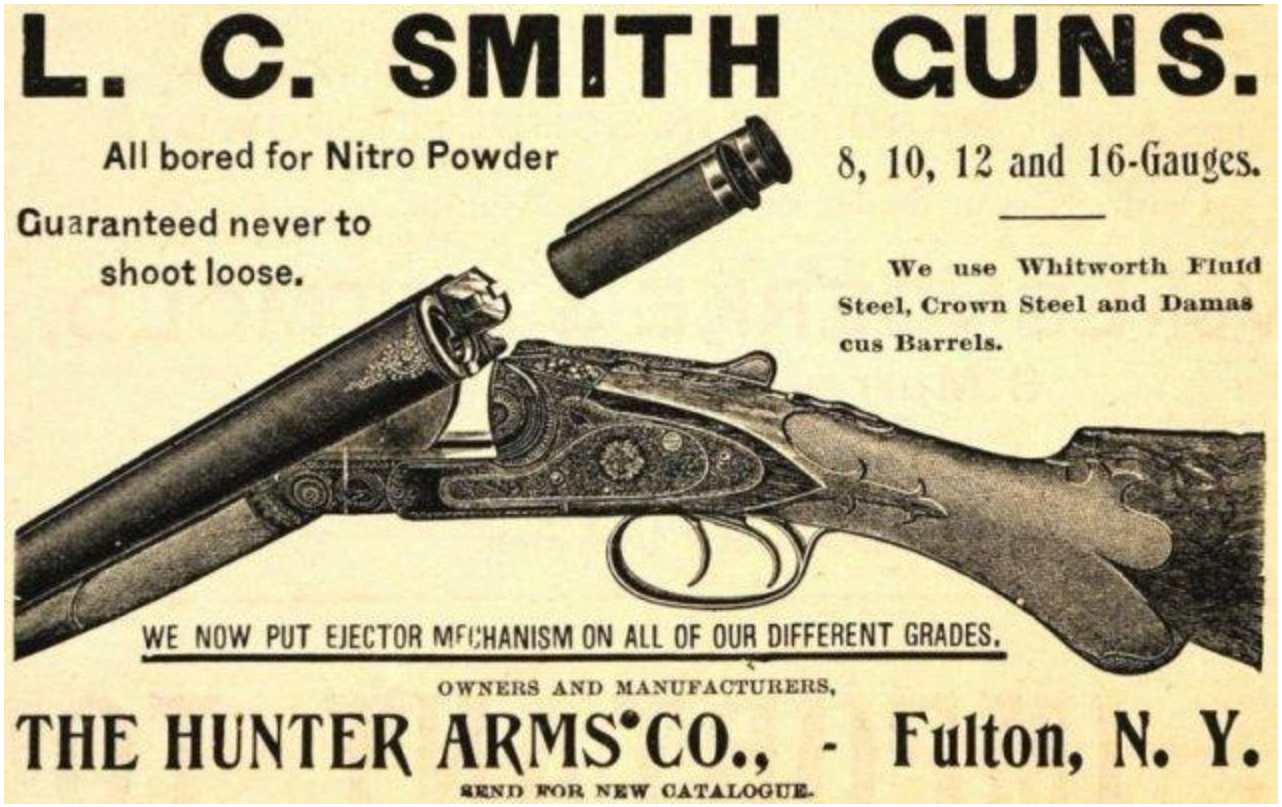
U.S. Makers Barrel Sources



When the L.C. Smith Top-Action Double Cross-Bolted Breech-Loading Double Barrel "Bar Action" Hammer Gun was introduced by L.C. Smith Maker, Syracuse in 1884, and the "New L.C. Smith Hammerless Gun" using Alexander Brown's rotary locking bolt and lock in 1886, Lyman Cornelius had little choice but to use foreign Pattern Welded (Twist, Crolle Damascus, and Laminated Steel) barrels. Since about 1880, none had been produced in the U.S., and no U.S. makers offered fluid steel barrels at that time.

The vast majority of barrels imported for the domestic makers were from Belgium, as were most of barrels fitted to guns manufactured in England. John Henry Walsh "Stonehenge" reported in *The Shot-gun and Sporting Rifle* in 1859 that "quite three-fourths of the tubes used in Birmingham are Belgian make**,** and nearly all the London trade use them…"

The McKinley Tariff of 1890 set the average ad valorem tariff rate for imports into the United States at 48.4%. "Sporting, breech-loading double-barrel shotguns" had a 35% ad valorem PLUS an import duty of $1.50 if priced less than $6; $4 if $6-$12; and $6 if priced greater than $12. "Single-barrel breech-loading shot-guns" had the same 35% ad valorem PLUS an import duty of $1. **"Forged rough shotgun barrels"** i.e. non-joined tubes, however, were exempt from the tariff which allowed the US makers to continue to import Damascus tubes from (mostly) Belgium to fit and finish here.

Sporting Life, November 30, **1895**
"How Shot Guns Are Made and the Process Through Which They Pass Fully Explained"
https://digital.la84.org/digital/collection/p17103coll17/id/54849/rec/66
The beginning of the manufacture of a gun is the barrels, and it is generally known that no barrels are made in this country except the rolled steel, which is used on the Winchester gun. **All gun barrels are now imported**, although an attempt was made a few years ago to produce them in this country, but with only partial success. England, Germany and Belgium supply most of the barrels, **the latter country doubtless producing the larger quantity.** All gun barrels, whether imported directly from the makers in Belgium, or through an importer in this country to the gun manufacturer, are **received in rough tubes**, which very much resemble a couple of gas pipes, but being somewhat larger at one end than at the other. These barrels or "tubes" as they are called, are merely tied together in pairs, with small wire and 40 to 50 pairs are packed in a box.

The Belgian gun making industry was centered in Liege, with 189 gun makers in 1891. Barrel factories were primarily in Chaudfontaine, Forêt, Fraipont, and especially Nessonvaux in the Vesdre valley. In 1896 an estimated 700 workers produced 300,000 pairs of pattern welded barrels.
In 1899, the U.S. firms of Hartley & Graham and Simmons Hardware bought 90,000 guns (not all shotguns) from Liege gun makers.

***Parliamentary Papers, Volume 122 Great Britain Parliament House of Commons* 1905**
http://books.google.com/books?id=ErkOAQAAIAAJ&source=gbs_navlinks_s
stated that Liege produced 850 **tons** of Damascus barrels; 100 tons for export, and 156,000 double barrel shotguns.
Machine-made (steel) barrels were either sold in their rough state or after being

finished off. **The annual production in Belgian factories was about 1,500,000 barrels, of which a large part is exported to America.**

Ernest Heuse-Lemoine (1834-1926) from Nessonvaux was a major barrel maker and intermediary for smaller firms in the Vesdre Valley, maintaining agents in London, Birmingham, and New York. He supplied damascus barrels for at least 50 years to U.S. makers, and is reported to have named the "Boston" and "Washington" patterns especially for the American market.

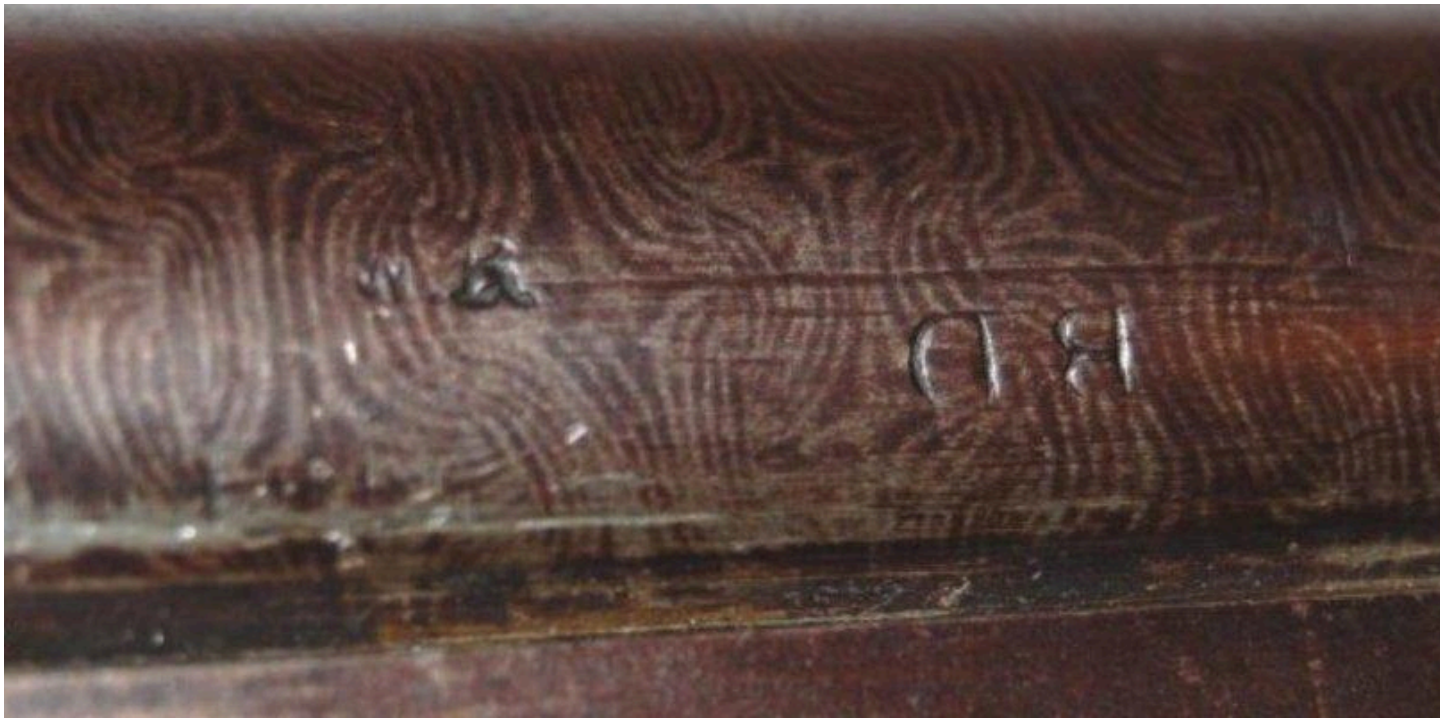
Belgian maker's marks that have been identified on barrels:

L.C. Smith: *Bauduin Doyen, Heuse-Riga Fils, Henri Heuse-Riga, George Laloux & Ernest Heuse-Lemoine*
Baker: *Charles Spirlet, Joseph Joris & Arthur-Delvaux-Heuse*
Lefever: *Arthur-Delvaux-Heuse & George Laloux*
Ithaca: *Heuse-Riga Fils*
Colt Patent Firearms Mfg. Co.: *Plunger-Riga & Heuse-Riga Fils*
Sears/A.J. Aubrey/Meriden: *Lucient Clement, Heuse-Riga Fils, and Henri Pieper*
Remington: *Henri Pieper, Simonis-Janssen* & others as yet unconfirmed including *J. Pire & Cie, another of the Janssen families, Dumoulin, Heuse-Lemoine, or Eugene Joris of Fraipont*
Syracuse Arms: *Arthur-Delvaux-Heuse*
Torkelson: *Janssen Fils & Cie*

DAMASCUS MAKERS

1905 A1 Chain Damascus with 'C', 'H', 'E' & an unknown ?importers mark.
'C' = Crucible?

‘W& ‘ and **‘BD’** Possibly ***Bauduin Doyen*** of Fraipont
1898 No. 0 with “Good Two Rod Damascus”



1902 0 grade with both **'BD' and 'EH';** possibly Ernest Heuse-Lemoine, but the trademark used by ***Heuse-Lemoine & Cie*** was a Crowned 'HL'

H.R.F. ***Heuse-Riga Fils*** c. 1910 16g Grade F hammer gun
'HHR' of ***Henri Heuse-Riga*** has also been identified on No. 0 hammerless

‘HRF’ also found on Ithaca Flues and Meriden Fire Arms Co./Sears

Hunter Arms used **Laminated Steel** on Quality No. 1 guns 1890-1898. Two Iron "Good Damascus" was used until 1907, when "Special Steel" was introduced.

SN 23404 (c. 1890) No. 1 with Laminated Steel stamped with the Provisional Birmingham Proof as applied to the rough tube.

A c. 1892 A1 with 3 Iron ‘Turkish’ crolle and Birmingham Proof also exists.

FLUID STEEL MAKERS

It was not until the turn-of-the-century that American makers, and sportsmen, began to turn away from Damascus to fluid steel barrels. Sir Joseph Whitworth's adaptation of Bessemer's principle of hydraulic pressure casting was patented in 1874. The first Purdey Pair Nos. 10614 & 10615 were delivered January 1, 1880 with the "**New Whitworth Fluid Pressed Steel.**"

Lefever Arms Co. was the first U.S. maker to supply Whitworth steel for their Optimus in 1887. Parker used Whitworth for the first AAH Pigeon Gun in 1894 SN 79964 delivered to Capt. Du Bray. Hunter Arms first offered Whitworth on the Monogram, A2, and A3 in 1895.

Along with Sir Joseph, other makers were rapidly developing fluid steel barrel methodology and barrels entered in the **Birmingham Proof House Trial Report of 1891** included "English fluid compressed steel, Whitworth process", English and Foreign steel "Siemens-Martin process", "English carburised steel, Darby's method", English "Superior Barrel Steel", and "English steel, hematite process, from pig and scrap." Whitworth barrels were three times the expense of "English machine forged 3 Rod Best Damascus" and "Foreign 3 Rod Crolle", while the other fluid steel barrels were comparable in cost.

In 1900, Jean Lejeune of Nessonvaux could supply a pair of "Boston" tubes for 10 francs; or about **2 dollars**.

The 1902 Sears, Roebuck & Co. catalog listed non-ejector Damascus barrel hammerless guns as follows: L.C. Smith No. 2 - $54, Remington 1894 A grade with "Two Stripe Damascus" - $35, 1894 B grade - $45, Ithaca No. 2 - $37.50, Baker A grade - $37.50, and Parker GH - $58.20.
The 1903 H.H. Kiffe Co., New York catalog shows the Smith No. 0 Damascus non-ejector at $35.25, with "Discount allowed for Cash with order."

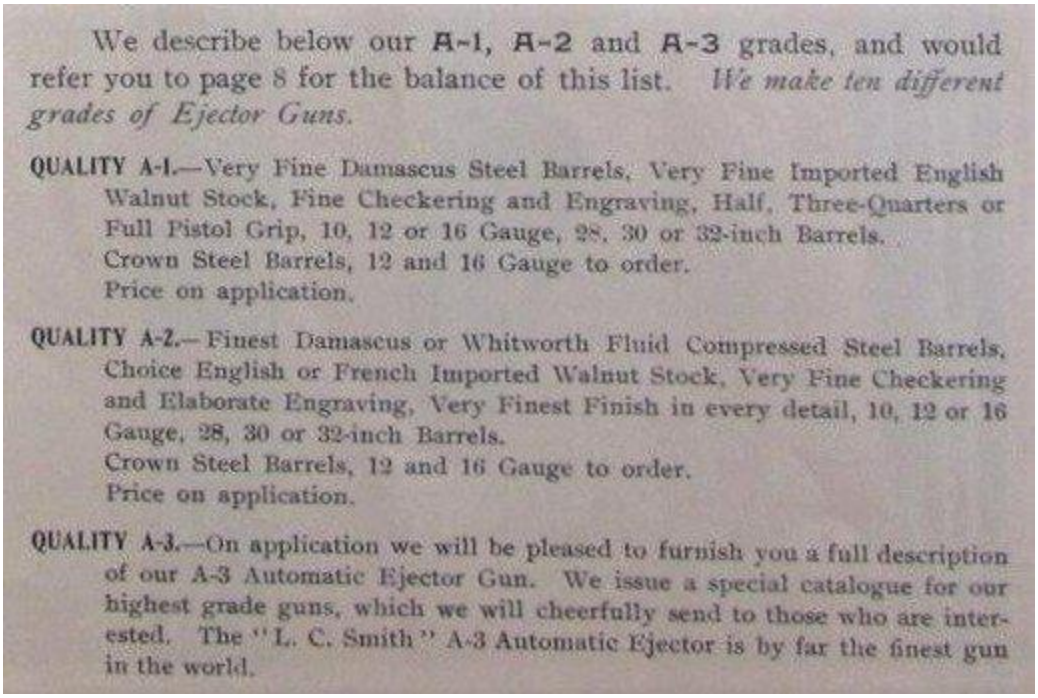
It would have been very difficult to justify sourcing fluid steel barrels from a foreign or domestic maker unless the tubes could be purchased at a similar

favorable cost.

Hunter Arms was one of the earliest American makers to offer fluid steel on other than the highest grade guns. **Crown** steel first appeared with the Pigeon Gun in 1893, offered for the A-2 and A-1 (SN 1130) in 1894, was also used for the No. 3 about 1895, and in 1898 for the No. 2. The Hunter Bicycles 1897 Catalog listed "Hunter Crown Steel Tubing".

c. 1895 L.C. Smith Pigeon Gun courtesy of Mike Yonker

1895 Hunter Arms catalog
Quality A-2 through No. 3 & Pigeon were offered with Crown Steel



We describe below our **A-1, A-2** and **A-3** grades, and would refer you to page 8 for the balance of this list. *We make ten different grades of Ejector Guns.*

QUALITY A-1.—Very Fine Damascus Steel Barrels, Very Fine Imported English Walnut Stock, Fine Checkering and Engraving, Half, Three-Quarters or Full Pistol Grip, 10, 12 or 16 Gauge, 28, 30 or 32-inch Barrels.
Crown Steel Barrels, 12 and 16 Gauge to order.
Price on application.

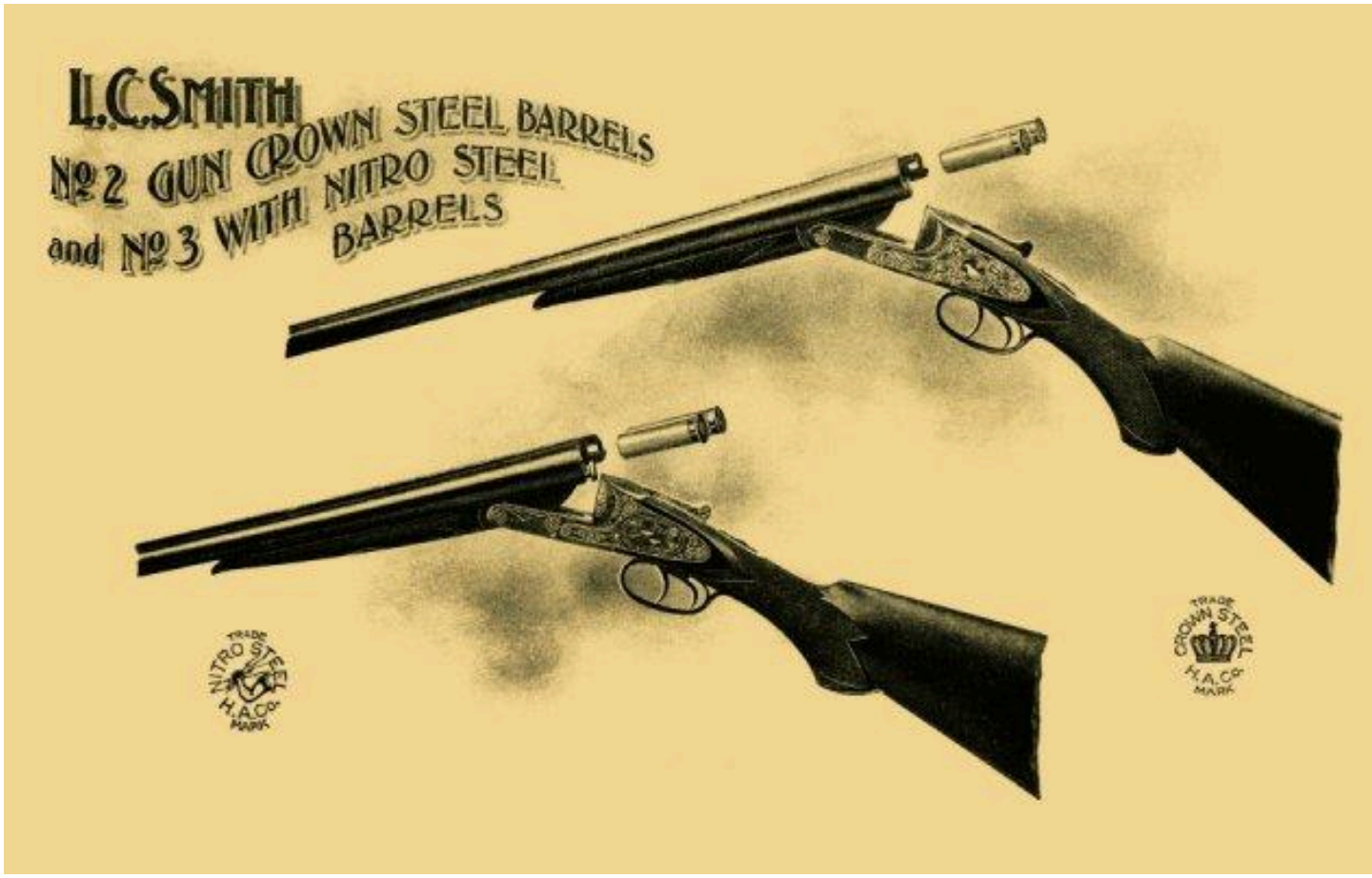
QUALITY A-2.—Finest Damascus or Whitworth Fluid Compressed Steel Barrels, Choice English or French Imported Walnut Stock, Very Fine Checkering and Elaborate Engraving, Very Finest Finish in every detail, 10, 12 or 16 Gauge, 28, 30 or 32-inch Barrels.
Crown Steel Barrels, 12 and 16 Gauge to order.
Price on application.

QUALITY A-3.—On application we will be pleased to furnish you a full description of our A-3 Automatic Ejector Gun. We issue a special catalogue for our highest grade guns, which we will cheerfully send to those who are interested. The "L. C. Smith" A-3 Automatic Ejector is by far the finest gun in the world.

Late 1890s Hunter Arms' shipping records often include the notations ECS (Crown), ENS (Nitro), ED (Damascus), E Lam., E Twist and OS (unknown).

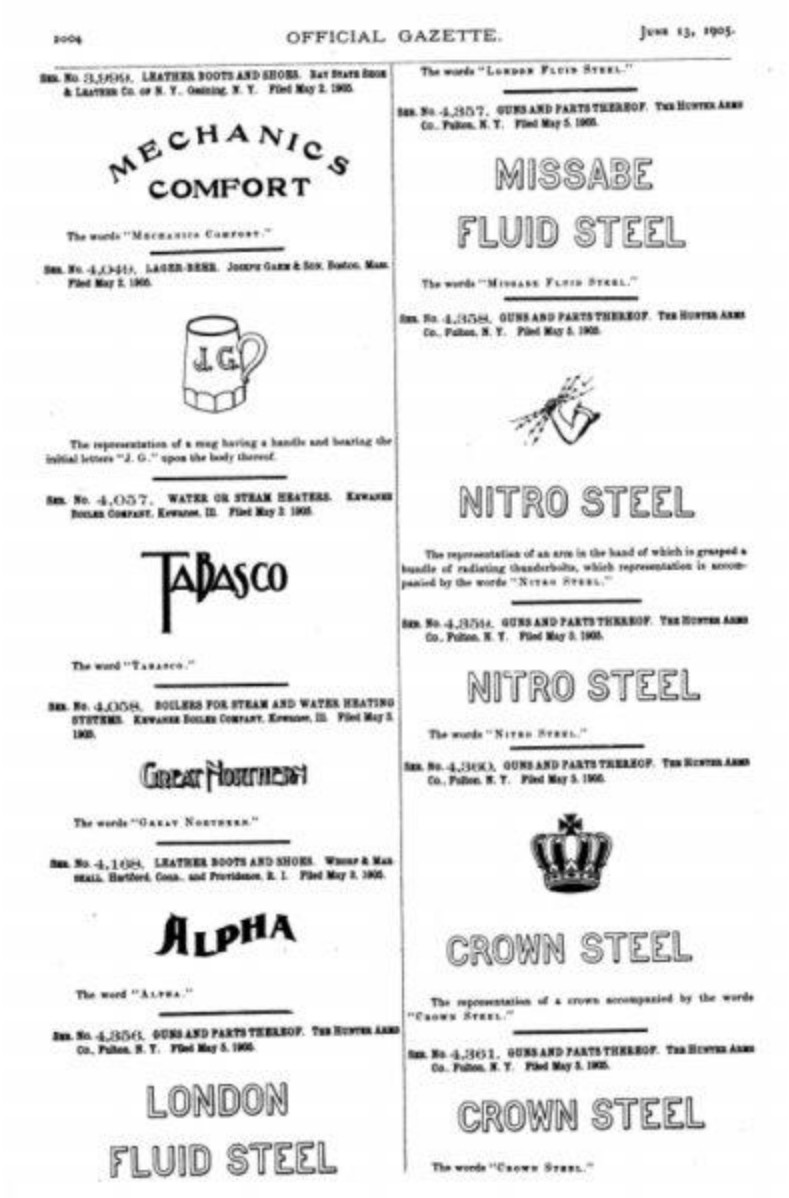
c. 1901 - 1903 **Ithaca Gun Co.** No. 3 and above models have been identified with "Crown Steel" marked on the top of the barrels

Hunter Arms **Nitro** steel was introduced in 1897 for the A-2, A-1, No. 3 and Pigeon and later the No. 4 and No. 5.
In 1898 **Armor** steel appeared with the introduction of the No. 00, and **Royal** steel for the F grade hammer gun.
London steel was used for the No. 0 and **Special** steel for the No. 1 in 1907.



"**Fluid Steel-Krupp Essen**" barrels were cataloged as an available option 1900-1905, but the tubes were likely produced by *Acier Cockerill Liege* under license from Krupp.
"Monogram, Premier & Deluxe Steel" (likely Crucible sourced) were offered c. 1918-1922

Fulton tradename barrels were marked "Royal Steel", "Special Smokeless Steel", "London Fluid Steel", "Peerless Steel", "Fluid Blued Steel", "Projectile Steel", "Silver Steel", "Blue Diamond Steel", "Faultless Steel", and "Missabe Fluid Steel" on "Comstock Arms Co. Duluth" guns. The Mesabi Iron Ore Range is the largest iron deposit in NE Minn.



2004 OFFICIAL GAZETTE. JUNE 13, 1905.

No. 33,666. LEATHER BOOTS AND SHOES. Bay State Shoe & Leather Co. of N. Y., Gaining, N. Y. Filed May 2, 1905.

MECHANICS COMFORT

The words "Mechanics Comfort."

No. 4,043. LAGER-BEER. Joseph Gans & Son, Boston, Mass. Filed May 2, 1905.

J.G.

The representation of a mug having a handle and bearing the initial letters "J. G." upon the body thereof.

No. 4,057. WATER OR STEAM HEATERS. Kewanee Boiler Company, Kewanee, Ill. Filed May 3, 1905.

TABASCO

The word "Tabasco."

No. 4,058. BOILERS FOR STEAM AND WATER HEATING SYSTEMS. Kewanee Boiler Company, Kewanee, Ill. Filed May 3, 1905.

Great Northern

The words "Great Northern."

No. 4,168. LEATHER BOOTS AND SHOES. Whitney & Mansell, Hartford, Conn., and Providence, R. I. Filed May 8, 1905.

ALPHA

The word "Alpha."

No. 4,356. GUNS AND PARTS THEREOF. The Hunter Arms Co., Fulton, N. Y. Filed May 5, 1905.

LONDON FLUID STEEL

The words "London Fluid Steel."

No. 4,357. GUNS AND PARTS THEREOF. The Hunter Arms Co., Fulton, N. Y. Filed May 5, 1905.

MISSABE FLUID STEEL

The words "Missabe Fluid Steel."

No. 4,358. GUNS AND PARTS THEREOF. The Hunter Arms Co., Fulton, N. Y. Filed May 5, 1905.

NITRO STEEL

The representation of an arm in the hand of which is grasped a bundle of radiating thunderbolts, which representation is accompanied by the words "Nitro Steel."

No. 4,359. GUNS AND PARTS THEREOF. The Hunter Arms Co., Fulton, N. Y. Filed May 5, 1905.

NITRO STEEL

The words "Nitro Steel."

No. 4,360. GUNS AND PARTS THEREOF. The Hunter Arms Co., Fulton, N. Y. Filed May 5, 1905.

CROWN STEEL

The representation of a crown accompanied by the words "Crown Steel."

No. 4,361. GUNS AND PARTS THEREOF. The Hunter Arms Co., Fulton, N. Y. Filed May 5, 1905.

CROWN STEEL

The words "Crown Steel."

Parker **Titanic** **s**teel barrels were offered for Grades 3 - 6 from 1897 until the introduction of **Acme** **s**teel for Grades 4 - 6 around 1910.

In 1895, Parker completed a run of 14 DH and 1 BH with **Vulcan** steel barrels; the Grade 0 VH was introduced in 1899 with **Vulcan** steel. **Parker Special Steel** barrels appeared on the Grade 2 GH in 1908, and the Grade 1 PH & NH received **Parker Steel** in 1917.

Feb. 26, 1898 *Sporting Life*
Parker Bros., makers of hammer and hammerless shotguns have issued the following special notice:
We can now supply you with a plain black barrel that we do not hesitate to recommend as a hard, tough and thoroughly reliable barrel, and in consequence is suitable for shooting nitro powders.
We unhesitatingly recommend them for trap and pigeon guns when a party desires a barrel similar to the Whitworth Fluid Pressed Steel.
We have decided to name them "Titanic Steel", by which name they will be known, and stamped on the top rib. They will be made in the $100, $150 and $200 list, and will be kept up to the high standard that has characterized our guns of these grades.
PARKER BROS., Meriden, Conn.

Lefever Arms Co. was the first U.S. maker to supply Whitworth steel for their Optimus in 1887. The first Lefever with **Krupp** steel barrels was in 1894.
c. 1904 B, C, D & E grades were offered with Krupp steel.
c. 1900 C & D grades may have **Ordnance Steel** barrels.
In 1904 Lefever listed the DS with **Dura (or Duro) Nitro** Steel, G with **Royal Nitro** Steel, and the F with **Premier Nitro** Steel.
The H with **Carman** Fluid Steel was offered about 1908
Iron Age, April 2, 1908
https://books.google.com/books?id=5U0cu_tHZy8C&pg=PA1139&lpg
Hunter-Trader-Trapper, August 1912
https://books.google.com/books?id=Uy7OAAAAMAAJ&pg=RA4-PA73&lpg
I have not found a Carman steel mill, but the barrels may refer to Edwin Carman
https://en.wikipedia.org/wiki/Edwin_Salisbury_Carman

The **J. Stevens Arms & Tool Co.** Model 270 was listed with **Nitro** steel, after 1904 the lower grade **Tobin** doubles were fitted with **DeMoya Fluid Steel** and **Trojan Nitro Steel** barrels, and the 1920s **Folsom/Crescent American Gun Co.** "Midget Field Model" was listed with **Nitro** steel barrels, though most were **Armory Steel**, as were the **A.J. Aubrey/Meriden Fire Arms**.

The 1907 **Union Fire Arms** catalog listed the Model 22 double with "Imported **Nitro-steel** Barrels"

Steel barrels were introduced on Remington 1894 Hammerless Double in the **Remington Arms Co.** April 1897 catalogue (courtesy of Dave Noreen.)
Remington (Decarbonized) **Steel** sold for the same price as the ordinary Damascus barrels on A-grade guns, and was described in the catalogue as "manufactured in our own works…"
"**Ordnance Steel** is of the highest grade, and is especially recommended for heavy charges of nitro powder. The tensile strength of this steel is 110,000 lbs., and elastic limit 60,000 lbs., this being greatly in excess of any strain to which shotgun barrels are subjected with reasonable loads of nitro powders."
"Ordnance Steel" barrels were offered at the same price as the fancier Damascus barrels on grades C and above, but cost a $10 premium on A- and B-Grades when introduced in 1897, and climbed to $15 by the 1899 catalogue and remained so through the 1909 catalogue.
For more information see
https://www.remingtonsociety.org/pre-wwi-shotgun-barrel-steels/

In 1897, **Baker Gun & Forging** introduced the $100 Pigeon Gun with **Whitworth** steel barrels. About 1906 the Batavia Special with **Homo-tensile** steel, S with **Flui-Tempered** steel, the L grade Trap with **Holland Special Steel**, and R (replacing the A grade) with **Krupp** steel were available.

> *The Baker Gun Quarterly*, Volume 1, No. 5, July **1895**
> "A Visit To The Gun Factory"
> Believing it would interest our many readers to know something of how shot guns are made, we invite you to go with us through the factory and see something of the way it is done. We will first visit the receiving room, where all stock for the factory use is brought. We here find barrels in boxes, barrels in racks and barrels in various places, seemingly in the utmost confusion. Inquiry of the stock keeper develops the fact that instead of chaos, all is in perfect order.
> We find that **there are no shot gun barrels made in the United States**

> **except the plain steel barrel**, which is known under various names, as decarbonized steel, silver steel, acme steel, etc., but it is the same old, steel barrel and varies but slightly in the hardness and durability of the metal.
>
> *The Baker Gun Quarterly,* November, 1904
> "All our barrels are specially made for us by the best European barrel makers."

Hunter Arms catalogs and advertisements from the late 1890s into the 1930s frequently carried the statement that "These barrels are made especially for us and are used exclusively by us."

That is not to say, however, that the tubes were made in the U.S.

June 22, **1895** ***Sporting Life***
How the L. C. Smith Gun Game to be the Staple Article It Now Is In Sportsmen's Circles - History of Its Rise and Progress.
Another grade of gun which the Hunter Arms Company placed on the market, through the effort and study of Harvey McMurchy, is the **L. C. Smith "Pigeon Gun."** Ever ready to recognize the wants of the trap-shooter they brought out this last year a new grade of this celebrated gun. This grade, like the others of this company, combines the strength and durability features that made their first hammerless gun so popular. **The barrels on this new gun are the new Crown steel barrels**, **which are made expressly to their order** and are harder than Damascus; also stronger, which makes them very popular among sportsmen. The metal is extra thick at the breech and of good strength at the muzzle, being especially adapted to stand the tremendous strain of many excessive loads of Nitro powder which has proven so disastrous to guns of other makes. This pigeon gun is strictly a high grade, made at a very reasonable price. The grip is made straight regularly, but can be made half, three quarters, or full pistol grip, if so ordered. The engraving is appropriate to a gun of this character and is of neat design and finish. The price of this pigeon gun is listed at $125, and with ejector principle $150.

Hunter Arms shipping records show the first run of 10 Pigeon Grade guns (SNs 37209 to 37218) was started in May **1893**

Hunter Arms ads in ***Sporting Life*** for **1896 & 1897** list Crown but **not** Nitro steel barrels. The **1897** Hunter Arms catalog listing for the Pigeon shows "Pigeon Nitro Steel" however.

Sporting Life Feb. 26, **1898**
The Hunter Arms Company, of Fulton, N. Y., makers of the L. C. Smith gun, have made a somewhat radical change in their guns recently. The following was received, which is being sent out to the trade:
Fulton, N. Y., Feb. 10. Our motto, "We lead, others follow," is again to be brought prominently before the public. After seriously considering the demands of the shooters we have concluded to make the following changes in the L.C. Smith guns for 1898.
Our famous Crown Steel barrels will now be put on our No. 2, $80 list gun regularly, with an option on the Damascus if preferred. **After years of use on our No. 3 guns, we can cheerfully say that our Crown Steel barrels are a decided success in every way**. In addition to this very important change we now offer you an entirely new design in engraving on this grade. It is neat and in keeping with a gun of this description. Our policy is always to improve our product whenever and wherever we can, hence instead of reducing our price on the No. 2 gun we have greatly improved its quality, and offer our patrons a vastly superior gun at former price. In regard to our No. 3 gun, $100 list, we come to you with **something entirely new in gun barrels called Nitro steel**. For months and months we have been testing these barrels to fully demonstrate to ourselves their qualities, and the result is most satisfactory. This Nitro steel comes the nearest to the Whitworth fluid steel of any gun barrel ever offered to the trade. This statement expresses fully the status of our nitro steel, and in offering these new barrels you may rest assured we do so only after being fully convinced as to their superior quality.
Both Crown and Nitro steel barrels will have our trademark stamped on them. In this mark **you have our guarantee that they are genuine, and just what we represent them to be.**
Hoping that we may have the pleasure of your favors with orders for samples of these new guns and assuring same our best attentions always, we remain, yours very truly, HUNTER ARMS CO.

1901 Logan-Gregg Hardware, Pittsburgh
"New Crown & Nitro Steel barrels to order"

No. 2.—Smith. 12 gauge. 30 inch Damascus barrels or New Crown steel barrels to order. Good imported English walnut stock, pistol grip. Checkered and engraved. . . . . Each $ 80.00

No. 3.—Smith. 12 gauge. 30 inch fine Damascus or New Nitro steel barrels. Fine imported English walnut stock very nicely checkered and engraved. Pistol grip. Non-ejector. . . . . Each $ 100.00

Special catalog upon request.

John Houchins cites an interview with John J. Goss, foreman of the Hunter Arms barrel brazing department published in *Shooting Times* by Wallace Labisky in 1961. Mr Goss stated that at least **from 1900 until the 1940s all of the barrels came from a steel works in Syracuse,** except for Whitworth barrels.

From an early 1900s article in Col. William Brophy's *L.C. Smith Shotguns* regarding a visit to the Hunter Arms Co. factory by a Mr Millman, who has been shooting a Smith gun for "about twenty years…"
"This, I told him, as I opened the door, is our barrel department. Here the barrels are reamed and polished. We import our Damascus barrels, which are rough bored. Our fluid steel barrels are made especially for us over in Syracuse."

The presence of Belgian maker's marks on Royal, Armor, London, Crown, and Nitro steel barrels, and the testimony of Thomas Hunter clearly contradict that statement.

Machinery, February **1907**, W.L. McLaren, "The Manufacture of Shot-guns at the Ithaca Gun Company's Works"
https://books.google.com/books?id=AvVFAQAAIAAJ&pg=PA303&lpg
"The barrels (Krupp-Essen, Cockerill, Twist & Damascus) are all imported; they come in boxes containing 50 pairs each, rough-turned and rough-bored…"

Hunter, Trader, Trapper, August, **1908**
https://books.google.com/books?id=USTOAAAAMAAJ&pg=RA1-PA9&lpg
The Ithaca Field Gun "...fitted with imported smokeless powder steel barrels…"

Hearings, Vol. 14, United States 60th Congress 2nd Session
November, **1908**.
http://books.google.com/books?id=XW0vAAAAMAAJ&dq
We further request that shotguns barrels in single tubes forged rough bored…be continued on the free list as at present, because their manufacture or production can not be economically undertaken in this country.
Hunters Arms co., Fulton, N.Y., Ithaca Gun Co., Ithaca N.Y., Parker Bros., Meriden, Conn., Lefever Arms Co., Syracuse, N.Y., J. Stevens Arms & Tool Co., Chicopee Falls, Mass., N.R. Davis & Son, Assonet, Mass., Baker Gun & Forging Co., Batavia, N.Y.

Field & Stream, May, **1909** "The Parker Gun" by Harry Palmer
http://books.google.com/books?id=6B5YAAAAMAAJ&pg=PA21&dq#v=onepage&q=&f=false
In the first place, the material that goes into the Parker is the best that the market supplies, the steel that is used in the frame and forend being a special stock made to conform to a physical test, which every bar received from the steel mill must stand, or be rejected. The gun is made entirely in the well-equipped factory, with the exception of the rubber butt-plates, **and the tubes for the barrels, which are imported.**

Report on Duties on Metals and Manufactures of Metals
By United States Congress. Senate. Committee on Finance, **1912**
Testimony regarding the Payne-Aldrich and Dingley Tariff Bills
http://books.google.com/books?id=QDkvAAAAMAAJ
http://books.google.com/books?id=QDkvAAAAMAAJ&pg=PA879&dq
STATEMENT OF MR. THOMAS HUNTER, OF FULTON, N. Y.,
REPRESENTING THE **HUNTER ARMS CO. AND OTHERS**
The Chairman: Will you state the companies you represent, Mr. Hunter?

Mr. Hunter. The Hunter Arms Co., the Baker Gun & Forging Co., Parker Bros. Gun Co., Hopkins & Allen Arms Co., A. H. Fox Gun Co., Lefever Arms Co., H. & D. Folsom Arms Co., Ithaca Gun Co., N. R. Davis & Sons, and Harrington & Richardson Arms Co.
Senator McCumber: Does the American manufacturer use the unfinished importation?
Mr. Hunter: He uses what are designated in the present bill as "gun barrels rough-bored." That is what we import.
Senator McCumber: To what extent do you use those?
Mr. Hunter: **Entirely.**
Senator McCumber: You do not manufacture any of them?
Mr. Hunter: No, sir. **We have no facilities for making shotgun barrels.**
Senator McCumber: Does any other company make them?
Mr. Hunter: There are a few that make them for themselves only. None are made to be sold. **We never have been able to buy any in this country.**

THE TESTIMONY OF W.A. KING REPRESENTING **PARKER GUN CO.**
https://books.google.com/books?id=seIRAAAAIAAJ&pg=PA631&lpg
Mr. King: I can speak only for our own company in so far as wages go. For instance, on the question of barrels, Mr. Hunter informed your committee that some years ago some of the manufacturers of this country attempted to make barrels. We made some barrels: we built an addition to the factory, put in some up-to-date machinery, and brought some men from Belgium to show our blacksmiths how to do it. We had to pay our blacksmiths not less than 32 cents an hour, up to 40 cents, and we gave it up, because the highest wages paid the Belgian blacksmiths for exactly the same grade of barrel are 11 cents per hour. That is what is paid to the highest-priced man employed.
Senator Smoot: In Belgium?
Mr. King: **In Belgium**: yes, sir. **That is where all of our barrels are imported from,** with the exception of our very high-grade **Whipple** (*probably a typo for Whitworth*) steel barrels.

Additional 1912 testimony
https://books.google.com/books?id=seIRAAAAIAAJ&pg=PA623&lpg
Testimony by M.C. Mason of Hopkins & Allen stating that only J. Stevens Arms & Tool Co. manufactured their own barrels
https://books.google.com/books?id=seIRAAAAIAAJ&pg=PA631&lpg

Brief submitted by **J.G. Riga**, Feb. 15, **1913** to the Tariff schedule hearings before the Committee on Ways and Means, House of Representatives
"**Shotgun barrels are not made in this country and they can not be bought**, and all the small gun manufacturers are obliged to buy **all their barrels** abroad and this duty would really work a great hardship to all the double-barrel gun manufacturers, such as the Hunter Arms Co., Fulton, N. Y.; Ithaca Gun Co., Ithaca, N. Y.; Baker Gun & Forging Co., Batavia, N. Y.; Lefever Arms Co., Syracuse, N. Y.; the Crescent Fire Arms Co., and the Hopkins & Allen Arms Co., of Norwich, Conn.; A. H. Fox Gun Co., Philadelphia, Pa.; N. R. Davis & Sons, Assonet, Mass., etc. All the above manufacture double-barrel guns, which is a real sportsman's gun."

The Riga family were Damascus barrel makers in Liege, and J.G. Riga imported barrels into the U.S. starting about 1886; supplying Forehand & Wadsworth, Colt, Bacon Arms, and C.S. Shattuck. Barrels were purchased from many small makers and shipped from Antwerp.

By 1912 Damascus or Twist barrels were used on a very small percentage of U.S. maker's shotguns. c. 1909, even A.J. Aubrey/Meriden Fire Arms and Folsom/Crescent were using "Armory Steel", but the source is unknown.

"Our Home Industries – The Hunter Arms Co." by John Hunter, Sr.
The Sandy Creek News, April 13, **1916**
http://nyshistoricnewspapers.org/lccn/sn83031653/1916-04-13/ed-1/seq-3/
Gun barrels, previous to the war, were practically all manufactured in Birmingham, England and Liege, Belgium. Perhaps you may remember that during the early days of the war the Germans drove the men out of a large factory just on the outskirts of Liege. That factory was where practically all the American barrels were manufactured.
(In the Boring Dept.) you see the barrels in very large quantities coming into this department in hard wooden boxes which are characteristic of the foreign shipments.

Tariff Information Survey, **1921**
https://play.google.com/books/reader?id=IfxIAQAAIAAJ&printsec=frontcover&output=reader&hl=en&pg=GBS.PP15
"Practically all the raw materials are obtained from domestic sources, with the

exception of a portion of the barrels for shotguns, which are imported by the smaller makers, as a rough bored forging. The production of this component of the gun requires an investment in equipment too large to allow of profitable manufacture on a small scale. All but one of the firms which imported barrels before the war reported (1920) that they intended to again import as soon as possible, although one of them took up their manufacture during the war, and statistics of importations in 1920 indicate that this practice has been largely resumed. The most of the larger companies make their own barrels. These rough forgings have been obtained chiefly from Belgium, a few of the highest grade coming from England."

BUT

The Tariff Review October 15, **1897**
http://books.google.com/books?id=xngpAAAAYAAJ&pg=PA202&dq
We suppose that the gentleman making the statement that no gun barrels are made in this country referred to barrels made of iron and steel, such as **twist, laminated and Damascus.** If so, he was correct, for **no barrels of that nature are made at the present time in this country.**
Gun barrels, however, are made very extensively here, but they are made from plain Bessemer metal, the same as is used in rifle barrels, and are used in the manufacture of single guns and the cheaper grade of double guns.

Note: **Winchester** contracted with domestic steel makers, including Bethlehem Steel Co., and **Remington** produced its own decarbonized and fluid steel barrels.

Sanderson, Crucible & Halcomb

Sanderson Steel was started in Sheffield, England in 1776 and Sanderson Bros. & Newbould Ltd. purchased Sweet Iron Works in Syracuse in 1876. Sanderson may have supplied Crown fluid steel barrels (likely imported "rough forged tubes") to Hunter Arms starting in 1893 with the introduction of the Pigeon grade gun, Nitro steel in 1897, Armor in 1898, and Royal in 1901.

Several Sanderson Brothers and Newbould Ltd. trade catalogs are in the collection of the Smithsonian American National Museum of American History. The

Sanderson Bros. Steel Co., Syracuse, 1895 catalog (courtesy of the Smithsonian) can be viewed here:
https://drive.google.com/file/d/0BwA2RFs-wocbOTlCc0lxNWJ2OEU/view

There is no mention of "gun barrel steel", nor serving as an import agent for foreign steel makers.

The first electric arc furnace was developed by Paul Héroult, of France, in 1900. Héroult came to the U.S. in 1905 and **Halcomb Steel Co.** installed the first electric arc furnace in the U.S. in 1906. Sanderson Brothers Steel Co. installed an arc furnace in 1907, and the furnace is on display at Station Square, Pittsburgh.

"Crown", however, was the brand name of the **Crown and Cumberland Steel Co.**, Allegany County, Maryland which was established in 1872. Related to the Panic of 1893, Crown and Cumberland Steel was sold at a trustee sale in 1894, and then reorganized as Cumberland Steel and Tinplate Co. In 1900, the company became part of Crucible Steel.
There was **also** a division of Cassidy & Co., Crown Steel Works, in Allegheny Co., PA
https://archive.org/stream/directoryironan00instgoog#page/n8/mode/2up
AND "Whiteley's Crown Steel" in Muncie, Indiana.

Stauffer, Eshleman & Co., New Orleans imported "Crown" steel in 1905
https://books.google.com/books?id=-WqueYkMugsC&pg=PA1153&lpg

Sanderson used the brand name "Sanderson Bros. & Co." and was one of 13 companies that formed **Crucible Steel Co**. **of America** July 21, 1900, with headquarters in Pittsburgh. Sanderson then became **Sanderson Brothers Steel Works**
http://www.crucibleservice.com/history.aspx

https://journals.psu.edu/wph/article/download/2428/2261

Crucible Steel Co. of America was a consolidation of the following companies
https://books.google.com/books?id=xdk5AQAAMAAJ&pg=PA254&lpg

- Aliquippa Steel Co.
- Anderson, Du Puy & Co.
- Benj. Atha & Illingworth Co.
- Beaver Falls Steel Works
- Canton Steel Works
- Cayuga Tool Steel Works
- Consumers' Heating Co.
- Crescent Steel Works
- Cumberland Steel & Tin Plate Co.
- Howe, Brown & Co.
- La Belle Steel Works
- Park Steel Works
- Sanderson Bros. Steel
- Singer, Nimick & Co.
- Spaulding & Jennings Co.
- Norwalk Steel Co. was incorporated in 1910
- In 1911, Midland Steel Co. was purchased and became Pittsburgh Crucible Steel Co.

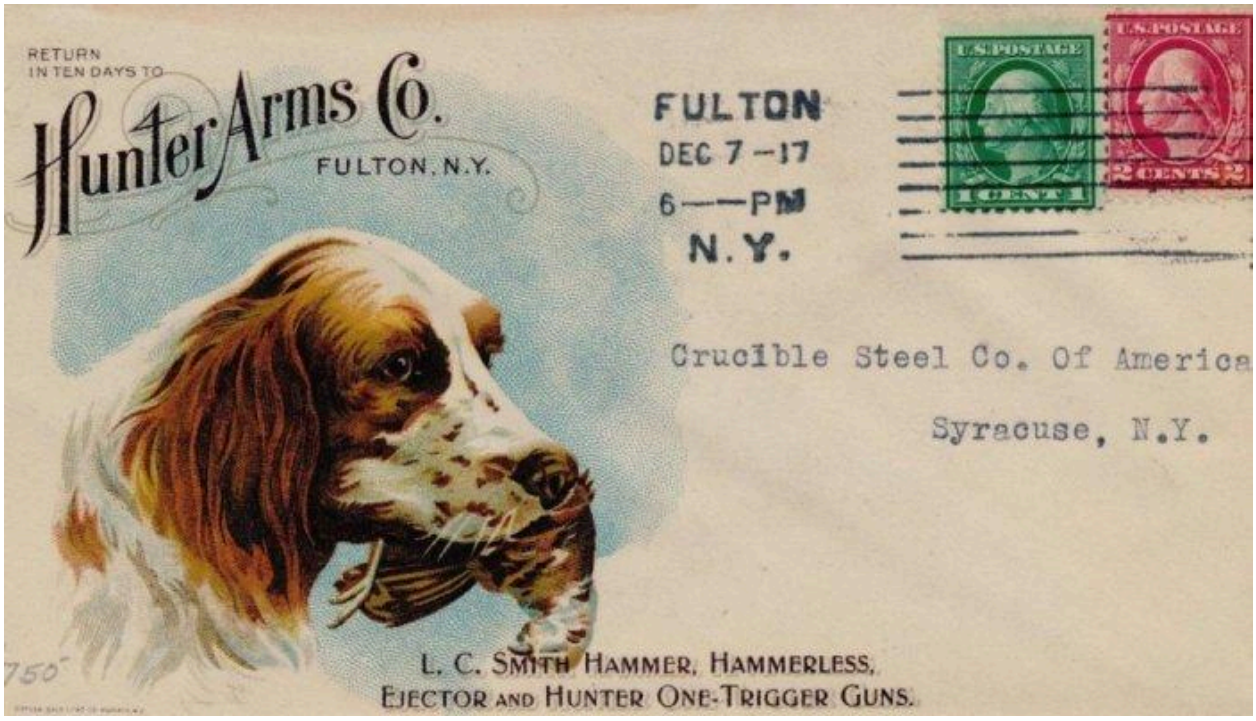
In addition to Sanderson Bros. Steel Works in Syracuse, New York, Crucible operated the following steel works in 1902.
https://books.google.com/books?id=2yYqAAAAYAAJ&pg=PA331&lpg

Pennsylvania

- Aluquippa Steel Works
- Beaver Falls Steel Works
- Black Diamond Steel Works
- Crescent Steel Works
- Howe, Brown & Co. Works
- La Belle Steel Works
- Pittsburgh Steel Works
- Singer, Nimick & Co. Works

New Jersey

- Atha Steel Co.
- West Bergen Steel Works



C.H. Halcomb, former president of Crucible, formed **Halcomb Steel Company** in Syracuse in 1902, with L.C. Smith as Chairman of the Board of Directors.

Crucible bought Halcomb in 1911, but the company continued to market many tradename steels and steel alloys including 'Dreadnought High Speed Steel', 'Ketos Oil Hardening Steel', and 'Halectralloy Brand' Chrome Vanadium and Chrome Nickel steels. In 1917, Halcomb was merged with Syracuse Crucible Steel Co.

John Houchins states that Halcomb supplied London steel for 0 grades and Royal steel for the hammer guns starting in 1907, and in his *L.C. Smith "The Legend Lives"* p. 385 has a copy of the 1907 Halcomb catalog with a listing for "Machine Gun And Smokeless Rifle Barrel, Revolver Cylinder Steel, and Shot Gun Barrel...furnished in both Carbon and Alloy grades."
"Gun Barrel Steel For Smokeless Powder", "Open Hearth Gun Barrel Steel" and

“Gun barrels steel to all standard specifications” are also listed.

The 1913 edition of “Halcomb Steel Co. Catalogue and Hints on Steel” however contains **no** mention of steel for gun barrels, nor Royal or London steel https://archive.org/details/HalcombSteelCompanyManufacturesOfHighestGradeCrucibleAndElectric

In 1882, **Gautier Steel** was a division of Cambria Iron Co., Allegheny Co., PA. Dudley G. Gautier was president of the Philadelphia Steel & Forging Co. and D.G. Gautier & Co. was listed as an agent for both Sanderson Brothers & Co. and Tacony Iron Works (1881-1910) of Philadelphia.

Lefever H and Ithaca Flues with ‘SB & Co G’ – Gautier?

1906 12g 00 Armor barrels with **‘S.B. & Co P’** - Sanderson‘s Pittsburgh Works?

1910 F grade hammer gun with Royal Steel stamped over **‘SB & Co C’** -
Sanderson‘s Cumberland Works?

‘SB & Co F’ 1925 Long Range Field Grade

1925 Eagle with Nitro Steel overstamped **‘SB & Co T’ -** Tacony Iron Works, PA?

Were the 'rough bored tubes' imported by Sanderson / Crucible, for Hunter Arms and the U.S. doublegun makers?
Until correspondence, purchase orders, billing or shipping records are located, that question is unlikely to be definitively answered.

HOWEVER

In 2021 a 1909 F grade hammer gun with Twist barrels was discovered to be marked SB&Co T, similar to the 1925 Eagle in the image above.
Courtesy of Dr. Michael V. Scott


S B & Cº T

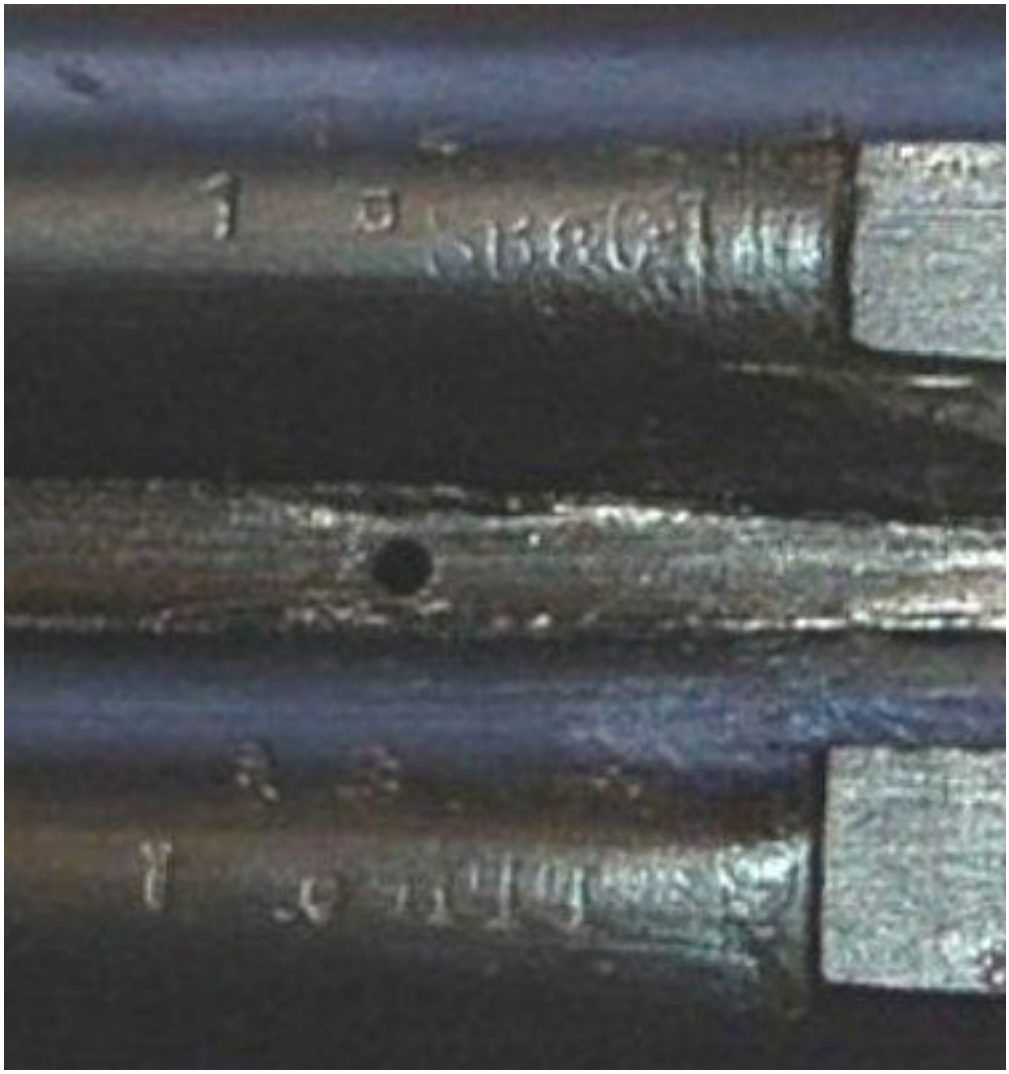
In that there is NO chance that Sanderson Bros., Tacony Iron Works, or another Crucible steel work was producing Twist rough forged tubes, the presence of the SB&Co mark would seem to be very strong evidence that Sanderson/Crucible served as the importer/agent/broker for the Belgian tubes.

Samuel Buckley & Co.

Confusion exists related to **another** ‘SB & Co’ mark.

N.R. Davis hammergun with Twist barrels
Also found on a N.R. Davis steel barrel tradename hammergun

1920 Ithaca Flues Field with a **different style** ‘SB & Co’ stamped over **‘**LLH**’**



1926 Sterlingworth

Similar mark on a Fluid Steel Lefever. The mark is also present on a Chain damascus FE barrel SN 38,025

Samuel Buckley served on the Birmingham Proof House Committee and in 1863 was one of the officers in the British Small Arms Co. He later established a branch office in Detroit. Guns produced by William Powell in the 1860s exist marked Samuel Buckley & Co. Hammer guns and Anson & Deeley patent BLNEs were imported into the US by J. Palmer O'Neal of Pittsburgh, PA in the 1880's.
See ***The Double Gun Journal*** Vol. 22 Issue 3, 2011

The American Exporter's ***Export Trade Directory*** of 1915 listed Samuel Buckley & Co. as "chiefly importers" with offices at 16 East 33rd St., New York, 2 Soho Square, London and Liege, Belgium.
Samuel Buckley & Co., Manhattan incorporated in July 1921.

Walt Snyder provided this quotation from Harry Howland regarding c. 1920 **Ithaca Gun Co**. barrels - "We were getting all our barrels forged, rough drilled and rough turned from Belgium. We were purchasing them from either Samuel Buckley & Co. or from J. Riga & Co. and it was not until two or three years later that we began purchasing those barrels from the Flannery Bolt Co."

Other Reported U.S. Barrel Makers

The Iron Age Directory**,** David Williams Co., 1911
http://books.google.com/books?id=chtaAAAAYAAJ&pg=PA390&lpg
Listed the following companies under "Steel, Gun Barrel"

Edgar Allen & Co. Chicago, Ill.
Bethlehem Steel Co., South Bethlehem, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Colonial Steel Co., Pittsburgh, Pa.
Crucible Steel Co. of America, Pittsburgh, Pa
Farist Steel Co., Bridgeport, Ct.
Wm. Jessop & Sons, Inc, 91 John St., NY
C. Pardee Works, Perth Amboy, NJ

Thomas Prosser & Son, 26 Platt St., NY
Vanadium Alloys Steel Co., Latrobe, Pa.
West Leechburg Steel Co., Pittsburgh, Pa.

In *American Rifleman* Nov. 1937, A.P Curtis stated in "Making Double Shotgun Barrels" that the **American Gun Barrel Company** of New Haven, Conn. made barrels for the U.S. market 1914-1921, but it could not compete with the duty free importation of tubes after Belgium recovered from WWI.

Laurent Lochet-Habran

The 'LLH' of *Laurent Lochet-Habran* has been found on Fox, Baker (S grade with "Flui-tempered Steel", Baker Standard boxlock with "Nitro Rolled Steel" and ACL in a circle, Batavia Leaders, and Folsom Paragon Ejectors), Lefever, Crescent (possibly marked "Fluid Temper Steel"), Ithaca (Lewis & Flues with 'Smokeless Powder Steel'), NID, Lefever Nitro Special, Lefever M-2 single barrel, and Westernfield Deluxe/Western Arms Long Range, Smith Royal, Armor, London, Crown and Nitro barrels and Hunter Arms Fulton and "Ranger" for Sears.

LLH barrels have been found on Smith guns manufactured from 1909 to 1948.
A 20g Monogram completed March 16, 1912 surfaced in 2015 with 32" barrels stamped "Sir Joseph Whitworth Fluid Compressed Steel/Made to Order" bearing the Whitworth trademark AND a second barrel with '2' on the forend lug, the same SN on the flats, the Hunter Arms "Crown" stamp, **clearly showing a 'LLH' on the left barrel**; but which are also marked "Sir Joseph Whitworth Fluid Compressed Steel"! (See *The Journal of the L.C. Smith Collectors Association*, Spring 2016)

Composition analysis by Optical Emission Spectroscopy (OES) of a 1909 Smith No. 00 with both a 'LLH' and 'ACL' mark showed the barrel to be AISI 1030 low alloy medium carbon steel, with a tensile strength of 90,000 psi.

A c. 1925 Crescent Fire Arms “Genuine Armory Steel” barrel with the ‘LLH’ mark was non-standard (high phosphorus) AISI 1040 low alloy medium carbon steel with a tensile strength of 104,000 psi.

The H. & D. Folsom Arms Co. Catalogue No. 35 (1930-31) listing for the New “Empire” (Crescent No. 9) states the barrels are “Fine Decarbonized ‘High Pressure’ Steel – Proof Testing with loads considerably heavier than standard loaded shells”; not “(Decarbonized) Armory Steel” as had been listed since introduction of the Model 0 Hammer Double in 1897.

1928

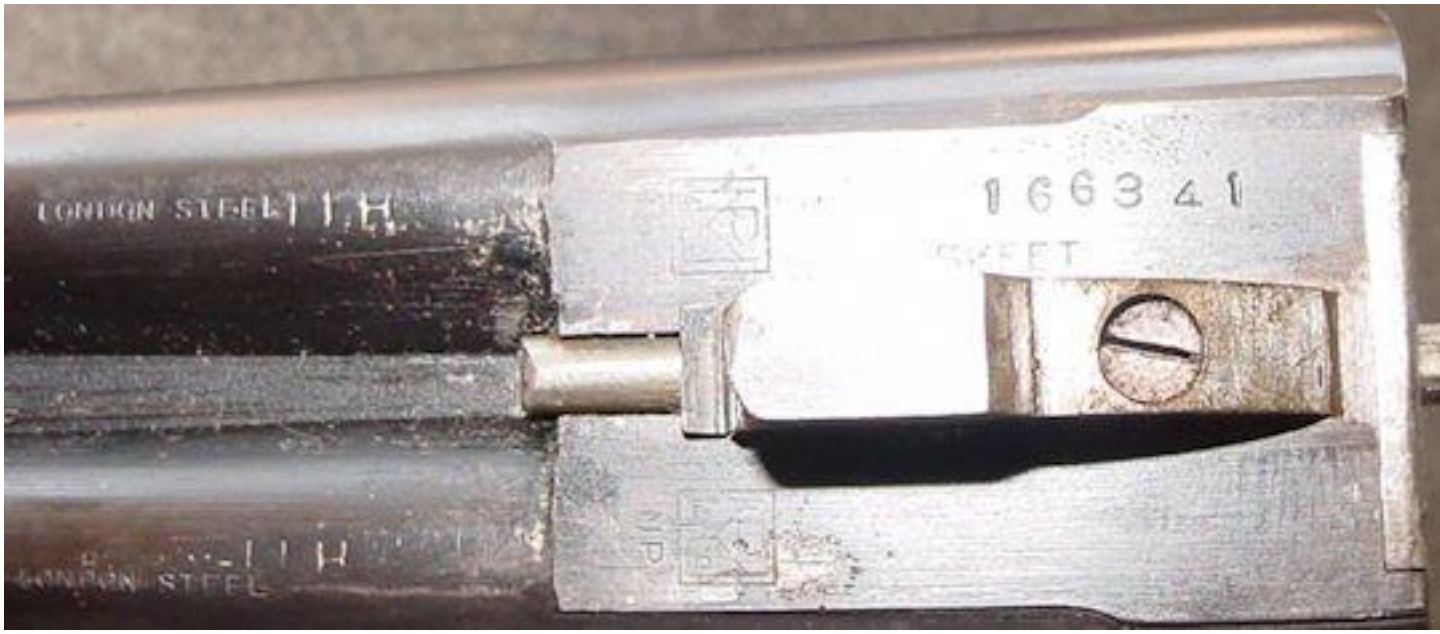
Possibly Royal Steel replacement barrels on a c. 1898 F grade hammergun

1910 20g 00 Armor Steel, ‘C’, ‘LLH’ & ‘ACL’ (*Acier Cockerill Liege)*

Royal Steel over ‘LLH’ & ‘ACL’ - *Acier Cockerill Liege*
1912 F grade hammer gun

1910 5E Nitro Steel with ‘LLH’ and ‘ACL’

London Steel over ‘LLH’ Skeet Special



1914 Trap Grade Crown Steel, ‘LLH’ & ’ACL’

Nitro Steel with ‘LLH’ - 1922 Eagle grade LRWF

Canons Delcour

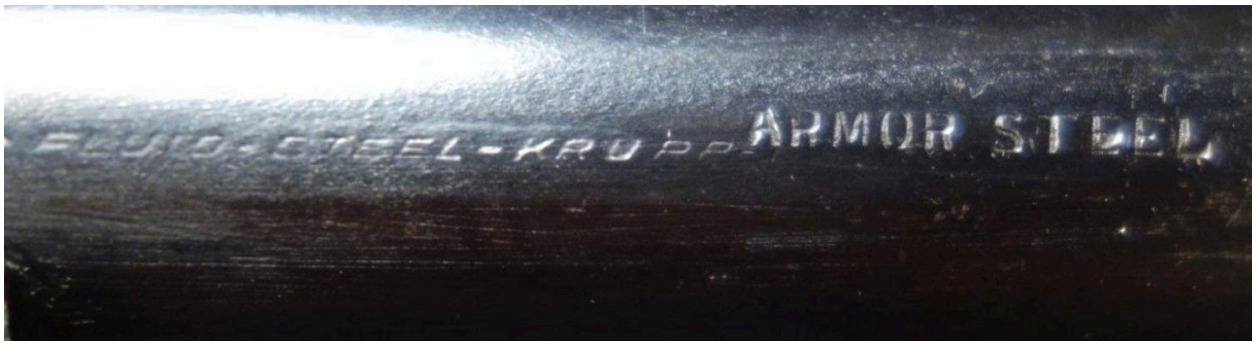
Around 1930, Crucible purchased tubes from *Delcour-Dupont* of Nessonvaux, which appeared on Field and Trap grade guns.
Jean-Baptiste Delcour was the father of Lucien & Oscar Delcour and had been a manager for Pieper & Cie before opening his own shop specializing in Damascus barrels. *Canons Delcour* was registered in 1921, and remained in business until about 1968 when they were acquired by *Fabrique National de Herstal.*

The mark is also found on Fox, Ithaca NID (“Best Fluid Steel”) and Ithaca Lefever Nitro Special A-grades.

Acier Cockerill Manufacture Liegoise

1902 No. 00 L.C. Smith with possibly ‘ACM’ in a circle on the left barrel

“Fluid Steel-Krupp Essen” with Armor Steel overstamp. Krupp barrels were cataloged as an available option 1900-1905, likely manufactured by license to *Acier Cockerill Liege*



Importers and Distributors

It appears that barrel makers in Belgium sold “rough forged tubes” primarily through import-export agents. From the *Monthly Consular and Trade Reports*, Vol. 74, 1904 “Manufacture of Firearms and Gun Barrels in Liege” by James C. McNally, Consul, Liege, Belgium, October 14, 1903
“Manufacturers report that many American houses buying from Liege factories do so **through agents**, and say that it would be more advantageous to importers to deal directly.”

Most Smith guns were sold by Hunter Arms through local and regional sporting goods and hardware firms, rather than by special order directly from the factory, and some distributors apparently requested that identifying marks be placed on the barrels of the guns they ordered.

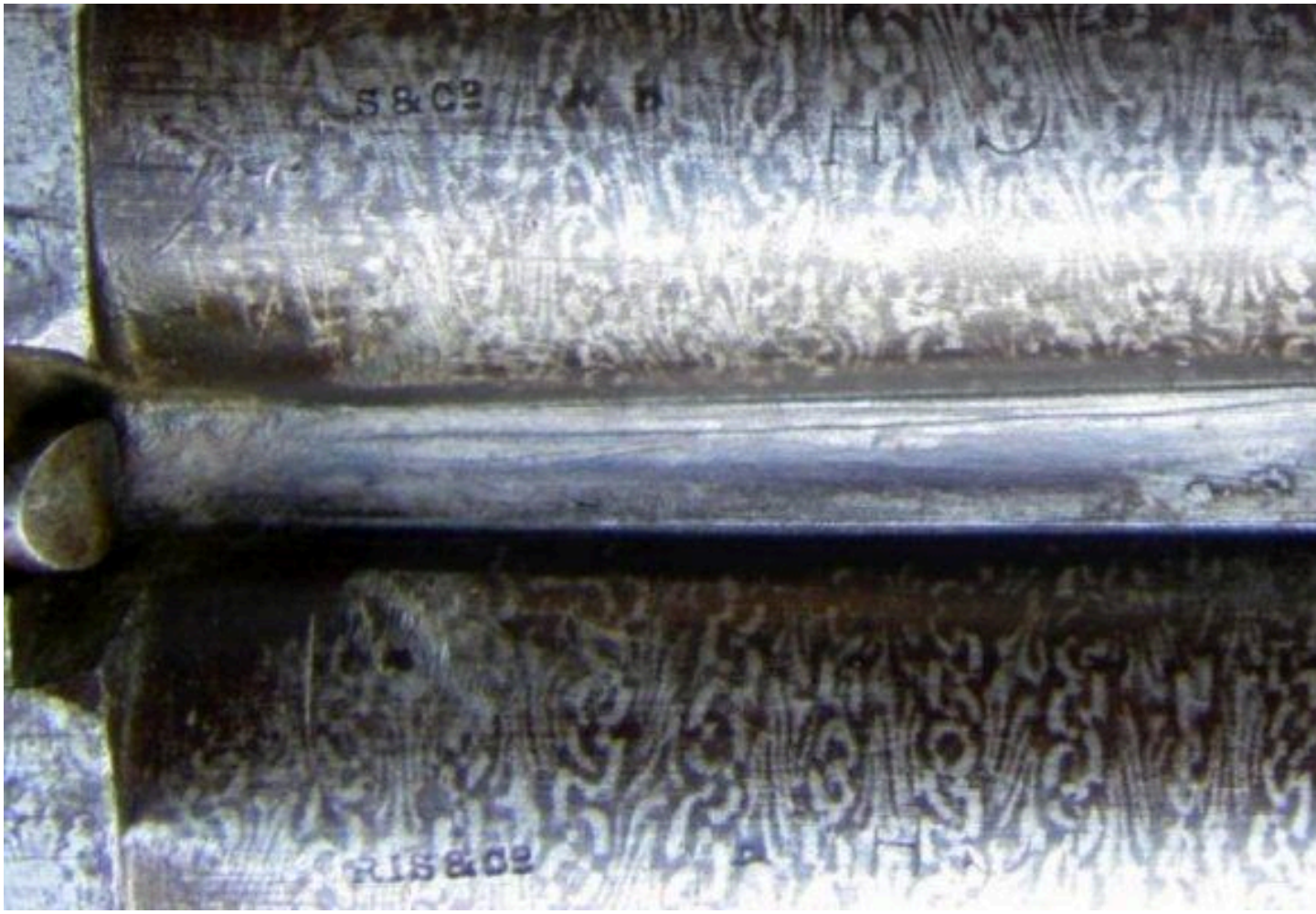
‘C’ and **'BH',** possibly Belknap Hardware, a major distributor in Louisville, KY. 1909 12g 00 with Armor steel barrels. The 4 over 5 stamp represents the pre-fit and finish barrel weight. The barrels weigh 4lbs 1oz.

‘WR’ Likely William Read & Sons, Boston 1912 No. 2 Chain Damascus

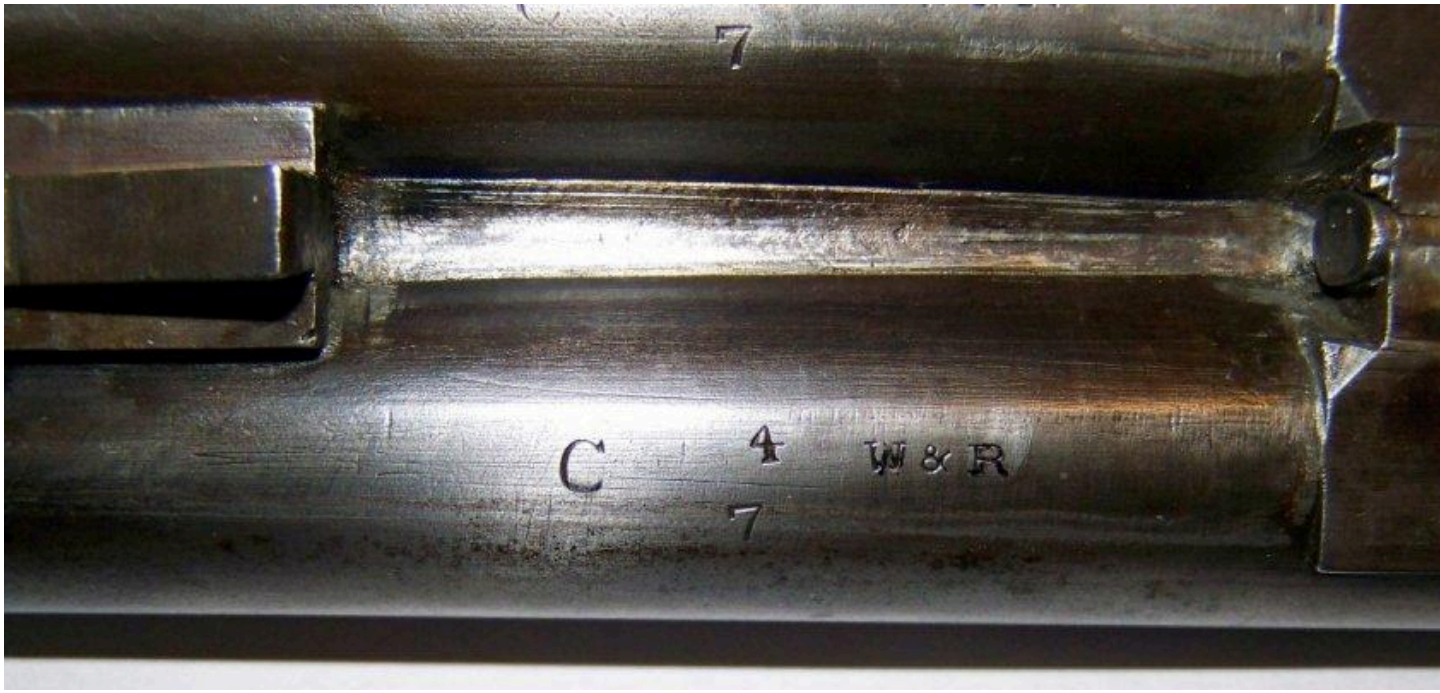
‘O’ and **‘WR’** - William Read and Sons, Boston. Another partial stamp, possibly the tube maker or importer? 1900 F grade hammer

‘O.’ and ‘C.&J.’ Twist barrels on 1898 F grade hammergun

‘RIS & Co’ - 1902 10g No. 2 chain damascus, also with **‘H’, ‘C’,** and possibly **‘W & R’**



‘C’ and **‘W & R’**



SUMMARY OF BARREL MARKS

‘C’ is found on both Damascus and fluid steel barrels and is presumed to represent **Crucible Steel Co**. **of America** established in 1901

‘S. B. & Co’ - Sanderson Brothers & Co.

C – Sanderson‘s Cumberland (Maryland) Works?

G – Gautier?

T – Tacony Iron Works?

P – Sanderson‘s Pittsburgh Works?

F - unknown. Peter Frasse & Co. was a steel importer, including “Poldi”

Damascus Tube Makers

EH - ? *Ernest Heuse-Lemoine*

H.R.F. - *Heuse-Riga Fils*

BD - ? *Bauduin Doyen* of Nessonvaux

Fluid Steel Makers

Delcour-Dupont of Nessonvaux / *Canons Delcour S.A.*

Laurent Lochet-Habran with steel from *Acier Cockerill*

Acier Cockerill Manufacture Liegoise (?) which was a tradename used by *Manufacture d'Armes à Feu Liégeoise*

Krupp Essen (possibly by license to Belgium makers)

Unknown Importers?

W & R

RIS & Co.

O. and C.& J.

TD

B.J.W.&Co. (possibly Mercer, PA) has been identified on Belgian sourced but English finished and marketed non-Hunter Arms tradename guns

https://books.google.com/books?id=SXI-AQAAMAAJ&pg=RA6-PA65&lpg

Known "Rough Forgings or Ironware" Importers

Baldwin Brothers & Co., New York

https://books.google.com/books?id=9n7PAAAAMAAJ&pg=PA95

William Henry Cole & Son, Baltimore,

Henry Keidel & Co., Baltimore,

William Read & Son, Boston,

Perry, Ryer & Co., New York,
G. Hirsch's Sons, New York,
Wiebusch & Hilger, New York,
Billings and Spencer Co., Hartford, CT.

c. 1900 importers of "shotgun barrels, rough bored, not forged"

Baldwin Brothers & Co., N.Y.,
William Henry Cole & Son, Baltimore,
Henry Keidel & Co., Baltimore,
William Read,
Joseph Giles Riga, Springfield, Mass.,
Perry, Ryer & Co., N.Y.

Steel Importers 1905
https://books.google.com/books?id=-WqueYkMugsC&pg=PA1153&lpg

Hunter Arms Distributors?

Unfortunately, ledger pages with the serial numbers of early 1900s mostly No. 0 hammerless and F grade hammer guns with the following marks do not include the shipping destinations.

WR - ? William Read
BH - ? Belknap Hardware
SD&G - Schoverling Daly & Gales

Special thanks for the research assistance provided by Raimey Ellenburg, Walt Snyder, David Williamson, Chris Helms, Roger Domer, and Pete Mikalajunas.

Where Were My L.C. Smith Barrel Tubes Made?

Roger L. Domer and published in "The Journal of the L.C. Smith Collectors Association", Winter 2017

Introduction

Where were my L.C. Smith (Smith) barrel tubes made? This is a question that has been confounding Smith historians for several years. I would even put it in the category of a 'Cold Case File', a term used by police departments who reopen old murder cases with the hope of solving a crime.

First, the barrels on every Smith shotgun started out as "Forged Rough Shotgun Barrels". They were received in rough tubes that resembled a couple of gas pipes. These tubes were wired together in pairs, and 40 to 50 pairs were packed into a box or barrel. After these tubes were received at Hunter Arms, they went through several processes to make them look like what you see today on your Smith shotgun. This article is not about the latter process; it is about WHERE the barrel tubes came from.

Background

How did the author become involved in a Hunter Arms Company (HAC) cold case file? Well … I stumbled into it. While in Fulton N.Y. in August 2017 we were at the Pratt House disassembling Mike Harris' exhibit, and we were all about to head to our respective homes. This was on Sunday at the end of the 7th Hunter Arms Homecoming. There was miscellaneous chatting and Mike turned to me and asked where L.C. Smith shotgun barrels were made. I was really taken back by this question and blurted out 'Syracuse N.Y.', but to be honest about it, I wasn't sure.

Explanations

I began this research project with an open mind. This article is an effort to provide a chronicle of events that tells a story that is logical using the fragmented information that is available. There will still be differences of opinions as to the makers of the barrel tubes used by Hunter Arms to fabricate finished barrels. And, of course, new information may be uncovered in the future.

Discussion

This article is not meant to disparage Mr. John Houchins' exhaustive research, but

to share new information. The assertion that barrel tubes were sourced in Syracuse N.Y. from Sanderson Brothers and Halcomb Steel is based primarily upon an interview with Mr. John J. Goss, foreman of the HAC barrel brazing department, and published in *Shooting Times* in 1961. Mr. Goss stated that at least from 1900 until the 1940s ALL of the barrel tubes came from a steel works in Syracuse, except for the Whitworth barrels.

An early 1900s article cited in Colonel William Brophy's *L.C. Smith Shotguns* regarding a visit to the HAC factory by a "Mr. Millman" also said – "This I told him, as I opened the door, is our barrel department. Here the barrels are reamed and polished. We import our Damascus barrels, which are rough bored. Our fluid steel barrels are made especially for us over in Syracuse."

This is not what was said by any U. S. firearms maker.
1908. Hearings, Vol. 14, U.S. 60th Congress, 2nd Session, November, 1908.
"We further request that shotgun barrels in single tubes forged rough bored be continued on the free list as at present, because their manufacture or production cannot be economically undertaken in this country."
The companies were identified as the Hunters Arms Company, Fulton N.Y., Ithaca Gun Company, Ithaca N.Y., Parker Brothers Company, Meriden, Connecticut, Lefever Arms Company, Syracuse, N.Y., J. Stevens Arms and Tool Company, Chicopee Falls, Massachusetts, N.R. Davis and Son, Assonet, Massachusetts, Baker Gun and Forging Company, Batavia, N.Y.

1912. Thomas Hunter's testimony regarding the Payne-Aldrich and Dingley Tariff Bills in "Report on Duties on Metals and Manufactures of Metals", By United States Senate Committee on Finance, 1912

> The Chairman: Will you state the companies you represent, Mr. Hunter?
> Mr. Hunter. The Hunter Arms Co., the Baker Gun & Forging Co., Parker Bros. Gun Co., Hopkins & Allen Arms Co., A. H. Fox Gun Co., Lefever Arms Co., H. & D. Folsom Arms Co., Ithaca Gun Co., N. R. Davis & Sons, and Harrington & Richardson Arms Co.
> Senator McCumber: Does the American manufacturer use the unfinished importation?
> Mr. Hunter: He uses what are designated in the present bill as "gun barrels rough-bored." That is what we import.
> Senator McCumber: To what extent do you use those?
> Mr. Hunter: Entirely.
> Senator McCumber: You do not manufacture any of them?

> Mr. Hunter: No, sir. We have no facilities for making shotgun barrels.
> Senator McCumber: Does any other company make them?
> Mr. Hunter: There are a few that make them for themselves only. None are made to be sold. **We never have been able to buy any in this country.**

(Note: Winchester contracted with domestic steel makers, including Bethlehem Steel Co., and Remington produced its own decarbonized and fluid steel barrels.)

February 15, **1913.** In a brief submitted by J.G. Riga, to the Tariff hearings before the Committee on Ways and Means, House of Representatives, it was stated **that shotgun barrels are not made in this country and they cannot be bought,** and all the small gun manufacturers are obliged to buy all their barrels abroad and this (tariff) duty would really work a great hardship to all the double-barrel gun manufacturers, etc.

In summary, we have testimony before the Congress of the United States in 1912, and by Mr. Riga in 1913, that all double barrel shotgun tubes were imported into the United States.

1914 – 1918 World War I. The next historical event that negatively impacted HAC occurred in August 1914, with the German invasion of Belgium. There is no doubt that Belgium was the primary source of foreign barrel tubes for the American market. After the invasion, barrel tube shipments to America ceased. The German occupation coincided with a widespread economic collapse and unemployment in Belgium, and with shortages of basic necessities, e.g. food and clothing. Belgium ports were cut off from imports and exports by the Allied naval blockade. Thus, no more barrel tube exports were sent to America.

HAC was in a state of bankruptcy in 1914. An article published by the *Oswego (NY) Palladium*, dated 7 October 1914 follows:

> A meeting of the creditors of the HAC will be held October 19th, unless present plans are balked, and the question as to whether the plant will be continued in operation or be sold will be finally settled. The present outlook is that unless the creditors come forward with a large sum of money for the purchase of new material (assume barrel tubes are included) that the plant will be sold.
> The question of whether or not the plant is to continue in operation depends upon whether the creditors will authorize the trustees to expend a sum of money large enough to purchase a large amount of raw materials.

> The stock on hand at the time the concern went into bankruptcy has been exhausted and the trustees must go to the manufacturers, the Marlin Company, the Stevens Company and others for new material for which **they will be forced to pay a fancy price on account of the European war, which has put the domestic product at a premium, for the reasons that no other is available.**

So, it is clear that World War I and, specifically the invasion of Belgium by the Germans, caused a critical shortage of raw materials at HAC to the extent that its continued existence was in question.

Following the bankruptcy, trustees and receivers operated the plant for a time and finally permission was received to sell HAC to a group of Fulton businessmen who organized a corporation and took over the business. It was reported in the *Oswego Palladium* on June 18, 1921 that the Simmonds Company had purchased the HAC. A rocky road was experienced for a while, but things settled down and HAC flourished thereafter.

1914 - 1921. After the bankruptcy proceedings and the economic recovery commenced, we can reasonably be assured that HAC found the 'materials' it needed to run a going concern. Here's where things get murky.

The HAC financial records are missing. The author believes that the records could still be stored away in some dusty bin in one of three Federal District Courts mentioned in newspaper articles referring to the past bankruptcy proceedings; and we are diligently looking for them. I used to be a Federal employee and we sent files, upon files, to a Federal records center. The HAC files might be in one of those facilities. Les Weldin, from Fulton N.Y. has been very helpful in finding documents for this article at the Pratt Museum, and investigating the location of the HAC files. If we find them, we could know a lot of "unknowns".

As mentioned earlier, the trustees "must go to the manufacturers…for new material". There **was** a domestic barrel tube manufacturer that would sell tubes to HAC. The American Gun Barrel Company of New Haven, Connecticut was created in 1914 and continued until 1921. According to Mr. Arthur P. Curtis, this company made shotgun tubes for the domestic trade, and for a time enjoyed a good demand for their products. Mr. Curtis further mentions that these tubes were not necessarily better than those imported, but World War I made importation of tubes at first difficult, and later impossible. U.S. manufacturers who were not equipped

to make their own tubes were eager customers of this domestic tube manufacturer.

Before we go further in this discussion, let's establish Mr. Curtis' credentials. Mr. Curtis invented the L.C. Smith 'Curtis fore end fastener' and worked for the HAC from 1899 – 1917; as plant superintendent during the last seven years of his employment. After WWI, he worked at Winchester, Ithaca, Iver Johnson, and Marlin. He returned to Fulton in 1940 and was the general manager of HAC until his death in 1941. Additionally, Mr. Curtis was a prolific writer. Forty one of his articles were published from 1909 to 1940. He also authored *America's Double Hammerless Shotguns*.

1921 In *American Rifleman* Nov. 1937, Curtis stated in "Making Double Shotgun Barrels" that the American Gun Barrel Company of New Haven, Conn. made barrels for the U.S. market 1914-1921, but it could not compete with the duty-free importation of tubes after Belgium recovered from WWI.

In the 1921 "Tariff Information Surveys regarding Domestic firearms Production" it was mentioned that practically all the raw materials for firearms production for smaller gun makers were obtained from domestic sources, **with the exception of barrels.** For the smaller gun manufacturers, the investment in equipment was too large to allow profitable manufacture on a small scale. All but one of the firms that fell within this niche, who had imported barrels before the war, reported in 1920 that they intended to again import barrels from foreign sources as soon as possible.

Conclusion

If Mike Harris asked me today – "Who made L.C. Smith barrel tubes?", I would say prior to WWI they would have been made in Europe. I have chosen to believe Mr. Thomas Hunter in his testimony before Congress; that **gun barrel tubes were 'entirely' purchased from foreign providers.**

After WWI, the answer would be either in New Haven, Connecticut by the American Gun Barrel Company (briefly) or by a Belgium manufacturer; *Canons Delcour S.A., Laurent Lochet-Habran, Acier Cockerill Manufacture Leigoise,* and possibly others.

We cannot, however, know all the facts unless we are able to obtain the Hunter Arms Company business records or purchase invoices and contracts.

TABLE OF CONTENTS