

# Springfield Research Newsletter

ISSUE NUMBER 37  
Apr. - June, 1986

## INFORMATION SOURCES FOR THIS ISSUE

- \* Letters Received, Office of the Chief of Ordnance (OCO), 1882-85
- \* General Correspondence, Office of the Chief of Ordnance, 1921-25
- \* Records of Army Troops in the Panama Canal Zone

## SERIAL NUMBER BOOK, VOL. 2

Vol. 2 of Serial Numbers of U. S. Martial Arms has been at the printer since May, and it is now scheduled to be delivered on Aug. 15. Please complete and return the enclosed form for a personally autographed copy. Vol. 2 includes all serial numbers published in Newsletters 24 - 35, plus some that will not appear in the Newsletter (M1917 rifles, more data on Hotchkiss rifles and carbines).

## TRAPDOOR NOTES

\* The rear sight on the Officer's Rifle originally had the same graduations as those of the Model 1873 service rifle sight; sometime between Jan. 8 and May 17, 1876, it was graduated for the rifle cartridge and provided with a 50 yd. marking.

\* Starting in 1884, many carbine stocks were modified to hold the Model 1882 headless shell extractor.

\* In Apr., 1885, the screw hole in the metallic pistol grip was made oblong to allow adjustment of the position of the grip. The holes in some of these grips were subsequently altered at Cheyenne Ordnance Depot and elsewhere.

\* The 1885 Meacham Arms Co. catalog offered regulation Springfield rifles for sale, and Springfield Armory claimed that these were spurious. The number of one of the Meacham rifles was 162704.

\* In June, 1885, Col. Kelton experimented with different rifling twists, various bullets, and frontal ignition.

\* It was decided that the Model 1884 sight and front sight cover would not be used on the Officer's Rifle.

\* The first assembly of Model 1884 sights to rifles occurred on Sept. 19, 1885.

\* In Oct., 1885, Col. Kelton submitted a model of a hammerless trapdoor breech mechanism.

### THE MEANING OF "POSITIVE CAM"

The following abstract from a letter dated Nov. 2, 1885, from Lt. Col. A. R. Buffington to the Chief of Ordnance gives a definitive meaning to the term "positive cam": "...in addition to the changes embraced by the model '84 rifle, it has a positive cam (the inclination of surface reversed ...) the strengthened cam latch shaft and breech block cap, improved position of firing pin screw and a new firing device consisting of two pins and a spring: one, the firing pin proper, a very small pin moving perpendicularly to the face of the breech block and retractd by the spring. Reversing the surface of the cam prevents the sticking during rapid firing found in the first construction. ...in view of a probable change of breech mechanism, or to a magazine arm, it is not recommended that any more changes be made in the service rifle at this time."

### CONVERSION OF AIR SERVICE RIFLES

The following communication from Raritan Arsenal describes the fate of 139 of the total of approximately 825 M1903 Air Service Rifles:

Headquarters, Raritan Arsenal, Metuchen, N. J., Jun. 19, 1925. To: Chief of Ordnance, War Department, Washington, D. C.

1. As requested in basic letter, information is furnished that the modification of the caliber .30 Rifles, altered for aircraft use, was directed by the Ordnance Office in first indorsement dated Sept. 27, 1924, File O.O. 474.1/4831 (R.A. 471.1/45). This operation required re-stocking, substituting lower band complete, assembling upper band complete, and substituting movable stud and front sightleaf, U.S. Rifle, cal..30, M'03, for the movable stud and front sight leave, for aircraft use. One hundred and thirty-nine (139) of these Rifles have been modified as stated above and are now available for issue as U.S. Rifles, caliber .30, M-1903, at a cost of \$168.38.

### SERIAL NUMBER DATA IN THIS ISSUE

Serial data in this issue consists of 112 trapdoors from the early records (including those of 1 Long Range Rifle and the spurious Meacham Springfield) and 111 Model 1903 rifles cited in Panama Canal Zone records.

### PRODUCTION SUMMARIES

This issue continues the publication of the trapdoor-era and interwar production summaries.

### TRADING POST

WANTED: 1966 Camp Perry National Match Pistol brochure - and any other years. Matt J. Buzzell, Jr., 130 Eighth St., San Francisco, CA 94103.

**MISCELLANEOUS TRAPDOOR RIFLES  
CITED IN EARLY ORDNANCE DEPT. RECORDS**

Serial	Mod	MMDYY	Usage	Serial	Mod	MMDYY	Usage
85632	73R	012385	BATTY E 3RD ART	212118	79R	121584	1ST ILL NG (DAMAGED)
91571	73R	011085	BATTY E 3RD ART	212147	79R	121584	1ST ILL NG (DAMAGED)
117596	73R	050885	BATTY K 3RD ART	212155	79R	121584	1ST ILL NG (DAMAGED)
132591	L	110785	SA KELTON BULLET TRIAL	212168	79R	121584	1ST ILL NG (DAMAGED)
162704	73R	042685	MEACHAM ARMS CO	212178	79R	121584	1ST ILL NG (DAMAGED)
180515	73R	022185	BATTY 3D 4TH ART	212180	79R	121584	1ST ILL NG (DAMAGED)
200959	79R	012085	BATTY E 3RD ART	212194	79R	121584	1ST ILL NG (DAMAGED)
206657	79R	121584	1ST ILL NG (DAMAGED)	212195	79R	121584	1ST ILL NG (DAMAGED)
206802	79R	121584	1ST ILL NG (DAMAGED)	212202	79R	121584	1ST ILL NG (DAMAGED)
206863	79R	121584	1ST ILL NG (DAMAGED)	212218	79R	121584	1ST ILL NG (DAMAGED)
206876	79R	121584	1ST ILL NG (DAMAGED)	212219	79R	121584	1ST ILL NG (DAMAGED)
206920	79R	121584	1ST ILL NG (DAMAGED)	212227	79R	121584	1ST ILL NG (DAMAGED)
206942	79R	121584	1ST ILL NG (DAMAGED)	212243	79R	121584	1ST ILL NG (DAMAGED)
207021	79R	121584	1ST ILL NG (DAMAGED)	212248	79R	121584	1ST ILL NG (DAMAGED)
207054	79R	121584	1ST ILL NG (DAMAGED)	212267	79R	121584	1ST ILL NG (DAMAGED)
207066	79R	121584	1ST ILL NG (DAMAGED)	212287	79R	121584	1ST ILL NG (DAMAGED)
207089	79R	121584	1ST ILL NG (DAMAGED)	212309	79R	121584	1ST ILL NG (DAMAGED)
207105	79R	121584	1ST ILL NG (DAMAGED)	212311	79R	121584	1ST ILL NG (DAMAGED)
207160	79R	121584	1ST ILL NG (DAMAGED)	212313	79R	121584	1ST ILL NG (DAMAGED)
207208	79R	121584	1ST ILL NG (DAMAGED)	212319	79R	121584	1ST ILL NG (DAMAGED)
207221	79R	121584	1ST ILL NG (DAMAGED)	212320	79R	121584	1ST ILL NG (DAMAGED)
207233	79R	121584	1ST ILL NG (DAMAGED)	212324	79R	121584	1ST ILL NG (DAMAGED)
207248	79R	121584	1ST ILL NG (DAMAGED)	212333	79R	121584	1ST ILL NG (DAMAGED)
207998	79R	121584	1ST ILL NG (DAMAGED)	212336	79R	121584	1ST ILL NG (DAMAGED)
208183	79R	121584	1ST ILL NG (DAMAGED)	212338	79R	121584	1ST ILL NG (DAMAGED)
208189	79R	121584	1ST ILL NG (DAMAGED)	212351	79R	121584	1ST ILL NG (DAMAGED)
208203	79R	121584	1ST ILL NG (DAMAGED)	212359	79R	121584	1ST ILL NG (DAMAGED)
208436	79R	121584	1ST ILL NG (DAMAGED)	212374	79R	121584	1ST ILL NG (DAMAGED)
208686	79R	121584	1ST ILL NG (DAMAGED)	212376	79R	121584	1ST ILL NG (DAMAGED)
208742	79R	121584	1ST ILL NG (DAMAGED)	212377	79R	121584	1ST ILL NG (DAMAGED)
209114	79R	121584	1ST ILL NG (DAMAGED)	212389	79R	121584	1ST ILL NG (DAMAGED)
209318	79R	121584	1ST ILL NG (DAMAGED)	212392	79R	121584	1ST ILL NG (DAMAGED)
209355	79R	121584	1ST ILL NG (DAMAGED)	212393	79R	121584	1ST ILL NG (DAMAGED)
210228	79R	121584	1ST ILL NG (DAMAGED)	212396	79R	121584	1ST ILL NG (DAMAGED)
210242	79R	121584	1ST ILL NG (DAMAGED)	212409	79R	121584	1ST ILL NG (DAMAGED)
210517	79R	121584	1ST ILL NG (DAMAGED)	212418	79R	121584	1ST ILL NG (DAMAGED)
210519	79R	121584	1ST ILL NG (DAMAGED)	212424	79R	121584	1ST ILL NG (DAMAGED)
211183	79R	121584	1ST ILL NG (DAMAGED)	212425	79R	121584	1ST ILL NG (DAMAGED)
211259	79R	121584	1ST ILL NG (DAMAGED)	212428	79R	121584	1ST ILL NG (DAMAGED)
211267	79R	121584	1ST ILL NG (DAMAGED)	212436	79R	121584	1ST ILL NG (DAMAGED)
211297	79R	121584	1ST ILL NG (DAMAGED)	212454	79R	121584	1ST ILL NG (DAMAGED)
211357	79R	121584	1ST ILL NG (DAMAGED)	212851	79R	121584	1ST ILL NG (DAMAGED)
211359	79R	121584	1ST ILL NG (DAMAGED)	212917	79R	121584	1ST ILL NG (DAMAGED)
211364	79R	121584	1ST ILL NG (DAMAGED)	212945	79R	121584	1ST ILL NG (DAMAGED)
211365	79R	121584	1ST ILL NG (DAMAGED)	212948	79R	121584	1ST ILL NG (DAMAGED)
211367	79R	121584	1ST ILL NG (DAMAGED)	212956	79R	121584	1ST ILL NG (DAMAGED)
211375	79R	121584	1ST ILL NG (DAMAGED)	254239	84R	070785	CO H 3RD INF
211392	79R	121584	1ST ILL NG (DAMAGED)	254315	84R	071685	CO H 3RD INF
211397	79R	121584	1ST ILL NG (DAMAGED)	254343	84R	070785	CO H 3RD INF
211400	79R	121584	1ST ILL NG (DAMAGED)	266853	84R	042385	BATTY L 2ND ART
211508	79R	121584	1ST ILL NG (DAMAGED)	266867	79R	111984	BATTY L 2ND ART
211537	79R	121584	1ST ILL NG (DAMAGED)	"	84R	042385	BATTY L 2ND ART
211543	79R	121584	1ST ILL NG (DAMAGED)	266978	84R	052685	BATTY L 2ND ART
211953	79R	121584	1ST ILL NG (DAMAGED)	267007	79R	071184	BATTY L 2ND ART
211980	79R	121584	1ST ILL NG (DAMAGED)	"	84R	042385	BATTY L 2ND ART
212007	79R	121584	1ST ILL NG (DAMAGED)	267038	84R	052685	BATTY L 2ND ART

Model Code(s): L = Long Range Rifle R = Service Rifle  
Total Entries: 112

**M1903 RIFLES**  
**CITED IN PANAMA CANAL ZONE FIELD RECORDS**

Serial	Model	MMDDYY	Usage	Serial	Model	MMDDYY	Usage
13705	032721	PANAMA CANAL ZONE		273688	032721	PANAMA CANAL ZONE	
14656	032721	PANAMA CANAL ZONE		273718	032721	PANAMA CANAL ZONE	
16567	032721	PANAMA CANAL ZONE		277804	032721	PANAMA CANAL ZONE	
19536	032721	PANAMA CANAL ZONE		313314	032721	PANAMA CANAL ZONE	
19612	032721	PANAMA CANAL ZONE		313465	032721	PANAMA CANAL ZONE	
34621	032721	PANAMA CANAL ZONE		319135	032721	PANAMA CANAL ZONE	
46324	032721	PANAMA CANAL ZONE		320236	032721	PANAMA CANAL ZONE	
60766	032721	PANAMA CANAL ZONE		320390	032721	PANAMA CANAL ZONE	
76616	032721	PANAMA CANAL ZONE		320500	032721	PANAMA CANAL ZONE	
77096	032721	PANAMA CANAL ZONE		322230	032721	PANAMA CANAL ZONE	
82283	032721	PANAMA CANAL ZONE		322427	032721	PANAMA CANAL ZONE	
86115	032721	PANAMA CANAL ZONE		322491	032721	PANAMA CANAL ZONE	
87324	032721	PANAMA CANAL ZONE		322648	032721	PANAMA CANAL ZONE	
87428	032721	PANAMA CANAL ZONE		322762	032721	PANAMA CANAL ZONE	
103485	03 20 L C LEIGHTON (SALE)			323141	032721	PANAMA CANAL ZONE	
116437	032721	PANAMA CANAL ZONE		325644	032721	PANAMA CANAL ZONE	
123164	032721	PANAMA CANAL ZONE		326788	032721	PANAMA CANAL ZONE	
130935	032721	PANAMA CANAL ZONE		332720	032721	PANAMA CANAL ZONE	
132784	032721	PANAMA CANAL ZONE		336415	032721	PANAMA CANAL ZONE	
134164	032721	PANAMA CANAL ZONE		338081	032721	PANAMA CANAL ZONE	
135370	032721	PANAMA CANAL ZONE		341898	032721	PANAMA CANAL ZONE	
136179	032721	PANAMA CANAL ZONE		345919	032721	PANAMA CANAL ZONE	
138616	032721	PANAMA CANAL ZONE		417542	032721	PANAMA CANAL ZONE	
141212	032721	PANAMA CANAL ZONE		422618	032721	PANAMA CANAL ZONE	
144905	032721	PANAMA CANAL ZONE		432927	032721	PANAMA CANAL ZONE	
150823	032721	PANAMA CANAL ZONE		471256	032721	PANAMA CANAL ZONE	
157402	032721	PANAMA CANAL ZONE		472608	08 20 G R FORD (SALE)		
164808	032721	PANAMA CANAL ZONE		474527	032721	PANAMA CANAL ZONE	
166026	032721	PANAMA CANAL ZONE		476143	032721	PANAMA CANAL ZONE	
170922	032721	PANAMA CANAL ZONE		522204	032721	PANAMA CANAL ZONE	
172738	032721	PANAMA CANAL ZONE		522237	032721	PANAMA CANAL ZONE	
182188	032721	PANAMA CANAL ZONE		526049	032721	PANAMA CANAL ZONE	
190364	032721	PANAMA CANAL ZONE		526421	032721	PANAMA CANAL ZONE	
193085	032721	PANAMA CANAL ZONE		526428	032721	PANAMA CANAL ZONE	
196231	032721	PANAMA CANAL ZONE		592042	032721	PANAMA CANAL ZONE	
197343	032721	PANAMA CANAL ZONE		598478	032721	PANAMA CANAL ZONE	
203904	032721	PANAMA CANAL ZONE		605772	032721	PANAMA CANAL ZONE	
209482	032721	PANAMA CANAL ZONE		605776	032721	PANAMA CANAL ZONE	
212297	032721	PANAMA CANAL ZONE		605781	032721	PANAMA CANAL ZONE	
227124	032721	PANAMA CANAL ZONE		605785	032721	PANAMA CANAL ZONE	
236391	032721	PANAMA CANAL ZONE		605789	032721	PANAMA CANAL ZONE	
236597	032721	PANAMA CANAL ZONE		622863	032721	PANAMA CANAL ZONE	
246969	032721	PANAMA CANAL ZONE		632643	032721	PANAMA CANAL ZONE	
252051	032721	PANAMA CANAL ZONE		647621	032721	PANAMA CANAL ZONE	
253634	032721	PANAMA CANAL ZONE		647622	032721	PANAMA CANAL ZONE	
261090	032721	PANAMA CANAL ZONE		647629	032721	PANAMA CANAL ZONE	
261538	041521 CO I 42ND INF (MISSING)			647635	032721	PANAMA CANAL ZONE	
261685	032721	PANAMA CANAL ZONE		647645	032721	PANAMA CANAL ZONE	
263674	032721	PANAMA CANAL ZONE		650774	032721	PANAMA CANAL ZONE	
264023	032721	PANAMA CANAL ZONE		650775	032721	PANAMA CANAL ZONE	
267852	032721	PANAMA CANAL ZONE		650783	032721	PANAMA CANAL ZONE	
267949	032721	PANAMA CANAL ZONE		650790	032721	PANAMA CANAL ZONE	
268000	032721	PANAMA CANAL ZONE		650795	032721	PANAMA CANAL ZONE	
268449	032721	PANAMA CANAL ZONE		775942	11 20 J KASTENBAUM (SALE)		
269582	032721	PANAMA CANAL ZONE		783519	032721	PANAMA CANAL ZONE	
273113	032721	PANAMA CANAL ZONE					

Total Entries: 111

## SPRINGFIELD ARMORY PRODUCTION

Fiscal Year 1885

Manufactured Arms

16,955 Springfield Rifles, Cal. .45  
 20,600 Springfield Rifles, Model 1884 (without sights)  
 2 Springfield Rifles, Experimental  
 2,500 Springfield Cadet Rifles  
 500 Springfield Shot Guns  
 100 Officer's Rifles  
 500 Officer's Swords  
 1 Brig. Genl. Sword

Appendages and Miscellaneous

500 Brush Wipers, Service Shells  
 250 Cleaning Rods, complete, Springfield Shotguns  
 5,000 Hunting Knives  
 750 Magazine Belts for Lee Rifle  
 3,039 Pistol Grips, Metallic  
 Various Sight covers, headless shell extractors, screw drivers, wiping rods, rear sight gibs, bayonet scabbards, and cavalry curb bits

Parts

Various parts for Springfield rifle, carbine, cadet rifle, and shot guns; parts for Hotchkiss Navy rifle, Chaffee-Reece rifle, and officers swords

Experiments and InvestigationsDateSubject

1884  
 July 29 Rod bayonet rifle with improved front and rear sights  
 Sept. 16 Headless shell extractor submitted by Pvt. J. Quade, 21st Inf.  
 Sept. 16 Accidental discharge of rifle due to unreliability of the safety notch tumbler  
 Oct. 18 Alterations in Gatling gun to enable it to use long and short cartridges in the tin feed case or Bruce feed guide  
 Oct. 28 Grooved bullet invented by A. C. Carey

1885

Feb. 19 Headless shell extractor invented by Daniel B. Weatherbe  
 Mar. 18 Bayonet butt and pistol combination submitted by Capt. M. H. DeHeart  
 Apr. 20 Two headless shell extractors invented by Lt. W. S. Scott

## SPRINGFIELD ARMORY PRODUCTION

Fiscal Year 1920

Principal Articles Manufactured**A. ARMS, HAND****1. BAYONETS**

71,134 Bayonets, Model of 1905  
1,000 Bayonets, Model of 1905 (chrome steel)  
4 Bayonets, Pitet type

**2. SABERS**

50 Sabers, fencing

**3. SWORDS**

100 Swords and scabbards, Cadet  
198 Blades and other parts for Dueling Swords

**B. GUNS**

4 Accuracy Guns, Cal. .30, Model of 1906, for use with Mann "V" Rest

**C. RIFLES****1. GALLERY PRACTICE RIFLES**

2 Gallery Practice Rifles, cal. .22, Model of 1903, experimental  
1,535 Barrels for GP Rifle, Model of 1903  
2 Barrels and Receivers for GP Rifle, Model of 1903  
50 Mainsprings, copper plated

**2. U.S. RIFLE, CAL. .30, MODEL OF 1903**

5,416 U.S. Rifle, Cal. .30, Model of 1903  
91,750 U.S. Rifle, Cal. .30, Model of 1903, Mark I  
1 U.S. Rifle, Cal. .30, Model of 1903, stargauged, Mark I  
2,794 U.S. Rifle, Cal. .30, Model of 1903, stargauged and specially selected for the National Match  
2 U.S. Rifle, Cal. .30, Model of 1903 made with bullet seat to allow 180 grain bullet when chambered in rifle to seat properly  
1 U.S. Rifle, Cal. .30, Model of 1903, modified for receiving a telescopic sight (experimental work)

**3. APPENDAGES**

22 Cleaning rods, brass (experimental)  
10 Cleaning rods, copper clad (experimental)

4. MISCELLANEOUS

5 Barrels (various) for Mann Rest  
11 Barrels, special lengths and rifling for experimental purposes  
1 Barrel, 1 turn in 5", for use with boat tail bullet  
4 Barrels with twist from 8" to 16"  
5 Barrels, 30" long, with twist from 10" to 14"  
2 Barrels, .308" across the grooves  
42 Barrels, 1.25" diameter, 24" long  
2 Barrels and receivers, assembled, selected for accuracy with  
stargauge record and targets  
2 30" Barrels and Receivers, assembled  
4 32" Barrels and Receivers, assembled  
1 Sight, special  
1 Sight, Czegka, for U.S. Rifle, Cal. .30, Model of 1917  
2 U.S. Rifles, Cal. .45, Model of 1903, for experimental purposes

ALTERATIONS AND REPAIRSA. ARMS, HAND1. SABERS

20 Sabers, Officers' 30" and Scabbards  
68 Sabers, Officers' 32" and Scabbards  
18 Sabers, Officers' 34" and Scabbards

2. SWORDS

7 Swords, Staff and Foot Officers'

B. PISTOLS

64,137 U.S. Automatic Pistols, Cal. .30, Model of 1918

## ROCK ISLAND ARSENAL PRODUCTION

**Fiscal Year 1920**

Principal Articles Manufactured

## 1. Rifles and Carbines

60,179 Rifles, U.S. Cal. .30, Model of 1903

20 Rifles, U.S. Cal. .30, Model of 1903, Modified for Cavalry Equipment, Model of 1917

2. Parts for U.S. Rifle, Cal. .30, Model of 1903

22,595 Barrels, complete

500 Sets of Parts, to test the gauges, tools, and fixtures manufactured  
for U.S. Rifle, Cal. .30, Model of 1903, Mark I  
Various other parts

500 Boxes, cadet cartridge, Cal. .30, Model of 1903

### 3. Pistols and Revolvers

65,000 Spare Bolt Carriers for Automatic Pistol, Cal. .30, Model of 1918  
195,000 Magazine Cases " " " " " " " " " "

#### 4. Hand Arms

99,500 Bayonets

**Parts for Bayonets, Model of 1905**

### Articles Repaired

59 Rifles, U.S., Cal. .30, Model of 1903, fitted for telescopic musket sights  
 8 Rifles, U.S., Cal. .30, Model of 1903, fitted for Maxim silencers  
 578 Rifles, U.S., Gallery Practice, Cal. .22, Model of 1903  
 717,404 Rifles, U.S., Cal. .30, Model of 1917  
 1,500 Carbines, U.S., Cal. .30, Model of 1899  
 Various pistols, revolvers, shotguns, bayonets, bolos, sabers, swords, knives, etc.  
 20 Sabers, Cavalry, Model 1913 (Modified)