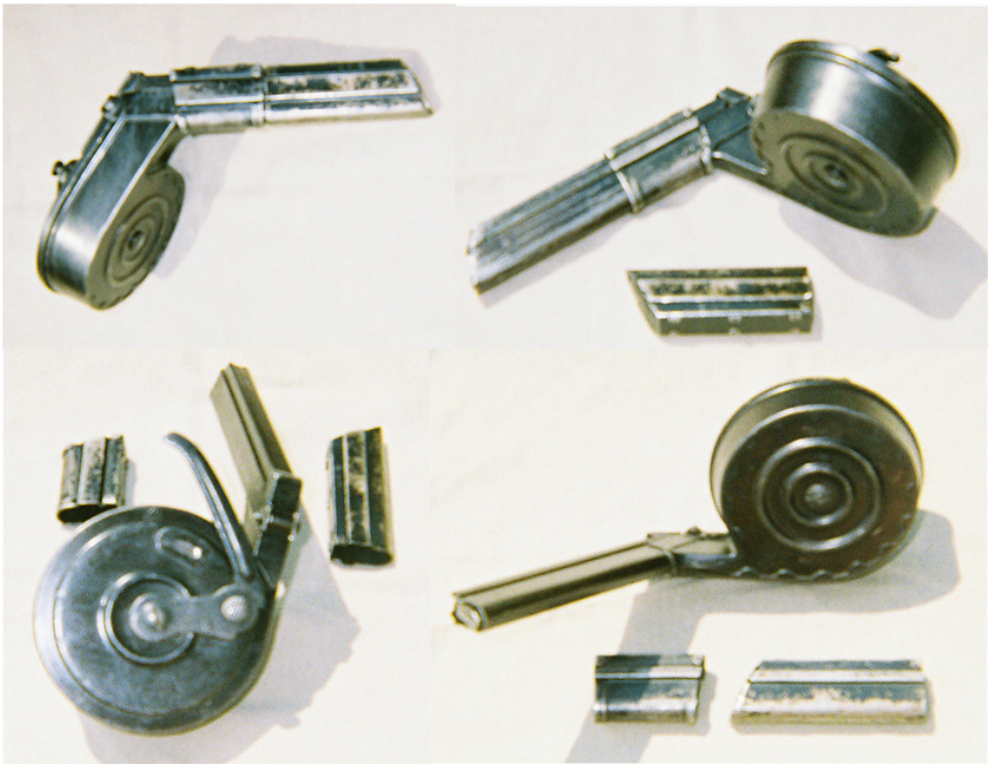


7. Bing Brothers Folding Crank Serial Number Repositioned

Summarizing Bing Brothers, there are two operational crank models with five production variations presented here in the chronological order of manufacture. Which provides seven "B/N" collectible variations of the nearly 800,000 manufactured pieces, ten times more than the AEG manufactured pieces.

ACCESSORIES & TOOLS

This photograph illustrates the accessories used with the trommel magazine. The upper left corner is the magazine with the dust cover and adapter in place. In the upper right corner the dust cover is removed from the magazine. The lower two magazines depict different views with both the dust cover and adapter removed. The adapter does not have an application with the LP.08. Use of the adapter will be explained further in this narrative.



TM.08 With Accessories

Dust Covers

The Dust Cover or "Schutzkappe" protects the end of the magazine stem neck from damage, helps to retain the loaded rounds and kept out dirty and debris. The dust cover variations were primarily fabrication differences.

There are several variations of the Dust Cover. The earliest dust covers were pressed sheet steel, folded and spot welded. Later production dust covers were pressed sheet steel, folded and staked together with body tabs. Early dust covers were blued, a majority of the later covers were black japanned.

Early Dust Cover Folded & Welded Body

The folded and staked in place pressed sheet steel dust cover is illustrated in the following two pictures. The rear spine and cover top are stacked with integral body tabs.

Dust Cover Rear Spine Body Panel Tabs

The dust cover top end tab of pressed sheet steel is folded and staked in place with body tabs.

Dust Cover Folded Top Tabs

The following picture compares the different variations of the dust cover side grooves. The upper dust cover has a single channel rib for covering the magazine assembly rib and the hold open pin. The lower dust cover incorporates two channel ribs to separately cover the magazine assembly rib and the hold open pin *(A:1018).*

Dust Cover Magazine Grooves (B:Photo)

This next picture compares the rear spine difference of the folded welded cover body in the upper view versus the folded and stacked displayed in the lower view.

Dust Cover Magazine Fabrication Details (B:Photo)

Loading Tools

The loading tools or magazine loaders were manufactured by both Bing and AEG. The loaders were issued on a scale of one to five magazines

The loading tool major components include a pressed sheet steel folded and welded housing, a yoke handle, a cartridge pusher and a spring biased magazine catch. The yoke is joined to the cartridge pusher by a pair of links. The yoke is attached to and pivots on the housing which contains the magazine catch.

The Bing loader cartridge pusher is joined to the yoke outside with a pair of bent links. The AEG loader cartridge pusher is joined to the yoke inside with a pair of flat links. The links are riveted to the yokes separately with through spacers to the pusher.

Bing Brother B/N Loading Tool

The housings are sheet metal pressings which are folded and welded. The magazine catch with spring is mounted on the housing.

Both manufactures display the appropriate maker's mark. The AEG maker's mark is on yoke handle. The maker's mark for Bing (B/N) is on the housing lower body.

AEG Hexagon Marked Loading Tool

Other loader differences include a two part yoke handle with flat pusher links inside the yoke sides for AEG. The Bing loaders incorporate a single piece rolled formed and welded yoke. The Bing yoke and bent pusher links are mounted outside of the yoke sides *(A:1020).*

To attach the tool insert the magazine stem neck into the loader housing. Push the housing until the spring biased catch locks into the magazine groove. To release the magazine loader push the large knurled button on the side of the housing.

Magazine With Loading Tool Attached

Loading Magazine

TM.08 Loading Directions

Follow these instructions for loading the 32 round trommel magazine.

- First rotate the crank winding lever one full clockwise turn and push the spring biased detent button into the retainer slot. This locks the compressed magazine springs.
- Apply an ample amount of light oil through the magazine stem neck.
- You may be able to hand load a few rounds while the crank is locked.
- Lock the loading tool in place over the stem neck of the magazine.
- Begin feeding rounds into the trommel, you will quickly find that you need to push them down with the plunger after each round.
- It is recommend that on the first loading of a trommel magazine only use 20 rounds.
- If this number of rounds proves to function well then perhaps top them off.
- NOTE: Before you remove the tool when loading the magazine is complete, unlock the winding lever, allow it to slowly return to a resting position.
- After unlocking the winding lever the end of the handle points to the number on the face of the magazine that corresponds to the rounds loaded.
- With the loading tool still in place tap the magazine body a couple of times to get the spring to open and put full compressive force against the rounds.

Remove the loader and you should be ready to go *(E:Narrative).*

Carrying Pouches

Pouches were provided to assist the soldier in carrying the awkward snail drum magazines. The numerous variations of detail imply there were many fabric processing companies involved in manufacturing of the carrying pouches.

All of the carrying pouches have a large flap with a leather mounted closure buckle for securing the TM.08 on the lower end. The opposite end of the pouch incorporates a suspension loop with a leather mounted closure buckle. A wide variety of shape and stitching techniques exists for the pouches. Some pouches were made with additional zinc plated steel buttons for the buckled closure trommel flap.

Carrying pouches were fabricated from field grey canvas. The pouches were made in slightly differing styles, materials and colors. All have leather strap buckles of the same pattern used for the P.08 holsters. Pictured below are three basic pouch patterns. The variation details are probably dependent upon different manufacturers and material availability.

Three Canvas Pouch Variations (B:Photo)

One TM.08 fits in each pouch. All pouches could be suspended vertically from a waist belt by the loop end. Some pouches were made with loops on the back side for wearing horizontally on a waist belt *(A:1019).*

Canvas Pouch Side View With Trommel Inside (B:Photo)

Canvas Pouch Back View Horizontal Mount Loops With Trommel Inside (B:Photo)

Pouches suspended vertically from a waist belt allowed the soldier to carry two or three trommel magazines. Although bulky and cumbersome the pouch vertical suspension allowed an ease of access to the magazine. This picture clearly illustrates two suspended carry pouches with one TM.08 being removed.

Multiple Vertical Suspended Canvas Trommel Pouches

The following picture is typical of leather snail drum magazine carry pouches. There are a many of these pouch examples that are in new condition and well marked with 1915 or 1916 dates. These leather pouches are controversial and spurious. The snail drums did not start production until late 1916 and were not supplied to the field until 1917.

There are no known period pictures that illustrate the use of these leather pouches. In fact anyone that has attempted to install or remove a snail drum from a leather carry pouch knows they are worthless for field application.

Fake Snail Drum Leather Pouch (A:1020)

P. Kasten

The Bavarian Feldzeugmeisterei was informed on 22 February 1918 of the pending manufacture of the P. Kasten. The purpose of the P. Kasten was "for transport of the drum magazines which have been adopted for the Lg. Pistole 08 and related accessories" *(A:1023).*

The P. Kasten or Patronen-Kasten is simply a purpose built carry tool box. The P. Kasten magazine carrier was developed to accommodate the ease of deployment for multiple trommels and ammunition with a loading tool.

There was a large group interest in the German Army for the P. Kasten. German Army formations to be provided with these boxes included the Infantry, Jager, Bicycle-mounted and Strum Companies *(A:1023).* The P. Kastens were to be made up in the Army Depots to the established specifications and drawings. The planned scale of supply was that each P. Kasten would be equipped with five magazines and pouches. This indicates a planned scale of 190,000 units for the LP.08s issued during WWI *(A:1024).*

Army units were widely provided with these carry boxes. The sole purpose of these boxes was the transportation of the drum magazines which had been adopted for the LP.08 and the related accessories.

The P. Kasten is a pine board box with a hinged lid and steel fittings. The box is painted field gray with large white stenciled "P." on front. There were numerous P. Kasten magazine carriers produced. Minor feature variations exist for the cartridge box because of the different manufacturers and material availability.

P. Kasten Front View (E:Photo)

P. Kasten Top View (E:Photo)

The following two photographs illustrate a properly loaded P. Kasten top view and an open system ready for service. The P. Kasten interior has wood partitions for five TM.08s. A lift out

bar retains the trommels with the stem necks pointed upwards. There is a single cut-out block for holding the loading tool.

Complete P. Kasten with Five Magazines (C:Photo)

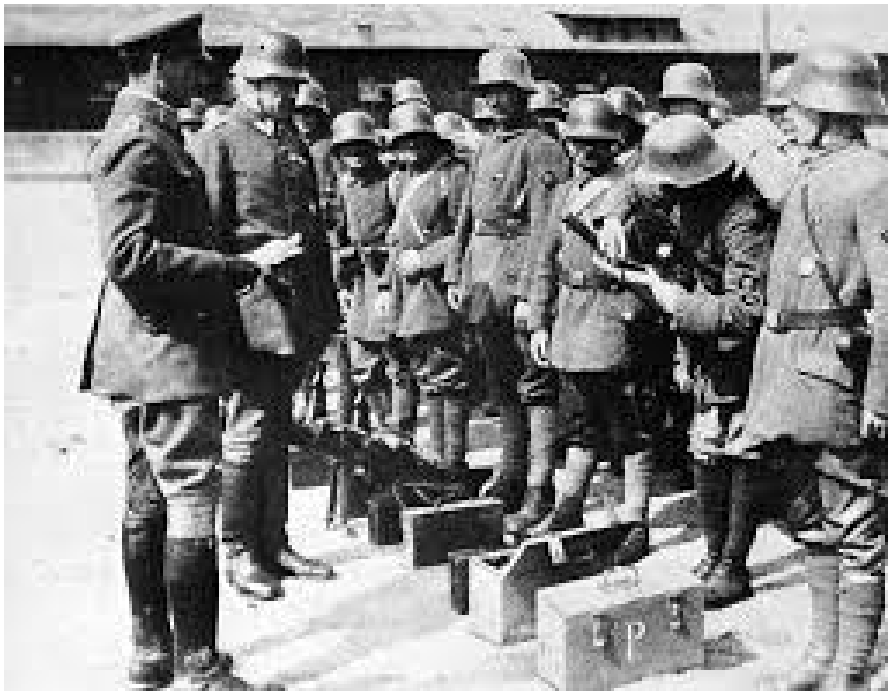
A lift out tray provides four divisions for holding boxed cartons of ammunition. Five canvas carry pouches were provided with each P. Kasten.

Opened P. Kasten With Five Magazines

There is an approximate total of 870,000 TM.08s manufactured. Allowing five TM.08s per P. Kasten implies that 174,000 P. Kastens could have been made. Between 1914 and 1918 the total estimated production of the LP.08 was 173,750 pistols. This similar number of LP.08s produced further indicates that a P. Kasten was to be provided with each pistol.

Originally there were many P. Kastens produced to support the utilization of the LP.08 combat assault system. Even though there were many P. Kastens manufactured very few have survived. The P. Kasten savage attrition rate is much greater than that of the LP.08 pistol. The P. Kasten is an extremely rare LP.08 accessory *(A:1024).*

The following photograph depicts a unit of the post WWI Bavarian Freikorps training in the use of the MG 08/15 and the MP.18. The soldier is loading a TM.08 trommel magazine into a MP.18. The use of the P. Kasten is clearly displayed.



Freikorps Epp MP.18 Training

Collection Display

The following displays a complete LP.08 Combat Assault System collection. The LP.08 rig includes the board stock, the appropriate holster and the leather slings with leather attachments. There are six snail drum magazines (TM.08), five for the P. Kasten and one in the pistol. A completely loaded P. Kasten included boxes of ammunition and loaded TM.08s. A fully loaded carry box weighed in the order of 30 pounds (13.7 kg). In addition to the LP.08 Combat Assault System the fully loaded P. Kasten had to be hand carried into combat.

P. Kasten Collection Display (C:Photo)

MP.18

The German military required a compact effective weapon for fighting in the trenches of World War One. The firepower and mobility of the LP.08 Combat Assault System led to the development and fielding of the MP.18 sub machine gun *(A:1007).*

Development of the Bergman MP.18 began in 1917 at the request from Imperial German Army. This simple and effective automatic weapon fired the 9x19mm Luger pistol cartridge. Early prototypes were tested with double-row box magazines which held 20 rounds, but the German Army insisted on adoption of the 32-round TM.08 (snail-drum) magazine produced for the LP.08 Combat Assault System. It must be noted that MP.18 is considered as the world's first practical submachine gun, and it set the pattern for most weapons of the class.

MP.18 With TM.08 Magazine

An estimated 30,000 of the MP.18 submachine guns were built before the Armistice in 1918. Approximately 10,000 of those reached German troops at the fronts. The Treaty of Versailles limited the number of machine guns that Germany was permitted to stockpile. The Treaty made no mention of machine pistols or the MP.18 in particular. The MP.18 saw limited use by police of Weimar republic *(D:Narrative).*

German Soldier With MP.18, France 1918

The MP.18 was in service in Germany from 1918 until 1940. Many of the MP.18s found their way into clandestine service in other parts of the world *(A:1028)*. The MP.18 was also used in the Irish Civil War (1921-23), the Second Sino-Japanese War (1937-45), the Chaco War (Bolivia-Paraguay 1932-35), the Chinese Civil War (1927-36) and the Spanish Civil War (1936-39) *(D:Narrative)*.

The TM.08 (trommel magazine) was supplied with a stamped steel dust cover and an adaptor for use with the MP.18 submachine gun. The magazine is inserted into the MP.18 on the left side. The early guns had the magazine housing sloped back to accommodate the TM.08 drum magazines.

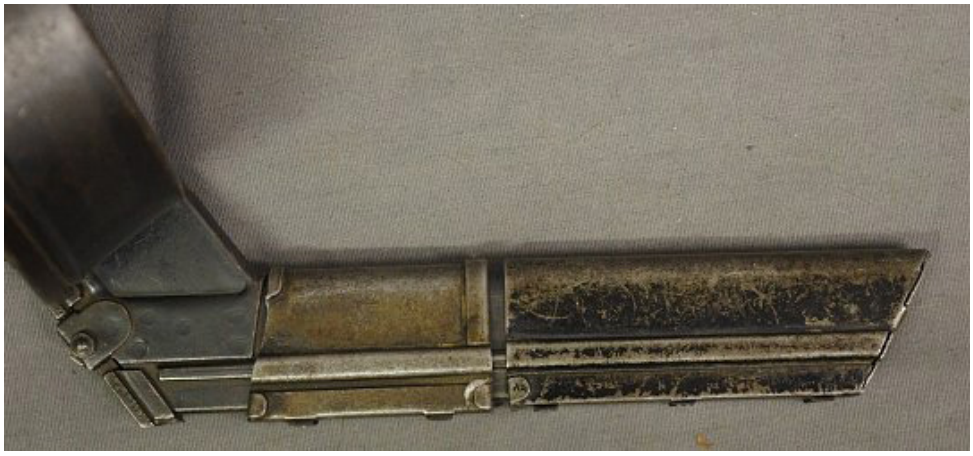
MP.18 With Trommel Magazine Note Adapter Position

The TM.08 adapter is a simple but important device. The purpose of the adapter is to act as a spacer to prevent the drum magazine from being inserted too far into the MP.18 housing.

The magazine adapter incorporates construction similar to the dust cover. The adapters are stamped and folded with the rear spine retained by folded tabs. The adapters have a single wide rectangular channel on the right side to pass over the magazine assembly rib and the hold open pin *(A:1025).*

Trommel Magazine Adapter Channel (C:Photo)

Trommel Magazine Adapter Rear Spine (C:Photo)



Magazine with Adapter & Dust Cover (C:Photo)

This photograph illustrates the long and wide spread usage of the MP.18. The machine pistols are in the hands of Czechoslovakian Army officers in 1938. Apparently they are loading the MP.18 with the TM.08 snail drum magazines from a P.Kasten *(B:Photo).*

MP.18 With Trommel Magazines Used In Czechoslovakia September 1938

IN CLOSURE

The Trommelmagazine 08 (TM.08) or Snail Drum Magazine was designed in 1915 and served with the LP.08 until1918. In this relatively short time period the LP.08 Combat Assault System demonstrated the capability of a compact high capacity personal weapon.

The German Army was quick to develop the MP.18 sub machine gun utilizing the compactness and high capacity of the TM.08 . The German Army used the TM.08 with the MP.18 from 1918 until 1940. Several countries around the world used the MP.18 with the snail drum magazine prior to WWII.

Designs for new formidable sub machine guns incorporating high capacity drum magazines followed the example of the Trommelmagazine 08. Many countries developed their own weapon systems. In 1921 the Thompson Sub Machine was marketed with high capacity drum magazines. The Finnish Suomi KP-31 with a high capacity drum magazine was adopted in 1931. The Russian PPsH with a high capacity drum magazine was adopted in 1941.

Following the example set by the Trommelmagazine 08, submachine guns with high capacity magazines have demonstrated their place on the today's battle field.

Reference Key

(Letter: Page)
Letter = Source Reference
Page or Referenced Topic

A: "The Borchardt & Luger Automatic Pistols"
B: Patrice Gimat-Latu, http://translate.google.fr/translate...108293&act=url.
C: Eric Bruning, Luger Forum
D: Wikipedia
E: George Anderson, Luger Forum
F: "Central Powers Pistols" by Jan C. Still