The National Projectile Works

By John D. Hamilton

Grand Rapids, Michigan (1897-1906)

The National Projectile Works (Figure 1) was organized in 1897 to manufacture Myron Clark Lisle's patented "lubricated wire-patched bullets." The *Grand Rapids Herald* proudly announced the birth of the company on May 2, 1898:

Will make thirty thousand bullets a day.

Capacity of Grand Rapids Projectile Works

Articles of Association to Be Filed With the County Clerk Today and Plant to Be in Running Order in About a Month.

The movement to organize a company to manufacture the Lisle lubricated bullet, reference to which, has been made, will come to a head today when the organizers expect to file articles of association of the National Projectile Works of Grand Rapids, with a capital stock of $25,000, $10,000 paid in, shares $10 each. The organizers are: D.H. Armstrong, general manager, Capt. C. McD. Townsend, Col. William T. McGurrin, Joseph Kirwin and M.C. Lisle, the inventor. Mr. Armstrong said last evening that there were several offers under consideration, but he expects to locate in the Rollin building on Canal street, in which are located the Cycloid works. The first work will be the building of tools with which to make the machines used in preparing the bullets. As soon as the machinery is ready, which will be in about a month, Mr. Armstrong says the company will be able to turn out 30,000 bullets a day. This bullet will be stamped out of bar lead. The missiles for war use will be wound with insulated copper wire, the one for ordinary commercial purposes will be wound with thread. Bullets will be turned out for the United States army rifle and the Savage arms company. The insulation on the copper wire serves the same purpose as the thread, cleaning the gun, filling the rifling and causing the bullet to be driven by the full power of the gas generated by the ignition of the powder.

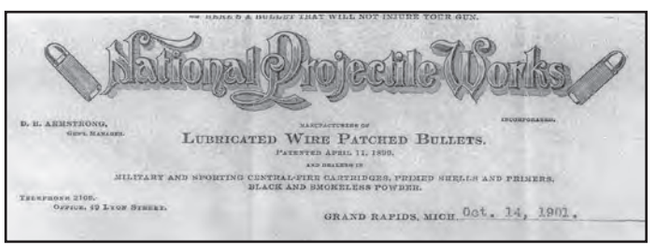


Figure 1. Letterhead of the National Projectile Works, Grand Rapids, Michigan, 1901. (Photo courtesy of Mike Boccaccio)

The wire holds up the bullet, and the combination is claimed to serve the same purpose as the metal patch now being used while preventing rapid heating and preserving the rifle from quick deterioration. Mr. Armstrong says the army rifle heats so rapidly that a few "minutes" action would place an army in almost helpless condition.

The Grand Rapids City Directory for 1898 listed Joseph Kirwin as President, Myron C. Lisle as Vice President, and Denson H. Armstrong as Secretary/Treasurer. Lisle was the designer and production engineer, Armstrong furnished most of the capital and ran the business end of the operation. Throughout its history, Armstrong was a constant factor in its operation, filling various positions as President, Secretary, and General Manager.

Company advertising touted the value of its product as:

- prevents fouling
- cleans and lubricates the barrel, making swabbing unnecessary
- adapted to slow or fast twist rifling, black or smokeless powder
- fills all the grooves with no leakage, thus utilizing the full effect of the powder charge
- less friction, thus increasing velocity and affording a flatter trajectory
- greater penetration than a plain lead bullet.

In the 1889 Grand Rapids City Directory, Myron C. Lisle was listed as an "adjuster" for the Singer Manufacturing Company residing at 14 N. Division Street. In 1901 Lisle was list as superintendent of the works, Edward Taggart was President, Armstrong was Vice President and General Manager, Adolph Latta was Treasurer and Jay B. Hurd was Secretary.

In May 6, 1901 the *Saginaw News* reported National Projectile Works had increased its capital stock from $25,000 to $60,000. This infusion of funding paved the way for introducing new machinery. On January 2, 1903, The *Grand Rapids Press* reported:

> ***Will Install More Machinery***
>
> *Denson H. Armstrong, general manager, and Myron C. Lisle, superintendent of the National Projectile Works of this city, returned this morning from Chicago, where they have been for several days selecting new machinery for the new cartridge factory. This company manufactures the lubricated wire patched bullet. The demand for the new ammunition has increased so rapidly that the management will add a complete line of new, up-to-date cartridge machinery as soon as it can be turned out by the Eastern manufacturers.*

A subsequent article in the *Grand Rapids Press* (July 29, 1903) provided an encouraging outlook for the company's future:

GOLD BOND ISSUE

> ***Will be Made by National Projectile Company***
> ***Those In Control***
> ***Prospectus Shows the Concern Has Been Prosperous***
> ***Money is to be Used to Enlarge Plant in Order to Care for Increasing Business.***

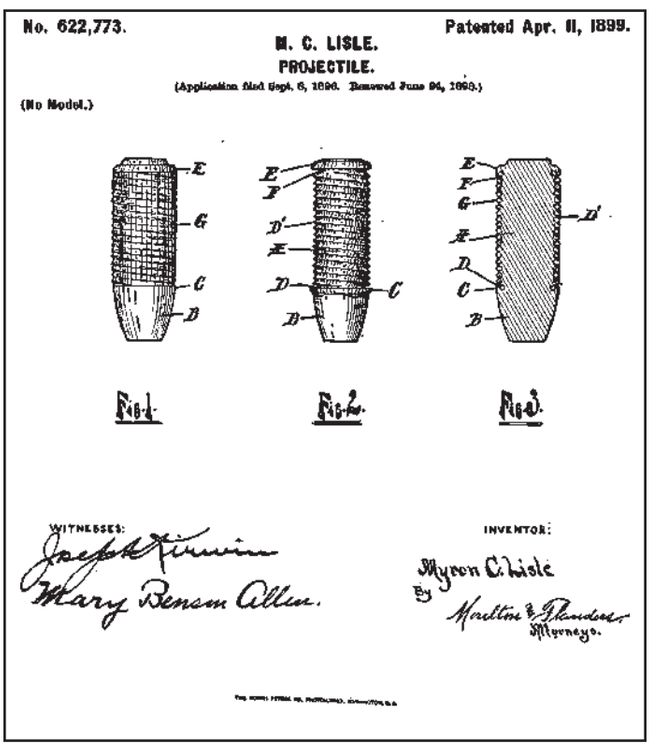
In order to provide funds for the construction of its new building and the enlargement of its business the National Projectile Works of this city will issue five-year 5 percent, first mortgage gold bonds and each $100 bond will entitle the owner to an equal amount of stock in the company. The entire bond issue is to be redeemed and retired on or before maturity, leaving the stock holders sole owners of the business, free and clear of all incumbrances.

> The company has issued a prospectus setting forth the business done since its organization and which makes a very flattering showing and states that not a share of the stock has ever been disposed of for less than its face value, $100 per share. It is likewise stated that the business at the present time is free and clear of any indebtedness.
>
> The management of the company is vested in Gen. William T. McGurrin, president; Adolph Leitelt, Jr., vice president; Charles B. Kelsey, Treasurer; Denson H. Armstrong, secretary and general manager; Frank W. Hine, attorney, and Myron C. Lisle, superintendent. The latter is an expert machinist and is the inventor of the lubricated wire patched bullet, which the company manufactures as well as the special power automatic machinery for making the same.
>
> In providing for the new building and the modern machinery, which is to be installed it is the purpose to increase the capitalization from $60,000 to $100,000 and to make the bond issue noted above in the sum of $25,000.

Of the company officers mentioned, McGurrin was a partner in a plumbing firm (steam and gas fixtures, hot air furnaces), Leitelt was President of the Adolph Leitelt Iron Works, and Kelsey was President of the Commercial Savings Bank.

WHAT MADE LISLE'S BULLET DIFFERENT

Lisle's first projectile patent (Patent # 622,773) was filed on September 8, 1896 and renewed June 24, 1898 (Figure 2). It specified a cast soft metal (lead) cylindrical


No. 622,773. Patented Apr. 11, 1899.

M. C. LISLE.

PROJECTILE.

(Application filed Sept. 8, 1896. Renewed June 24, 1898.)

(No Model.)

Fig. 1. Fig. 2. Fig. 3.

WITNESSES:

Joseph Timmins

Mary Benson Allen.

INVENTOR:

Myron C. Lisle

By Martin & Flanders

Attorneys.

Figure 2. M.C. Lisle's first projectile patent, U.S. Patent # 622,773 issued April 11, 1899.

body, or projectile, intended for small arms using high explosives (high velocity smokeless powder). This projectile would have the main body tightly encircled by a stout, spirally wound linen or cotton cord, the ends of which would be "immoveably" secured. The cord could be waxed or greased to lubricate the projectile's passage down the bore. The cast lead body of the projectile bore deep spiral grooves. Within the grooves the cord was tightly laid. At opposite

ends of the grooves were lead flanges, which, when swaged down upon the ends of the cord, were intended to firmly secure the cord jacket in place. It is to be noted that nowhere in either of Lisle's projectile patents does he refer to his projectiles as "bullets."

The National Projectile Works was formed while Lisle's initial concept was undergoing examination at the Patent Office. No boxes of the company's early cord-wrapped projectiles are currently known to exist. If encountered, one would expect their labels to read "Patent Pending." Under actual use, the cord jacket, when used with high-pressure powder, was liable to become loosened during firing and deflect the projectile during flight. During the 1898 Frankford Arsenal ammunition tests, the "Lisle Patent Special Cord and Lubricated Metal Patched Bullet" was found "unsuitable for military use."[1] However, Lisle's "lubricated wire-patched bullet" found a welcome niche in the civilian sportsman's market and this acceptance must have resulted from Lisle's wire-wrapped improvement patent.

Lisle's second projectile patent, Patent # 622,772 was filed May 9, 1898 and issued April 11, 1899 (Figure 3). This patent was intended to rectify problems encountered by the use of cord wrapped projectiles. This time, Lisle specified the jacket of the projectile would be fabric-covered wire

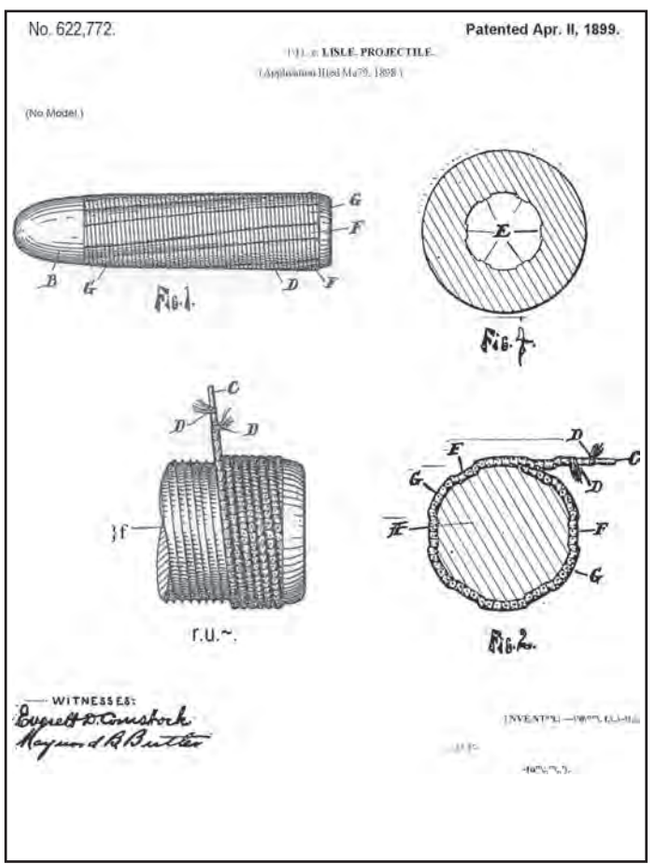


Figure 3. M.C. Lisle's second improved projectile patent.

(soft iron or copper); the fine threads being wound transversely on the wire. By doing this, the threads run lengthwise on the projectile. This tends to decrease wear in the bore by friction. The ends of the wire were firmly embedded into the projectile by laying the ends in deeper end grooves and then swaging the lead down over them as outlined in the first patent. Before the wire with its covering is wound on the bullet, the covering is saturated with a lubricant. The winding of both wire and threads was accomplished by machine. The result was a projectile that reached a higher initial velocity with increased range, flatter trajectory, and greater penetration; all advantages repeatedly emphasized in the company's advertising. Lisle claimed to have combined the good features of a "metal" jacket with those of his fabric wrapped wire-wound jacket. Lisle assigned one-half of his rights to this patent to Frank A. Simonds.

Lisle noted in his second patent application that previously conceived projectiles had been provided with smooth hard metal jackets, a soft metal body spirally bound with lubricating cord, a hard metal body with soft jacket or packing and wound with a cord, and a hard-metal projectile with spiral grooves engaged by a band of soft metal. The disadvantages Lisle cited of these efforts were found to be that smooth hard-metal jackets require great pressure to force them into the bore, thereby causing great friction, heat, and abrasion when fired. Cord-wound soft metal projectiles clean and lubricate the bore, but do not effectually prevent the expansion of the soft metal projectile as do metal jackets. This reduced penetration as the soft lead flattened upon impact. Of concern to riflemen at this time was the accepted notion that copper jacketed bullets, driven by smokeless high velocity powder, could harm a soft metal barrel. It wasn't until Marlin introduced their Model 1893 rifle with its "Special Smokeless Steel" barrel, that the arms industry finally achieved a satisfactory resolution to this last problem.

There is an interesting time lapse between the filing dates of Lisle's initial patent submission on September 8, 1896 and his second patent filed on May 9, 1898. This may be accounted for by the fact that issue of the first application, which dealt with a cord-wrapped projectile, had proved less than adequate in the real military/sporting world, and was delayed by the patent office examiner. The second application, dealing with a fabric wire-wrapped projectile proved more successful. Lisle had second thoughts about protecting his original patent and renewed it. Thus, both applications (the first one amended by the renewal) were eventually issued on the same day, April 11, 1899.

Prudently, Lisle and Frank Simonds jointly applied for a Canadian patent for the wire-wound projectile, securing

their rights throughout North America. Their application was filed on March 27, 1899 and issued on January 15, 1900 as Canadian Patent # 65804. No assignee was listed, which meant the National Projectile Works corporate entity operated without having title to the patent.[2]

Myron's son Elmer L. Lisle (b. 1890) recalled when his father employed him making bullets in 1903 and 1904, "molten lead was poured into multiple moulds, yielding the grooved slug (Figure 4). The slugs were then passed through a rolling machine to assure roundness and to open up the grooves for the wire. The bullets were then fed into the patching machines, which automatically clinched the end of the wire in the groove with a little hammer, winding the lubricated wire on the body of the bullet, and another hammer clinched the other end of the wire. A shear clipped off the wire and a 'kick-off' expelled the finished bullet. The bullet was then passed through another rolling machine to roll the lead flanges completely over the wire ends and, lastly, the bullet was swaged to size and weight ready for loading and crimping into the shell. The bullets were then loaded, packed into boxes, and shipped to dealers."

VARIETY OF PRODUCTION

The company offered "Lubricated Wire Patched Bullets" (Figure 5) as loaded smokeless or black powder cartridges, or as independent reloading components. (Photo courtesy of Mike Boccaccio)

According to the NWP catalog (Figures 6 and 7), lubricated wire-wrapped cartridges were offered in the following varieties with both smokeless and black powder loadings:

.30-40-220 Krag-Jorgensen

.30-30-160 Winchester 1894, Marlin 1893, and Savage 1899 (Figure 8).

.303-28-180 (Smokeless) Savage 1899

.303-40-180 (Black Powder) Savage 1899

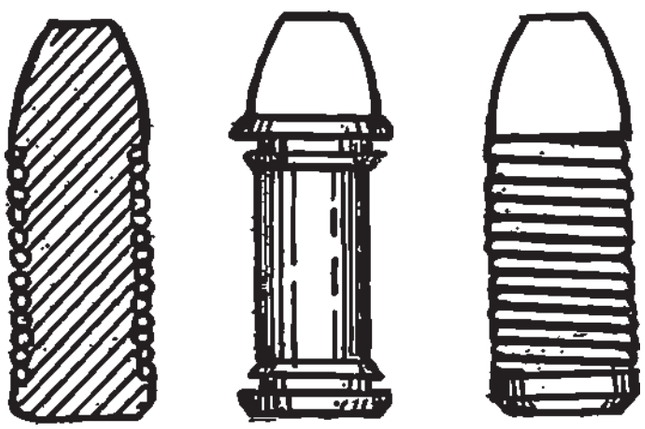


Figure 4. Elmer Lisle's drawing of the lead core (*American Rifleman*, February, 1942).

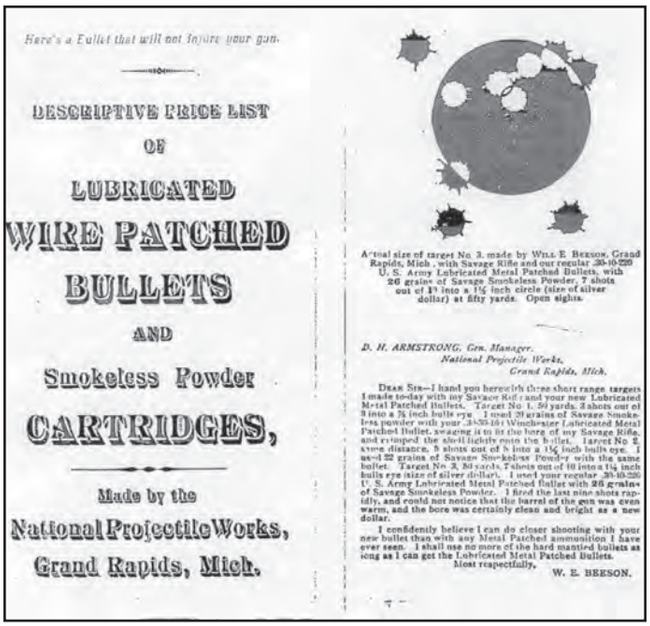


Figure 5. Cover of the rare, undated, 9-page National Projectile Works descriptive price list. (Photo courtesy of Mike Boccaccio)

Figure 6. Illustration from Buzzacott *Sportsman's Encyclopedia*, 1910. Note the .303 caliber bullet with wire wrapping, not entirely seated within the case. (Photo courtesy of Mike Boccaccio)

.32-40-165 Marlin and Winchester (Figure 9)

.38 Colt Long

.38-55-255 Ballard and Marlin

.38-56-255 Marlin 1895

.38-55-255 Winchester 1886

.38-70-255 Winchester 1886

Lubricated

Wire Patched Bullets

Patented April 11, 1899

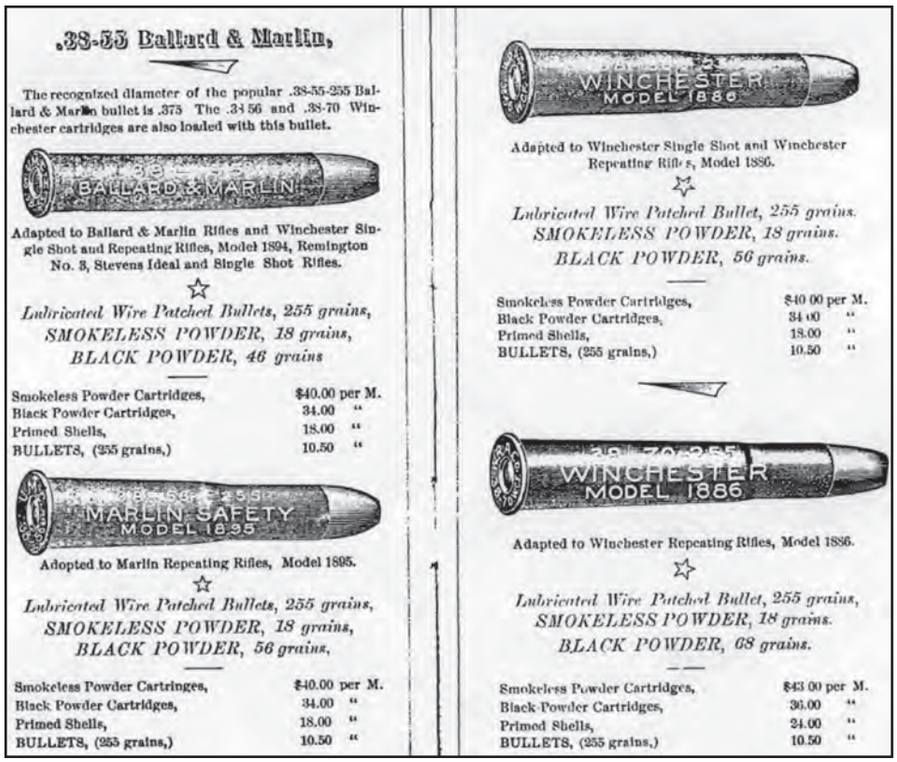
Made by the National Projectile Works

Grand Rapids, Mich.

Notice. In loading these bullets, bell the Muzzle of the shell and take off the inside Sharp corner. Use about 10% less Powder and crimp the bullet in the Shell same as ordinary target cartridges.

NPW MOVES TO CALIFORNIA

William McGurrin was President, Armstrong was Secretary/Treasurer, C.B. Kelsey was Treasurer and the company had moved to 29 Canal Street by 1906. This was the



.38-55 Ballard & Marlin.

The recognized diameter of the popular .38-55-255 Ballard & Marlin bullet is .375 The .38-56 and .38-70 Winchester cartridges are also loaded with this bullet.

Adapted to Ballard & Marlin Rifles and Winchester Single Shot and Repeating Rifles, Model 1894, Remington No. 3, Stevens Ideal and Single Shot Rifles.

☆

Lubricated Wire Patched Bullets, 255 grains,
SMOKELESS POWDER, 18 grains,
BLACK POWDER, 46 grains

Smokeless Powder Cartridges,	$40.00 per M.
Black Powder Cartridges,	34.00 "
Primed Shells,	18.00 "
BULLETS, (255 grains,)	10.50 "

Adopted to Marlin Repeating Rifles, Model 1895.

☆

Lubricated Wire Patched Bullets, 255 grains,
SMOKELESS POWDER, 18 grains,
BLACK POWDER, 56 grains,

Smokeless Powder Cartringes,	$40.00 per M.
Black Powder Cartridges,	34.00 "
Primed Shells,	18.00 "
BULLETS, (255 grains,)	10.50 "

Adapted to Winchester Single Shot and Winchester Repeating Rifles, Model 1886.

☆

Lubricated Wire Patched Bullet, 255 grains.
SMOKELESS POWDER, 18 grains.
BLACK POWDER, 56 grains.

Smokeless Powder Cartridges,	$40 00 per M.
Black Powder Cartridges,	34 00 "
Primed Shells,	18.00 "
BULLETS, (255 grains,)	10.50 "

Adapted to Winchester Repeating Rifles, Model 1886.

☆

Lubricated Wire Patched Bullet, 255 grains,
SMOKELESS POWDER, 18 grains.
BLACK POWDER, 68 grains.

Smokeless Powder Cartridges,	$43 00 per M.
Black Powder Cartridges,	36.00 "
Primed Shells,	24.00 "
BULLETS, (255 grains,)	10.50 "

Figure 7. NPW catalog, .38 caliber bullets. Note that the wire wrapping is completely seated within the case. (Photo courtesy of Mike Boccaccio)

last Grand Rapids listing given for National Projectile Works—it no longer appeared in the city directory. Elmer Lisle recalled that "great plans were being made for expansion in the near future but then reorganization of the company took place, misunderstandings, and finally Mr. Lisle went to Canada to sell his Canadian patents and the company started on the downgrade due to lack of manufacturing skill."[3] However, by 1907, Armstrong had acquired control of the National Projectile Works and relocated it to Ontario, California, where it was incorporated on April 8, 1908 by the State of California.

NAPA, CALIFORNIA (1906-1917)

At the time of the West Coast incorporation, the company directors were listed as H.E. Swan, E.H. Richardson, S.G. Berger, E.V. Caldwell and J.R. Pollock; all listing their residences as Ontario, California. The *Sporting Goods Trade Directory* for 1909 and 1912 listed the firm in Ontario. However, the 1913 edition listed it in Napa, California. The Napa lubricated wire-patched bullets are found packaged in boxes marked "National Cartridge Company" of Napa, California (Figures 10 and 11). Lisle was no longer around to insure that tooling was adequate to the firm's mission and unfortunately, Armstrong was not noted for his mechanical engineering genius. From Napa, the reputation and quality of Lisle's original lubricated wire patched projectile began a downward slide that eventually resulted in the demise of the firm.

The National Projectile Works faded momentarily from the commercial scene as the move from Grand Rapids to California was taking place. During that hiatus, Charles P. Watson of Pittsburgh, Pennsylvania obtained a patent for an improved wire-wrapped bullet that also offered a two-part bullet with a hard mushrooming nose and a gas check. This competitive wire-wrapped bullet went into production as the Watson Wire Wound Projectile Company and their

Figure 8a. (above) .30-30-160 Marlin Blue label box.
Figure 8b. (right) .30-30 bullet

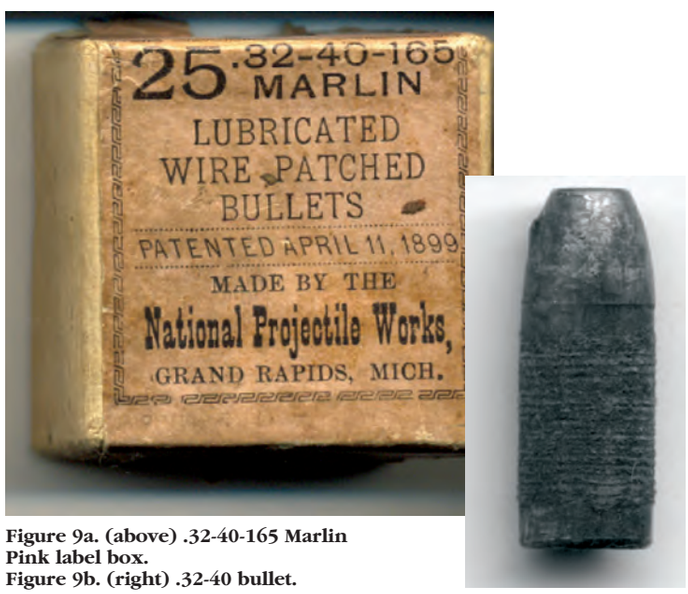


Figure 9a. (above) .32-40-165 Marlin Pink label box.
Figure 9b. (right) .32-40 bullet.

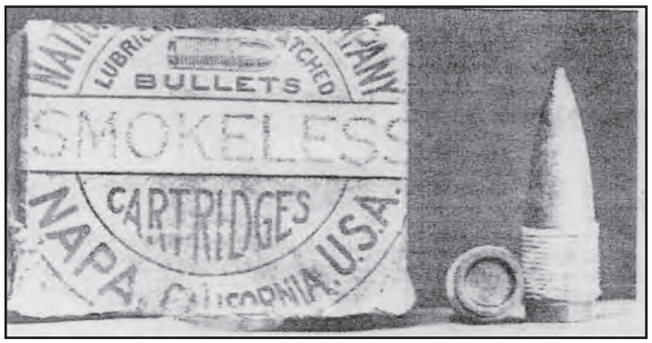


Figure 10. .30 cal. cartridge box label and wire wound bullet from National Cartridge Company, Napa, California. From this cartridge box, it would appear that the NPW segued into a more marketable corporate title known as the National Cartridge Company. (Photo courtesy of *The Cartridge Collector*)

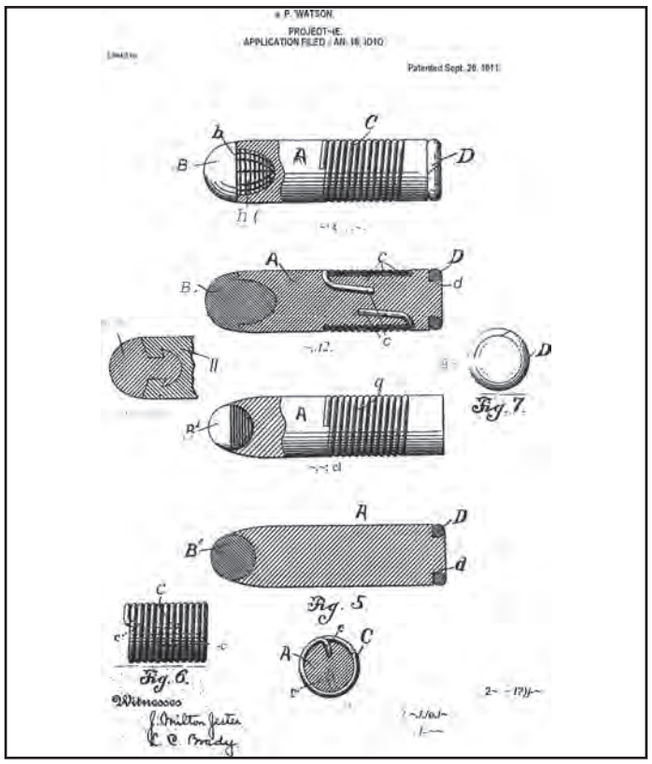


Figure 11. Watson's Wire Wrapped Projectile, U.S. Patent 1,004,510 filed January 13, 1910 and issued September 26, 1911. A hard (aluminum) expanding nose bullet with O-ring type gas check and a hard jacket formed of a coil of German silver inserted in the mold before the lead body is poured, which thoroughly embeds the ends and gas check.

advertisement ran in *Outers Book* Magazine (ca. 1910-14) showing the company as being located in Alvord, California.[4]

Writing almost 35 years removed from the active life of the National Projectile Works, the final word about the company was provided by Col. Townsend Whelen (Figure 12) who had this to say regarding the California-produced lubricated wire patched bullet:

> *A fine flop, which was hung on the rifle shooting public just prior to the 1st World War–the famous "wire wound bullet" which was designed and marketed by a firm in California. This freak consisted of a plain alloy bullet having its base protected by a heavy cup, or gas check, of copper, above which was wound several turns of insulated copper wire having its ends cast into the lead core. The windings were then well lubricated. Upon being fired, these windings naturally unwrapped and from then on the chief feature of this bullet came from the musical notes given forth as the wire tore loose. It was utterly worthless for any practical use when fired from a high velocity rifle."*[5]

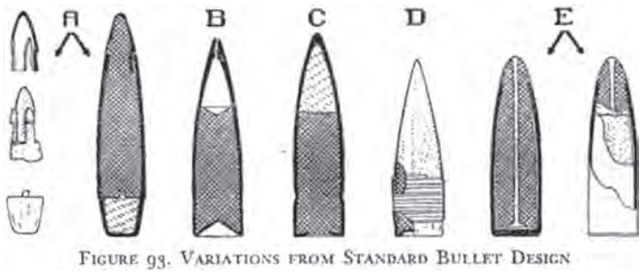


FIGURE 93. VARIATIONS FROM STANDARD BULLET DESIGN

Figure 12. Whelen's Variations From Standard Bullet Design. Note bullet design D shows a wire-wrapped military style bullet.

Public notice of the demise of the company was supplied by the *Marvyn Scudder Manual of Extinct or Obsolete Companies*, which informs us that the company's charter was forfeited March 28, 1917, for failure to pay its state license tax. Subsequently, a California court decree was signed on August 13, 1917 approving dissolution of the corporation.

LISLE'S FURTHER CAREER

By January 1909 Lisle appears to have moved to Canada where, as a United States citizen residing in Toronto, Ontario, he filed U.S. Patent # 970,248 issued Sept. 13, 1910 for sealing revolver cylinders to prevent the escape of propellant gases (Figure 13). Lisle found that there was as much as a 50% loss of pressure resulting from gas leakage between the cylinder and the barrel. Lisle assigned a one-fourth interest in this patent to Vincent Robinson of Toronto. James Gooding (*Canadian Gunsmiths*) lists gunsmith Henry T. Robinson of Toronto as being active in 1895. Vincent Robinson was probably related to Henry. This .44 caliber hammerless revolver was described in a 1910 sporting magazine as combining the Colt model 1898-shaped grip with the Nagant method of moving the cylinder forward to seal the rear of the barrel, thus making the revolver gas-tight."

Also from Toronto, Lisle produced his "Handy Gun," (Figures 14–17) designed as a cheap weapon and animal trap gun for trappers, ranchers, woodsmen and others who had need of a general purpose weapon requiring little care. It was constructed entirely of heavily japanned malleable cast iron, with the exception of the mainspring. The firing

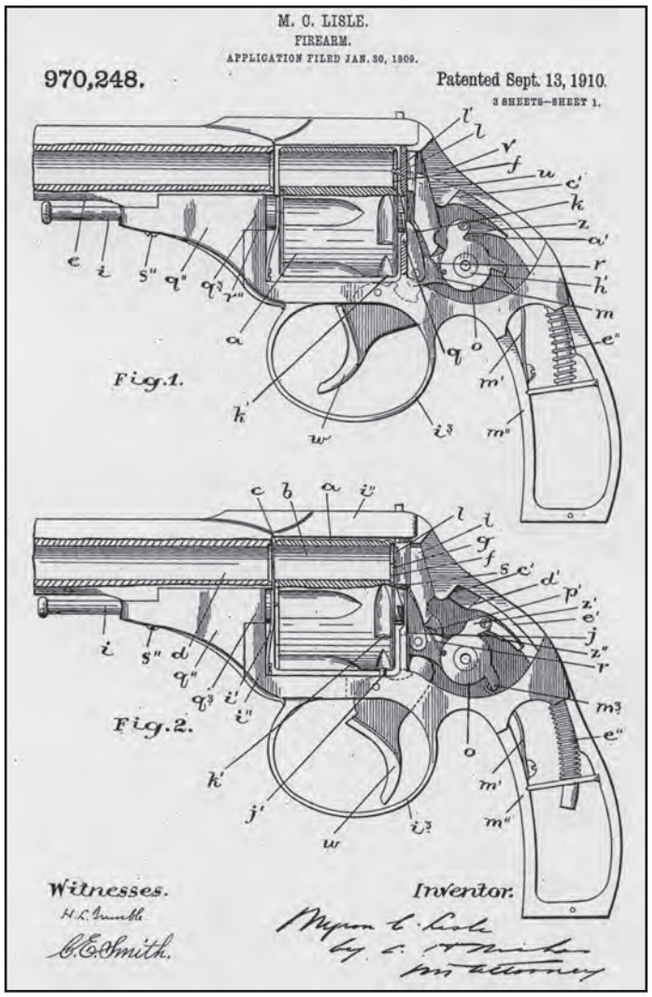


Figure 13. M.C. Lisle U.S. Patent was an improvement to seal gas leakage from a revolver cylinder.

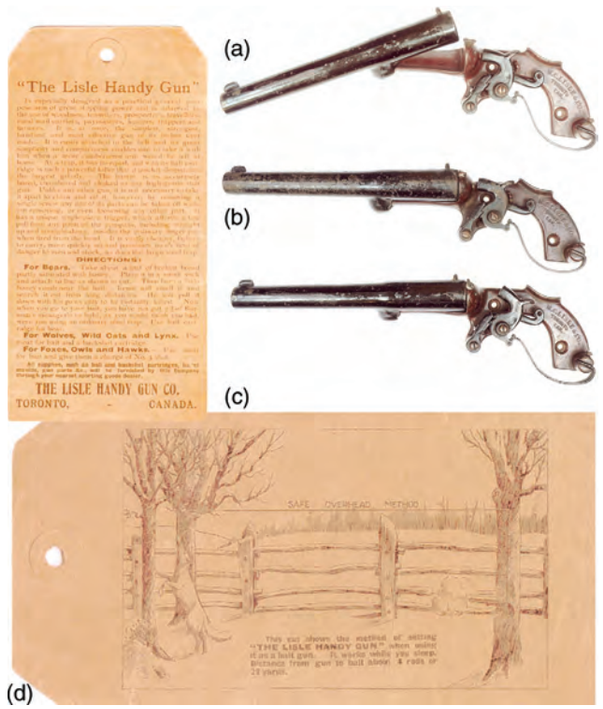


**Figure 14. (a) M.C. Lisle "Handy Gun" trapper's model.
(b) "Handy Gun" at half cock position (top), and at full cock position (bottom). Note two screw holes for attaching gun to a tree.
(c) The Lisle "Handy Gun" hang tag (obverse) indicating that the barrels were bored, chambered and choked as any high grade shotgun together with recommendations for the best type of bait to use for different animals. The Lisle Handy Gun Co. also furnished ball and buckshot cartridges, bullet molds and gun parts through local dealers.
(d) Hang tag (reverse) with illustration of a "safe overhead method" setup when using the "Handy Gun" as a bait gun. (Photo courtesy of Melvin W. Flanagan). (See Attachment A for full text.)**

mechanism consisted of a hammer, sear, and mainspring—all externally mounted on the frame. The 16-inch, 12-gauge tip-up barrel had minimal sights. The cast iron handgrip was marked "M.C. LISLE & Co./TORONTO/CAN." The trigger—sear could be released by a trip string/wire leading directly to bait. The butt was provided with an appropriate hole so that it could be nailed, screwed or tied to a tree.

**Figure 15. (a) Detail showing "Handy Gun" grip markings. Note the screw hole in the frame for mounting. (Photo courtesy of Donald M. Blyth)
(b) Detail showing "Handy Gun" barrel marking "Pat. Apld. For." To date, an issued patent for the "Handy Gun" has not been found. (Photo courtesy of Melvin W. Flanagan)**

Figure 16. Right side of the "Handy Gun" showing the barrel's tip-up lever. (Photo courtesy of Donald M. Blyth)

The Handy Gun was also supplied with a detachable iron skeleton stock having a minimal cheek rest so that it could be fired from the shoulder.[6] Ouch!

In the 1910 U.S. Census, Myron C. Lisle (age 57) and his wife Bessie (age 50) were listed as living in Milwaukee, Wisconsin. The birthplace for Lisle was given as New York, the same as both of his parents. His birth year was provided as ca. 1853. The 1920 U.S. census lists Bessie Lisle as a widow, still residing in Milwaukee. Her son Elmer L. whose occupation was recorded as "machinist shop," and her daughter Ina M. Lisle "electrician repairer" were listed as living with her.

LISLE FOOTNOTE

Myron C. Lisle also originated the following rifle patents filed while a resident of Grand Rapids:

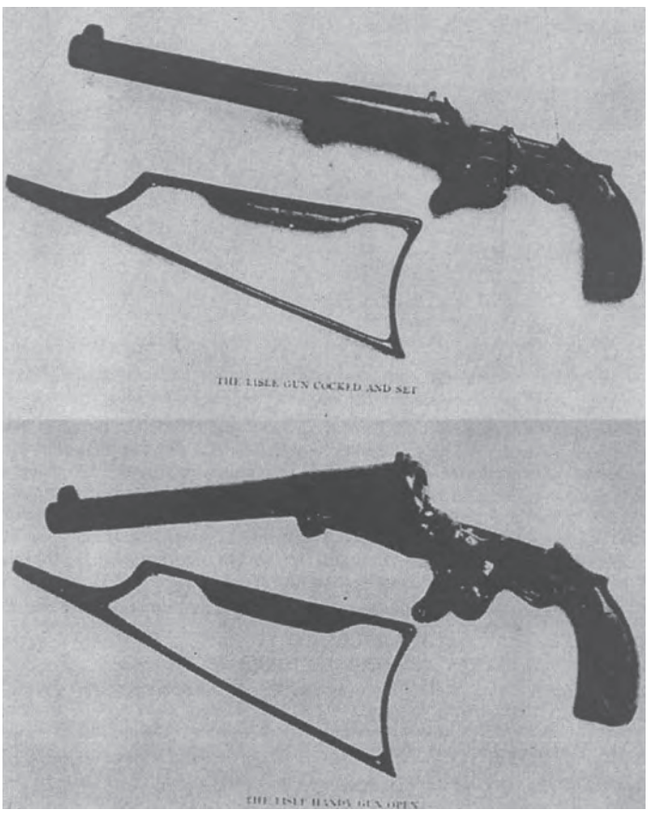


Figure 17. Illustration from the November 1910 issue of *Outers Magazine*, showing the Lisle Handy Gun with its shoulder stock. (Photo courtesy of Larry S. Sterett)

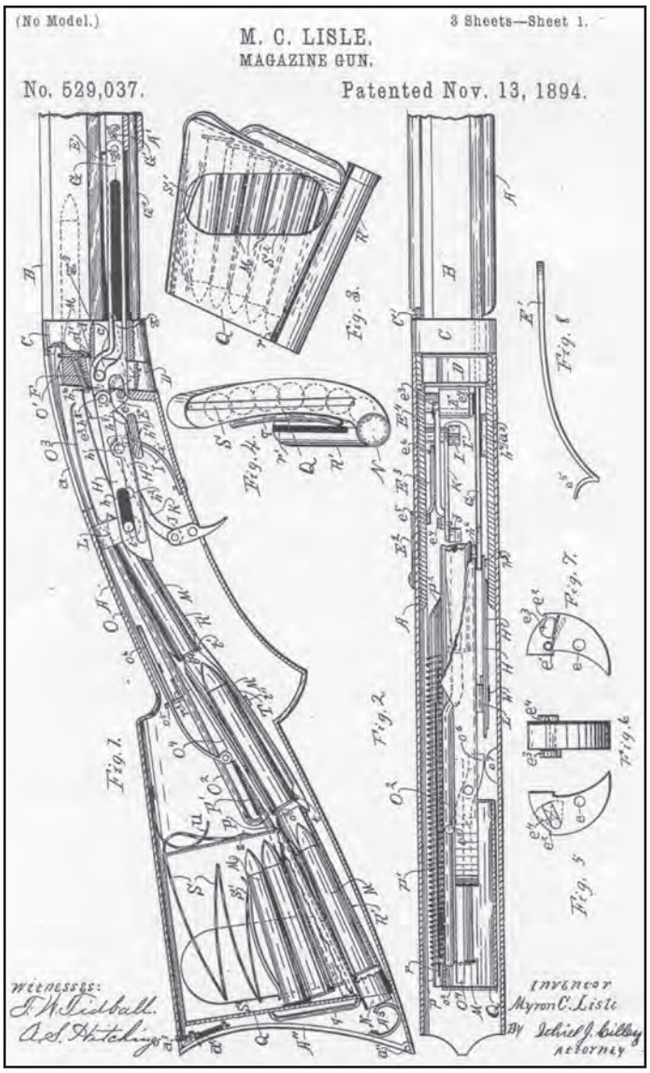


Figure 18. A pump action magazine rifle with a vertically-sliding breechblock.

- U.S. Patent # 529,037 issued Nov 13, 1894: a pump action magazine rifle with a vertically-sliding breechblock (Figure 18). Lisle assigned a half interest to William A. Berkey of Grand Rapids.
- U.S. Patent # 536,960 issued Apr 2, 1895: a lever-action magazine rifle utilizing a rotary magazine in the buttstock (Figure 19).
- U.S. Patent # 609,445 issued Aug 23, 1898: pump action magazine rifle (Figure 20). Lisle assigned eleven-twentieths of his right to this patent to William A. Berkey and James Bayne of Grand Rapids.
- U.S. Patent # 695,819 filed January 26, 1900 and issued Mar 19, 1902: a breech-loading rifle utilizing a crank-handle bolt action to manually force the projectile into the rifled portion of the barrel (Figure 21). This required using a modified form of cartridge with "inwardly pressed bead

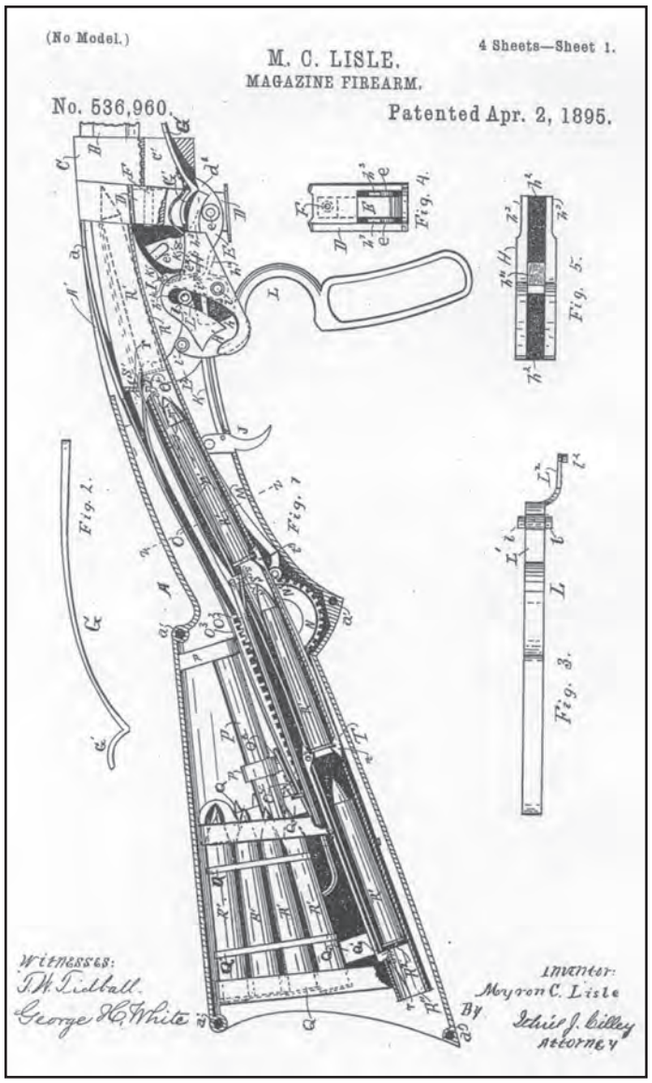


Figure 19. A lever-action magazine rifle utilizing a rotary magazine in the buttstock.

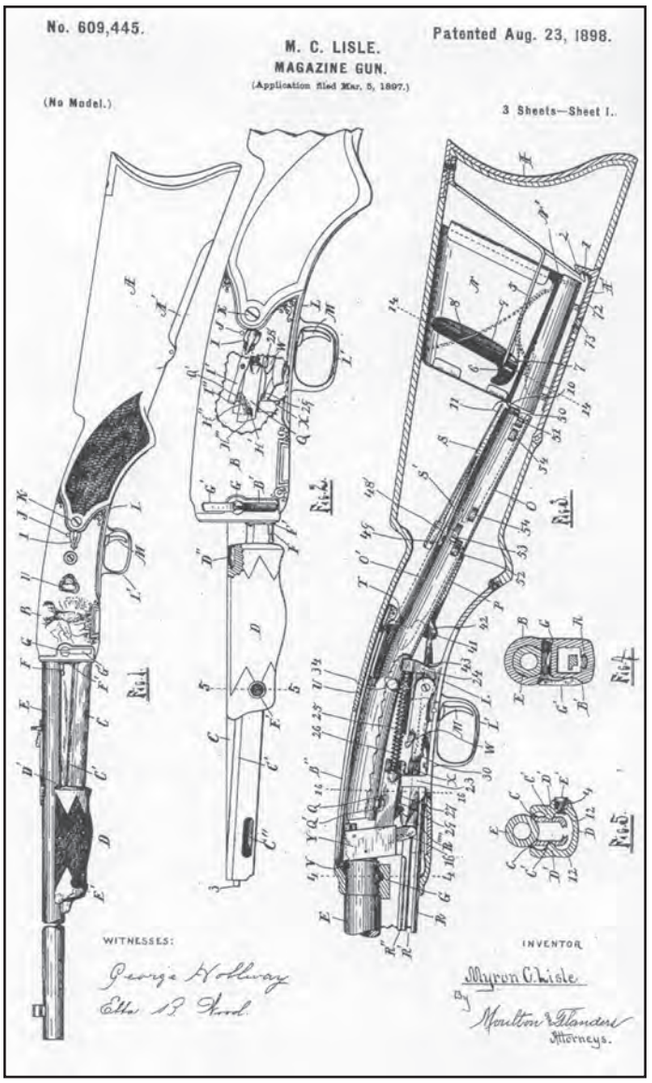


Figure 20. A pump action magazine rifle.

formed in the shell to engage the rear end of the projectile and prevent it from being pressed further into the shell."

A half interest in Lisle's 1902-issued breech-loading rifle patent was assigned to Frank A. Simonds who was listed in 1901 as Secretary of the Rapid Rifle Company Ltd. of Grand Rapids. In the city directory they were listed as manufacturers of air rifles and bicycles, notably of a spring air gun (Patent # 689,923 issued December 13, 1901), the rights to which were assigned to the Rapid Rifle Company Ltd. of Grand Rapids, Michigan.

The reason for Frank A. Simonds' relationship with Lisle is subject to conjecture because Simonds does not appear connected to the National Projectile Works. However, when viewed in relation to Lisle's several firearms patents, and his natural desire to see them come to fruition, it may be construed that Simonds was in a position to dangle the lure of a manufacturing resource for Lisle's rifles. In 1898 Simonds was listed as Secretary and Manager of Butterworth & Lowe Company, founders and machinists, also known as the Grand Rapids Iron Works, whose assets were available to the Rapid Rifle Company. At that juncture, Lisle was probably enticed to offer Simonds a half interest in both his second projectile patent as well as the bolt-action rifle patent, and half interest in two of his other patents to William A. Berkey, in order to gain momentum in advancing production of his firearms. It is not apparent if any of Lisle's rifle patents were ever placed into production.

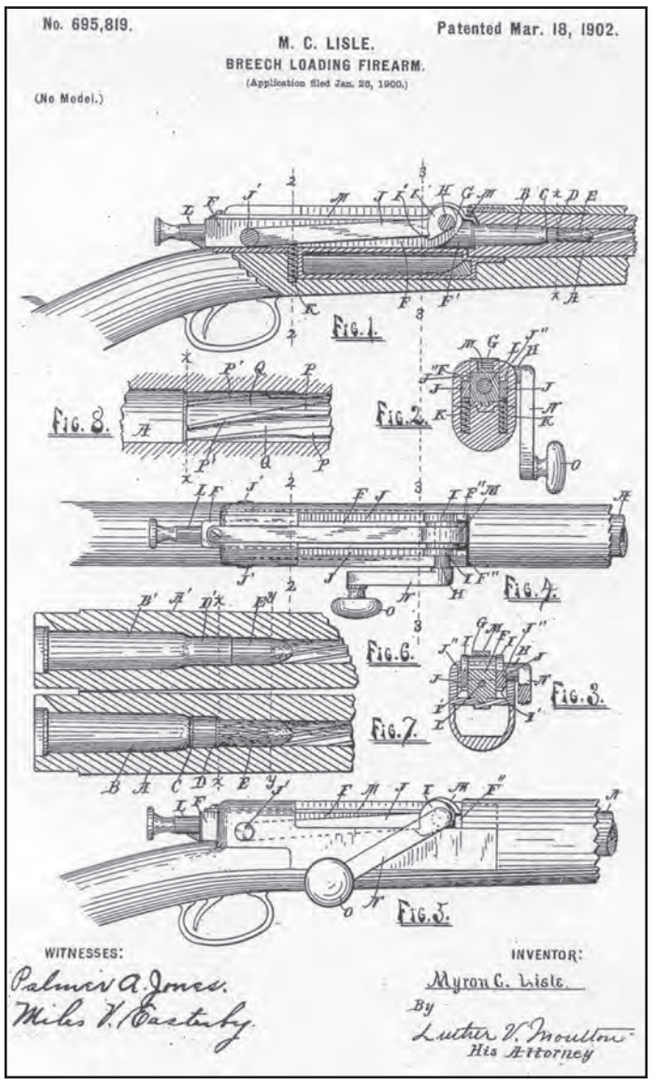
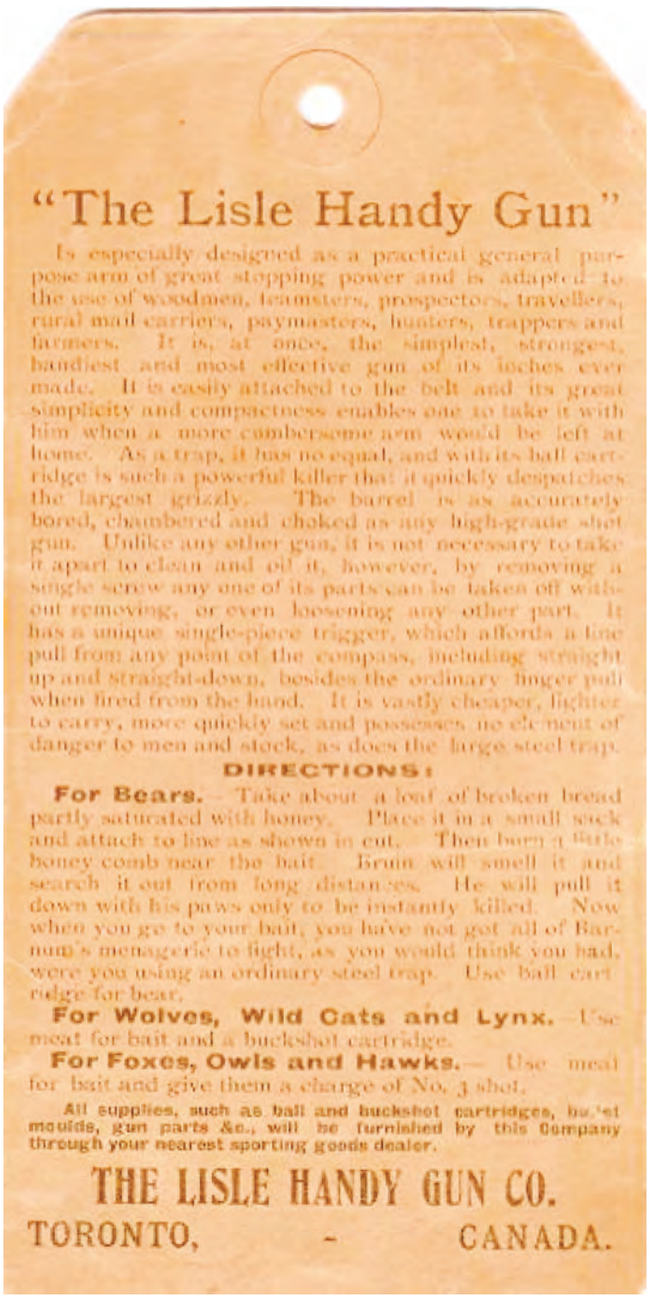


Figure 21. A breech-loading rifle utilizing a crank-handle bolt action to manually force the projectile into the rifled portion of the barrel.



"The Lisle Handy Gun"

Is especially designed as a practical general purpose arm of great stopping power and is adapted to the use of woodmen, teamsters, prospectors, travellers, rural mail carriers, paymasters, hunters, trappers and farmers. It is, at once, the simplest, strongest, handiest and most effective gun of its inches ever made. It is easily attached to the belt and its great simplicity and compactness enables one to take it with him when a more cumbersome arm would be left at home. As a trap, it has no equal, and with its ball cartridge is such a powerful killer that it quickly despatches the largest grizzly. The barrel is as accurately bored, chambered and choked as any high-grade shot gun. Unlike any other gun, it is not necessary to take it apart to clean and oil it, however, by removing a single screw any one of its parts can be taken off without removing, or even loosening any other part. It has a unique single-piece trigger, which affords a line pull from any point of the compass, including straight up and straight-down, besides the ordinary finger pull when fired from the hand. It is vastly cheaper, lighter to carry, more quickly set and possesses no element of danger to men and stock, as does the large steel trap.

DIRECTIONS:

For Bears. Take about a loaf of broken bread partly saturated with honey. Place it in a small sack and attach to line as shown in cut. Then burn a little honey comb near the bait. Bruin will smell it and search it out from long distances. He will pull it down with his paws only to be instantly killed. Now when you go to your bait, you have not got all of Barnum's menagerie to fight, as you would think you had, were you using an ordinary steel trap. Use ball cartridge for bear.

For Wolves, Wild Cats and Lynx. Use meat for bait and a buckshot cartridge.

For Foxes, Owls and Hawks. Use meat for bait and give them a charge of No. 3 shot.

All supplies, such as ball and buckshot cartridges, bullet moulds, gun parts &c., will be furnished by this Company through your nearest sporting goods dealer.

THE LISLE HANDY GUN CO.

TORONTO, - CANADA.

Attachment A

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5. Whelen, p. 317-318.

6. Sterrett, p. 12-14.

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